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GLOBAL EMPLOYMENT TRENDS 2013
Recovering from a second jobs dip

International Labour Office · Geneva

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Contents

Tables

Boxes

Country spotlights

Figures

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Executive summary

This Global Employment Trends report for 2013 is a special edition, warranted by the resurgence of the crisis in 2012. The year 2011 saw a tapering off of the recovery, followed by a dip in both economic growth and employment growth in 2012. Unemployment increased by a further 4 million over the course of 2012.

The report examines the crisis in labour markets of both advanced economies and developing economies. The epicentre of the crisis has been the advanced economies, accounting for half of the total increase in unemployment of 28 million since the onset of the crisis. But the pronounced double dip in the advanced economies has had significant spillovers into the labour markets of developing economies as well. A quarter of the increase of 4 million in global unemployment in 2012 has been in the advanced economies, while three quarters has been in other regions, with marked effects in East Asia, South Asia and Sub-Saharan Africa.

The report estimates the quantitative and qualitative indicators of global and regional labour markets and discusses the macroeconomic factors affecting the labour markets in order to explore possible policy responses. In estimating labour market indicators, the report uses four key analytical techniques: 1) an ILO hiring uncertainty index indicating persisting weaknesses; 2) an extension of ILO estimates of the working poor to a full income decomposition of employment to give income classes and their correlation to investment, growth and generation of quality jobs; 3) a breakdown of growth factors which differentiates between within-sector productivity growth, cross-sector productivity growth, and labour inputs, all of which have significant implications for growth patterns in advanced and developing economies; and 4) a Beveridge curve which allows some distinction between cyclical and structural factors affecting the labour market.

In examining the impact of macroeconomic developments on labour markets, the report looks at negative feedback loops from households, firms, capital markets and public budgets that have weakened labour markets. It finds that macro imbalances have been passed on to the labour market to a significant degree. Weakened by faltering aggregate demand, the labour market has been further hit by fiscal austerity programmes in a number of countries, which often involved direct cutbacks in employment and wages, directly impacting labour markets. Far from the anti-cyclical response to the initial crisis in 2009 and 2010, the policy reaction has been pro-cyclical in many cases in 2011 and 2012, leading to the double dip reported here.

The final chapter of this special edition urges a policy rethink in order to achieve a more sustained recovery in 2013 and beyond.

Global labour markets are worsening again

In the fifth year after the outbreak of the global financial crisis, global growth has decelerated and unemployment has started to increase again, leaving an accumulated total of some 197 million people without a job in 2012. Moreover, some 39 million people have dropped out of the labour market as job prospects proved unattainable, opening a 67 million global jobs gap since 2007. Despite a moderate pick-up in output growth expected for 2013-14, the unemployment rate is set to increase again and the number of unemployed worldwide is projected to rise by 5.1 million in 2013, to more than 202 million in 2013 and by another 3 million in 2014. A quarter of the increase of 4 million in global unemployment in 2012 has been in the advanced economies, while three quarters has been in other regions, with marked effects in East Asia, South Asia and Sub-Saharan Africa. Those regions that have managed to prevent a further increase in unemployment often have experienced a worsening in job quality, as vulnerable employment and the number of workers living below or very near the poverty line increased.

New recession conditions in Europe have been spilling over globally

Lower economic activity and job growth even in countries that had initially escaped the second wave of the crisis constitutes a spillover effect of the weak growth in advanced economies in 2012, in particular recession conditions in Europe. So far, the main transmission mechanism of global spillovers has been through international trade, but regions such as Latin America and the Caribbean have also suffered from increased volatility of international capital flows that have forced them to quickly adjust their macroeconomic policy in order to dampen the effects on exchange rates, thereby weakening their domestic economies.

Growth decelerated by 1.4 percentage points in East Asia, largely due to a notable slowdown in China, where growth slowed to 7.8 per cent – the slowest rate of growth since 1999. In South Asia, where growth in India slowed sharply to 4.9 per cent, the lowest rate of growth in the country in a decade, the regional GDP growth rate decelerated by 1.6 percentage points. The regions of Latin America and the Caribbean and the Middle East also saw a substantial deceleration.

Policy incoherence has led to heightened uncertainty, preventing stronger investment and faster job creation

Incoherence between monetary and fiscal policies adopted in different countries and a piecemeal approach to financial sector and sovereign debt problems, in particular in the Euro area, have led to uncertainty weighing on the global outlook. Investment has not yet recovered to pre-crisis levels in many countries. The indecision of policy-makers in several countries has led to uncertainty about future conditions and reinforced corporate tendencies to increase cash holdings or pay dividends rather than expand capacity and hire new workers.

The continuing nature of the crisis has worsened labour market mismatches,

The length and depth of the labour market crisis is worsening labour market mismatch, contributing to extended spells of unemployment. As the crisis spreads through international trade, occupations concentrated in exporting industries are particularly vulnerable and in several countries their importance in

intensifying downside labour market risks

total employment has declined by significant margins. New jobs that become available often require competences that the unemployed do not possess. Such skill and occupational mismatches will make the labour market react more slowly to any acceleration in activity over the medium run, unless supporting policies to re-skill and activate current job-seekers are enhanced.

Job creation rates are particularly low, as typically happens after a financial crisis

The origins of the crisis in the financial sector weigh on job creation. Following banking crises such as the current one, more jobs are destroyed and fewer jobs created as pre-crisis misallocation and over-investment require time to be corrected. In advanced economies job destruction rates have increased again after a short-lived respite in 2010, indicating that further job restructuring is likely before a stronger rebound can be expected in labour markets. Other regions are also still experiencing higher-than-average job destruction rates.

The jobs crisis pushes more and more women and men out of the labour market

Labour force participation has fallen dramatically, in particular in advanced economies, masking the true extent of the jobs crisis. The problem is particularly severe in the Developed Economies and European Union region where the labour force participation rate declined by close to one percentage point and is expected to recede further as long-term unemployment and a weak economic outlook discourages people from staying in the labour market. As a consequence, the employment-to-population ratio has fallen sharply – in some cases 4 percentage points or more – and has not yet recovered even in cases where the unemployment rate has started to decline.

Youth remain particularly affected by the crisis

Young people remain particularly stricken by the crisis. Currently, some 73.8 million young people are unemployed globally and the slowdown in economic activity is likely to push another half-million into unemployment by 2014. The youth unemployment rate – which had already increased to 12.6 per cent in 2012 – is expected to increase to 12.9 per cent by 2017. The crisis has dramatically diminished the labour market prospects for young people, as many experience long-term unemployment right from the start of their labour market entry, a situation that was never observed during earlier cyclical downturns.

Currently, some 35 per cent of all young unemployed have been out of a job for six months or longer in advanced economies, up from 28.5 per cent in 2007. As a consequence, an increasing number of young people have become discouraged and have left the labour market. Among European countries where this problem is particularly severe, some 12.7 per cent of all young people are currently neither employed nor in education or training, a rate that is almost 2 percentage points higher than prior to the crisis. Such long spells of unemployment and discouragement early on in a person's career also damage long-term prospects, as professional and social skills erode and valuable on-the-job experience is not built up.

Weak labour markets holding back private consumption

Income growth has come under pressure from rising unemployment, putting downward pressure on real wages in many advanced economies, thereby lowering the support that private consumption could give to economic activity. Sources of growth, therefore, need to be complemented from other areas, in

and economic growth

particular stronger growth in private investment but also government consumption, at least in countries where fiscal space is available.

Despite a recovery over the medium run, unemployment remains elevated

Over the medium term, the global economy is expected by many commentators to recover, but growth will not be strong enough to bring down unemployment quickly. Even with an acceleration of growth, the global unemployment rate is expected to remain at 6 per cent up to 2017, not far from its peak level in 2009. At the same time, the global number of unemployed is expected to rise further to some 210.6 million over the next five years.

Labour productivity growth has slowed sharply, preventing further gains in living standards

Another finding of this report is that labour productivity growth has slowed sharply in 2012. After an initial rebound following the 2009 recession, weak investment and a highly uncertain global outlook have put a brake on further increases in productivity. Particularly worrying in this respect is the trend of a slowdown in labour productivity growth observed in certain regions such as Latin America and the Caribbean, suggesting that the gains in the quality of employment observed in these regions over recent years might be difficult to sustain.

Structural change has slowed down in emerging and developing economies, damaging engines of growth

Structural change necessary for emerging and developing economies to improve their standards of living has also slowed during the crisis. In particular the tepid recovery in global investment prevents faster reallocation of resources towards more productive uses in developing economies. Prior to the crisis, many developing countries experienced rapid reallocation of workers from low- to higher productivity activities across broad economic sectors. Such structural change is an important driver of labour market improvements. In the past, it has helped reduce vulnerable employment and working poverty. Compared to earlier years, however, structural change has lost momentum during the crisis, largely because jobs are no longer moving out of agriculture as fast as before and agricultural productivity growth remains low. Forecasts indicate that Asia and Sub-Saharan Africa are more likely to return to their pre-crisis path of structural change than are Latin America and the Caribbean and Central and South-Eastern Europe. The Middle East and North African economies are expected to remain among the least dynamic economies in terms of sectoral re-allocation of labour.

Further progress in reducing working poverty and vulnerable employment requires higher productivity growth and faster structural change

Despite the slowdown in structural change, the rate of working poverty has continued to decrease, but at a slower pace than before the crisis. Currently some 397 million workers are living in extreme poverty; an additional 472 million workers cannot address their basic needs on a regular basis. As those countries with particularly high rates of working poverty continue to experience faster growth than the world average, the rate of working poverty is expected to continue to decline. However, as they are also growing faster demographically, the absolute number of working poor is expected to increase in some regions unless faster economic growth returns.

Vulnerable employment – covering own-account and contributing family workers – is expected to decline but at a slower rate. Informal employment –

one specific form of vulnerable employment – has started to increase again, especially in certain transition economies in Eastern Europe and Central Asia.

A new consumer class is emerging, but is not yet large enough to constitute an independent engine of growth

There are signs of an emerging consumer working class in developing countries, potentially substituting for some of the consumption slowdown in advanced economies. On the back of structural change and the movement of workers out of agriculture and into higher productivity sectors, working poverty has declined and some countries have seen the emergence of a working middle class, which has now surpassed 40 per cent of the developing world's workforce. With the crisis, however, progress in poverty reduction has slowed and could adversely affect growth of the emerging middle class. This will impact negatively on the capacity for developing economies to play a stronger role in supporting global economic activity and offer alternative engines of growth.

Policy-makers need to take additional steps to recover from the second jobs dip

The worsening of macroeconomic and labour market conditions in many countries and the risk of the jobs crisis becoming entrenched calls for additional policy action. Some promising areas for action include:

- Tackle uncertainty to increase investment and job creation. Particularly in developed countries, policy-makers need to address policy uncertainty. This includes providing more coherent and predictable policy plans; measures to increase disposable incomes to foster stronger consumption; prompt implementation of financial reforms to restore the banking sector to its proper function of supporting investment and providing credit, in particular to SMEs, the key engines of job creation. It also requires credible exit strategies for those countries particularly affected by the debt crisis, for instance by rescheduling sovereign debt and easing financial burdens of private households.

- Coordinate stimulus for global demand and employment creation. Austerity measures and uncoordinated attempts to promote competitiveness in several European countries have increased the risk of a deflationary spiral of lower wages, weaker consumption and faltering global demand. In light of the global jobs and consumption deficit, countries should adapt the pace of their fiscal consolidation to the underlying strength of the economy and recognise that short-term stimulus may be needed to grow out of debt burdens. Global policy-makers and coordination bodies such as the G20 and EU should make stronger efforts to avoid beggar-thy-neighbour policies, which are occurring through wage and social protection reductions in Europe as well as through trade and monetary measures in other countries. Policy actions need to be better coordinated globally in order to rebalance growth and foster multipolar growth engines. The growing purchasing power of the emerging middle class in many developing countries could help bring about such a development.

- Address labour market mismatch and promote structural change. The bulk of the unemployment crisis is cyclical. However, policy-makers also

need to tackle structural problems that intensified with the crisis, such as skill and occupational mismatches. Weak and unsteady recovery has worsened these problems in some countries and this is likely to put a brake on future recovery in the labour market. Governments should step up their efforts to support skill and retraining activities to address the gaps between demand and supply of work skills and qualifications and to address long-term unemployment. Re-activation and job counselling measures should be enhanced. The global crisis has lowered the pace of structural change in many developing regions, calling for policies to improve productivity and facilitate workers' mobility across sectors. Where employment in agriculture is particularly significant, governments need to pursue measures to accelerate productivity growth in that sector and diversify the work and investment opportunities in rural areas.

- Increase efforts to promote youth employment – with a special focus on long-term unemployment for youth. High and rising youth unemployment rates have spurred concerns over a "lost generation" with long-term adverse consequences both for young people themselves and the economy more broadly. To address these challenges, policy-makers should promote youth employment. The ILO comprehensive guidance on how to do this is contained in the Call for Action on the Youth Employment Crisis agreed by governments, workers and employers at the June, 2012 International Labour Conference. Besides pro-employment macroeconomic policies and active labour market policies, three specific types of interventions are considered particularly relevant: i) enhancing young people's employability through measures such as better links between the world of education and training and the world of work, including apprenticeships; improving young people's access to information on career opportunities, support for job search, and youth employment guarantee schemes; ii) encouraging youth entrepreneurship; and iii) promoting labour standards and rights of young people by ensuring that they receive equal treatment and are afforded rights at work, including their right to organise and bargain collectively, and ensuring their adequate social protection.

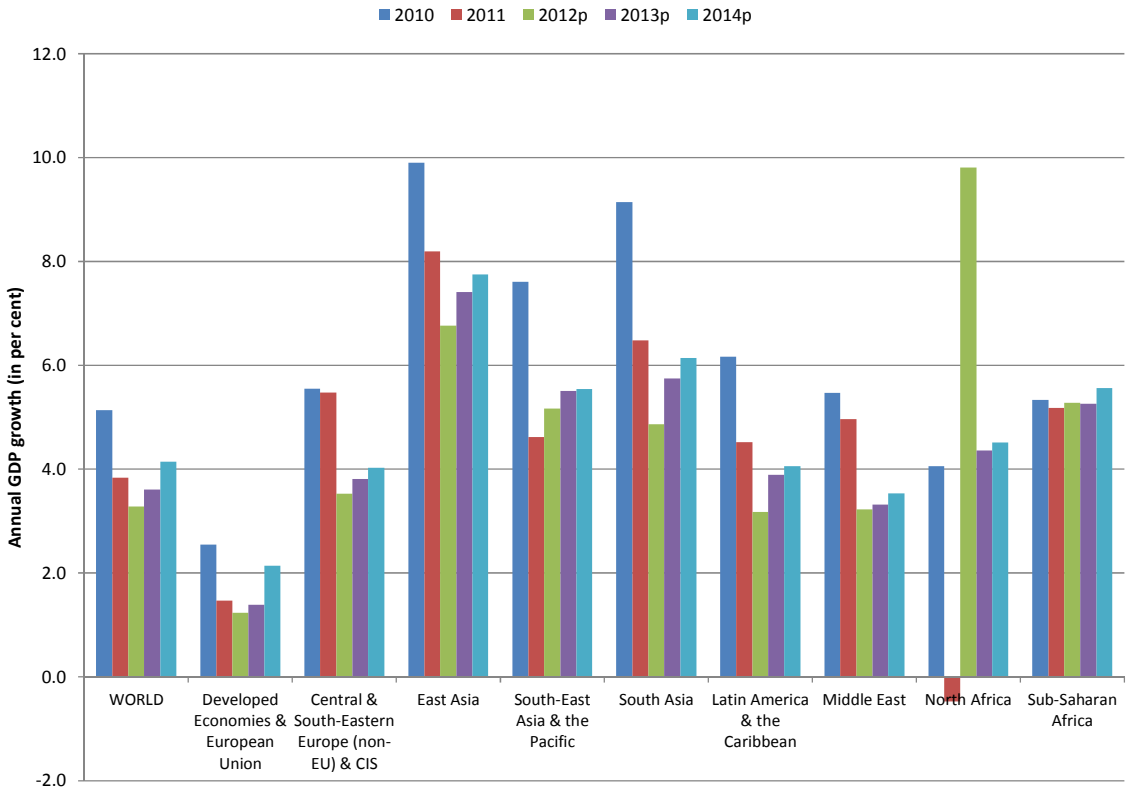
1. Macroeconomic challenges have worsened

The global economic slowdown intensifies in 2012

Heightened uncertainties contributed to a widespread slowdown in 2012

The global economic and jobs crisis has entered its fifth year, following a year of economic adversity and disappointing labour market trends. After a relatively encouraging first quarter, the crisis returned during the remainder of 2012, with weakening economic growth in nearly every region of the world (see Figure 1). On an annualized basis, global economic growth is estimated to have decelerated to 3.3 per cent in 2012, compared with 3.8 per cent in 2011 and 5.1 per cent in 2010. These adverse macroeconomic trends occurred alongside rising uncertainties stemming from a number of factors, most importantly the prolonged and deepening crisis in the Euro area and policy ambiguity related to fiscal tightening and the debt ceiling debate in the United States (see also Box 1, p. 21).

Figure 1. Global and regional GDP growth estimates and projections, 2010-14 (annual % change)



Source: IMF, *World Economic Outlook,* October 2012.

The largest growth deceleration occurred in the Central and South-Eastern Europe (non-EU) and CIS region, with annual output growth falling to 3.5 per cent versus 5.5 per cent in each of the two previous years (see Figure 1). The Developed Economies and European Union region grew

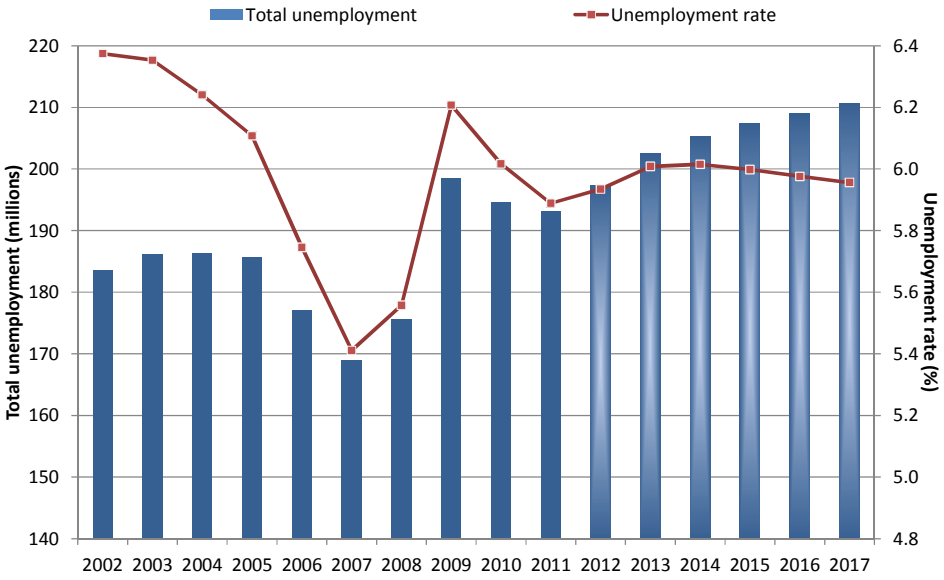
by only 1.2 per cent, versus 1.5 per cent in 2011 and 2.5 per cent in 2010. Growth decelerated by 1.4 percentage points in East Asia, largely due to a notable slowdown in China, where growth slowed to 7.8 per cent – the lowest rate of annual growth since 1999. In South Asia, where growth in India slowed sharply to 4.9 per cent, the lowest annual rate of growth in the country in a decade, the regional GDP growth rate decelerated by 1.6 percentage points. The regions of Latin America and the Caribbean and the Middle East also saw a substantial deceleration.

However, in 2012 some regions resisted the slowdown in global growth. In the North Africa region, output growth surged by more than 10 percentage points year-over-year, but this was largely a rebound following wartime conditions in Libya during the previous year. In South-East Asia and the Pacific, which has demonstrated remarkable economic resilience throughout the past year, growth accelerated to 5.2 per cent, versus 4.6 per cent in 2011. Sub-Saharan Africa, which notably has shown solid and relatively high growth in the past decade, also performed well throughout 2012, with a robust 5.3 per cent rate of growth, a slight uptick over 2011.

Global unemployment started to rise again while other indicators also suggest rising distress in labour markets

The acceleration of global growth is likely to be insufficient to prevent an improvement in unemployment, which has reacted with a lag to the sharp deceleration in growth over the previous 2 years (see Figure 2). Global unemployment rose to 197.3 million in 2012, an increase of 4.2 million over the previous year and 28.4 million above the level in 2007, the year preceding the crisis. Moreover, given the slowdown in activity, the ILO's baseline projection is a further deterioration in 2013, with the global unemployment rate ticking up to 6 per cent and a further increase in the number of unemployed around the world of 5.1 million. On the basis of current macroeconomic forecasts, the global unemployment rate is projected to remain at around 6 per cent until at least 2017.

Figure 2. Global unemployment trends and projections, 2002-17



Note: The chart displays past trends and projections for 2012 onwards for global unemployment (rate and absolute number).
Source: ILO, *Trends Econometric Models*, October 2012.

Other key labour market indicators provide further evidence of rising distress in labour markets around the world (see chapter 2). Labour force participation rates continued to decline in many countries and long-term unemployment rates remained high or kept rising in developed economies, signalling widespread discouragement, growing labour market detachment and increasing structural unemployment problems. This can have adverse long-term consequences for workers in terms of diminished skills, growing skills mismatches, and reduced employability, weighing on economies' trend rates of output growth.

In developing countries, there is evidence that productive structural change – the shift in employment out of lower productivity sectors into higher productivity ones – has slowed, weakening a key driver of job quality growth that has been associated with poverty reduction, falling shares of vulnerable employment and growth in the developing world's emerging middle-class (see chapter 4 for a detailed analysis of these trends).

Rising uncertainty and depressed labour markets feed on each other

Unresolved financial sector issues and recession-induced public debt problems in developed economies continue to weigh on private consumption, investment and public expenditure, thereby raising uncertainty. Credit conditions remain tight in many countries despite record low central bank interest rates as banks continue to clean up their balance sheets and face challenges to comply with new regulatory provisions. Households are not spending more as they continue to deleverage in order to recover from loss of asset and wage income. Firms, facing both less demand for their products and difficulties in access to financing, are holding back new investment and prefer keeping liquid assets rather than committing to fixed capital outlays. Finally, public support to the banking

sector and recession-induced widening of public deficits have both led to a sudden acceleration in public debt, creating concerns about fiscal sustainability and causing the costs of borrowing influenced by treasury yields to skyrocket in certain countries, notably in Europe. Together, private sector deleveraging and public sector fiscal woes have seriously deteriorated the outlook.[1] A negative spiral is operating whereby the deterioration in the real economy, the labour market and financial sector difficulties feed on each other through heightened uncertainty, preventing a sustainable recovery from taking hold (see Box 1).

Box 1. How can uncertainty lead to increased unemployment?

The theoretical relationship between uncertainty and macroeconomic performance is fairly well established – namely that heightened uncertainty leads to reduced investment and consumption, thereby reducing economic growth. At the same time, given the multitude of measures of uncertainty and a number of different analytical approaches utilized in the literature, the precise magnitude of the effects of uncertainty on growth and labour markets is less well understood.

To assess the impact of the recent increase in uncertainty on global growth, the IMF's *World Economic Outlook,* October 2012 (IMF, 2012b) estimates the impacts of uncertainty during the global economic crisis by focusing on measures of uncertainty including volatility in stock returns, the degree of policy uncertainty (indicated by keywords in the press), and other indicators. The report finds that a one standard deviation increase in uncertainty is associated with a decline in output growth of between 0.4 and 1.25 percentage points. The authors find that increased uncertainty has the biggest negative impact on investment growth, followed by output and consumption growth. The study finds a sharp increase in policy uncertainty between 2006 and 2011 of about five standard deviations, which may have reduced growth in advanced economies by 2.5 percentage points.

How does this heightened level of uncertainty affect labour markets? A recent study by researchers at the Federal Reserve Bank of San Francisco (Leduc and Liu, 2012) finds that increased uncertainty has a direct, positive relationship with unemployment. In addition to reduced private sector investment which lowers demand for new workers, the main mechanism through which uncertainty affects unemployment is through reduced vacancies and job matching. As the hiring of an employee represents a long-term commitment and entails a cost to the firm, heightened uncertainty reduces firms' willingness to hire as it reduces visibility into future demand for their goods or services. As a result, firms post fewer vacancies, leading to a decline in the job finding rate and an increase in unemployment. This, in turn, has a negative impact on household incomes, which reduces aggregate demand.

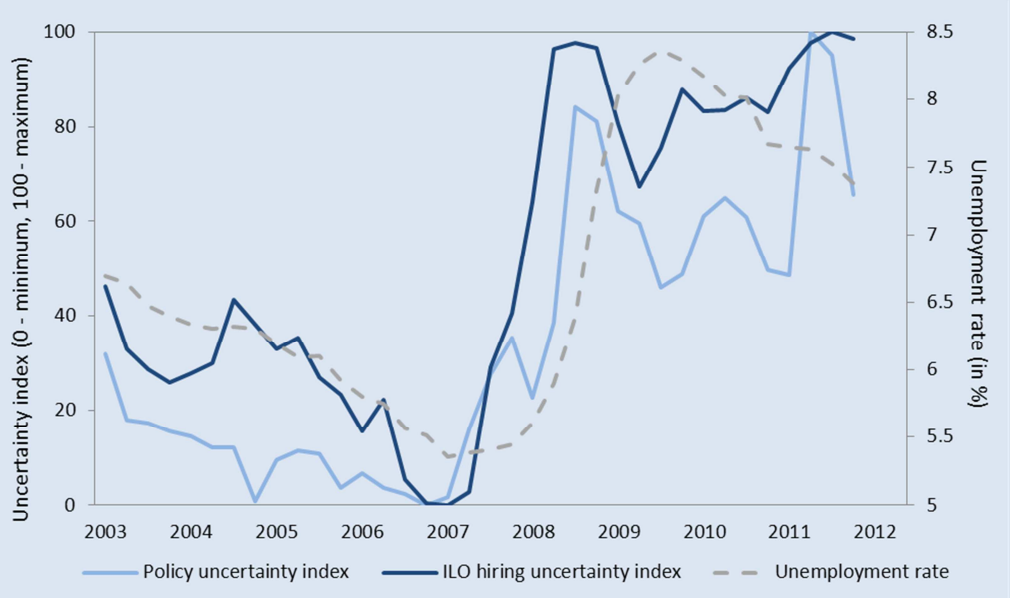
Using data on consumer and employer perceptions regarding uncertainty, the authors find that heightened uncertainty has lifted the unemployment rate in the United States by at least 1 percentage point since early 2008, while lowering the inflation rate. This represents a disproportionately large shock in comparison with previous recessions, which they posit may be due to fewer monetary policy options in the current near-zero nominal interest rate environment to address the shortfall in aggregate demand due to uncertainty. Similar results are found for the United Kingdom.

Figure B1.1 shows two different measures of uncertainty and the unemployment rate of G7 countries. The ILO hiring uncertainty index is based on estimates of implied volatility that result from survey results on hiring intentions in G7 countries. The index reflects changes in the assessment by employers regarding the economic outlook when taking hiring decisions (see Appendix 1, p.33). The policy uncertainty index of Baker et al. (2012) reflects uncertainty about economic policies and includes information on news coverage of policy-related uncertainty and disagreement among forecasters. The two indices are highly

[1]Deleveraging refers to the deliberate attempt by economic agents (private households, companies, governments) to reduce their debt burden and repay outstanding financial liabilities.

correlated with each other as well as with the unemployment rate of G7 countries. Furthermore, trends in uncertainty seem to precede changes in the unemployment rate, at least at the onset of the current crisis, suggesting that an uncertain environment needs to prevail for a while before having a severe impact on unemployment.

Figure B1.1 Uncertainty and unemployment in the G7



Note: Policy uncertainty index of Baker et al. (2012) does not include Japan. ILO hiring uncertainty index is based on implied volatility calculations using the Manpower Employment Outlook Survey. Both uncertainty indices are based on averages weighted with the size of the labour force and are rescaled so that the minimum value is 0 and the maximum value is 100.
Source: ILO calculations based on Manpower Employment Outlook Survey, OECD Economic Outlook and Baker et al. (2012), see Appendix 1 for details.

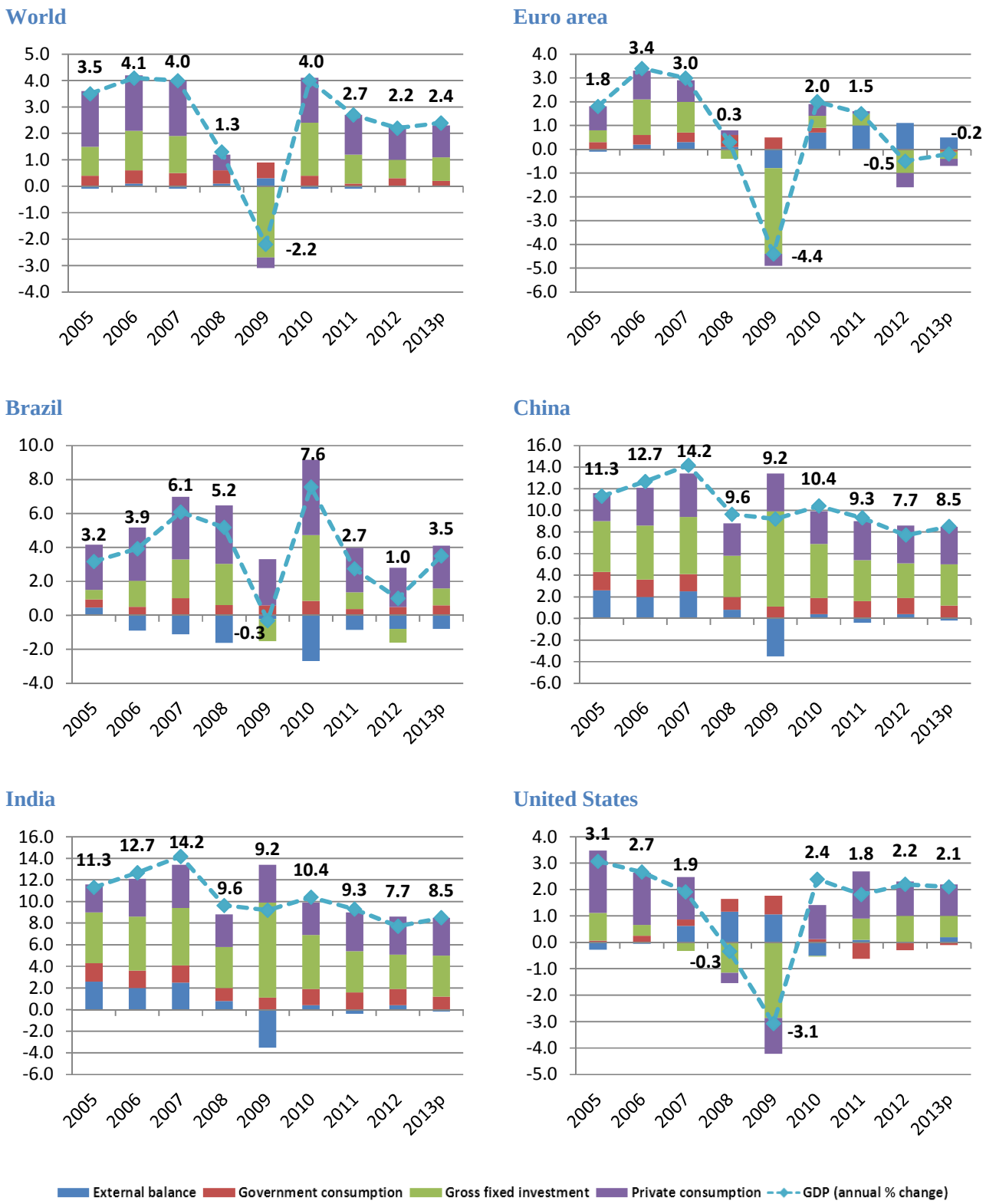
The policy implications are significant: if increased uncertainty does indeed lead to a decline in aggregate demand and a rise in the unemployment rate, this would argue for easier fiscal and monetary policy in countries in which this is likely to help offset the decline in output and employment. Better policy coordination at the international level could provide a further boost to growth and jobs, as this would help to restore confidence, promoting consumption, investment and hiring.

The rise in uncertainty, originating mainly in developed countries, has weakened global growth by weighing on both consumption and investment in different countries and regions (see Figure 3). High and persistent unemployment has left wage earners with weak disposable incomes. At the same time, global investment slowed alongside deleveraging in advanced economies. As a consequence, in 2012 investment contributed only 0.7 percentage points, whereas private consumption added only 1.3 percentage points to global output growth (at market prices), the lowest rates for both factors since the peak of the crisis in 2009. The slowdown in investment and consumption was most notable in the Euro area, contributing –1.0 and –0.6 percentage points respectively to economic growth, sending the region into recession.

In the United States, where GDP growth was little changed in 2012 versus 2011 and where productivity growth has held up better in comparison with employment growth, the contribution of

investment to GDP growth increased to 1.0 percentage point, compared with 0.8 percentage points in the previous year. In contrast, the contribution from private consumption growth declined to 1.3 percentage points in 2012 compared with 1.8 percentage points in 2011. Notably, in the United States, slower growth in government spending resulting from reduced fiscal stimulus measures and reduced government employment served as a drag on growth over the past 2 years. In China, where growth slowed significantly in 2012, growth in investment contributed only 3.2 percentage points to overall GDP growth over the past year versus 3.8 percentage points in the previous year, while the contribution from consumption also declined moderately. In India, growth in investment contributed 1.5 percentage points to overall GDP growth over the past year, down from 1.8 percentage points in 2011, while the contribution from consumption declined to 2.8 per cent versus 3.2 per cent the previous year. In Brazil, the contribution of investment to overall GDP growth turned negative, to –0.8 percentage points, compared with 1 percentage point in 2011. The contribution from consumption slowed modestly.

Figure 3. Aggregate demand contributions to real GDP growth



Note: The figure displays the contributions of private consumption, gross fixed investment, net exports and government consumption to GDP growth. Aggregate demand contributions are displayed in percentage point contribution to GDP growth; real GDP growth is given in per cent: p = projection.
Source: EIU Country Data, Extracted 9 January 2013.

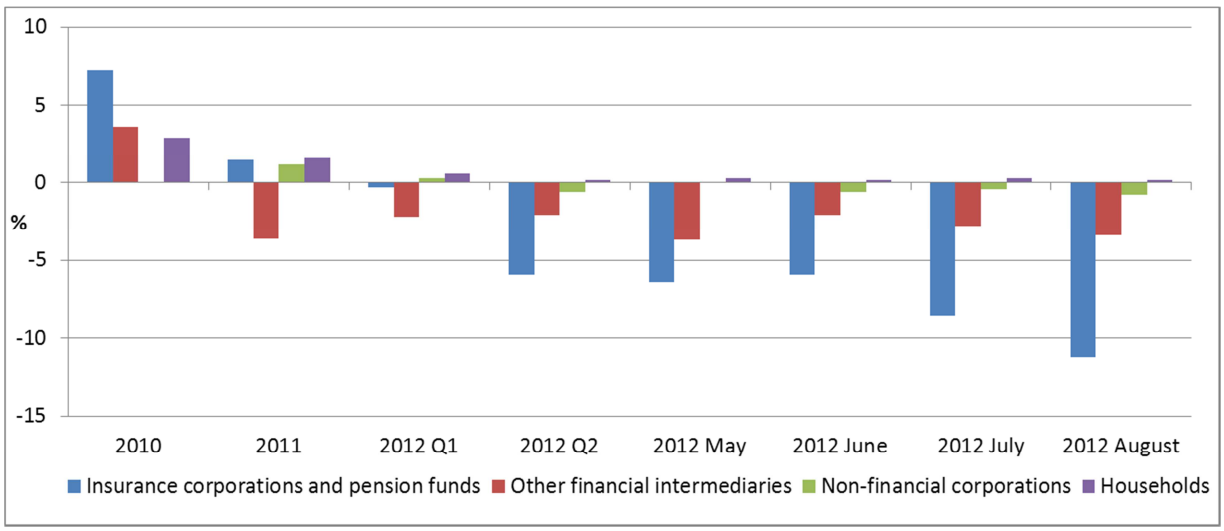
Global uncertainties rose alongside recession conditions in Europe in 2012, but other sources of uncertainty are set to diminish

Entering 2013, the crisis in the Euro area constitutes the single biggest risk to global employment trends for the year ahead (IMF, 2012b; OECD, 2012; United Nations, 2012a). The financial crisis in the Euro area, brought on by a combination of banking sector distress and protracted financial and household deleveraging, coupled with high levels of sovereign debt and unsustainably high government bond yields in some countries, has emerged as a disruptive and destabilizing force not only in the Euro area itself, but also for the global economy as a whole.

GDP growth rates declined in the Euro area in 2012, with a notable slowdown in the area's largest economies, Germany and France, where growth rates fell to 0.9 per cent and 0.1 per cent, respectively, down sharply from 3.1 per cent in Germany and 1.7 per cent in France in 2011. Furthermore, seven out of the Euro area's 17 economies contracted in 2012: Output in Greece plunged by 6 per cent, and declined by 3 per cent in Portugal, by 2.3 per cent in Cyprus and Italy, by 2.2 per cent in Slovenia, by 1.5 per cent in Spain and by 0.5 per cent in the Netherlands. Greece experienced the fifth consecutive year of falling output since 2008 and has contracted by around 20 per cent since 2007.

Despite emergency measures such as the European Financial Stability Facility (EFSF), the European Stability Mechanism (ESM) as well as a number of extraordinary – implemented or announced – monetary interventions by the European Central Bank, growth throughout the Euro area has continued to deteriorate, with labour markets in several Euro area economies in deep distress. Credit remains tight, with near-zero growth in credit to households and credit to the private sector contracting over much of 2012 (see Figure 4). This has adversely affected investment by the private sector and private consumption, which was already weak due to deleveraging. In addition, small and medium-sized enterprises (SMEs) account for a large share of private sector job creation in most countries and are typically highly reliant on bank credit to maintain and expand operations (ILO, 2012d). This is a direct and important channel through which tightening credit conditions can adversely affect job creation.

Figure 4. Euro area European Central Bank loans (annualized growth rates)



Source: European Central Bank Monetary Statistics, September 2012

Given the lack of a fiscal union in the Euro area or the possibility to (partially) mutualize public debt obligations,[2] options for promoting growth in the hardest-hit countries have been limited. On the fiscal side, the main mechanism for dealing with the sovereign debt crisis in these countries has thus far been austerity – deep cuts in public spending with the aim of stabilizing government finances and reassuring bond markets. The primary policy instruments have been public wage freezes and cuts in public employment and social security entitlements (Annex 2 provides key policy developments in selected countries). A negative side-effect of this course of action has been further deterioration in growth and labour market trends in countries facing the greatest constraints in credit markets. This, in turn, has led to negative spillover effects due to reduced business and consumer confidence in Euro area economies with otherwise healthy balance sheets, such as Germany.

As a consequence, uncertainty surrounding the macroeconomic outlook grew significantly in Europe in 2012, though the most pressing worries surrounding a break-up of the Euro area and sovereign defaults have abated somewhat entering 2013. In the United States, some of the uncertainty overhang was removed with the recent legislation to avoid the "fiscal cliff", and there have been notable improvements in previous sources of economic strain, such as the housing market. Growth in many Asian economies and in Sub-Saharan Africa, while slower than in the initial recovery period remains fairly robust and will provide some support to global growth.

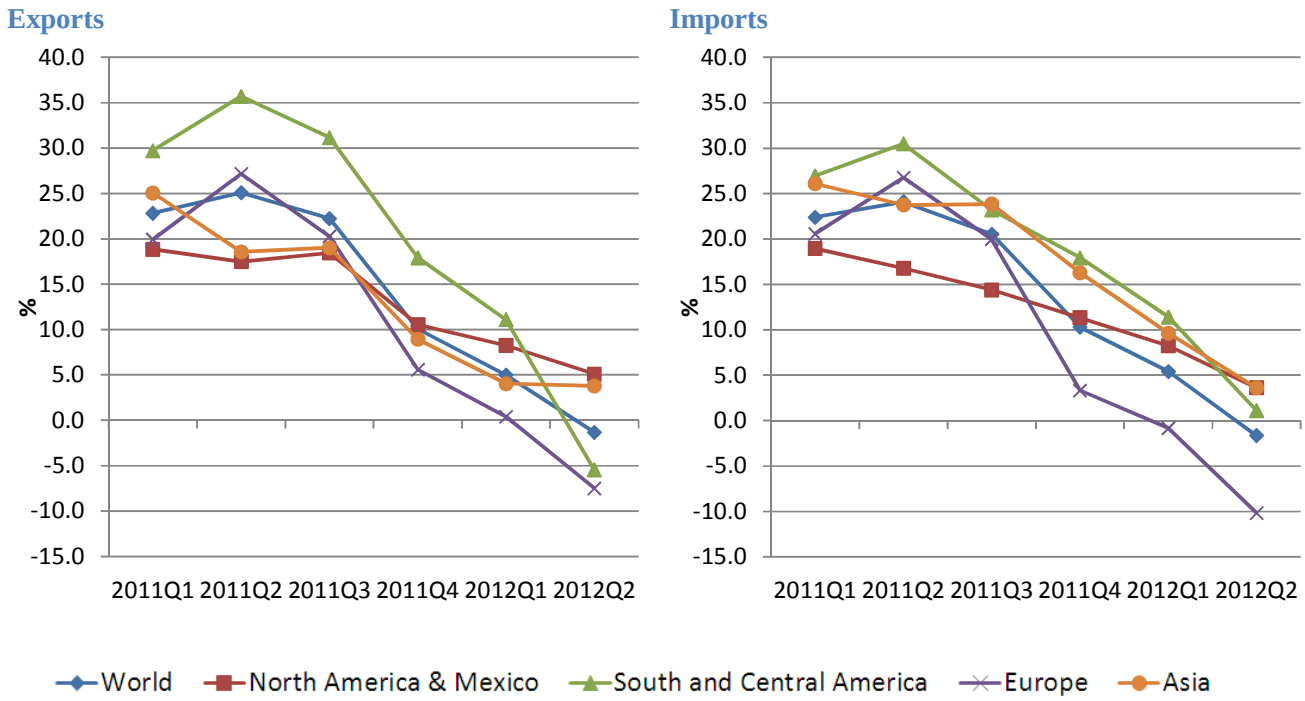
To restore confidence, the pressing challenge in Europe and elsewhere is to effectively restart the engines of economic growth – most urgently in countries facing a prolonged contraction in economic activities. Also needed, will be continued action on the part of policy-makers to enact extraordinary fiscal and monetary measures to support growth, along with strong international policy coordination.

[2] See ILO (2012d) for a discussion on mutualized debt obligations such as Euro bonds.

Slowing trade and volatile investment flows spread risks globally, in particular to developing regions

Rising global uncertainties, tight credit conditions for households and firms, public sector austerity measures and the resulting slowdown in aggregate demand are also having an adverse impact on trade and investment flows. This poses a growing challenge, particularly in those developing countries that strongly rely on external demand to pull their economic growth. As a consequence, after robust growth in exports and imports during the first three quarters of 2011, growth in global merchandise trade decelerated sharply beginning in Q4 2011, falling further in Q1 2012 and turning negative in the second quarter of the year (see Figure 5). The World Trade Organization forecasted in September that global merchandise trade would grow by 2.5 per cent in 2012, down from the previous forecast of 3.7 per cent made in April.[3]

Figure 5. Quarterly world merchandise trade by region, year-on- year percentage change



Source: World Trade Organization, *Short-term merchandise trade statistics,* extracted 3 October 2012.

While all regions have experienced a significant downturn in merchandise trade growth, Europe has seen the largest decline in both exports and imports, which contracted at an annual rate of 7.5 per cent and 10.2 per cent respectively in Q2 2012. Merchandise exports also began to contract in South and Central America, and growth in imports also slowed substantially. The United States was a relative bright spot, as export growth slowed, but remained above 5 per cent in the second quarter, while in Asia, merchandise export growth was slow in both Q1 and Q2 of 2012, at around 4 per cent, and import growth also slowed sharply. While these declines in trade have direct,

[3]"Slow global growth to hit trade in 2012 and 2013, WTO says". World Trade Organization Trade Statistics, 21 September 2012 http://www.wto.org/english/news_e/pres12_e/pr676_e.pdf.

adverse effects on workers in the import- and export-oriented industries themselves, spillover effects to other industries connected with export industries can also be substantial.

The overall slowdown in economic activity is an important contributing factor behind the slowdown in trade flows. The very large magnitude of the drop in trade points, however, to an additional, related factor: declining trade financing. Short term trade finance loans play a key role in facilitating global trade operations, and thus tightening credit conditions, particularly in Europe, are creating a more difficult environment for businesses reliant on short term credit to fund trade and other business operations.[4] Already towards the end of 2011, there was a sharp reduction in new trade finance lending by many European banks. As European banks account for more than a third of the overall global trade financing market, worsening crisis conditions in Europe could have devastating consequences for trade, not only in Europe, but also in Asia, Latin America and West Africa, among other regions (Feyen et al., 2012).

The challenges posed by slowing global trade are compounded by increased volatility of international investment flows. Volatile capital flows amplify the risk of economic and financial instability, particularly in developing economies, as heightened risk aversion can lead to a sudden withdrawal of international capital. At the same time, efforts to increase liquidity in financial markets during periods of strain through exceptionally low interest rates and additional, unconventional monetary easing measures can lead to speculative capital flows to developing countries, potentially raising inflation and leading to asset price bubbles (Akyüz, 2011). This also raises the risk of a reacceleration in food price inflation, with devastating consequences for the poor (United Nations, 2012a). Developing economies reliant on assistance may also be harmed by reduced development financing due to weaker economic conditions in developed economies.

Protectionism and policy incoherence could create further risks for the global economy

The risk of self-defeating protectionism

Rising economic stress has led to calls for protectionist policies at the national level and increased use of trade barriers (WTO, 2012). Even though they might provide temporary relief for some industries in turmoil, such measures are likely to reduce the aggregate, longer term performance of the global economy, thereby harming the global labour market. While there has not been a marked rise in trade protectionism over the past year, rhetoric surrounding international trade policy reflects growing pressure on policy-makers to enact protectionist measures that could ultimately harm growth and prospects for recovery.

Measures taken to boost export competitiveness can also have unintended adverse consequences. For instance, recent proposals for competitive wage cuts in crisis countries are unlikely to yield the expected benefits. When wage cuts are pursued simultaneously across several countries, any gains in competitiveness will offset each other and the negative impact of wage cuts on consumption could lead to a further global slowdown due to weak aggregate demand (ILO, 2012j). Particularly in this period of slowing growth, there is a need for renewed international policy

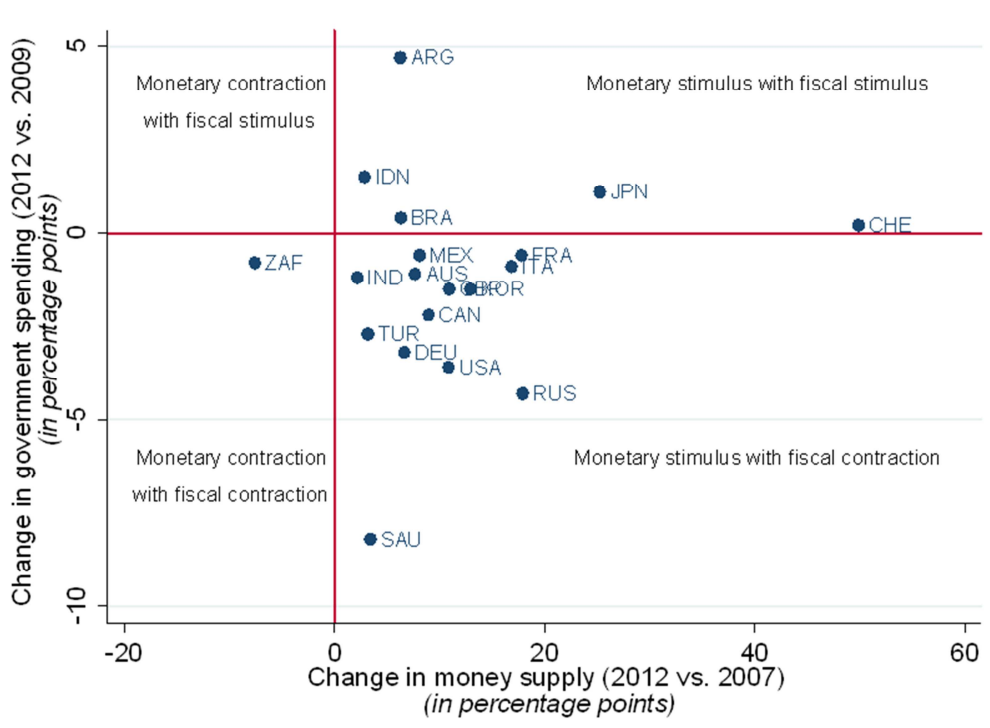
[4] The Economist, "Boxed in", 8 September 2012. http://www.economist.com/node/21562221

coordination to prevent beggar-thy-neighbour policies related to trade, exchange rates and wages (UNCTAD, 2012).

Incoherent fiscal and monetary policy, and limited international coordination contributed to heightened uncertainty

In comparison with the crisis years of 2008 and 2009, the stance of monetary and fiscal policies in G20 countries has lost coherence, thereby increasing uncertainty and limiting policy effectiveness to support the recovery (see Figure 6). Indeed, major central banks continue to support the real economy with an accommodative stance of monetary policy, having lowered interest rates to near their lower limit and expanding the monetary base through exceptional interventions. At the same time, however, the substantial increase in public debt, especially among advanced economies, has triggered un-coordinated policy action to restore fiscal sustainability through austerity measures. Such policy incoherence prevents a stronger recovery from taking hold. Such an approach is unsustainable in the long-term as public debt levels continue to rise despite these austerity measures. Loose monetary policy in the absence of a stronger reaction of the real economy has created concerns with regard to financial stability, in particular in emerging economies (see chapter 3), thereby further increasing uncertainty to the outlook.

Figure 6. Policy incoherence between fiscal and monetary policy



Note: The chart displays the change in government spending between 2009 and 2012 (as a share of GDP in percentage points) versus a change in the money supply between 2007 and 2012 (measured as the monetary aggregate M2 as a share of GDP).
Source: IMF, *Fiscal Monitor*, October 2012; Economist Intelligence Unit, November 2012; own calculations.

One source of policy incoherence stems from the uncoordinated nature with which fiscal austerity measures are currently being implemented. Since 2009, when at the height of the financial crisis, governments opened their purses to support both the real economy and the financial sector with additional funds, government spending as a share of GDP has lost around 2.5 percentage points in advanced G20 countries and half a percentage point in emerging G20 countries (see IMF, 2012a). The high and rising debt ratios resulting from the recession-induced lower tax revenues and additional expenditure in support measures have increased pressure on governments to return to more sustainable fiscal positions, at least over the medium-run. Some countries that already had a weak fiscal position prior to the crisis were forced to implement substantial austerity packages, cutting down spending and finding new ways to raise government revenues. However, by implementing such austerity measures without regard to the broader global economic outlook, the strategy proved self-defeating as several major economies embarked on similar deflationary policies at the same time, thereby reducing aggregate demand both at home and abroad (see IMF, 2012b). The fact that monetary policy has already reached some limits in its capacity to support the economy ("zero lower bound", see Woodford, 2012) has further worsened the impact of such uncoordinated fiscal austerity measures on the real economy.

Policy coherence cannot be restored by unilateral action on the fiscal side. Major economies and economic blocs need to provide further support to the real economy both on the monetary and the fiscal side. On the monetary side, authorities have to make a credible commitment that their support measures will continue to operate as long as the economy and labour markets have not yet started to recover in a sustainable manner. This requires that funds provided through exceptional liquidity measures reach the real economy in the form of improved access to credit and a stabilized banking sector, a situation that still has not been achieved in some crisis countries. On the fiscal side, policy coherence requires that countries that have the possibility to support the economy continue to do so. Not all countries are currently in such a situation but those which have seen their public debt reach unsustainable levels will need to be able to rely on support from external demand and the global economy. More importantly, all countries need to strongly focus their fiscal policies towards supporting job creation and employment growth, scrutinizing their adjustment measures against potential negative effects for labour markets.

Inflationary pressures remain subdued in most countries, leaving space for accommodative monetary policies

Globally, inflationary pressures have declined over the past year, with growth in consumer prices slowing to 1.9 per cent in 2012 in the advanced economies, versus 2.7 per cent in 2011 and from 7.2 to 6.1 per cent in emerging and developing economies over the same period. Oil prices, which rose sharply in 2011, have remained below their 2011 peak throughout 2012 and are projected to change little in 2013.[5] Food prices accelerated broadly in 2012 without reaching similar peaks as in 2007. Nevertheless, both oil and broader commodity prices remain substantially higher than the trough that was reached during the global economic crisis. This has been a boon to commodity exporters during the economic recovery – particularly to the many countries in Sub-Saharan Africa and Latin America in which commodity exports constitute more than half of total exports – and their growth

[5]IMF, *World Economic Outlook*, October 2012 and United States Energy Information Administration. http://www.eia.gov/dnav/pet/hist/LeafHandler.ashx?n=PET&s=RBRTE&f=D

rates remain robust.[6] Yet, commodity exporters are also at risk in the event of a decline in prices going forward. In addition to lower rates of economic growth, such a slowdown could adversely affect external and fiscal balances in countries dependent upon commodities for export revenues.

Among the world's large economies, only India registered an increase in inflation in 2012, where consumer prices rose by more than 10 per cent, versus less than 9 per cent in 2011. Overall, the number of countries around the world with decelerating inflation in 2012 exceeded the number of those with rising inflation by a nearly 2-to-1 margin. The combination of decelerating inflation rates, growing economic and labour market slack, continued large-scale fiscal adjustment in many advanced economies, and interest rates near zero throughout much of the industrialized world provides an argument for increased fiscal support where feasible together with maintenance of expansionary monetary policies (IMF, 2012b).

The economic outlook remains cloudy

The macroeconomic outlook for 2013 entails significant downside risks even as some risks have improved

The global economy is projected to show a modest rebound beginning in 2013, with output growth edging up to 3.6 per cent versus 3.3 per cent in 2012 (IMF, 2012b). All regions are expected to see moderately increased growth, except North Africa, where growth of 4.4 per cent is projected, a reversion to a more typical rate following the post-conflict surge in 2012, and Sub-Saharan Africa, where output is projected to remain at a healthy rate of 5.3 per cent. Yet, whether or not the modest global recovery that is currently projected will emerge is highly dependent on the ability of governments to put in place the necessary policy mix in order to reverse negative trends that have become more entrenched over the past year. In particular, this requires ending the negative feedback loop between the macro economy and labour markets, and restoring confidence by seriously tackling tail risks.

Even if the expected recovery is set to strengthen, global unemployment is likely to remain elevated and even increase further over the short term. Partly, this is related to the inherent lag with which labour market developments react to improvements in output growth. In addition, the crisis origins in the financial sector have further weakened the effect of growth on job creation (see also chapter 3 for a discussion of this point). Finally, overall growth simply remains too weak for a stronger jobs recovery to take hold.

In this respect, key macroeconomic risks to the outlook for 2013 include a further deterioration in the Euro area, where the baseline scenario of modest recovery is dependent upon policy-makers to continue to establish credible policies to promote fiscal integration of Euro area economies. The negotiations in the United States surrounding the country's debt ceiling and the expenditure side of the "fiscal cliff" represents an additional risk, as the baseline assumes that policy-makers successfully reach agreement to avoid automatic reductions in government expenditure and tax increases, particularly on the middle-class.

[6] IMF, *World Economic Outlook*, April 2012. Chapter 4: Commodity price swings and commodity exporters. http://www.imf.org/external/pubs/ft/weo/2012/01/pdf/c4.pdf

As highlighted above, further deterioration in global trade represents another risk to the global economic recovery. Policy leadership and international coordination are needed to avoid protectionism and reaccelerate global trade growth. In particular, policies to promote aggregate demand through the consumption and investment channels – by reducing the uncertainty overhang and supporting employment generation – could alleviate some of the main underlying forces hindering a more robust economic recovery, while also reducing the risks associated with rising social unrest.

Longer term prospects also at risk

The scars left by the crisis are threatening longer term growth and development prospects. Persistent weakness in the global economy, particularly in the advanced economies, is holding back private sector hiring, leading to increased unemployment and larger numbers of long-term unemployed. As related skills mismatches rise, potential growth rates are likely to fall going forward. In addition, recession conditions in many European countries are reducing government revenue, leading to larger budget deficits and growing debts, increasing the burden of future interest payments and limiting available spending for public investment, social programmes and automatic stabilizers.

The global economic crisis revealed the pitfalls of a global financial system too detached from the needs of the real economy. So far, however, insufficient measures have been put in place to address these issues. Several countries and regions have started to enact legislation in this area but this remains partial and incomplete.

Finally, a sustainable long-term recovery will require further and sustainable rebalancing of global demand. In advanced economies in particular, this will require increased investment in productive capacity to reaccelerate productivity growth and employment generation. Longer term growth prospects in developing economies will require continued productive structural change, which can facilitate further growth in the emerging middle-class, increased consumption, and a reduction in vulnerable employment and working poverty. As this report shows, however, on both accounts sufficient improvement is not expected over the medium run, putting at risk a more sustainable recovery of the global economy and the world of work.

These long-term problems can only be tackled by a coordinated approach with changes in policies oriented towards labour market recovery. Chapter 5 of this report displays several options for such policy reforms, including measures to tackle youth unemployment, active labour market policies to address rising long-term unemployment and public investment measures to improve policy coherence and reduce uncertainty.

Appendix 1. The ILO hiring uncertainty index

The ILO has developed a new indicator which captures the assessment by employers of the uncertainty of the labour market outlook when taking hiring decisions. The ILO hiring uncertainty index is based on work by Black and Scholes (1973) regarding the pricing of options and other financial derivatives. It is calculated for all G7 countries and makes use of an economy-wide indicator of hiring intentions of the ManpowerGroup which is calculated from a survey of employers. The indicator measures hiring intentions and is calculated as the difference between the percentage of employers that expect an increase of employment in their establishment for the next quarter and the percentage of employers that expect a decrease.[7]

Indicators on hiring intentions such as the one published by the ManpowerGroup contain information on the expectations of both market trends and volatility. In order to extract the element related to the private sector's assessment of uncertainty and to construct the ILO hiring uncertainty index, the hiring intentions are interpreted as an option price. In this interpretation, hiring intentions reflect the value employers give to open a vacancy in order to hire new personnel with an expected productivity level in the next quarter, taking the short-term interest rate into account. In contrast to a financial derivative, however, there is no market for vacancies (nor for the underlying hiring intentions). This requires some adjustment in interpreting the first-pass results from applying the Black–Scholes formula to the labour market.

The first step in estimating the ILO hiring uncertainty index consists in estimating the implied volatility based on the formula provided by Black and Scholes (1973). For that, the current productivity level is interpreted as the "stock price" of the underlying asset and corresponds to value added per worker. Expected productivity is the "strike price" at which the option is executed and is derived by applying current growth rates of potential output over potential employment to productivity levels that are currently observed. In order to ensure consistency between the values for the hiring indicator as price of the option and the values for labour productivity as prices of the underlying asset, the hiring indicator first is rescaled so that the minimum value in the time series becomes 0 and the maximum value 10,000.[8] In order to exclude business-cycle-related effects and to extract the part of the implied volatility series that uniquely relates to labour market uncertainty, in a second step the implied volatility is regressed on the hiring index. The residual from this regression is once more rescaled so that the minimum value of the time series becomes 0 and the maximum value is set to 100. The rescaled residual is the ILO hiring uncertainty index.

The ILO hiring uncertainty index then reflects the assessment of employers about the volatility of future labour market developments. If the market uncertainty perceived by employers is high, there is a significant probability for hired workers to be much less productive than expected. This is then indicated by a larger value for the hiring uncertainty index. If the economic outlook is less uncertain and workers' productivity is likely to be close to the expectation, the index will be lower.

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[7] See http://www.manpowergroup.com/press/meos_landing.cfm.

[8] Robustness tests show that short-term trends in the implied volatility time series are little sensitive to the rescaling factor that is used for the hiring indicator. However, long-term trends seem to be more volatile.

Appendix 2. Public sector, social security and labour market measures in selected countries

Country	Public Expenditure Measures			Public Revenue Measures		Labour Market Measures
	Public wages	Public employment	Pensions, subsidies	Social security contributions	Income taxes	Minimum wages
Austria	Wage freeze for 2013	Hiring freeze until 2014	Stricter eligibility conditions on pensions and early retirement			
Belgium		Reduction by 5.5% between 2008 and 2012	Increase of early retirement age from 60 to 62 with a career of 40 years, with exceptions for some professions			
Bulgaria			Increase of retirement age by 1 year			Raise from BGN 270 to BGN 290 (monthly minimum wage as % of average wage decline from 39.5% in 2008 to 33.7% in 2011)
Cyprus	Wage cut of 10% for new entrants; wage freeze for 2 years	Reduction of 5,000 over the next 5 years			Increase of 3% on gross pensionable earnings; temporary contribution on gross earnings of public/ private sector employees for 2 years	
Czech Republic	Wage cut of 10% (excluding teachers)			Increase for high-income earners		
Estonia	Wage cut of 10% in public administration and 3% in education in 2009-2010; Wage freeze in 2011-2012			Increase in unemployment insurance tax to 4.2%		

France	Wage cut of 10% for starting wages in 2000-2010	Replacement freezing scheme affecting 30,400 civil servants	Increase of retirement age from 60 to 62 for selected groups	Increase of 0.2% of 2% social security contribution on capital income	Temporary increase of 3% on high-income households; Increase of 5% in corporate taxation	
Greece	Wage cut by 10% for local political staff; 15% in public sector salaries; abolition of 13th and 14th monthly salary	1:10 hiring attrition rule; employment reduction of 15% by 2011; target by 2015 modified to 26% from 20% reduction	Reduction of supplementary pensions by 10%, to a level of 20%		New progressive taxation scheme with 9 brackets (before: 4) with a 45% top rate (up from 40%) in 2010	Cut of 22% (32% for those under age 25)
Hungary	Wage freeze of gross wage bill and abolishment of bonuses		Removal of 13th monthly pension; restrictions to disability pensions; reduction in housing, student, pharmaceutical subsidies	Increase by 1%	Increase to 19% of corporate income tax rate starting in 2010	
Ireland	Wage cuts of 10% to new entrants and highest wages; 4.7% reduction on average in 2010	Reduction of 24,750 staff over 2008 levels	Progressive tax-relieved levy on the gross pay of pensionable public servants			Cut of €1 to €7.65 but reverted to €8.65 in July 2011
Italy	Freeze until 2014; incremental cuts to central government ministries between 2012-14		Increase in women's retirement age to 65; requirement to work 41 years before retirement	Extension of tax base	Surtax of 3% on individual income above €300,000	
Latvia				Increase by 2% as of 2011	Increase of income taxes from 23 to 26% in 2010; taxation of fringe benefits in 2010	
Luxembourg			Cut by 10% of subsidies to companies			
Poland				Increase by 2% in disability pension contribution paid by employers		
Portugal	Real wage loss of 2.5% in public administration in	Recruitment freeze			Abolition of lower tax rate for companies	

	2010; further cuts of 3.510% in 2011; suspension of bonuses in 2012				with a taxable profit up to € 12,500	
Romania	Wage cut of 25% in 2010; abolition of bonuses in 2011	Replacement of 1 staff for 7 leaving	Increase in retirement age to 65 (men) and 63 (women) by 2030	Introduction of the obligation to pay 5.5% health contribution when income is higher than €173		
Slovak Republic	Wage cut of 10% in state wage bills			Non-monetary benefits became subject to social security and health contributions		
Slovenia	Wage cut of 15%					
Spain	Wage cut of 5% in 2010, frozen in 2011 and 2012	Hiring freeze in 2012			Temporary increase in personal income tax	Freeze (2012)
United Kingdom	Freeze between 2012 to 2014	Drop of 7.4% in public employment since late 2009 - Target of 330,000 jobs cut by 2014	Removal of child benefits for high-income families		Increase of tax rate for the wealthy	

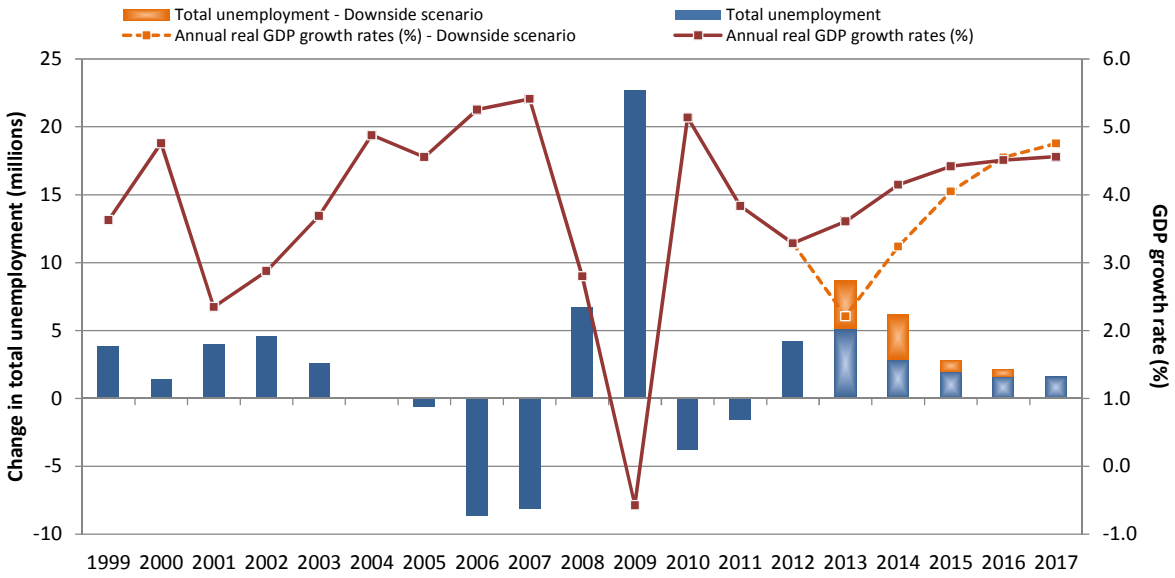
Sources: EC Stability and Convergence Programme, OECD Restoring Public Finances 2012, EC Tax reforms in EU Member States 2011.

2. Global labour market trends and prospects

Unemployment on the rise again, as job creation slows across most regions

The rise in estimated global unemployment by 4.2 million in 2012 is one of the largest increases since the early 2000s, excluding the immediate crisis years (see Figure 7). Reaching 197.3 million jobseekers in 2012, the number of unemployed is expected to rise further by about 5 million in 2013 and by 2.9 million in 2014 in the ILO's baseline projection, which assumes effective policy action in the United States to avoid a sharp reduction in fiscal expenditures and successful resolution of the debt ceiling discussions and no intensification of the Euro area sovereign debt and banking crisis.[9] At the same time, the global unemployment rate is projected to edge higher and remain stuck at around 6 per cent until at least 2017. The larger increase in global unemployment projected for 2013 as compared with 2012 is due to projected increases in the Developed Economies and European Union region as well as South-East Asia and the Pacific, South Asia and Latin America and the Caribbean. Some of this, in turn, is due to population and labour force growth, while some is due to lags between economic changes and changes in the labour market.

Figure 7. Annual change in global unemployment and GDP growth, 1999–2017



Note: The chart displays past trends and projections for annual changes in global unemployment. The chart also includes projections for the annual change in global unemployment under the assumption of a further deterioration in world economic developments in 2013 and 2014 (see text and Annex 2 for more details).Source: ILO, *Trends Econometric Models*, October 2012.

[9] The ILO's baseline scenario is consistent with the central projection in the IMF's *World Economic Outlook*, October 2012 (IMF, 2012b).

However, a downside scenario was also estimated, one that assumes an intensification of the crisis in the Euro area. Global unemployment would severely worsen in this downside scenario. Global output growth would fall to 2.2 per cent in 2013 and 3.2 per cent in 2014 (versus 3.3 per cent and 3.6 per cent, respectively, in the baseline scenario).[10] As a consequence, global unemployment would increase by an additional 3.5 million in 2013 (a total increase of 8.7 million versus 2012) to 206 million, corresponding to a rate of 6.1 per cent, rising to 212.2 million in 2014, a rate of 6.2 per cent. The bulk of the increase in unemployment would occur in the Developed Economies and European Union region, where the unemployment rate would reach 9.2 per cent in 2013, and rise further to 9.5 per cent in 2014, versus 8.7 and 8.6 per cent, respectively, in the baseline. The downside scenario implies that failure to enact effective policies to avoid a further intensification of the Euro area crisis would raise the global unemployment rate to a level not seen since the depths of the crisis in 2009. The unemployment rate in the Developed Economies and European Union region would far exceed the peak rate reached in 2010. Importantly, this scenario only considers the effects of insufficient policy response in Europe. It does not include a potential double impact of insufficient policies in both Europe and the United States. Such a development would undoubtedly bring about an even larger surge in unemployment.

Youth unemployment rate rises to 12.6 per cent

The labour market situation remains particularly bleak for the world's youth. The ILO estimates global youth unemployment of 73.8 million in 2012, a rate of 12.6 per cent, versus 12.4 per cent in the previous year (see Annex 1, Tables A3 and A4). Global youth unemployment has increased by 3.4 million since 2007. The rise in youth unemployment is occurring alongside a withdrawal of young people from the labour market, with 22.9 million fewer employed youth in 2012 than in 2007, despite growth in the global youth population of more than 12 million. This resulted in a decline in the global youth labour force participation rate of about 2 percentage points between 2007 and 2012. While part of this decline is due to increased time spent in education – a favourable trend in many developing countries with low historical attainment levels for secondary and tertiary education – the decline in youth participation in the Developed Economies and European Union region is more plausibly explained through discouragement and rising numbers of youth neither in education, employment or training, the so-called NEET rate.[11] In effect, many youth in a number of countries risk going from being unemployed or out of the labour market to becoming unemployable.

A divergent unemployment picture in developed and developing countries

There is a great deal of heterogeneity among the regions of the world with regard to trends in unemployment, and there is also a general divide between developed and developing regions. Unemployment rates remain far above historical levels in the Developed Economies and European Union region (8.6 per cent in 2012 versus an average of 6.9 per cent between 1998 and 2007), while in nearly every developing region, unemployment rates in 2012 were actually below average in comparison with the decade preceding the crisis. In the Central and South-Eastern Europe (non-EU) and CIS, South-East Asia and the Pacific, Latin America and the Caribbean and North Africa

[10] See Annex 1 for regional GDP growth rates assumed in the downside scenario.

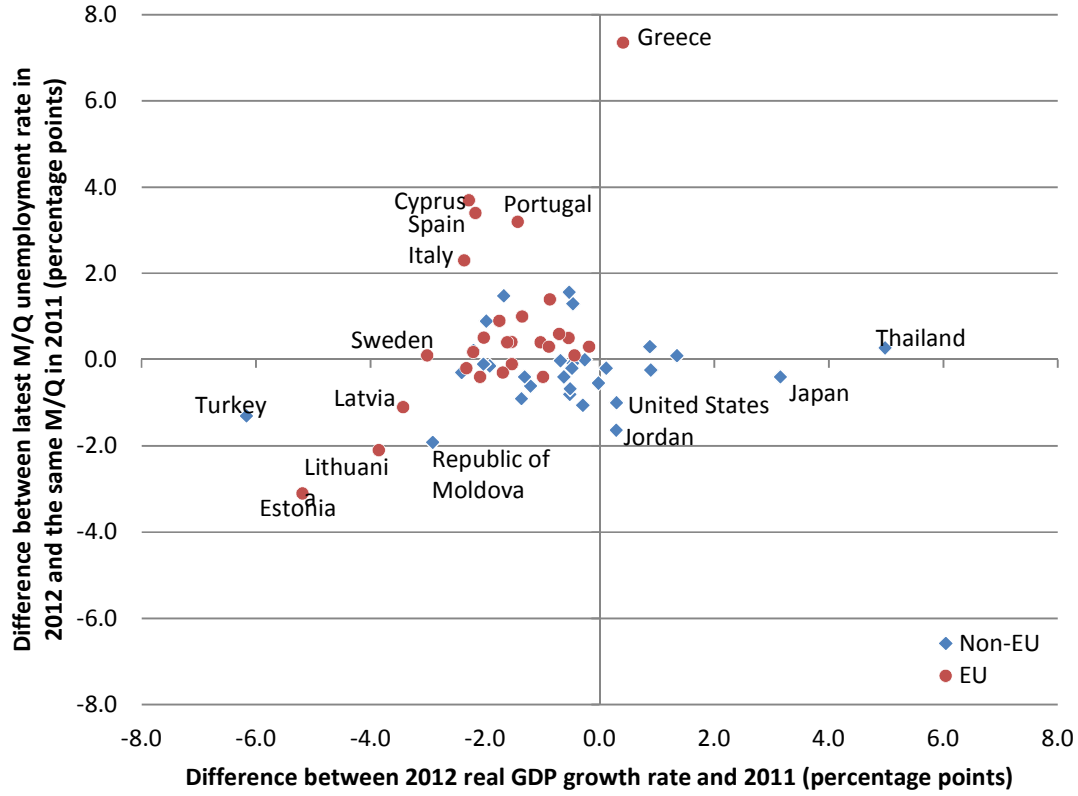
[11] See also see the Developed Economies and European Union section in chapter 3 for further discussion of trends in NEET rates in this region.

regions, unemployment rates in 2012 stood more than 1 percentage point below the average over the decade from 1998 to 2007.

One reason for this divide is that by and large, developing economies have significantly outperformed developed economies during the recovery period in terms of economic growth. There is also evidence that stimulus packages enacted in developing countries to counter the impact of the crisis were targeted more towards addressing labour market weaknesses (see ILO, 2012b). In contrast, in the Developed Economies and European Union region, broadly weak growth underscored by recession conditions in Europe, and limited effectiveness of fiscal and monetary measures implemented to mitigate the impact of the crisis on labour markets, has contributed to an increase of 14.8 million unemployed since 2007. This amounts to more than half of the total global increase in unemployment, despite the region accounting for less than 16 per cent of the global workforce.

Another reason for the divide in unemployment trends between developed and developing economies is that in developing countries, which often have large shares of workers outside of formal, wage employment, unemployment rates typically have a weaker correlation with macroeconomic changes than in developed economies. Figure 8 shows developments in economic growth and unemployment rates between 2011 and 2012 in 57 countries for which monthly or quarterly data are available. In general, a much stronger relationship between growth and unemployment rates is observed in the developed economies, with developing countries, such as Thailand (which saw a large pickup in growth compared with the flood-induced downturn in 2011), showing a far weaker relationship. The Euro area crisis is evident in the figure, as the upper-left quadrant, populated disproportionately by countries in the Euro area, indicates slowing output growth and rising unemployment rates.

Figure 8. Changes in GDP growth and unemployment rates, 2011–12, selected economies



Note: Euro area economies are indicated as red dots.
Source: Eurostat, OECD, ILO LABORSTA-STI and IMF WEO.

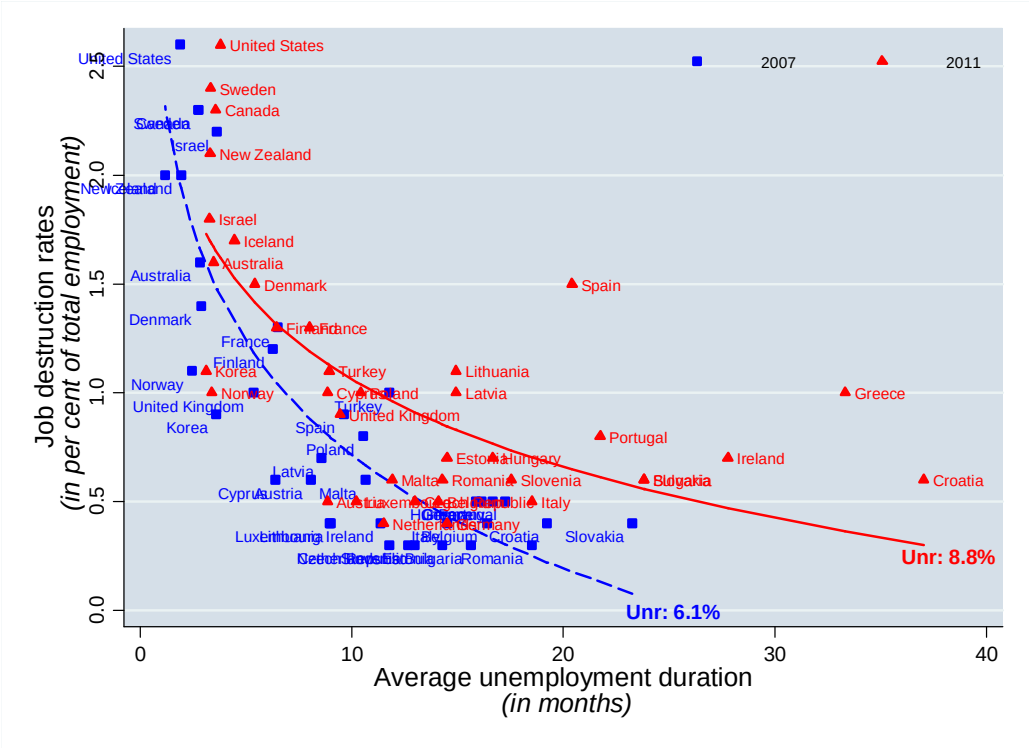
An increasing share of job-seekers is long-term unemployed

Unemployment rates alone do not reveal the full picture of the state of labour markets. The duration of unemployment also matters, in particular in countries where well-developed social security systems provide alternative sources of income. In this respect, an increasing proportion of long-term unemployed is likely to reflect structural problems in the labour market, creating the risk that workers become less attached to labour markets and suffer from skills erosion and reduced employability. This, in turn, can have adverse effects on the broader economy, in the short run by sapping aggregate demand through reduced consumption, while also reducing trend growth in the long run.

Many developed economies have seen a sharp rise in the unemployment rate mainly as a result of lengthening unemployment duration and rising long-term unemployment (see Figure 9). Some countries, in particular in the European Union, did see a simultaneous increase in job destruction rates (measured by unemployment inflows), pushing their unemployment rates beyond the regional average. For instance, between 2007 and 2011, Ireland and Latvia both saw their national unemployment rates rise by nearly 10 percentage points, as the share of long-term unemployed in total unemployed rose by more than 25 percentage points in both countries and job destruction rates more than doubled. Spain's unemployment rate rose by more than 13 percentage points, as the share of long-term unemployed rose by more than 21 percentage points and job

destruction increased by 50 per cent. On the other hand, in the United States, the unemployment rate rose by 4.3 percentage points over this period, mainly as a result of lengthening unemployment spells and an increase of the share of long-term unemployed by more than one-fifth. This sharp increase in long-term unemployment is a sign of severe labour market distress, characterized by extremely weak job creation, an increase in persons receiving unemployment benefits, growing risks that the unemployed will slip through the cracks of the underlying social protection systems as benefits are exhausted, and a risk of long-term structural damage in the labour market due to growing skills mismatches (see Box 2).

Figure 9. Job destruction vs. unemployment duration (2007 vs. 2011)



Note: The chart displays the iso-unemployment curve (IUC, see Pérez and Yao, 2012) for a selection of developed economies between 2007 and 2011. The IUC plots job destruction rates against average duration of unemployment across countries for a given year. An outward movement of the IUC indicates an increase in unemployment. The dashed and solid lines represent the theoretical IUC estimated for 2007 and 2011. The average unemployment rate (Unr) for the countries in this chart amounts to 6.1 per cent in 2007 and 8.8 per cent in 2011.

Source: ILO, *Key Indicators of the Labour Market*, 7th edition.

Box 2. Concerns over growing skills mismatch

For many workers, job destruction and unemployment associated with the economic crisis has resulted in the need to look for jobs in "new" sectors and occupations. Some of the workers who lost their jobs in the financial and constructions sectors, which were the first to be hit by the crisis in late 2008 and 2009, were forced to look for employment in sectors less strongly affected. But as the economic crisis spread, and no sector proved to be immune, increasing numbers of workers found themselves in a situation where it was unlikely that they would obtain a job similar to their previous one. As economies are restructuring, a mismatch may therefore arise between the supply of skills that is available in the large stock of unemployed created by the economic crisis and the demand of skills, in particular in developed economies. Such a mismatch hampers the reallocation of labour and will put upward pressure on unemployment rates.

Workers may respond to the changing environment in various ways. For some, relocation to another area may be sufficient to obtain a job. For others, "occupational downgrading" may be the only option, which means taking a job below their previous level of skill. This will result in increasing over-qualification of workers, and in this way add to mismatch among the employed. Even preceding the economic crisis, mismatch (both under-qualification and over-qualification) affected considerable and sometimes rising proportions of workers, with negative consequences for job satisfaction, workers' wages and productivity of firms (see e.g. Quintini, 2011).

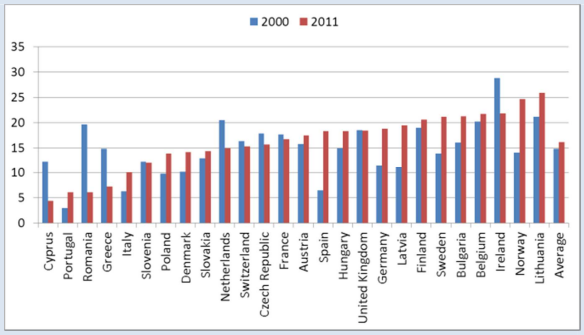
Although the issue of skills mismatch has received renewed attention in developed economies due to the economic crisis, skills mismatch has affected and continues to affect labour markets around the world. This can be illustrated with an index of dissimilarity which captures the differences in the shares of educational attainment of the employed in comparison with the unemployed (see Appendix 1 and Estevão and Tsounta, 2011). It should be emphasized that this index captures one dimension of mismatch (mismatch between the employed and the unemployed in terms of level of education), and does not capture other dimensions such as mismatch at more detailed levels of skills or mismatch between the skills of the employed and their job requirements. The index can also be interpreted as a summary measure of the relative position of labour market groups with different levels of education. If primary, secondary and tertiary graduates all have the same unemployment rate, the index will have a value of zero (no dissimilarity between groups), while the index would reach a value of 1 (complete dissimilarity) if, for example, all those with primary and tertiary education are employed and all those with secondary education are unemployed.

Skills mismatch as captured by the dissimilarity index shows a remarkably wide range in both developed and developing countries (figures B2.1 and B2.2). In the sample of 26 developed economies, mismatch was less than 10 per cent in Cyprus, Greece, Portugal and Romania in 2011, while in other countries mismatch exceeded 20 per cent (Belgium, Bulgaria, Finland, Ireland, Lithuania, Norway and Sweden). In half of the small sample of 14 developing economies, mismatch was less than 10 per cent, and exceeded 20 per cent in only two countries (Indonesia and the Russian Federation). Based on these samples of countries, it appears that mismatch is at lower levels in the developing world, despite the exceptionally high level in Georgia in 2002 (53 per cent). Although this may appear counterintuitive given the often lower levels of educational attainment in developing economies, it should be borne in mind that these levels affect both the employed and the unemployed.

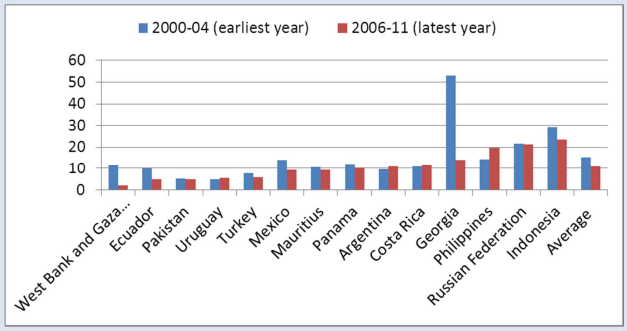
Apart from differences in levels, trends appear to go in opposite directions in developed and developing countries. Between 2000 and 2011, mismatch increased in 16 developed countries, and in the whole sample of 26 countries mismatch increased on average by 1.3 percentage points. In some countries, the increase was much stronger and exceeded 5 percentage points (Bulgaria, Germany, Latvia, Norway, Spain and Sweden), while a strong decrease was experienced in Cyprus, Greece, Ireland, the Netherlands and Romania. In the sample of developing economies, mismatch increased in only four countries (Argentina, Costa Rica, Philippines and Uruguay), while in the sample as a whole mismatch decreased by 4.3 percentage points. These trends indicate that the relationship between mismatch and unemployment is complex. Rising mismatch is not always reflected in rising unemployment, as the latter is also determined by the broader economic environment. Nevertheless, the trends in many economies underline the need for policies that ensure the best

possible match in the labour market, and more so in the current environment of high unemployment.

B2.1 Skills mismatch in selected developed economies (2000 vs. 2011)



B2.1 Skills mismatch in selected developing economies (earliest available year during 2000–04 and latest year during 2006–11)



Note: the figure shows the value of the following index:
$ID^{(mismatch)}$ = (1/2) Σ ABS ($E_i/E - U_i/U$), with:
ABS = absolute difference
E_i/E = proportion of the employed with education level i
U_i/U = proportion of the unemployed with education level i
Σ = summation over three levels of education (primary or less; secondary; and tertiary)
Source: ILO calculations based on *Key Indicators of the Labour Market*, 7th edition.

Part-time work signalling both challenges and some scope for optimism

Many employed have seen their hours of work decline, with a growing share of part-time workers in many developed economies, many of them involuntary par-time workers. Overall, in the EU-27, the share of part-time workers in total employment rose by 1.7 percentage points between Q2 2007 and Q2 2012, with an increase of 0.4 percentage points in the last year alone. In Ireland, the share of part-time workers surged by 5.7 percentage points since Q2 2007, with an increase of between 3 and 4 percentage points in Austria, Cyprus, Italy and Turkey. Between March and September of 2012, the number of part-time workers in the United States increased by 941,000, equal to 87 per cent of the net new jobs that were created over this period (BLS, 2012).

If transitory, such an increase in part-time employment could be the first step for a rise in more permanent, full-time jobs as firms first begin to hire part-time workers and subsequently convert some part-time workers to full-time employment. However, a long-term rise in part-time employment, particularly as has been witnessed in European countries, may also be a consequence of the heightened uncertainties under which firms have been operating. That is, given an uncertain macroeconomic outlook, firms are likely to prefer employing new workers on temporary or part-time employment contracts, providing more flexibility to reduce effective headcounts in the event of deteriorating economic fundamentals and to increase hours worked should the outlook improve. This type of employment, however, is less likely to sustain increased consumption and aggregate demand.

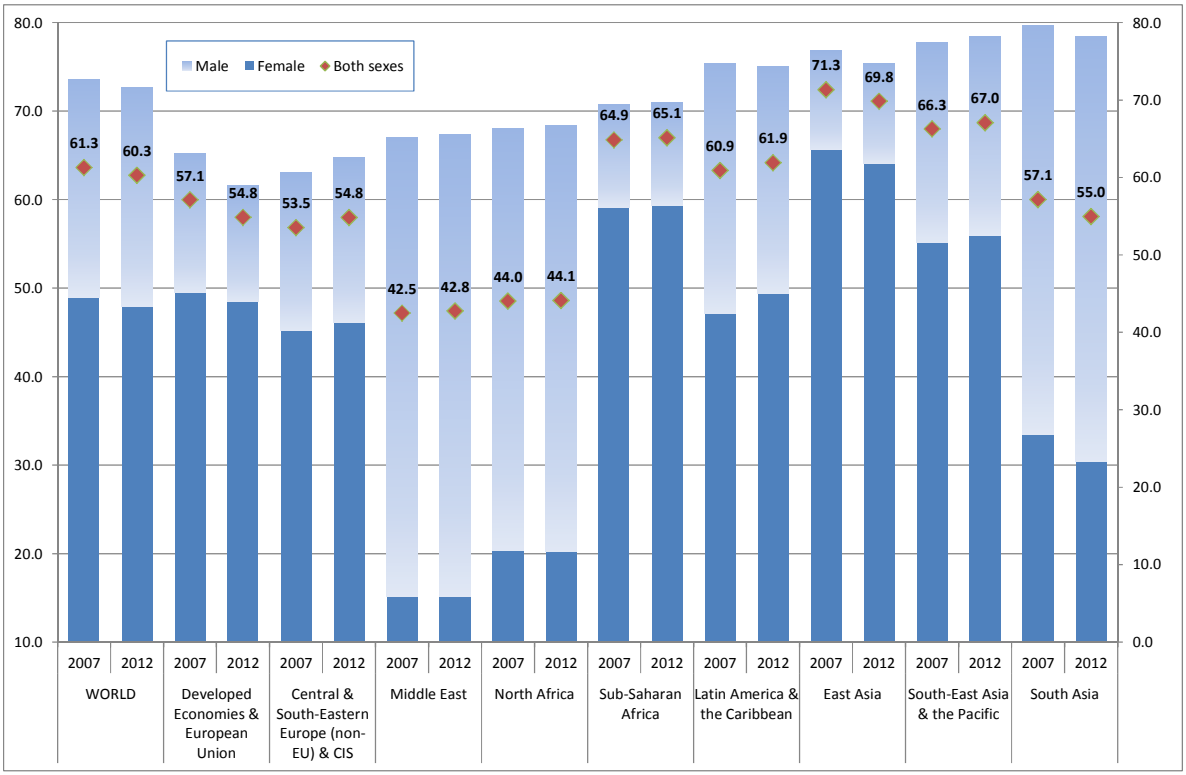
Understanding the scope and nature of the global jobs gap

A global jobs gap of 67 million, and a crisis situation for youth

As of 2012, the global employment-to-population ratio (EPR) – the share of the working-age population that is employed – stood at 60.3 per cent. The global EPR declined by 1 percentage point between 2007 and 2012 (see Figure 10), reflecting a substantial weakening in economies' employment-generating capacity. The EPR in 2012 is the lowest observed ratio since at least 1991, the earliest year for which global aggregate estimates are available. Moreover, while there has been a long-term decline in the global EPR, the average annual decline during the global economic crisis was more than three times the average decline over the 16 years between 1991 and 2007 and represented a stark reversal from the moderate increase in the global EPR between 2003 and 2007. On the basis of these EPR figures, the ILO estimates that a global jobs gap of 67 million has emerged as a result of the economic crisis.[12] That is, there were 67 million fewer employed people around the world in 2012 than expected based on pre-crisis trends.

[12] The estimate of the global jobs gap is calculated by comparing the historical average annual change in country-level EPRs for four demographic groups (youth male, youth female, adult male and adult female) to the actual changes in EPRs that occurred over the period 2007–12. The historical period used for comparison is 1999–07. Using alternative periods for the comparison yields an absolute minimum estimate of the global employment gap of 52 million and an absolute maximum estimate of 88 million.

Figure 10. Employment-to-population ratios by sex, world and regions, 2007 and 2012



Source: ILO, *Trends Econometric Models*, October 2012.

The largest regional decline in EPRs between 2007 and 2012 occurred in the Developed Economies and European Union region, which registered a drop of 2.3 percentage points, from 57.1 per cent to 54.8 per cent. South Asia saw a decline of 2.2 percentage points over the same period, while East Asia experienced a decline of 1.5 percentage points. Each of the remaining regions outside of North Africa saw increases in EPRs, ranging from 1.3 percentage points in Central and South-Eastern Europe (non-EU) and CIS to 0.1 percentage points in North Africa.

Some divergences are observed in terms of trends in EPRs by sex between 2007 and 2012. In most regions, male and female EPRs followed similar trends. Latin America is a notable exception: the overall EPR rose by 1 percentage point mainly as a result of an increase of the female rate by 2.2 percentage points whereas the male rate declined by 0.3 percentage points.

In South Asia, while both male and female EPRs declined, the drop in the female EPR far exceeded the corresponding decline for males (3.1 versus 1.2 percentage points). Massive gender gaps in employment rates remain in South Asia, as well as in the Middle East and North Africa, where women are far less likely to be employed than their male counterparts.

Between 2007 and 2012, the biggest overall contributor to the decline in global EPRs was a decline in labour force participation rates, which reduced the global EPR by 0.9 percentage points

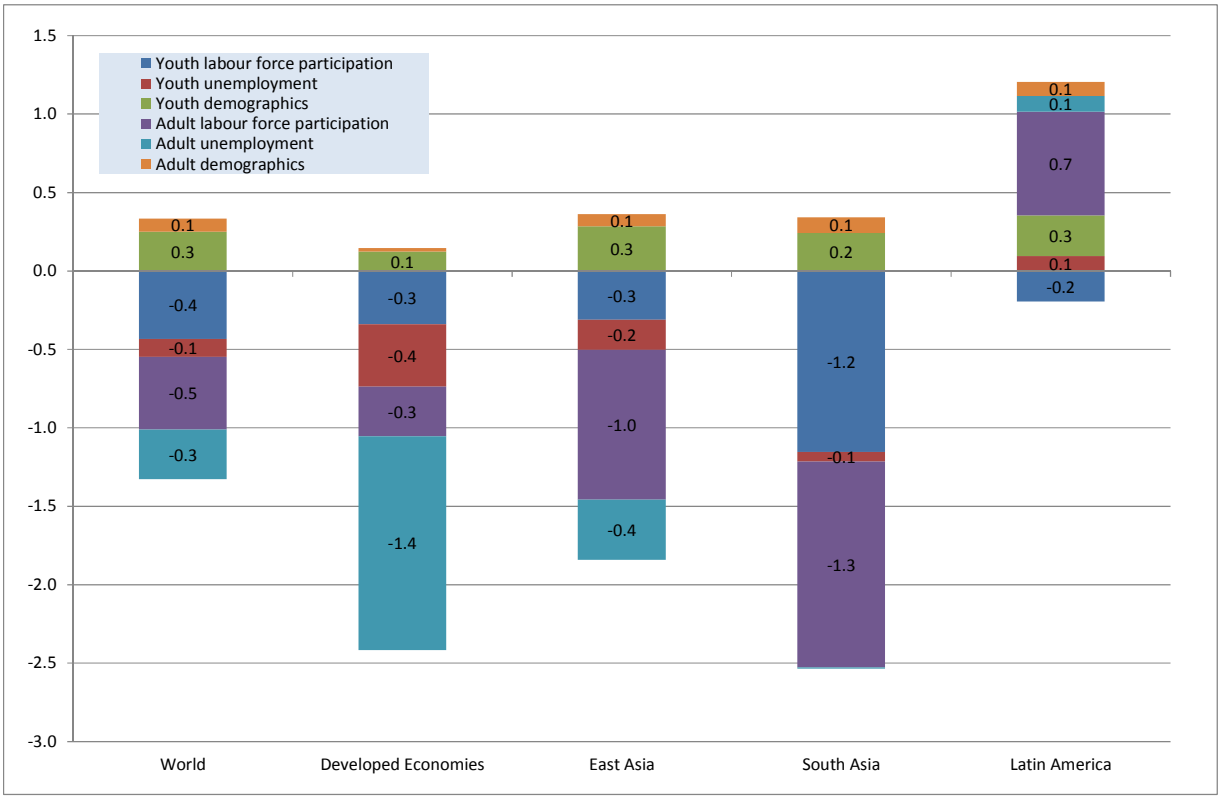
(see Figure 11).[13] Higher unemployment rates contributed a further 0.4 percentage points to the decline. These two negative trends were offset somewhat by favourable changes in the underlying population structure (a larger share of the working-age population in the total population), which added 0.3 percentage points to the global EPR.

Adverse labour market conditions for young people contributed disproportionately to the overall decline, with falling youth participation and rising youth unemployment accounting for -0.5 percentage points of the decline, versus a contribution of –0.8 percentage points from these two factors for adults. Even though young people made up less than 20 per cent of the global labour force before the crisis, negative labour market trends for youth accounted for 41 per cent of the decline in the global EPR due to rising unemployment and falling participation. Put another way, the contribution of adverse labour market outcomes for youth has been twice as large at the global level as one would expect based on the relative size of the youth cohort. These data show starkly that young people have suffered tremendously in this crisis.

In the Developed Economies and European Union region, the overall EPR declined by 2.3 percentage points between 2007 and 2012. Rising unemployment rates accounted for 1.7 percentage points of the overall decline in EPRs, while declining participation rates accounted for 0.6 percentage points. Adverse labour market trends for youth contributed 0.7 percentage points (31 per cent) of the decline, despite youth only accounting for 12.8 per cent of the region's labour force prior to the onset of the crisis. Thus, the contribution of negative labour market trends for youth to the overall regional decline in employment in the Developed Economies and European Union has been around two–and–a–half times as large as would be expected based on the size of the youth cohort.

[13] Appendix 2 provides a description of the methodology utilized for this decomposition.

Figure 11. Decomposition of changes in the employment-to-population ratio, 2007–12



Source: Authors' calculations on the basis of ILO, *Trends Econometric Models*, October 2012.

Adverse trends for female employment have contributed disproportionately to the overall global decline in EPRs. Falling female participation and rising female unemployment contributed 0.5 percentage points (55 per cent) of the decline in the global EPR over the period 2007-2012, versus 46 per cent attributed to these factors for men. This points to a disproportionate impact on women, as they only accounted for 40 per cent of the global labour force prior to the onset of the crisis. This was largely driven by developments in two populous regions, East and South Asia, where falling female labour force participation and rising unemployment rates have been observed. For example, in South Asia, where falling female participation accounted for 1.5 percentage points of the 2.2 percentage point decline in the region's EPR between 2007 and 2012. Changes in unemployment for both youth and adults had little impact on South Asia's EPR.

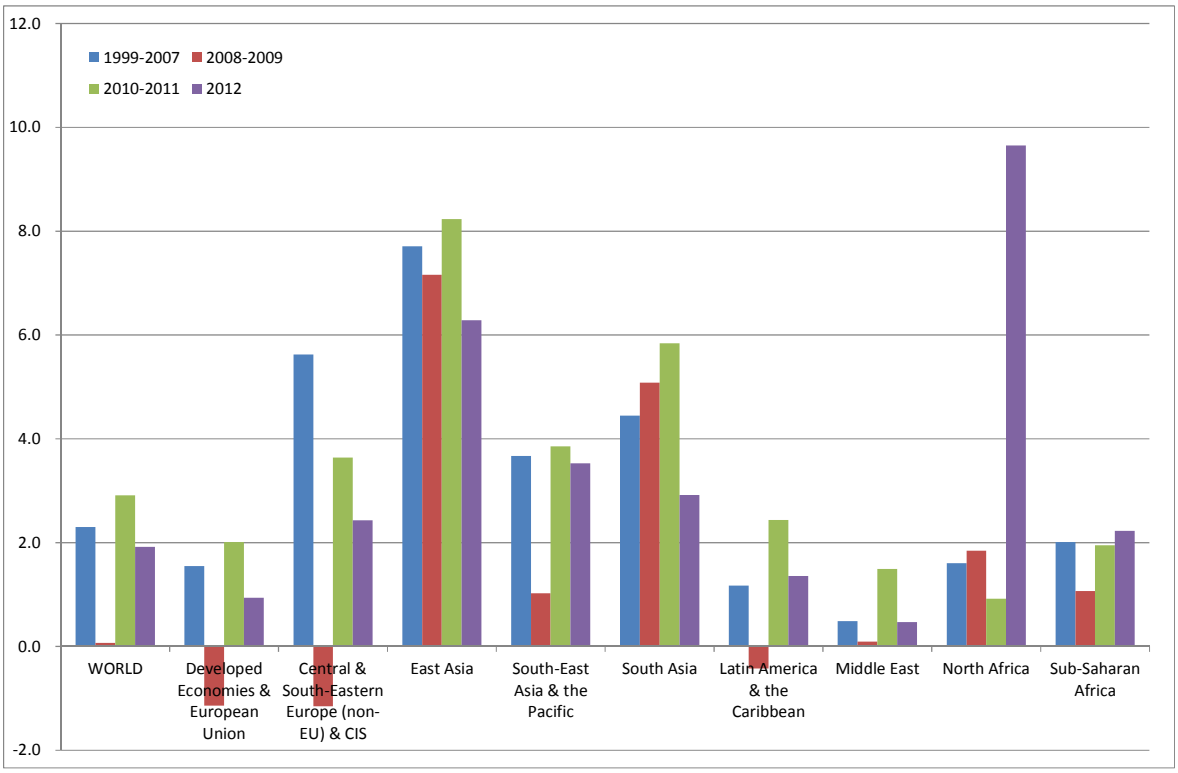
In contrast, in the Developed Economies and European Union region, the deterioration in labour market trends for men had a much larger effect on the overall decline in the regional EPR than the corresponding effect for women. Increased male unemployment contributed 1.1 percentage points to the 2.3 percentage point decline, while falling male labour force participation contributed a further 0.7 percentage points. The impact of rising female unemployment was somewhat offset by rising female participation in this region. Overall, adverse labour market trends for women accounted for only 24 per cent of the decline in the EPR in the Developed Economies and European Union region, while women make up around 45 per cent of the workforce in this region. The more severe crisis impact on men in the labour market can be attributed to the larger impact of the crisis on industries with large shares of male workers, such as construction and manufacturing.

Trends in employment quality

Slowing labour productivity growth limits potential for investment and real wage growth, harming aggregate demand

Labour productivity growth slowed sharply in 2012. At the global level, output per worker grew by only 1.9 per cent in 2012, down from an average of 2.9 per cent in the two previous years and below the pre-crisis average growth rate of 2.3 per cent (see Figure 12). All regions excluding North Africa and Sub-Saharan Africa experienced a decline in productivity growth, and growth remains well below the pre-crisis trend in the Developed Economies and European Union, Central and South-Eastern Europe (non-EU) and CIS, East Asia and South Asian regions. In North Africa, the rapid productivity growth in 2012 reflects the sharp rebound in economic growth following the conflict-induced contraction of the previous year.

Figure 12. Output per worker growth, world and regions, selected periods



Source: ILO, *Trends Econometric Models*, October 2012; World Bank, *World Development Indicators*; IMF, *World Economic Outlook*, October 2012.

The main factor underpinning this broad decline in productivity growth is weak investment. Investment growth has fallen further over the past year, with weakness spreading even to regions such as East Asia, where investment had been holding up well. The persistence of weak investment growth despite progress in repairing balance sheets reflects the new headwinds that have emerged from the sharp increase in macroeconomic uncertainties.

Moreover, the vicious circle of uncertainty, weak investment and diminished productivity growth is now contributing to slower wage growth, which threatens to hinder consumption and further sap aggregate demand. In 2011, global wage growth stood at 1.2 per cent, versus 2.1 per cent

in the previous year and 3 per cent in 2007 (ILO, 2012j). Excluding China, the figures are even more dire, with global wages growing by only 0.2 per cent, versus pre-crisis growth rates in excess of 2 per cent. And while estimates are not yet available for 2012, given this backdrop of heightened uncertainty and slowing investment and productivity growth, it is unlikely that wage growth accelerated over the past year.

A slowdown in productive structural change means less progress in reducing vulnerable employment

Diminished investment and consumption in developing regions is likely to reduce progress in shrinking the share of workers in vulnerable employment – comprising own-account workers and contributing family workers – who are far less likely than waged and salaried workers to benefit from existing social protection systems (see also chapter 4 for a more detailed analysis). In 2012, 1.49 billion workers in developing countries – 56 per cent of all workers in the developing world – were in vulnerable employment, an increase of more than 9 million from the previous year (see Annex 1, Table A13). The number of vulnerable workers grew in most developing regions, including South-East Asia and the Pacific, South Asia, Latin America and the Caribbean, the Middle East, North Africa and Sub-Saharan Africa. The persistence of a large share of vulnerable workers in the developing world represents another threat to growth prospects, given that this is likely to hold back consumption and limit growth in aggregate demand.

Continued progress in reducing poverty, but the number of "near poor" workers continues to grow

The number of workers living in extreme poverty has dramatically declined over the past decade and throughout the global crisis: the number of workers living with their families on less than US$1.25 a day fell by 281 million in the decade to 2011, leaving a total of 397 million working poor below this threshold. This is equal to just over 15.2 per cent of the developing world's total employment, down from 30.7 per cent in 2001, and down from 45.2 per cent in 1991. The number of workers living in moderate poverty also declined over this period, but by a more modest 35 million, for a total of 472 million workers living with their families on between US$1.25 and US$2 a day. Altogether, one-third of the developing world's workforce was living in poverty in 2011, down sharply from 53.7 per cent in 2001 and from 66.7 per cent in 1991 (see Figure 13).

Rapid economic development in the East Asian region (particularly in China) has had a strong impact on working poverty trends for the developing world as a whole. In the developing world excluding East Asia, the number of workers in extreme poverty actually rose by 26 million between 1991 and 2001, but declined sharply by 115 million in the period from 2001 to 2011. Also, in the developing world outside East Asia, the number of workers in moderate poverty increased in both periods, indicating that progress other than in East Asia has been more limited.

New ILO research has for the first time produced a further breakdown of the developing world's workforce (see Box 3), providing a first glimpse of trends in employment across five economic classes: (1) the extreme working poor (less than US$1.25 a day), (2) the moderate working poor (between US$1.25 and US$2); (3) the near poor (between US$2 and US$4); (4) middle-class workers (between US$4 and US$13); and (5) above middle-class workers (otherwise called "developed world middle-class and above", which are those workers living in households with per capita consumption greater than US$13 per person per day).

Box 3. New ILO estimates of employment across economic classes in the developing world

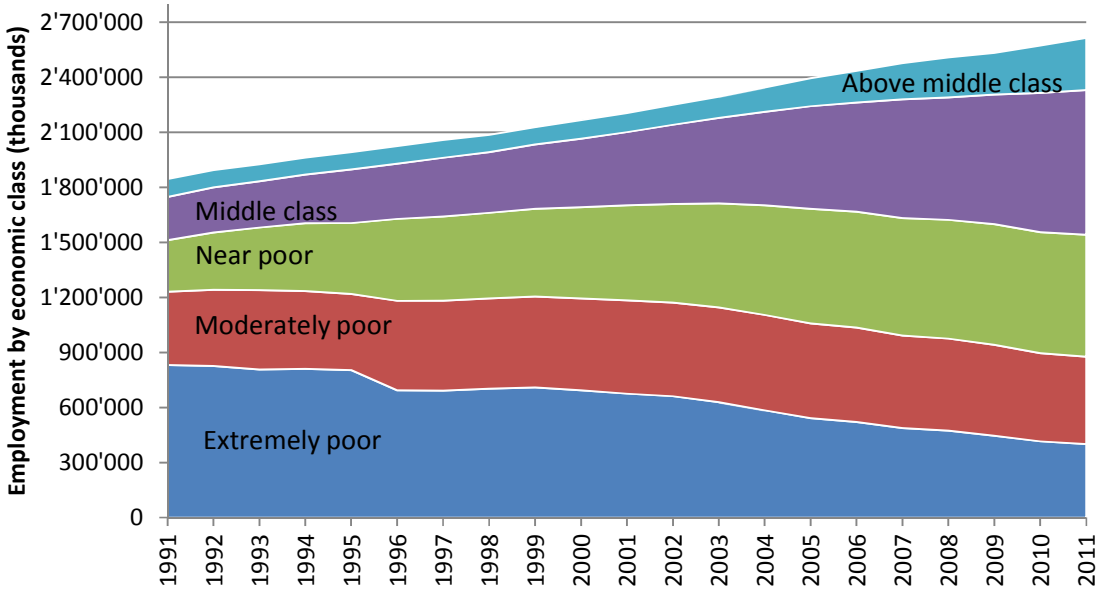
Building on earlier work by the ILO to produce global and regional estimates of the working poor, a new methodology has been developed to produce country-level estimates and projections of employment across five economic classes (Kapsos and Bourmpoula, forthcoming). This has facilitated the production of the first ever global and regional estimates of workers across economic classes, providing new insights into the evolution of employment in the developing world. The aim of the work is to enhance the body of evidence on trends in employment quality and income distribution in the developing world – a desirable outcome given the relative dearth of information on these issues in comparison with indicators on the quantity of employment, such as labour force participation and unemployment rates.

The authors define workers living with their families on between US$4 and US$13 at purchasing power parity as the developing world's middle-class, while workers living above US$13 are considered middle-class and upper-middle-class based on a developed world definition. Growth in middle-class employment in the developing world can provide substantial benefits to workers and their families, with evidence suggesting that the developing world's middle-class is able to invest more in health and education and therefore live considerably healthier and more productive lives than the poor and near-poor classes. This, in turn, can benefit societies at large through a virtuous circle of higher productivity employment and faster development. The rise of a stable middle-class also helps to foster political stability through growing demand for accountability and good governance (see Ravallion, 2009).

The econometric model developed in the paper utilizes available national household survey-based estimates of the distribution of employment by economic class, augmented by a larger set of estimates of the total population distribution by class together with key labour market, macroeconomic and demographic indicators. The output of the model is a complete panel of national estimates and projections of employment by economic class for 142 developing countries, which serve as the basis for the production of regional aggregates.

The new ILO estimates of employment by economic class show that in addition to the 868 million workers living with their families below the US$2 poverty line, there are 661 million "near poor" workers – living between US$2 and US$4 a day, amounting to 25.2 per cent of the developing world's workforce (see Figure 13). The number of near poor workers has increased by nearly 142 million over the past decade, with more than 141 million of this increase occurring outside East Asia. Altogether, 58.4 per cent of the developing world's workforce remained either poor or near poor in 2011. In this respect, the slowdown in structural change during the crisis and the only moderate acceleration in productive transformation expected to take place until 2017 is likely to lead to a slower rate of progress in reducing working poverty around the world. Together with data on vulnerable employment, this shows a clear need for improvements in productivity, sustainable structural transformation and expansion of social protection systems to ensure a basic social floor for the poor and vulnerable.

Figure 13. Employment by economic class, 1991–2011, developing world



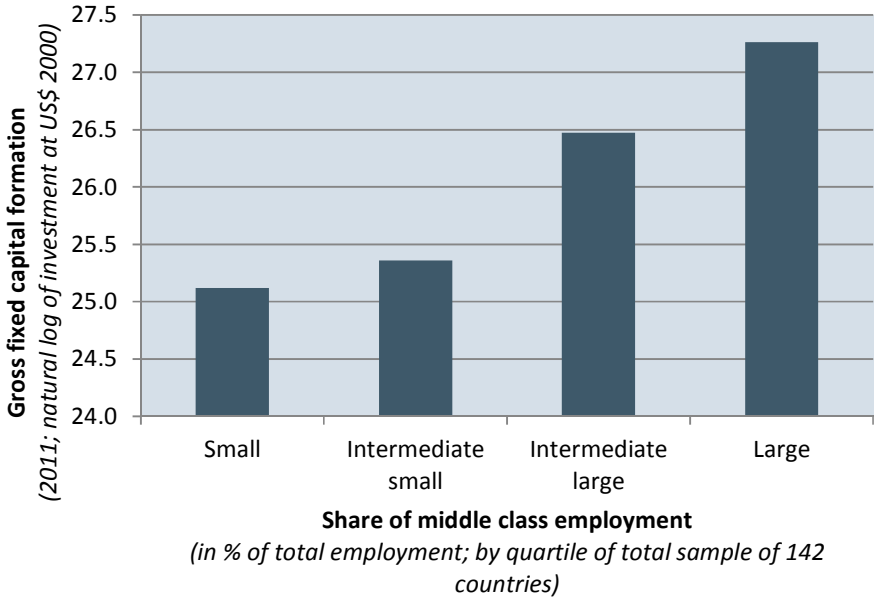
Source: Kapsos and Bourmpoula (forthcoming).

An emerging middle-class workforce in the developed world raises hopes for successful global rebalancing

As the total share of poor and near poor workers gradually fell, an estimated 41.6 per cent of the developing world's workers were attaining the middle and upper-middle-classes in 2011. This is a remarkable development given that in 2001, less than 23 per cent of the developing world's workforce was middle-class versus 53.7 per cent living in poverty. The decade from 2001 to 2011 saw rapid growth in middle-class employment, with an increase of nearly 401 million middle-class workers (above US$4 and below US$13) and an additional increase of 186 million workers above the US$13-a-day line. Current ILO projections indicate that the number of workers in the middle-class and above in the developing world could grow by an additional 390 million by 2017, with the share of middle-class workers rising to 51.9 per cent.

This emerging middle-class in the developing world could bring about a new driver of global growth, with stronger investment and consumption, in particular among poorer parts of the developing world (see Figure 14). The correlation indicates that in recent years (2011) total investment at the country level is associated with the share of the employed labour force that has reached middle-income status or above, thereby increasing domestic absorption. This would help foster structural change in these countries, increase global aggregate demand and potentially contribute to more balanced and sustainable global economic growth, to the extent that rising investment absorbs increasing shares of domestic savings.

Figure 14. Investment is associated with a larger middle-class (2011)



Note: The figure displays an association between the middle-class employment as a share of total employment and the natural log of gross fixed capital formation measured in constant US dollars (base year 2000) for 2011. The sample of 142 countries is averaged into quartiles and country-fixed effects have been taken into account. The empirical relationship between middle-class employment and investment can be represented by a regression line, estimated at:

$$ln(Investment_{2011}) = \underset{(0.258)}{24.6} + \underset{(0.004)}{0.03} \cdot MiddleClassShare_{2011}\,, \qquad R^2 = 0.21$$

Source: ILO, *Trends Econometric Models*; World Bank, *World Development Indicators*.

Despite this progress, much of the developing world still has large segments of poor and near poor workers. In South Asia, 92 per cent of the workforce was either poor or near poor in 2011, while in Sub-Saharan Africa, 86 per cent of workers were in these categories (see Annex 1, Table A15). Much work remains in terms of raising productivity levels and expanding the number of quality jobs in order to catalyse further growth in the developing world's middle-class. In this respect, the current crisis in global labour markets is threatening further progress and faster accession of the still large class of working poor to decent working conditions and better livelihoods.

Global outlook for labour markets

Available labour market data leave no doubt that the slowdown in global economic growth in 2012 has had a widespread, negative impact on the world of work. Global unemployment is rising once again, with particularly negative implications for the world's youth. Growth in the numbers of long-term unemployed and increased labour market detachment is raising the risk of the emergence of structural labour market problems that could become entrenched, lowering potential rates of growth and reducing the likelihood of a sustainable recovery taking hold.

The increase in macroeconomic uncertainty is a reflection of the sharp downturn in aggregate demand that has taken place; but increasingly, this macro uncertainty as well as diminished confidence in the ability of policy-makers to address the current economic challenges is also one of the main contributing factors to slowing growth and poor labour market outcomes. Closing the global employment gap, which has now reached 67 million, will require decisive action by policy-makers to restore confidence and promote investment and job creation.

Much of the current attention is focused on problems in the advanced economies – with record unemployment, recession conditions in Europe and risks of further deterioration in growth and contagion effects, should tail risks materialize. Yet policy-makers in developing regions also cannot afford to sit idle, as economic growth and trade are slowing, as is the rate of productive structural transformation that has driven much of the developing world's progress in reducing poverty and growing a larger middle-class. At the same time, this new cohort of middle-class workers in the developing countries provides hope that a new global economic engine will emerge through higher consumption and investment, leading to a more balanced and sustainable growth model in the years to come.

Above all, at this critical moment for the global economy, what is needed is a renewed focus on the world of work. This will require focusing policy action on employment generation, the promotion of investment and productivity growth. Without a significant improvement in the global labour market situation, there will be little hope of breaking the negative feedback loop still plaguing the global economy.

Appendix 1. Measuring skills mismatches

Skills mismatch can be quantified with an index of dissimilarity which captures the differences in the shares of educational attainment of the employed in comparison with the unemployed. It should be emphasized that this index captures one dimension of mismatch (mismatch between the employed and the unemployed in terms of level of education), and does not capture other dimensions such as mismatch at more detailed levels of skills or mismatch between the skills of the employed and their job requirements. The index is defined as follows:

$$ID^{Mismatch} = \frac{1}{2}\sum_{i=1}^{3} ABS\left(\frac{E_i}{E} - \frac{U_i}{U}\right)$$

where: i = an indicator for the level of education (primary or less; secondary; tertiary); ABS = the operator for the absolute difference; E_i/E = the proportion of the employed with education level i; U_i/U = the proportion of unemployed with education level i.

This index is different from the one used in Estevão and Tsounta (2011) in that it is calculated over two mutually exclusive groups (the employed and the unemployed), and is therefore not directly influenced by the unemployment rate.[14,15]

The index can also be interpreted as a summary measure of the relative position of labour market groups with different levels of education. If primary, secondary and tertiary graduates all have the same unemployment rate, the index will have a value of zero (no dissimilarity between groups), while the index would reach a value of 1 (complete dissimilarity) if, for example, all those with primary and tertiary education are employed and all those with secondary education are unemployed.

[14]In Estevão and Tsounta (2011) the mismatch index is defined as:

$$\Sigma\ (S_{ijt} - M_{ijt})2, \text{ with:}$$

S_{ijt} = proportion of the working-age population with skill level j at time t in state i

M_{ijt} = proportion of employees with skill level j at time t in state i

Levels of skill are based on educational attainment (low skilled – having less than high school diploma; semi-skilled – having a high-school diploma but less than a bachelor's degree; and high skilled – having at least a bachelor's degree).

[15] For example, if all the employed had education level A and all the unemployed level B, the $ID^{(mismatch)}$ calculated over the employed and the labour force would equal the unemployment rate. All else equal, a higher unemployment rate would therefore result in a higher $ID^{(mismatch)}$. Similarly, the index used by Estevão and Tsounta (2011) is affected by the proportion the working-age population that is employed.

Appendix 2. Decomposing changes in employment-to-population ratios

The aim of this methodology is to understand how employment-to-population ratios (EPRs) are linked to changes in age-specific labour force participation rates (LFPRs), changes in unemployment rates (URs), and changes in the underlying population structure.

There are several techniques for decomposing changes in EPR and attributing to each component or to each demographic group a share of total observed change. The methodology presented here builds on the LFPR decomposition methodology adopted by Hotchkiss (2009) and applies it to the EPR. This method exploits the relationship between the aggregate EPR and labour force participation rates, unemployment rates and population shares of different demographic groups in an additive manner.

Accordingly, changes in EPR are given by: (1) changes in LFPR of each demographic group, weighted by the demographic group's current period population share, current period EPR and the inverse of current period LFPR; (2) changes in unemployment rates of each demographic group, weighted by the demographic group's previous period LFPR and current period population share; and (3) changes in the population share of each demographic group, weighted by the difference between the demographic group's previous period EPR and aggregate EPR of the previous period.

More formally:

$$EPR_t - EPR_{t-1} = \sum_i \left\{ \left[LFPR_t^i - LFPR_{t-1}^i\right] \frac{EPR_t^i p_t^i}{LFPR_t^i} - \left[UR_t^i - UR_{t-1}^i\right] LFPR_{t-1}^i p_t^i + \left[p_t^i - p_{t-1}^i\right]\left[EPR_{t-1}^i - EPR_{t-1}\right] \right\},$$

where EPR_t^i is the employment-to-population ratio of the demographic group *i* at time *t*, $LFPR_t^i$ is the labour force participation rate of the demographic group *i* at time *t*, and p_t^i is the population share of the demographic group *i* at time *t*.

To perform this decomposition, data on working-age population and labour force are obtained from the UN Population Prospects 2010 revision database and the ILO EAPEP database, 6th Edition, respectively. Data on unemployment and employment are taken from ILO, *Trends Econometric Models*, October 2012.

Derivation of EPR decomposition:

We start with the equation $EPR_t - EPR_{t-1} = \sum_i \{\left[EPR_t^i - EPR_{t-1}^i\right] p_t^i + \left[p_t^i - p_{t-1}^i\right] EPR_{t-1}^i\}$

Which can be further extended to:

$$EPR_t - EPR_{t-1} = \sum_i \left[EPR_t^i - EPR_{t-1}^i\right] p_t^i + \sum_i \left[p_t^i - p_{t-1}^i\right] EPR_{t-1}^i$$

Recall this identity: EPR= (1−UR) LFPR

The first part of the above equation extends to:

$$\sum_i \left[EPR_t^i - EPR_{t-1}^i\right] p_t^i = \left\{[1 - UR_t^i]LFPR_t^i - [1 - UR_{t-1}^i]LFPR_{t-1}^i\right\}p_t^i$$

$$= \left\{LFPR_t^i - LFPR_t^i UR_t^i - LFPR_{t-1}^i + LFPR_{t-1}^i UR_{t-1}^i]\right\}p_t^i$$

$$= \left\{LFPR_t^i - LFPR_{t-1}^i + LFPR_{t-1}^i UR_t^i - LFPR_t^i UR_t^i - LFPR_{t-1}^i UR_t^i + LFPR_{t-1}^i UR_{t-1}^i\right\}p_t^i$$

$$= \left\{[LFPR_t^i - LFPR_{t-1}^i] - [LFPR_t^i UR_t^i - LFPR_{t-1}^i UR_t^i] - [LFPR_{t-1}^i UR_t^i - LFPR_{t-1}^i UR_{t-1}^i]\right\}p_t^i$$

$$= \left\{[LFPR_t^i - LFPR_{t-1}^i]p_t^i - [LFPR_t^i - LFPR_{t-1}^i]UR_t^i p_t^i - [UR_t^i - UR_{t-1}^i]LFPR_{t-1}^i p_t^i\right\}$$

Therefore, if we substitute the above extension to the main equation, we have:

$$EPR_t - EPR_{t-1} = \sum_i [LFPR_t^i - LFPR_{t-1}^i]p_t^i - \sum_i [LFPR_t^i - LFPR_{t-1}^i]UR_t^i p_t^i - \sum_i [UR_t^i - UR_{t-1}^i]LFPR_{t-1}^i p_t^i + \sum_i \left[p_t^i - p_{t-1}^i\right]EPR_{t-1}^i$$

Which we can write as:

$$EPR_t - EPR_{t-1} = \sum_i [LFPR_t^i - LFPR_{t-1}^i]p_t^i(1 - UR_t^i) - \sum_i [UR_t^i - UR_{t-1}^i]LFPR_{t-1}^i p_t^i + \sum_i \left[p_t^i - p_{t-1}^i\right]EPR_{t-1}^i$$

And finally, we derive to the EPR decomposition:

$$EPR_t - EPR_{t-1} = \sum_i [LFPR_t^i - LFPR_{t-1}^i]\frac{EPR_t^i p_t^i}{LFPR_t^i} - \sum_i [UR_t^i - UR_{t-1}^i]LFPR_{t-1}^i p_t^i + \sum_i [p_t^i - p_{t-1}^i]EPR_{t-1}^i$$

3. Regional economic and labour market developments

Developed Economies and European Union

Unemployment has started to become entrenched and further job destruction threatens

Macroeconomic conditions deteriorated in 2012 in much of the Developed Economies region, substantially increasing uncertainty to the outlook. Spillovers of the Euro area economic woes to the rest of the Developed Economies region and the global economy are becoming increasingly visible. The loss in risk appetite of investors in Europe is spreading more widely, also affecting economies in other countries in the region. As recessionary conditions spread throughout the region, unemployment rates are expected to go up again after having receded since their peak in 2010 (see Table 1). Indeed, the regional unemployment rate is expected to remain elevated throughout 2013 and to slowly decline only from next year onward, mainly thanks to improving labour market conditions outside the Euro area. Overall, unemployment rates will remain almost 2 percentage points higher than before the crisis over the entire forecast horizon.

Table 1. Labour market situation and outlook

		2009	2010	2011	2012p	2013p	2014p	2015p	2016p	2017p
Labour force participation rate (%)		60.5	60.3	60.0	60.0	59.9	59.9	59.8	59.7	59.7
Unemployment rate (%)	Total	8.4	8.8	8.4	8.6	8.7	8.6	8.4	8.2	8.0
	Male	8.8	9.1	8.7	8.8	8.9	8.7	8.5	8.2	8.0
	Female	7.9	8.4	8.2	8.3	8.5	8.4	8.3	8.2	8.0
	Youth	17.4	18.1	17.6	17.9	17.7	17.3	16.8	16.3	15.9
	Adult	7.1	7.5	7.2	7.3	7.5	7.5	7.3	7.2	7.0
Employment growth (% p.a.)	Total	–2.2	–0.2	0.4	0.3	0.2	0.4	0.5	0.5	0.5
	Male	–3.1	–0.3	0.5	0.2	0.2	0.5	0.6	0.5	0.5
	Female	–1.1	0.0	0.3	0.3	0.2	0.4	0.5	0.5	0.4
	Youth	–7.6	–4.1	–1.1	–0.9	–0.3	–0.1	0.0	–0.1	–0.3
	Adult	–1.5	0.3	0.6	0.4	0.3	0.5	0.6	0.6	0.6
Memorandum item:										
GDP annual growth rate (%)		–3.7	2.5	1.5	1.2	1.4	2.1	2.5	2.5	2.5

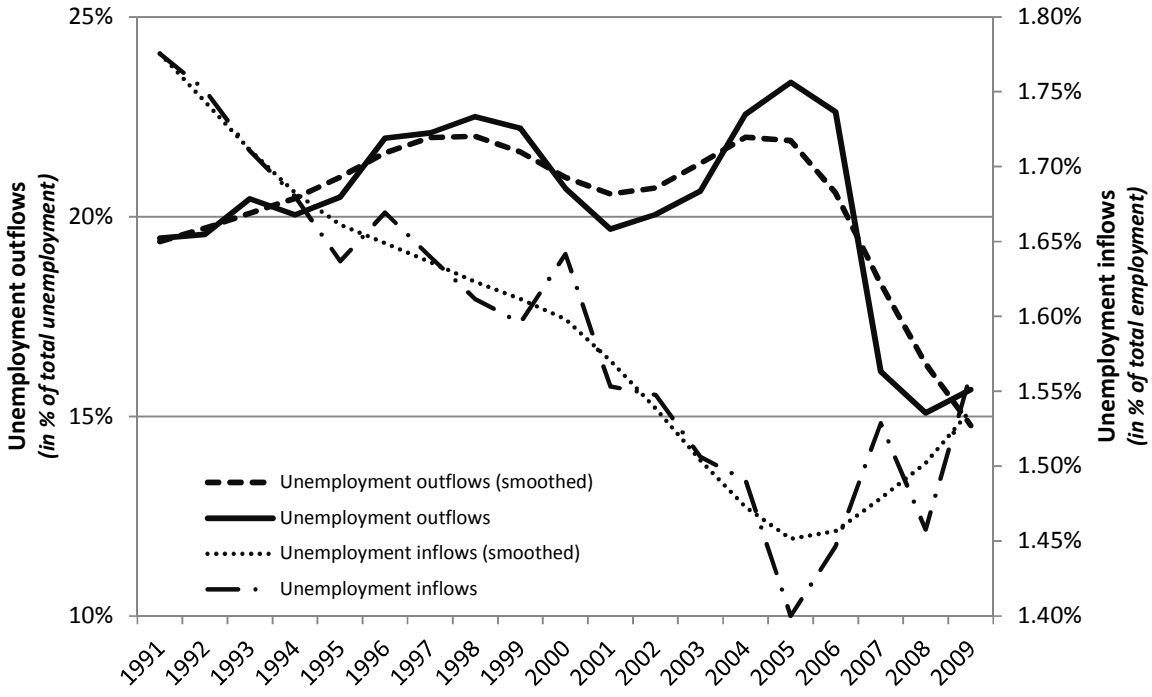
* 2012 are preliminary estimates; 2013–17 are preliminary projections.

Source: ILO, *Trends Econometric Models*, October 2012 (see Annexes 4 and 5); IMF, *World Economic Outlook*, October 2012.

Recessionary conditions have significantly reduced job creation rates, thereby lowering chances for job-seekers to return to employment quickly (see Figure 15). As a consequence the average duration of unemployment has increased with some 33.6 per cent of all job-seekers in the Developed Economies and European Union region being unemployed for 12 months or longer, up from 28.5 per cent prior to the crisis. The incidence of long-term unemployment is 31.3 per cent in the United States and 39.4 per cent in Japan. Overall, with the onset of the crisis, unemployment outflows have decreased by 33 per cent and remained broadly at that lower level for most of the region. At the same time, worker inflows into unemployment have experienced an upward trend

since the beginning of the crisis. The simultaneous drop in unemployment outflows and jump in job destruction rates magnified problems of joblessness in developed economies. At the same time, gross labour market turnover – the sum of job creation and destruction in a given period – has been trending downwards over the last three decades and is now 7 per cent below the region's turnover rate after the recession in the early 2000s. This bodes ill for faster labour market adjustment, thereby preventing a faster employment recovery. At the same time, as unemployment duration lengthens, job-seekers lose their skills and competences and will find it more and more difficult to get an alternative job opportunity. An increasing number have dropped out from the labour market altogether or returning to non-market activities. In OECD countries as a whole, for instance, the share of discouraged workers in the total labour force increased by 50 per cent between 2007 and 2011, whereas the increase in discouragement among youth in these countries was almost twofold.

Figure 15. Unemployment flows: Developed Economies and European Union countries

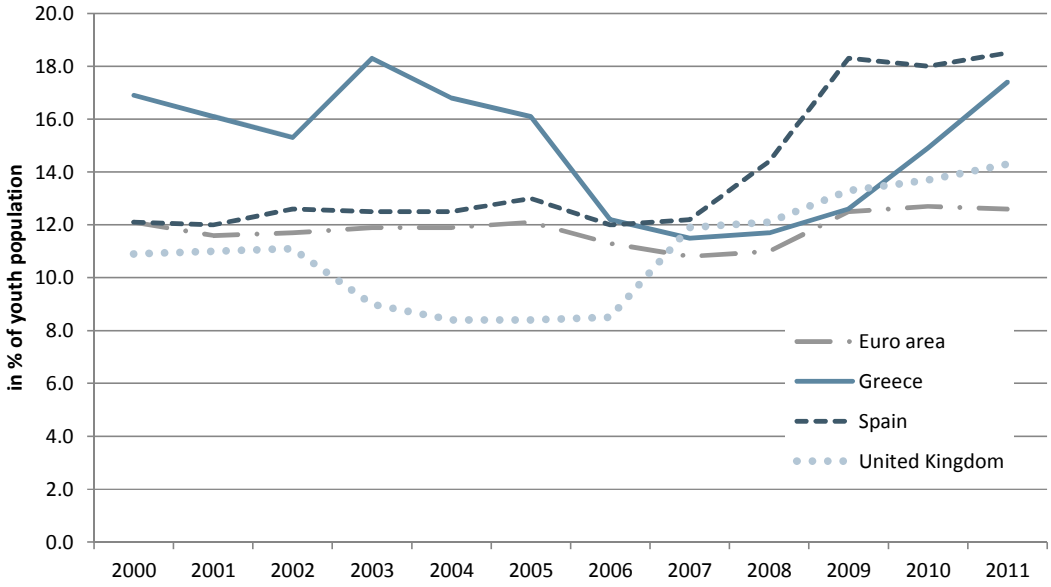


Note: Unemployment outflows measure the probability with which an unemployed person is leaving the unemployment pool during a given year. Unemployment inflows measure the probability with which an employed person is entering the unemployment pool during a given year.
Source: ILO, *Trends Econometrics Models*, October 2012.

The problem of an increasing detachment from the labour market is particularly severe among younger people who have been particularly hard hit by the crisis. In the Developed Economies region, youth unemployment rates have deteriorated substantially with the crisis and not shown signs of improvements since. As recessionary conditions have taken hold of most European countries again, youth unemployment has further increased, reaching more than 50 per cent of young active people in countries such as Greece and Spain and more than 22 per cent in the Euro

area overall. So far, only Austria, Germany and Switzerland have managed to keep youth unemployment low, in some cases even lower than prior to the crisis but even there, the slowdown in economic activity has started to push up youth unemployment (Austria, Switzerland) or prevented it from falling further (Germany). Some young people have started to return to or prolong education, to acquire new skills in order to improve their future labour market chances (Barrow and Davis, 2012). Others have dropped out completely or are increasingly frustrated in their job search without, nevertheless, returning to the education system. This group of young people that is neither in employment, education nor training (NEET) has grown since the crisis, in particular among European crisis countries, and is expected to increase further as recessionary conditions continue to prevail in the Euro area (see Figure 16).

Figure 16. The evolution of NEET rates in selected European countries and the Euro area

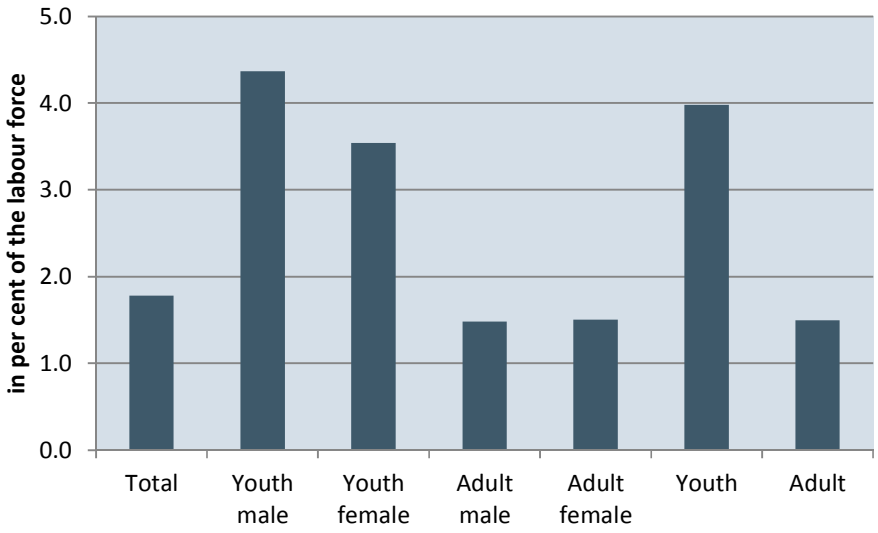


Note: The figure displays the rate of young persons not in employment, education or training as a share of the total youth population (15–24 years).
Source: Eurostat, 2012.

More than among the adult population, rising and more persistent unemployment for young people has fuelled their inactivity rates. The rapid and substantial increase in youth unemployment in some advanced economies has significantly lengthened the average duration of unemployment even for younger cohorts, a situation without precedence. As a consequence, youth participation rates have dropped in advanced economies by more than could have been expected on the basis of pre-crisis trends (see Figure 17). As the prospects of finding a job are dim and not all countries offer second-chance education opportunities or activation measures targeted at young job-seekers, fewer young people decide to search actively for a job, waiting for economic conditions to improve before returning to the labour market. This is likely to hamper their future chances for employment further, as essential skills for job search and employment are lost or not sufficiently acquired. Indeed, existing studies point to the particularly harmful effect of unemployment and inactivity early in a person's career. Important job experience is not being gained and might be difficult to acquire when a young person eventually finds employment later on. As a consequence, as the crisis continues,

young unemployed, once they eventually become employed, will be less productive, earn lower wages and have fewer stable employment opportunities. Existing evidence already points to a loss of at least 1 per cent of GDP among European countries due to the higher youth unemployment in the European Union (Eurofound, 2012).

Figure 17. Labour market participation gap



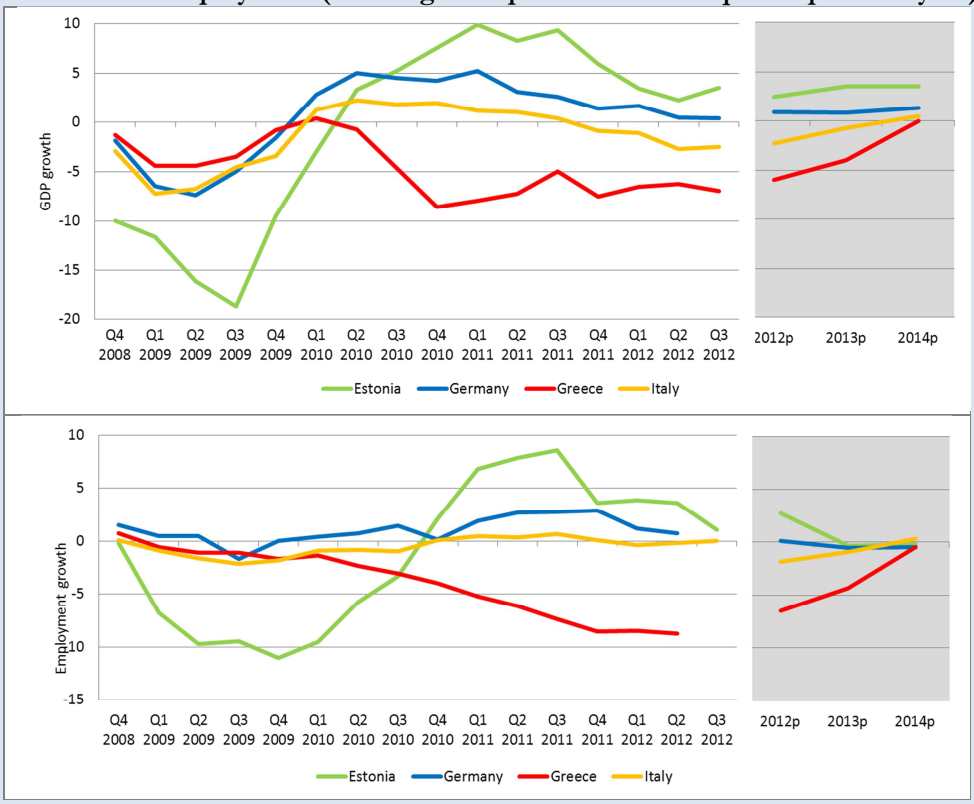
Note: The figure displays the difference between labour force projections based on historical averages of participation rates between 1999 and 2007 and the actual labour force. The participation gaps have been calculated at the country-level and aggregated across four different labour market groups at the regional level.
Source: ILO, *Trends Econometric Models*, October 2012.

Country spotlight 1. Growth and job creation in selected EU countries

The figures below display quarterly growth in GDP (top panel) and employment (bottom panel) between Q4 2008 and Q3 2012 and annual projections of the IMF (for GDP growth) and the ILO, *Trends Econometric Models*, October 2012 (for employment growth) between 2012 and 2014 (values shaded in grey). Quarterly growth rates are calculated on the basis of the same quarter in the previous year.

During the global economic crisis, GDP fell sharply in the European Union, with a contraction of almost 19 per cent in Estonia in Q3 2009 (versus Q3 2008) and a drop between 5 and 7 per cent in Greece, Germany and Italy at the beginning of 2009. The following recovery was uneven. In Estonia, Germany and – to a lesser extent – Italy, GDP growth recovered fairly quickly throughout the beginning of 2011. In contrast, Greece did not register positive growth rates during the entire period under consideration (with the exception of Q1 2010) and had the most significant contraction of almost 9 per cent at the end of 2010. As sovereign debt problems mounted, the recovery proved to be short-lived and growth rates decelerated sharply again in the second half of 2011 and the first half of 2012. Estonia and Germany continued to register positive growth rates, while Italy experienced another contraction with GDP declining by 2.5 per cent in Q3 2012. The contraction of Greece's GDP continued unabated throughout, losing another 6.5 per cent during 2012. The outlook for the coming years projects an increase in growth rates but at very low levels, particularly in Estonia and Germany, where growth is expected to reach 3.5 per cent and 1 per cent respectively according to IMF projections. The contraction of GDP in both Greece and Italy is expected to bottom out with Greece projected to return to zero growth and Italy to slightly positive levels by 2014.

Figure CS1.1. GDP and employment (% change compared with same quarter previous year)



Source: Eurostat; OECD; ILO LABORSTA database. For projections: IMF; ILO, *Trends Econometric Models*, October 2012.

The crisis had durable effects on employment in these four countries:

- Estonia experienced significant employment losses at the beginning of the crisis. After the downturn had bottomed out in Q4 2009 with a contraction of over 11 per cent, employment growth accelerated quickly thereafter, turned positive in Q3 2010 and reached its highest growth level of about 8.5 per cent in Q3 2011 before slightly falling again to a level of about 3.7 per cent at the end of 2011 and the first half of 2012. Even though Estonia registered relatively stable employment growth rates in the past quarters, it is projected to experience a deceleration, experiencing a moderate contraction in employment in 2013 and 2014.
- Germany showed only one quarter of contraction in employment (Q3 2009) during the crisis and remained at constant but low employment growth levels throughout 2009 and 2010. Employment growth picked up after the crisis and German employment grew at 2.9 per cent in Q4 2011. The first half of 2012 showed a slight deceleration in growth but Germany remains at a positive growth level of 0.7 per cent in Q2 2012. The projection of annual employment growth for 2012 through 2014 anticipates a continuation of this deceleration with moderate contractions in employment of around –0.5 per cent for 2013 and 2014.
- Italy showed contractions in employment throughout most of the crisis with a peak of –2.2 per cent in Q3 2009. Italy's employment growth did not recover to positive rates until the end of 2010 and remained at low levels of about 0 to 0.5 per cent throughout 2011. The year 2012 showed another two quarters of contractions and growth in employment of –1.8 per cent is forecast for 2012 before picking back up in 2013 and 2014.
- The sharp recession in Greece led to a labour market depression with consistent employment losses since 2008; employment losses peaked near 9 per cent in Q2 2012. As the GDP contraction is

projected to soften over the coming 2 years, Greece is expected to continue to lose jobs but at a lower rate than throughout 2012. However, even in 2014, employment is expected to contract another 0.5 per cent should GDP growth not recover more rapidly.

How has the financial crisis affected the labour market's capacity to generate jobs?

The sluggish recovery of growth in developed economies after the deep recession in 2009 has attracted wide interest and is subject to a fast growing body of analysis (see ILO, 2012d). Less attention has been given to the important question of how the employment creation process itself is affected by the particular dynamics of the crisis. Job creation is mostly assumed to follow directly from any changes in economic conditions. Despite the overwhelming evidence against it, a constant and time-invariant elasticity of employment to growth continues to be widely used to assess the employment implications of the business cycle.[16] This suggests that slow employment growth in developed economies is solely caused by weak growth, not by the capacity of the labour market itself to generate employment, a capacity that is measured by the Beveridge curve (see Box 4).

Box 4. What is measured by the Beveridge curve?

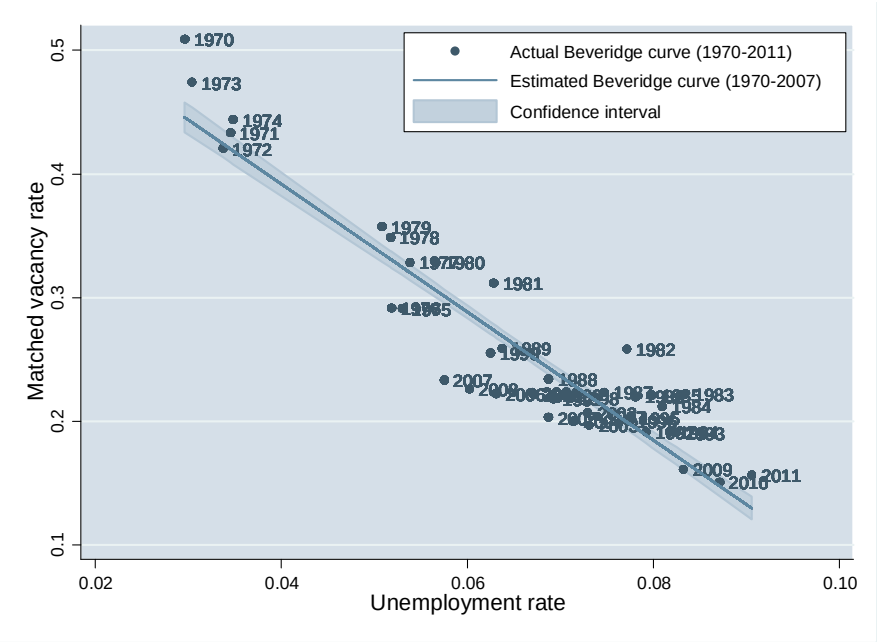
The Beveridge curve describes the empirical relationship between job vacancies and unemployment and is a key ingredient in understanding how the labour market translates changes in aggregate demand into more employment. It, therefore, underlies the relationship identified by Okun's law. In essence, changes in total demand affect the number of job openings firms are offering, depending on capacity constraints, relative prices and expectations. These vacancies are being filled during the hiring process, depending on labour supply conditions and the quality of labour market intermediation (i.e. the matching process). The more difficult and costly labour market matching is – for instance because of regional, sectoral and skill imbalances between labour demand and supply – the more the Beveridge curve moves outwards. On the other hand, if the matching between open vacancies and job-seekers improves, for instance with the help of active labour market policies, the Beveridge curve would move inward. In a completely frictionless labour market, job openings would be immediately filled and the unemployment rate would be a unique indicator of labour market slack. Real-world labour markets, however, are characterized by simultaneous job creation and destruction, even during recession times. This makes it necessary to identify separately the determinants of both margins of labour market adjustment in order to understand how aggregate demand shifts unemployment over the business cycle.

The observed pairs of job openings and number of job-seekers are the outcome of a theoretical trade-off between the two, caused by a time-consuming process of job-seekers matching with open positions, and the inclination of firms to hire new workers. The first relationship gives an indication as to the efficiency of labour market intermediation, which can be improved, for instance, through active labour market policies. The second relationship – labour demand – depends on future profits a firm expects to generate from a successful match and hiring of a new employee. This can be influenced by a variety of factors, including higher expected potential growth (more vacancies – less unemployment) and tighter financial conditions (fewer vacancies – more unemployment).

[16]See, for instance, IMF (2012b), chapter 4. In contrast, see Cazes et al. (2011) and IMF (2010) which present evidence against a growth-employment elasticity that is stable over time.

Indeed, for the Developed Economies region as a whole the vacancy unemployment trade-off, i.e. the Beveridge curve, does not suggest that the capacity of the labour market to transform higher labour demand effectively into more jobs has declined significantly since 2009 as observations since the crisis remain close to the estimated curve that represents the long-term capacity of the region's labour market to successfully match job-seekers with open vacancies (see Figure 18). For individual countries, however, the Beveridge curve seems to have shifted upwards somewhat, in particular when compared with the situation over the preceding business cycle. As represented in Figure 19, crisis observations in the United States, Spain and most recently Greece lie far apart from the Beveridge curve prevailing prior to 2008, indicating a possible shift. For the United Kingdom, this shift seems to have been more moderate but also indicates some movement towards less effective labour market matching. Taken together, companies in these countries are either not reacting to stronger growth or cannot find sufficient numbers of job applicants with the right mix of skills and competencies (see Figure 19).[17]

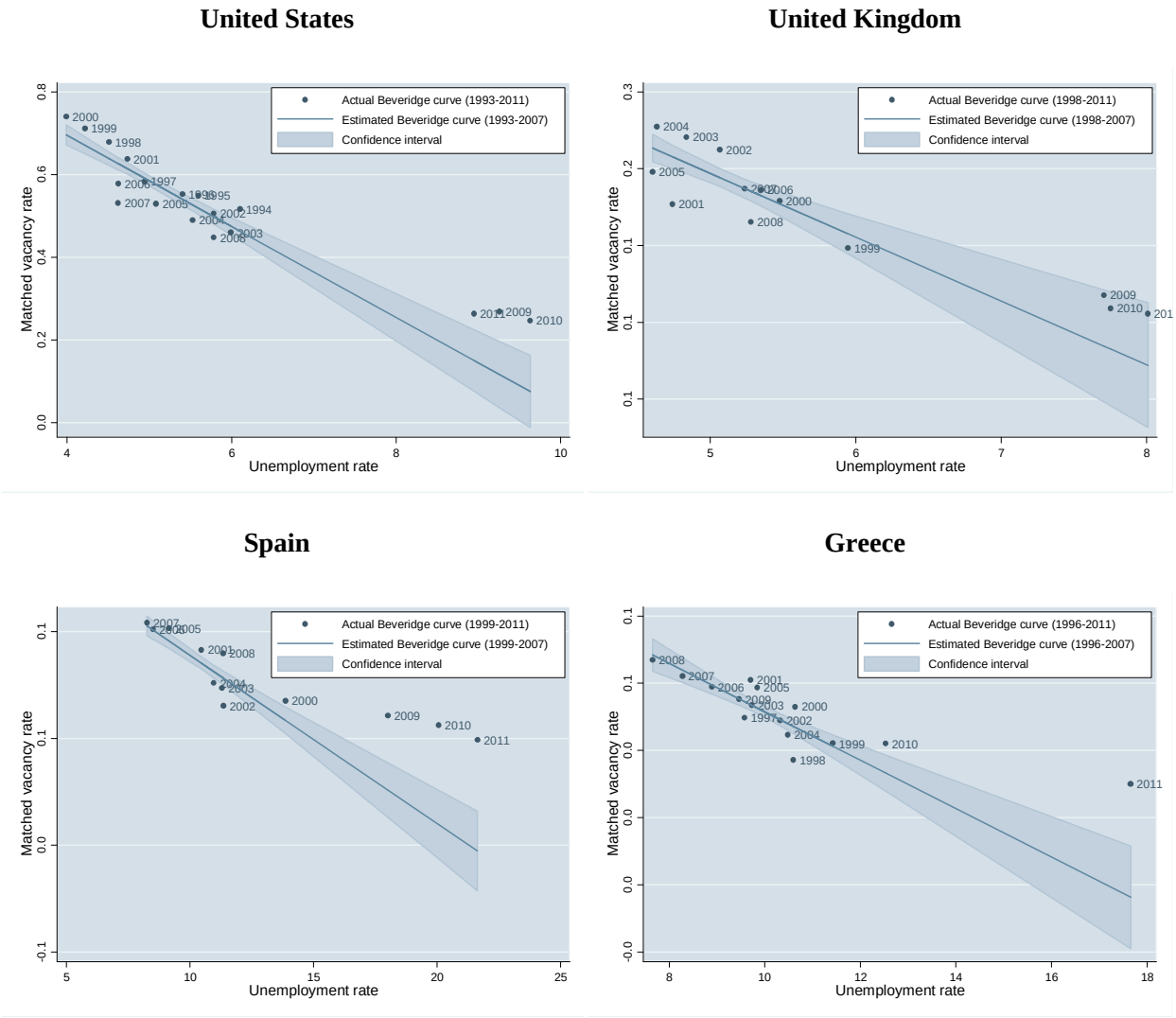
Figure 18. The Beveridge curve in Developed Economies



Note: The figure displays the relationship between matched vacancies and the unemployment rate between 1970 and 2011 (the Beveridge curve) and compares this with the estimated linear relation between these two variables before the crisis (1970–2007). Observations outside the confidence interval around the linear estimate indicate potential shifts of the Beveridge curve: Values towards the left and down indicate improvements in labour market matching whereas observations to the right and up indicate worsening matching problems.
Source: ILO, *Key Indicators of the Labour Market*, 7th edition.

[17] For individual countries similar but moderate shifts have been identified, using alternative methodologies, see Hobijn and Sahin (2012) and Sahin et al. (2012).

Figure 19. The Beveridge curve has moved outward in some advanced economies



Note: The figure displays the relationship between matched vacancies and the unemployment rate between 1970 and 2011 for selected developed economies and compares this with the estimated linear relation between these two variables before the crisis (country specific). Observations outside the confidence interval around the linear estimate indicate potential shifts of the Beveridge curve: Values towards the left and down indicate improvements in labour market matching, whereas observations to the right and up indicate worsening matching problems.
Source: ILO, *Key Indicators of the Labour Market*, 7th edition.

The increasing availability of vacancies despite high unemployment rates in several developed economies point to increasing difficulties in labour market intermediation. Part of this disruption on labour markets has to do with the sectoral and geographical imbalances that have been built up during the boom period prior to the crisis. Most of these countries went through a strong housing bubble, inflating excessively the construction industry, but also related real-estate and

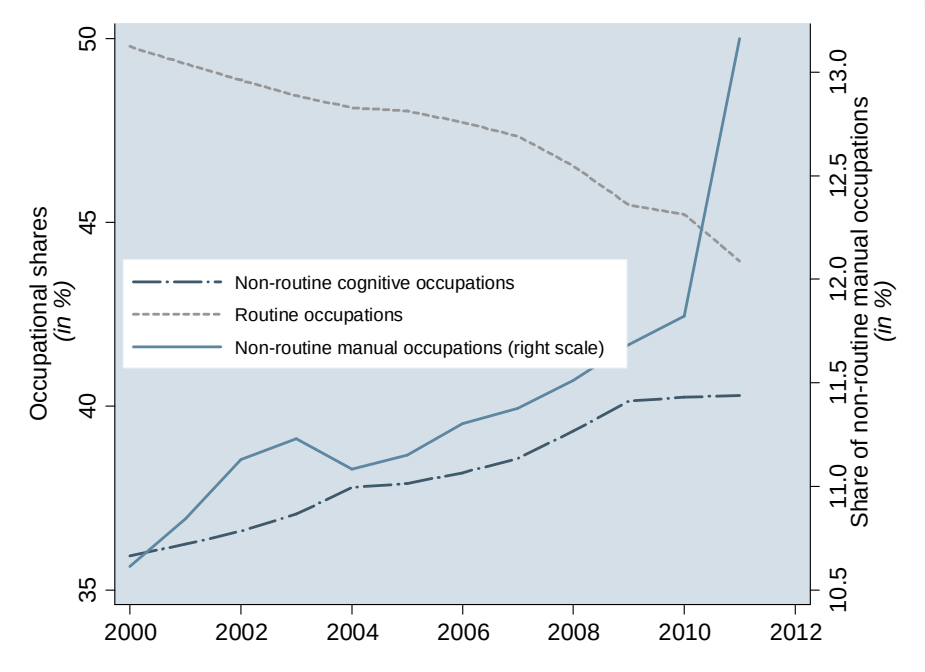
financial services. As these sectors need to adjust to a new reality with fewer job opportunities, employees that got laid off in these industries need to find alternative occupations in other areas, often requiring them to take out lengthy professional (re-)training or moving to a different geographical area. In the Euro area, these changes seem to have pushed up skills mismatches sizeably (ECB, 2012). For the United States, this phenomenon is estimated to have contributed as much as 1.5 percentage points to the increase in the long-run unemployment rate (see Estevão and Tsounta, 2011), which is sizeable but far from the actual increase in the United States unemployment rate. Hence, increasing mismatch problems on the labour market are unlikely to explain more than just a small fraction of the shift in the Beveridge curve in developed economies.

Others have pointed to the fact that the recession has accelerated longer term trends towards a reduction in middle-income occupations (see

Figure 20). Indeed, routine occupations demanding intermediate-level skills have seen a rapid decline over and beyond what would have been expected on the basis of historical trends. This "hollowing-out"[18] has been claimed to be responsible for the particularly protracted nature of the jobs recovery as new jobs are being generated during the upswing with a different occupational profile, thereby requiring retraining and other activation measures to match current job-seekers with these newly arising occupations (Jaimovich and Siu, 2012). Both the change in sectoral and occupational composition of employment might explain the sluggish recovery in employment over and above a more pronounced acceleration in output growth.

[18] The term refers to job polarization between high- and low-skill occupations whereby occupations at the intermediated skill level gradually disappear, see Autor (2010) and Spence and Hlatshwayo(2011) for a discussion of its relevance in the US context.

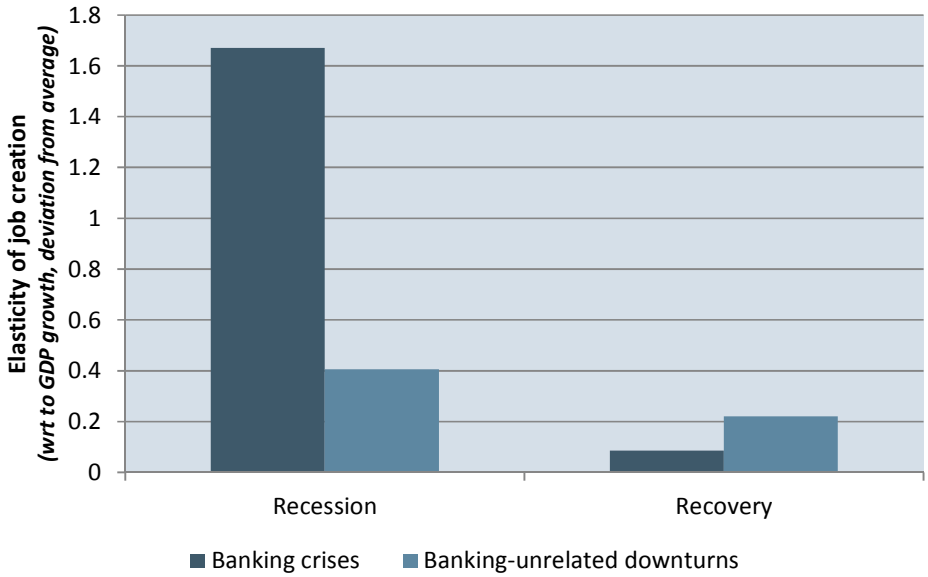
Figure 20. Occupational shifts



Note: The figure displays changes in occupational shares between 2000 and 2011. Occupational groups are defined according to Jaimovich and Siu (2012): Non-routine cognitive occupations include (i) legislators, senior officials and managers, (ii) professionals and (iii) technicians and associate professionals; routine occupations comprise (i) clerks, (ii) craft and related trades workers, (iii) plant and machine operators and assemblers, (iv) elementary occupations; non-routine manual occupations cover service workers and shop and market sales workers.
Source: ILO, *Key Indicators of the Labour Market*, 7th edition.

Nevertheless, a closer look at job creation dynamics around boom–bust periods reveals a more general pattern of sluggish employment growth, irrespective of any specific sectoral pattern or labour market mismatch. Indeed, when analysing the effect of growth on job creation around the time of banking crises, large drops in employment during banking recessions can be detected alongside more sluggish employment growth immediately afterwards (see Figure 21). This pattern of an L-shaped evolution of employment following a banking crisis contrasts with a more pronounced recovery of employment after a business cycle downturn that was not induced by foul credits and liquidity-constrained banks. Indeed, job creation falls more than four times faster when a recession follows a banking crisis than during normal business cycle downturns. In contrast, employment creation does not react at all – or only very weakly – to growth in the recovery period following such a banking crisis.

Figure 21. The responsiveness of job creation around banking crisis



Note: The figure displays the effect of downturns and recoveries on the responsiveness of job creation to changes in GDP. The chart distinguishes between recessions and recoveries unrelated to financial sector difficulties and those that have been induced by a banking sector crisis.
Source: ILO, *Trends Econometric Models*, October 2012; see Appendix 2 for methodological details.

Differences in the responsiveness of job creation to growth of this magnitude cannot be explained by sectoral or occupational shifts alone. Instead, downturns induced by banking crises come with strong cleansing effects whereby over-investment and misallocation induced by excessive leveraging prior to the crisis wipe out large parts of the economy. As a consequence, credit constraints worsen during a financial market crisis and depress the employment recovery for some time (see Box 5). In addition, persistent problems of the financial sector to restore sustainable balance sheets during such downturns also affect monetary policy transmission mechanism. This will affect financing conditions in particular for small and medium-size enterprises where many jobs originate. Despite record low refinancing rates for banks, both short- and long-term interest rates for corporations are sizeable, in particular in countries where sovereign debt risk spills over to the private credit market. Even companies that have sufficient own funds to invest are reluctant to enter any longer term commitments. Job creation is further impaired by the fact that banking-related crises require firms to build up new collateral to finance their activities, which is easier done through physical investment rather than through new hires (Calvo et al., 2012). This liquidity-hoarding is one of the major reasons for low investment and employment growth in developed economies and explains why job creation has been so slow despite large slack on labour markets and rapidly falling hiring costs in many advanced economies.

Box 5. Why do some asset price bubbles have worse effects on output and employment than others?

Financial globalization has brought about more frequent financial asset price bubbles. Whereas the post-war period was mostly immune from asset price bubbles in the Developed Economies region, deregulation of the banking sector in the 1980s in the United States led to the savings and loans crisis in 1989. Similarly, the opening of the capital account pushed Scandinavian countries through a real-estate and asset price boom in the early 1990s. Periods of rapid increases and declines of asset prices became more frequent with the real-estate bubble in Japan at the end of the 1980s, strong housing price swings in France and Switzerland at the turn of the 1990s and the IT bubble at the turn of the 2000s in several countries of the Developed Economies and European Union region. More recently, the United States housing bubble burst in 2007–08, while European economies are currently experiencing a sovereign debt crisis (Brunnermeier and Oehmke, 2012).

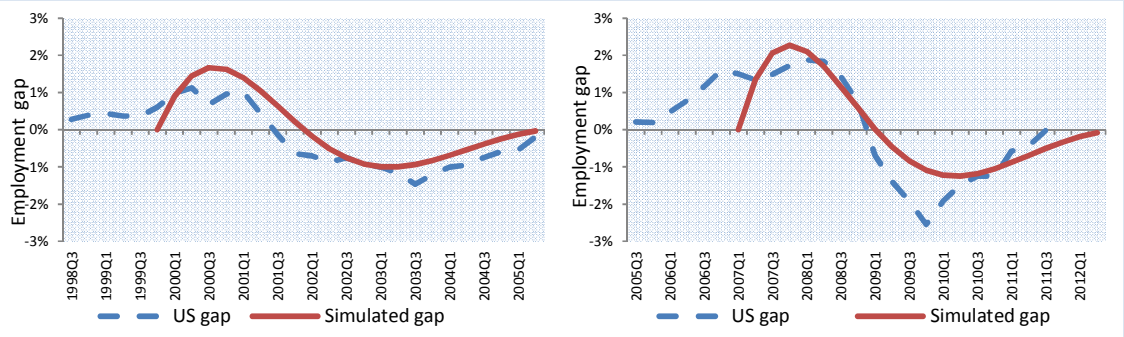
Not all asset pricing bubbles have the same impact on the real economy, however. For instance, the stock market crash in 1987 and the crash of the IT bubble in 2001 had very little direct negative impact on GDP. In contrast, the stock and housing market bubbles have triggered long-lasting periods of economic recession and stagnation in Japan over the 1990s and in the USA and other advanced economies since 2008. Existing evidence shows that besides the wealth effect of higher asset prices on consumption and investment decisions, it is primarily the severity of credit constraints that explains differences in crisis impacts. Indeed, as banks screen the credit worthiness of borrowers they take their clients' income or wealth as collateral. Asset price bubbles affect the credit constraints through the value of the collateral. Kiyotaki and Moore (1997) describe the interaction between credit rationing and asset pricing bubbles for firms. A similar analysis can be made when the collateral takes the form of real estate (Iacoviello, 2005).

To illustrate the importance of the credit channel for explaining differences in the impact of asset price bubbles, a medium-scale semi-structural macroeconomic model is used by the ILO for the estimates in this box. This model takes into account the main characteristics of modern economies. The financial sector is made of commercial banks and traders. Banks make decisions regarding loan application according to the collateral of borrowers. The collateral of borrowing firms takes the form of equities. Traders' expectations are subject to opinion dynamics and may lead to bubbles when the same beliefs are shared by a sufficient number of traders. The real sector is composed of workers and firms. Workers receive labour income depending on wages and the level employment, while firms form investment decisions based on the profit rate. Lastly, fiscal authorities engage in public spending either to limit the level of debt or to sustain economic activity, while monetary authorities set the interest to stabilize the inflation gap and the output gap. The model is calibrated to mimic characteristics of the United States economy. Consumption accounts for 70 per cent of GDP, while the share of investment is 12 per cent of GDP at the steady state. On the income side, the labour share of income accounts for 77 per cent of GDP. Population growth at the rate of 1 per cent annually and the real annual interest rate is 2 per cent. Public spending amounts to 18 per cent of GDP while the public debt to GDP ratio is close to 50 per cent.

The impact of asset price bubbles on output and employment is compared under two scenarios, assuming a 1 per cent increase in the value of equities. The simulated path of output is then recalibrated to match the magnitude of output swings during the past two recessions in the United States (see figure B5.1). In the first scenario (Panel A), credit rationing is less severe and banks are more accommodative. In the second scenario (Panel B), credit rationing by banks is severe and credit decisions are highly sensitive to the value of the stock market, which is used as collateral by banks.

Figure B5.1. Severity of credit constraints and the employment effects of asset price bubbles

Panel A. IT bubble (1999–2004) **Panel B. Sub-prime mortgage bubble (2005–12)**



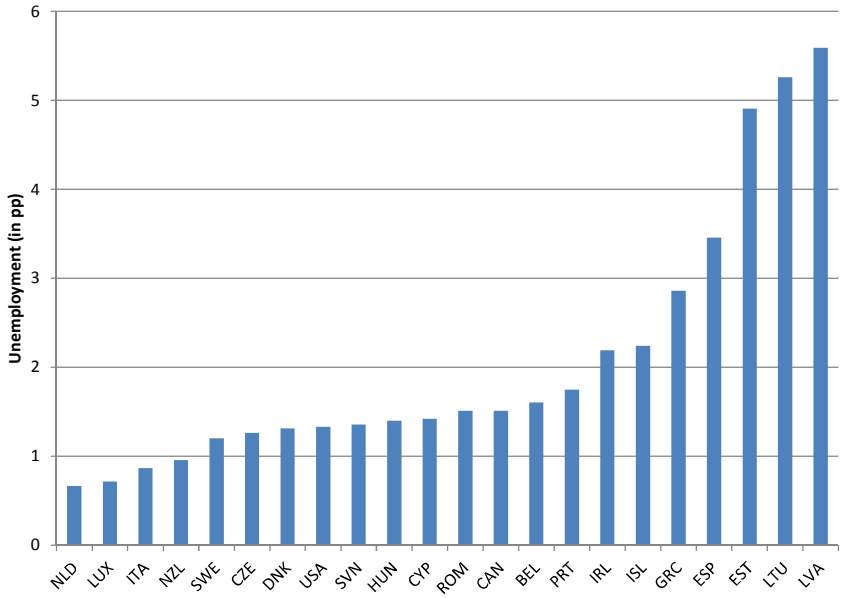
Note: The figure illustrates the impact on output of two types of asset pricing bubbles. Panel A corresponds to the dotcom bubble, which is not characterized by credit expansion. Panel B corresponds to the housing bubble, which took place along fast credit expansion. The dashed line illustrates the output gap in the USA. The solid line is the output gap as produced by the ILO macroeconomic model. In the ILO macroeconomic model, panel A corresponds to a scenario in which there is no credit rationing from banks. Panel B corresponds to a scenario in which credit rationing is inversely related to the value of the collateral of borrowers (in the form of financial assets).
Source: ILO Macroeconomic Model.

In Figure B5.1, an increase in stock prices is associated with increased employment instability when credit decisions depend more heavily on the value of the stock market (Panel A vs. Panel B). Economic instability takes the form of amplified output fluctuations. The standard deviation of employment is 20 per cent lower under scenario 1 (panel A) than under scenario 2 (panel B). Under scenario 1, employment reaches a peak after 3 years. When the economy unfolds, employment reaches a through after 7 years. In Panel A, the transmission channel between asset pricing bubble and credit is weaker reducing the degree of employment instability. These implied elasticities by the two scenarios are in line with the estimations of Gilchrist et al. (2005) using a VAR model for the United States.

New sources of employment growth

The sluggish recovery in much of the Developed Economies region following the financial crisis and the double dip in the Euro area have led to a substantial increase in trend unemployment rates in the region (see Figure 22). This implies that higher unemployment might already have become persistent, at least in certain countries of the region. In particular European countries in the Baltics and the Mediterranean have suffered from a strong and potentially lasting increase in their underlying unemployment rate, preventing a stronger employment recovery. Together with the increase in unemployment duration this rise in trend unemployment will pose serious challenges to policy-makers in finding the proper activation measures. On the one hand, higher trend unemployment has reduced the production potential, which further depresses a level of activity that is already below its medium-term sustainable growth rate (Ho and Yetman, 2012). This will feed into a self-sustaining slow-growth path of economic expansion whereby low activity and weak employment hold each other down. In addition, the decline in the efficiency of labour market matching (i.e. the outward movement of the Beveridge curve discussed above) in reaction to structural adjustment caused by the financial crisis will exacerbate problems for faster employment growth and further reduce the effectiveness of policy interventions that aim at stimulating the recovery.

Figure 22. Trend unemployment has increased (2011 vs. pre-crisis)



Note: The figure displays the increase of trend unemployment between 2011 and pre-crisis trends based on the estimation of a crisis-induced shift of the Beveridge curve (i.e. the relationship between vacancies and unemployment). The shift is measured at an assumed average level of economic activity, reflecting neutral business cycle conditions. Only countries for which the crisis effect on unemployment was statistically significant have been displayed.
Source: ILO calculations, see Appendix 1 for methodological details.

Overall, sources of new employment opportunities will remain scarce and diverse, adding to the complex picture on the labour market in advanced economies. The current situation of high uncertainty (see chapter 1) makes firms reluctant to open vacancies or to hire workers even if they have an open position. New employment opportunities are mainly generated in sectors that have not experienced a jobs crisis before. In this respect, the renewed slowdown in world trade causes employment in manufacturing to stall again after having lost in many advanced economies already during the first round of the crisis. Construction workers might see some relief to their employment situation, at least in those countries where deleveraging of households has progressed and allows a timid recovery of new construction (see Box 6). In the EU, new sources of employment growth are expected to lie in the green economy, health-care services, and information and communication technology sectors (EC, 2012).

Box 6. Short-term sectoral forecast for the United States

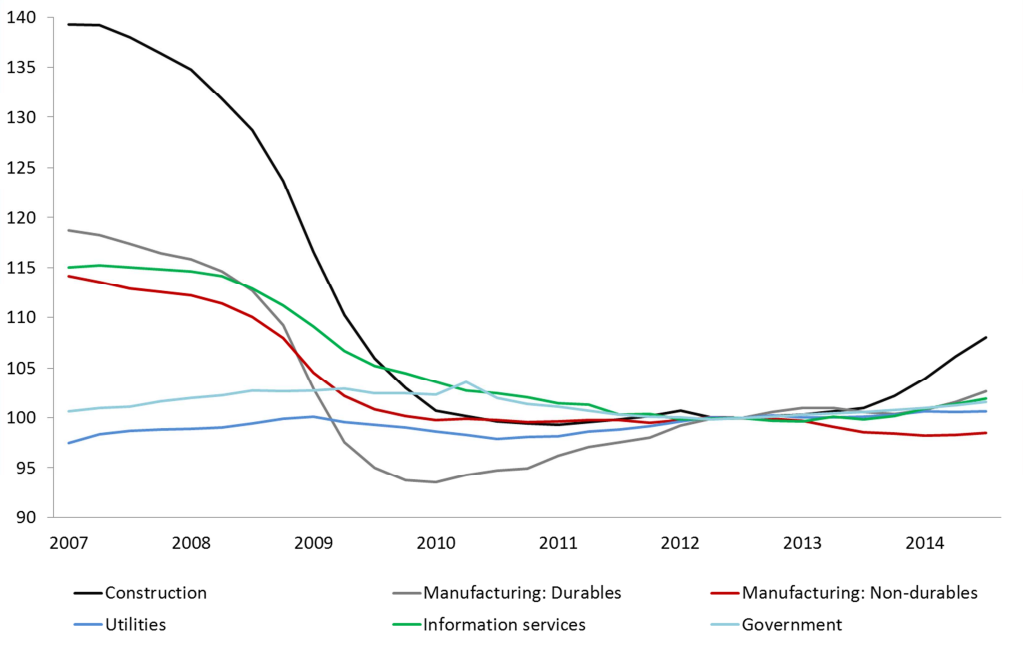
Sectoral employment in the United States has progressed unevenly during crisis and recovery. Whereas construction and manufacturing have taken the brunt of job destructions, other sectors such as health-care and educational services have progressed throughout the last 5 years. This has raised concerns about possible skill and occupational mismatches as competencies required in one sector or occupation might not be sufficient or adequate to find employment in another one. It has also triggered discussions as to a possible trend increase in the United States unemployment rate as not all jobs lost in the sectors principally hit might be quickly replaced by new jobs in emerging or growing sectors. This box discusses the recent developments

in sectoral employment in the United States and presents new quarterly forecasts for sectoral job growth up to the end of 2014. To facilitate comparison, the 15 sectors for which forecasts are available have been grouped into (i) crisis sectors, (ii) recovering sectors and (iii) fast-growing sectors.*

This sectoral forecast is based on a similar methodology to other GET forecasts, making use of employment elasticities between sectoral value added, investment and employment growth. However, as detailed sectoral forecasts for value added are not readily available, an alternative route has been taken here to predict sectoral employment: The empirical model is augmented with market opinions about hiring intentions, taken from the Manpower Employment Outlook Survey.† This source, available for 42 countries with various lengths of time series and sectoral detail, allows for an assessment of hiring intentions of private companies and public sector administrations for the immediate quarter ahead. Empirical analysis shows that the persistence of these hiring intentions is strong enough to make effective use of them to forecast sectoral employment for up to 2 years beyond the current quarter (see Appendix 3 for a discussion of the empirical set-up and results).

Crisis sectors are not expected to see much progress in employment creation over the coming 2 years. Indeed, construction has lost almost 30 per cent of employment between 2007 and 2012 and employment in manufacturing of durables is still down by more than 15 per cent in comparison with the situation prior to the crisis. In these sectors, employment is projected to remain far below pre-crisis levels for the next 2 years. Government employment has been stagnating in the aftermath of the crisis – with a temporary spike in 2010 due to the census – and has gradually declined after Q3 2010 as austerity measures started to be felt, mainly involving job losses at the state and municipality level. A similar trend is projected for utilities.

Figure B6.1. Crisis sectors (Q3 2012 = 100)

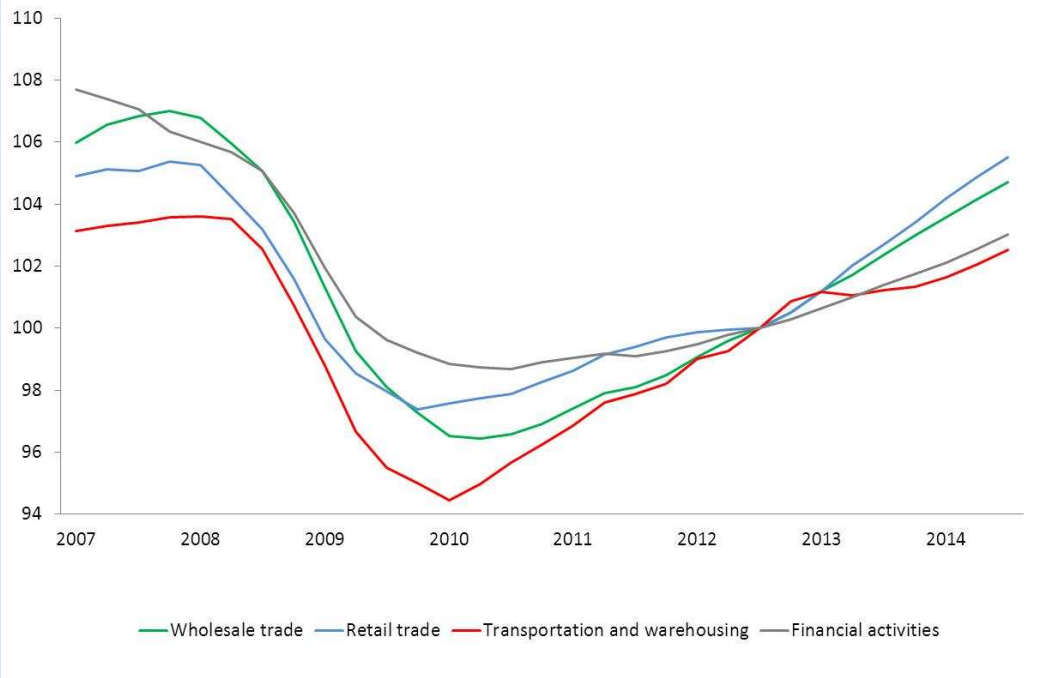


Source: ILO, Short-term forecasting models, November 2012.

Recovering sectors have also experienced strong job destruction during the crisis but started to recover somewhat and are expecting to gather ground over the next 2 years. In contrast to crisis sectors, those recovering are experiencing strong job growth over the coming quarters partly driven by stronger domestic consumption. Even financial services that are still restructuring after the deep crisis that has affected the sector now display healthy and steady employment growth. Other sectors such as transportation or retail

trade have recovered from the crisis trough and expect continuous growth over the next 2 years, without, however, surpassing their pre-crisis employment level.

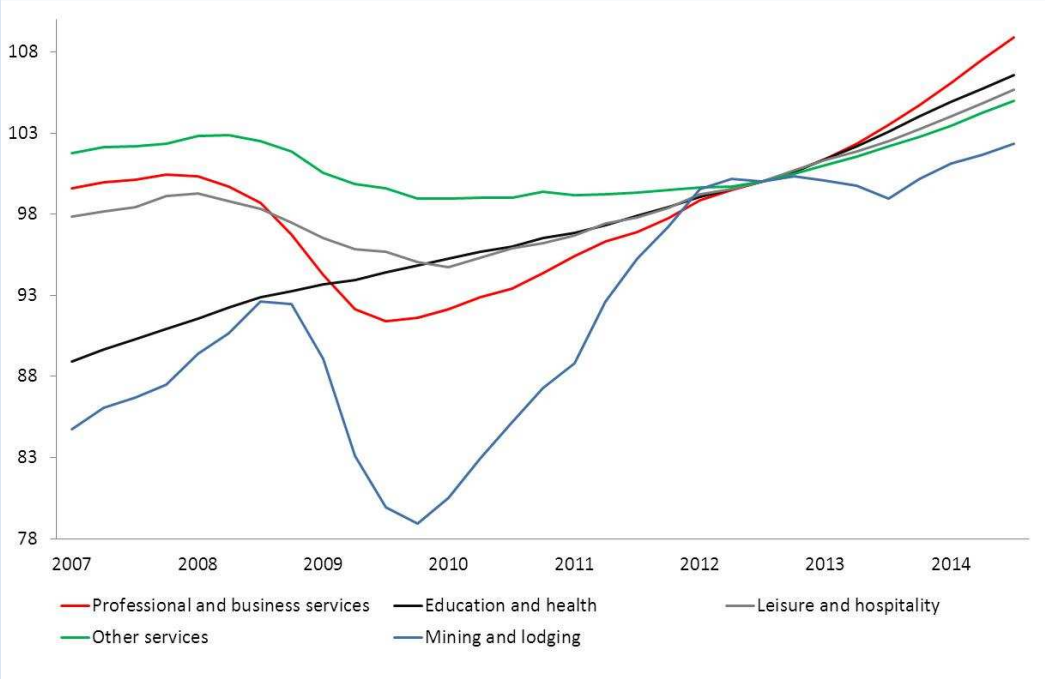
Figure B6.2. Recovering sectors (Q3 2012 = 100)



Source: ILO, Short-term forecasting models, November 2012.

Finally, in fast-growing sectors, sectoral employment is growing rapidly and has surpassed even pre-crisis levels (see figure B4.3). Most impressively, education and health services are expected to have employment levels more than 20 per cent above their pre-crisis levels. Similarly, professional services that suffered during the crisis are growing strongly and the hiring expectations indicate that employment can be expected to reach levels almost 10 per cent above pre-crisis. Also, the mining industry has managed to overcome its initial trough, benefiting from new discoveries of shale gas, especially in the North-Western part of the country.

Figure B6.3. Fast-growing sectors (Q3 2012 = 100)



Source: ILO, Short-term forecasting models, November 2012.

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* Forecasts for the following sectors are available: Mining and lodging, construction, manufacturing: durables, manufacturing: non-durables, utilities, wholesale trade, retail trade, transportation and warehousing, information services, financial activities, professional and business services, education and health, leisure and hospitality, other services, government.

† Available at: http://manpowergroup.com/press/meos_landing.cfm

To recover from this ongoing crisis more broadly and to break the vicious cycle of a frail labour market and a banking sector under stress reinfecting each other continuously, policy-makers need to take bold steps. As stressed in the last *Global Employment Trends* Report (ILO, 2012d), this may require more than fiscal stimuli at the level of individual countries. Indeed, what is needed at the current juncture is a general and coordinated action across the Developed Economies region.

Central and South-Eastern Europe (non-EU) and CIS

Unemployment has declined in 2012 but is expected to remain elevated through 2017

After running above world growth for two consecutive years, GDP growth is projected to decelerate in Central and South-Eastern Europe (non-EU) and CIS countries, falling below global growth for the rest of the projection period (see Table 2). Bottoming out at 3.5 per cent in 2012, growth will moderately accelerate to 4.0 per cent by 2014 and remain at 4.1 per cent through 2017 (IMF, 2012b). However, beyond the aggregate figures, considerable disparities in economic growth between the countries in the region can be observed: 2011 GDP volume indexes in comparison with 2010 varied

from 100.1 per cent in Azerbaijan to 114.7 per cent in Turkmenistan.[19] This disparity translates a different degree to which individual countries are exposed to shifts in world trade but also the fact that some countries are large primary commodities exporters that continue to benefit from still-high oil and commodity prices.

Despite the deceleration in growth in 2012, labour market indicators have continued to improve, albeit moderately (see Table 2). Unemployment continued to decline from its peak of 10.1 per cent in 2009 to an estimated 8.2 per cent in 2012 and is expected to soften further, lowering to 7.9 per cent by 2017. At the same time, labour force participation has increased further despite the demographic ageing that the region is going through and the decline in the youth population by more than 10 per cent since 2008. Indeed, in 2012, 59.8 per cent of the working-age population participated in the labour market, up by 2 percentage points from a decade earlier. Overall, this indicates that despite the crisis employment has expanded consistently and is now 3.1 per cent higher than in 2008. At the same time, the employment-to-population ratio has increased from 53.9 per cent in 2008 to 54.8 per cent in 2012 and is projected to increase further to 55.1 per cent by 2017.

Table 2. Labour market trends in CSEE and CIS countries

		2009	2010	2011	2012p	2013p	2014p	2015p	2016p	2017p
Labour force participation rate (%)		59.0	59.2	59.6	59.8	59.9	60.0	60.1	60.0	60.0
Unemployment rate (%)	Total	10.1	9.4	8.7	8.2	8.2	8.1	8.0	8.0	7.9
	Male	10.5	9.7	8.8	8.4	8.3	8.2	8.2	8.1	8.1
	Female	9.6	9.1	8.5	8.1	8.0	7.9	7.8	7.8	7.7
	Youth	20.4	19.2	17.7	17.1	17.3	17.3	17.3	17.4	17.4
	Adult	8.3	7.8	7.2	6.9	6.8	6.8	6.8	6.7	6.8
Employment growth (% p.a.)	Total	–1.1	1.5	1.7	1.0	0.5	0.5	0.4	0.3	0.1
	Male	–1.5	1.8	1.9	1.1	0.6	0.5	0.4	0.3	0.1
	Female	–0.7	1.2	1.6	1.0	0.5	0.4	0.3	0.2	0.1
	Youth	–5.6	–1.3	–1.4	–2.4	–3.7	–3.7	–3.5	–3.3	–3.0
	Adult	–0.4	2.0	2.2	1.5	1.1	1.0	0.8	0.7	0.5
Memorandum item:										
GDP annual growth rate (%)		–6.0	5.5	5.5	3.5	3.8	4.0	4.1	4.1	4.1

* 2012 are preliminary estimates; 2013–17 are preliminary projections.

Source: ILO, *Trends Econometric Models*, October 2012 (see Annexes 4 and 5); IMF, *World Economic Outlook*, October 2012.

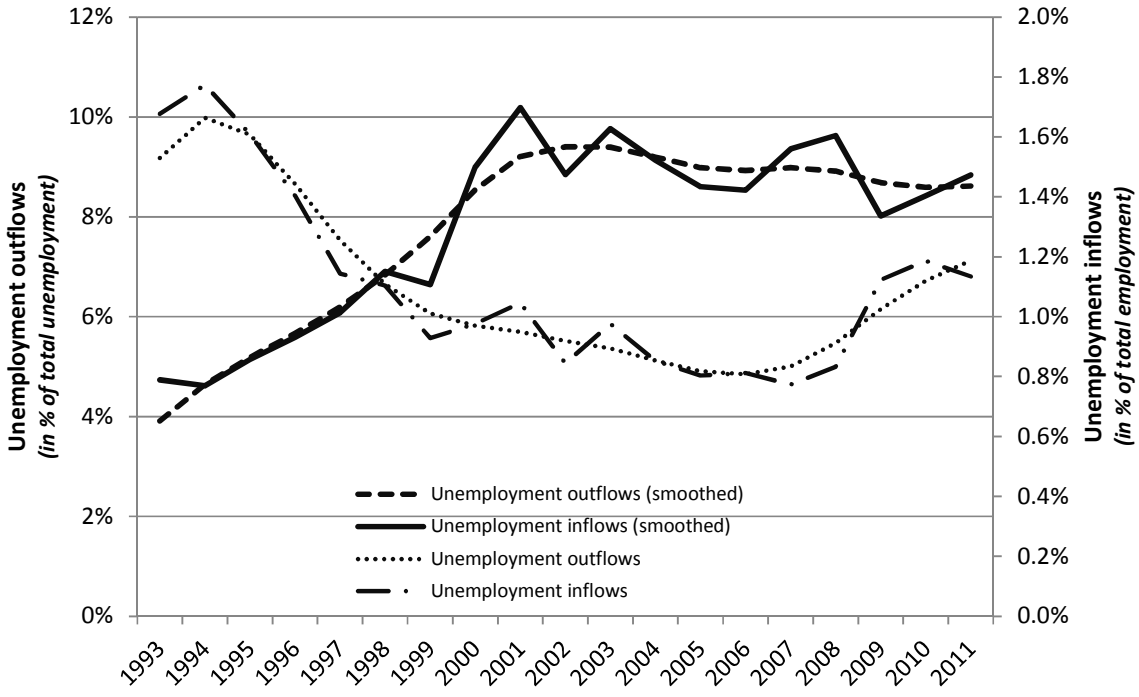
In particular, resource-rich countries in the region have displayed above-average labour market improvements. In Russia, the largest economy in the region, total employment expanded by 648,000 people between July 2012 and a year earlier when unemployment declined by 889,000 persons. This corresponds to an unemployment rate of 5.4 per cent, with male unemployment at 5.8 per cent and female unemployment at 5.0 per cent. Kazakhstan, another resource-rich country, saw

[19] Available at: http://www.cisstat.com/

its employment expand steadily with the recovery as GDP growth remained above 5 per cent p.a. This helped the employment-to-population ratio to rise to over 68 per cent and employment to expand by almost 3 per cent p.a. since Q1 2010.

Disregarding these overall positive labour market developments and significant post-crisis GDP growth, the labour market has lost momentum in the region (see Figure 23). In particular the sharp increase in unemployment inflows – mainly triggered by faster job destruction – has not yet fully returned to pre-crisis levels. Also, there seems to be a secular decline in the unemployment outflow rate, linked to a loss in job creation dynamics, that has set in since the beginning of the 2000s. More importantly, the fall in the overall unemployment rate hides the fact that some of the gains in bringing long-term unemployment down have been lost with the onset of the crisis, and that more than 32 per cent of all job-seekers in the region continue to be unemployed for 6 months or longer. Should trend job creation rates continue to decelerate, a further increase in long-term unemployment can be expected.

Figure 23. Unemployment flows: CSEE and CIS countries

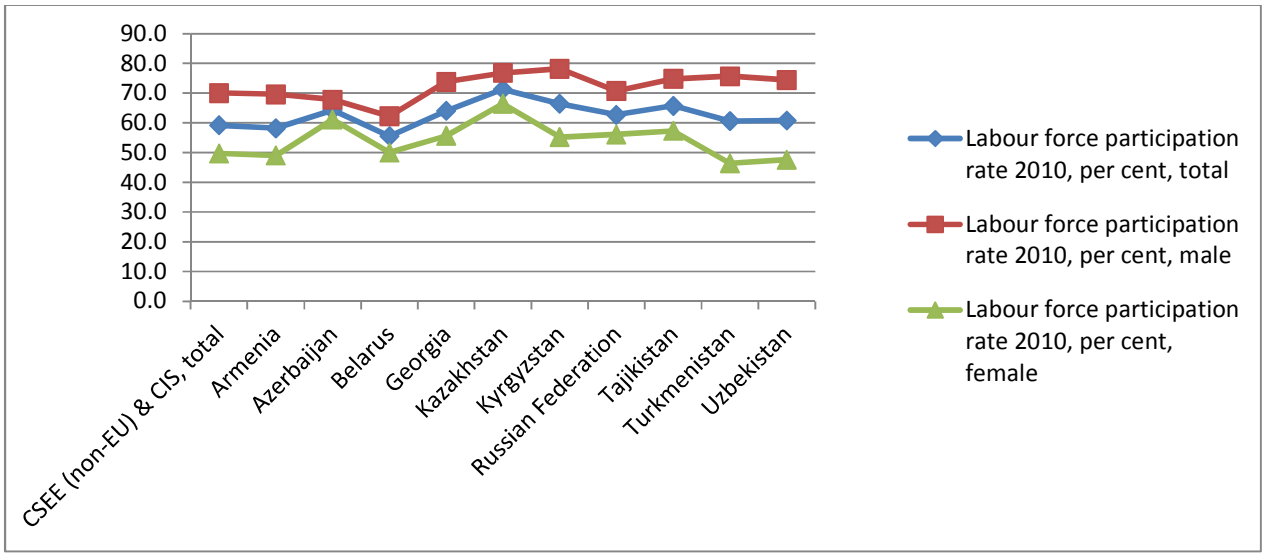


Source: ILO, *Trends Econometric Models*, 2012

The recovery has benefited different groups in the labour market unevenly. In particular, young people and women in CIS countries and Georgia continue to face high barriers to employment. By 2017, the youth unemployment rate in Central and South-Eastern Europe (non-EU) and CIS is projected to reach 17.3 for young men and 17.7 per cent for young women. In

countries with large youth population shares the situation is particularly dire: Despite the economic recovery, average youth unemployment in 2010 in Armenia[20] stayed at 39.1 per cent and young women were hit harder (female unemployment rate for 16 to 24 years of age was 48.2 per cent) than young men (male unemployment rate for the same age group was 32.2 per cent).[21] Azerbaijan benefited from a decline in the youth unemployment rate from 18.4 per cent in 1999 to 11.0 per cent in 2010.[22] In the Russian Federation the youth unemployment rate in July 2012 stood at 15.8 per cent which was four times higher than the unemployment rate for those aged between 30 and 49 years.[23] Gender disparities are also apparent in indicators of the labour market: gaps between male and female labour force participation rates remain significant (see Figure 24) and similar disparities can be observed in employment-to-population ratios (see Figure 25).

Figure 24. Male and female labour force participation rate, CIS countries and Georgia, 2010



Source: ILO, Estimates and Projections of the Economically Active Population (EAPEP), 6th edition (Update July 2012).

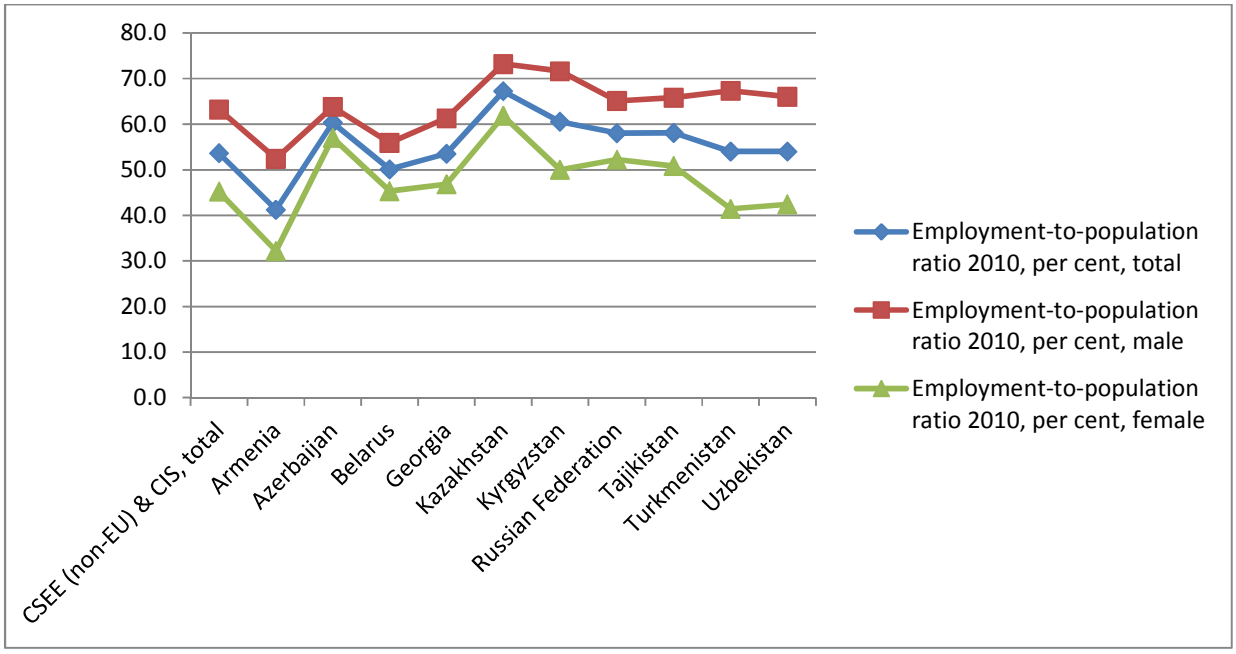
[20] In Armenia, the youth cohort comprises people aged 16 to 24.

[21] *Decent Work Country Profile – Armenia* (ILO, 2012e, p. 6).

[22] *Decent Work Country Profile – Azerbaijan* (ILO, 2012f, p. 8).

[23] Available at: http://www.gks.ru/bgd/free/b04_03/IssWWW.exe/Stg/d04/180.htm

Figure 25. Male and female employment-to-population ratio, CIS countries and Georgia, 2010

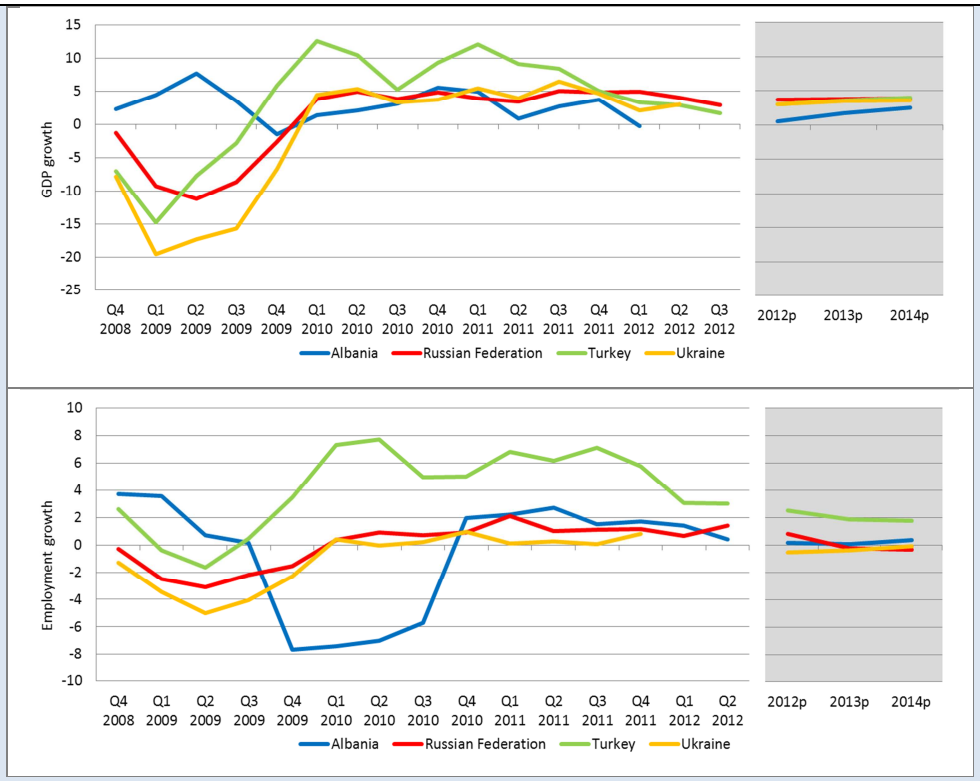


Source: ILO, *Estimates and Projections of the Economically Active Population (EAPEP)*, 6th edition (Update July 2012).

Country spotlight 2. Growth and job creation in Albania, the Russian Federation, Turkey and Ukraine

The Russian Federation, Turkey and the Ukraine suffered from a substantial shock to growth during the global economic crisis. GDP in these economies contracted by 9.2 per cent, 14.7 per cent, and 19.6 per cent respectively in Q1 2009 but recovery followed swiftly. By Q1 2010, all three economies registered positive growth rates, peaking at 12.6 per cent in Turkey. The years 2010, 2011 and the first half of 2012 showed stable positive GDP growth, resulting in a rate of 2 to 4 per cent in 2012. However, Turkey experienced a relatively sharp decline with the lowest growth rate after the crisis of 1.6 per cent in Q3 2012 compared with 3.4 and 3 per cent in Q1 and Q2 respectively. At beginning of the crisis. Albania experienced robust positive growth until Q3 2009 and a more moderate drop thereafter. Albania only experienced two quarters of contraction, namely Q4 2009 and Q1 2012, but registered unstable and low GDP growth in 2010 and 2011 of about 3 per cent. The outlook through 2014 projects continuous growth in the Russian Federation, Turkey and the Ukraine at rates between 3 and 4 per cent. Albania is expected to recover from its contraction in Q1 2012 and show modest growth of 0.5 per cent in 2012 and approximately 2 and 2.5 per cent in 2013 and 2014.

Figure CS2.1. GDP and employment (% change compared with same quarter previous year)



Note: The figures display quarterly growth in GDP (top panel) and employment (bottom panel) between Q4 2008 and Q2 2012 and annual projections between 2012 and 2014 (values shaded in grey). Quarterly growth rates are calculated on the basis of the same quarter in the previous year.
Source: IMF; Institute of statistics (INSTAT) Albania; ILO LABORSTA database; Eurostat; OECD. For projections: IMF; ILO, *Trends Econometric Models*, October 2012.

All four economies registered employment losses at the beginning of the global economic crisis but employment growth trajectories diverged significantly at the end of 2009 and in 2010. Turkey recovered jobs fastest with employment growth peaking at 8 per cent in Q2 2010 and remaining positive through 2011. Turkish jobs growth started to falter at the beginning of 2012 as employment grew only by 2.8 per cent in Q2 2012, its lowest rate since 2009. Due to the interconnectedness of their economies, the Russian Federation and Ukraine shared similar growth paths with a gradual jobs recovery from 2010 onwards and positive but low employment growth rates throughout 2011. Albania's jobs recovery diverged from its output recovery since Q1 2009. Albania's economy registered employment losses through 2010 and job creation recovered only in Q4 2010 with annual employment growth rates in 2011 and 2012 between 1 and 2 per cent. The projection for the coming years shows a deceleration in job recovery with moderate contractions for the Russian Federation and Ukraine, and growth rates slightly above zero for Albania. Turkey is expected to see employment continue to grow at 2 per cent, a deterioration of its ability to create jobs considering its high growth rates of approximately 7 per cent in 2011.

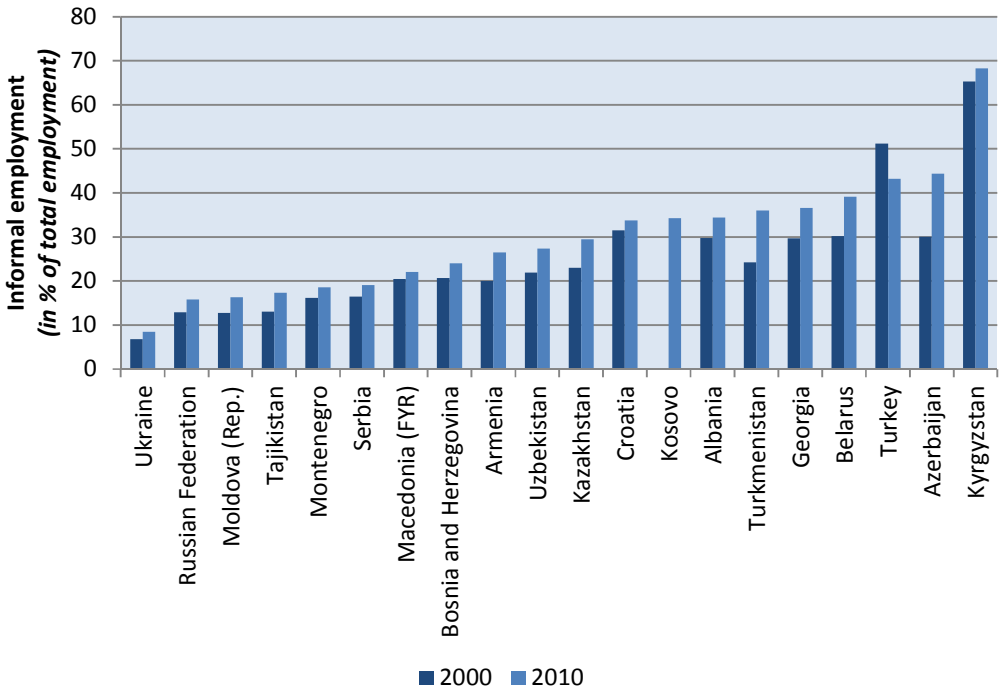
Informal employment remains an ongoing challenge for the region but other indicators point to some improvement

The high and rising incidence of informal employment remains one of the major labour market challenges in most countries of the region (see Figure 26).[24] Despite the continuous improvement in headline labour market indicators, the widespread and growing presence of informal employment indicates that the quality of employment has deteriorated. In Armenia, for instance, more than 49 per cent of total employment has been estimated to be informal in 2010 with large differences between rural and urban employment. Indeed, in rural areas informal employment constitutes 82.1 per cent of total rural employment and 98.6 per cent of agricultural employment. In contrast, in urban areas only 24.5 per cent of employees were in informal employment.[25] Overall, the region experienced a steady increase in informality – already prior to the crisis – that increased its vulnerability to the crisis and worsened the long-term outlook considerably. Informality increased particularly sharply in Caucasian and Central Asian countries such as Azerbaijan (+14 percentage points), Turkmenistan (+11 percentage points) or Georgia (+7 percentage points). This generalized increase in informality in the region is in stark contrast with other emerging regions in the world where broadly informal employment has declined as countries managed to implement anti-poverty measures and successfully applied formalization strategies (see also the discussion in the Latin American section).

[24] Informal employment concerns all those types of jobs that are not or only insufficiently covered by legal arrangements such as jobs in the informal sector or informal jobs in formal enterprises (see ILO 2011a, KILM Manuscript 8).

[25] *Decent Work Country Profile – Armenia* (ILO, 2012e, p. 7).

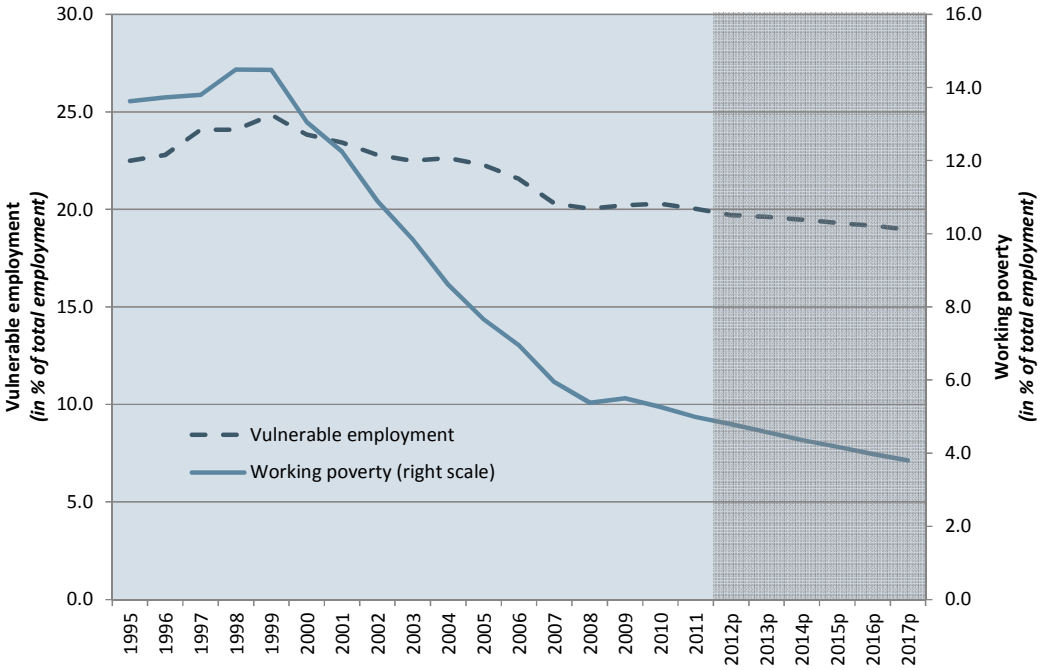
Figure 26. Incidence of informal employment in Central and Eastern European Countries (2000 vs. 2010)



Note: Urban informal employment rates have been estimated for Armenia.
Source: ILO, *Trends Econometric Models*, October 2012; ILO, *Key Indicators of the Labour Market*, 7th edition; Turkstat.

In contrast to informal employment, vulnerable employment has continued its downward trend in the region, albeit at a more moderate level (Figure 27). This decline that had set in after the peak of the transformation shock reached in 1997 has, however, bottomed out in recent years and vulnerable employment has not fallen below 20 per cent and is projected to do so at current trends only by 2015. In line with these trends, working poverty has also declined sharply over the 2000s before bottoming out with the onset of the crisis in 2009. Currently, still 4.6 per cent of all workers in the region are considered to be extreme or moderately poor, i.e. live in households with less than US$2 per person per day, and lack most basic commodities such as running water or heating. This rate is expected to decline only moderately by 2017 to 3.6 per cent, a much smaller improvement than could have been expected on the basis of pre-crisis trends.

Figure 27. Trends and projections for vulnerable employment and working poverty



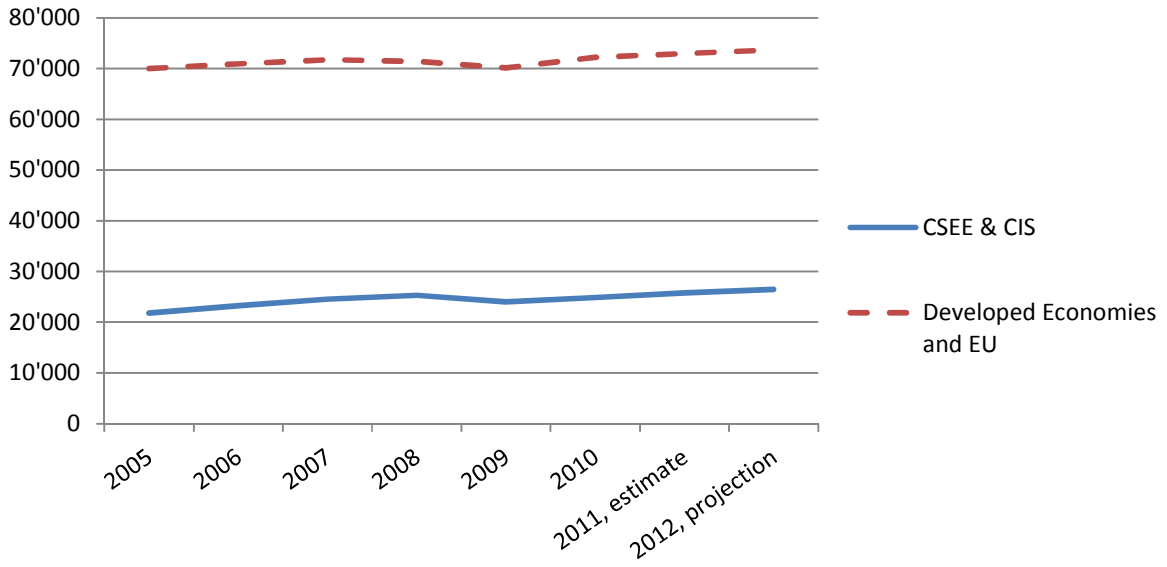
Note: The chart displays trends of vulnerable employment and working poverty (at the US$2 poverty line) for the CSEE and CIS countries region between 1995 and 2017. The shaded area indicates forecasts.
Source: ILO, *Trends Econometric Models*, 2012.

A consumer class has been growing in the region. Between 1999 and 2012, the share of workers living in households with at least US$4 per person per day has increased by 25 percentage points. Besides being able to cover their basic needs, these employees already have access to an increasing range of consumer goods that are typical for consumption baskets of middle-class workers in developed economies, such as cultural goods or manufactured goods. The further growth of this group and especially the expansion of the share of workers with per person/per day consumption levels of above US$13 is likely to constitute a growing domestic market and fuelling aggregate demand in the region, making it less dependent on commodity exports.

Labour productivity is not catching up with more advanced economies

For such developments to become sustainable, however, further supply-side adjustments are necessary. In particular, labour productivity growth needs to accelerate to broaden the base for a consumer class to enlarge. In this respect, labour productivity in Central and South-Eastern Europe (non-EU) and CIS has not grown faster than that in the Developed Economies region in the recent years, i.e. convergence during the transformation process has stalled instead of further accelerating. As a consequence, labour productivity levels are estimated to be still almost three times lower in the region in 2012 than in the Developed Economies region (see Figure 28).

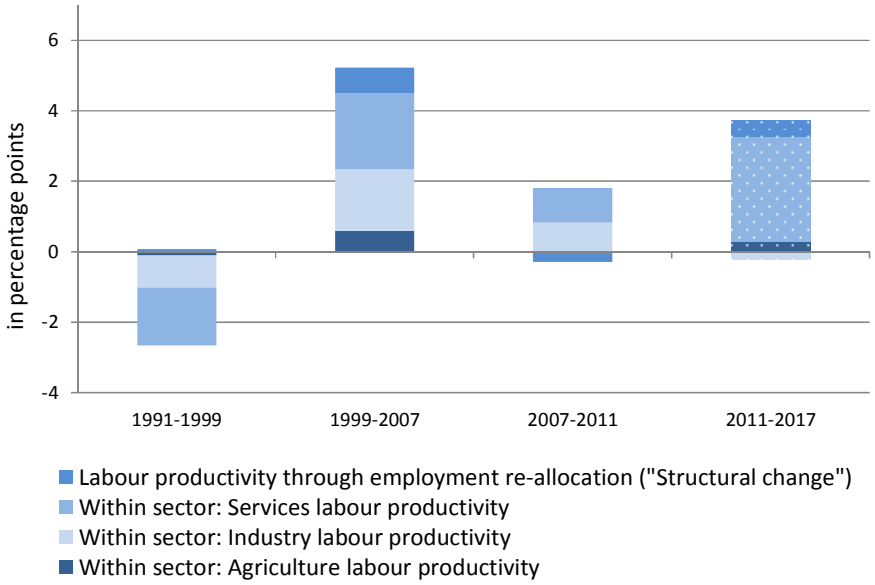
Figure 28. Output per worker (CSEE and CIS vs. Developed Economies)



Note: In constant 2005 international US dollars.
Source: ILO, *Trends Econometric Models*, October 2012; World Bank, *World Development Indicators* 2012.

Sectoral sources of productivity growth have varied considerably since the end of the transformation period. After a fast catch-up period between 1999 and 2007 with strong productivity gains in both industry and services and reallocation across sectors, labour productivity growth has decelerated fast with the onset of the crisis (see Figure 29). In particular, in industry, labour productivity growth has slowed substantially and was low over 2007–11. Neither has labour reallocation played an important role lifting productivity growth in the most recent period. Going forward, some acceleration is expected to set in, with strong productivity growth in services but only a moderate increase in industry.

Figure 29. Decomposition of labour productivity growth: CSEE vs. Developed Economies



Notes: The decomposition follows the methodology described in Appendix 1 of Chapter 4. Projections for 2011–17 are based on projections of sectoral value added shares produced as described in Appendix 2 of Chapter 4.
Source: ILO calculations.

Deficits in productive employment and high and rising informality rates are partly responsible for the lack of labour productivity convergence of Central and South-Eastern Europe (non-EU) and CIS to advanced economies. In the past, this has led to intensive labour migration within the region to seek better employment opportunities abroad (see ILO, 2012d). Economies with large shares of young populations such as Kyrgyzstan, Tajikistan, Uzbekistan, and Armenia have had difficulties in providing decent work opportunities for young people entering the domestic labour markets. Rather than being unemployed or working in the informal economy in their home countries, these young people often prefer to move abroad. Up to 500,000 (according to some estimations even up to 1 million) Kyrgyz citizens are estimated to work abroad often without finding much better employment opportunities, and have to accept vulnerable employment.[26]

To cope with these challenges, the region needs to act on two key strategic priorities: Improve the investment climate through better governance and maintain macroeconomic stability by aiming for low inflation, structural diversification and an increase in high-technology exports. Many countries in the region consider the transition to an innovation-based economy as one of the most pressing national priorities. This, however, requires overcoming a skills shortage requiring reform in vocational education and training and the creation of sufficient new productive employment opportunities.

[26] Draft National Employment Programme of Kyrgyz Republic for 2013-2020.

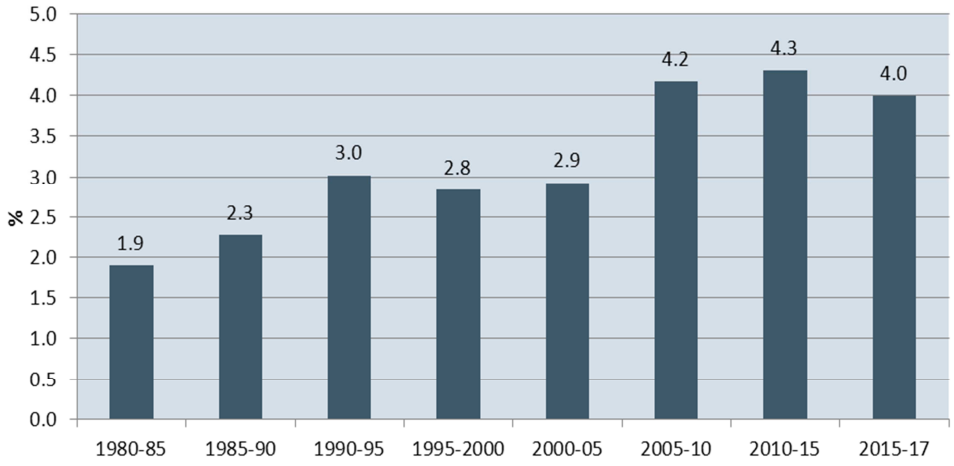
Latin America and the Caribbean

Growth continues but first spillovers are visible

Latin America has emerged more rapidly than other regions from the crisis and has shown remarkable resilience over the past 3 years. After having contracted by 1.5 per cent in 2009, GDP expanded by an average of 4.6 per cent p.a. between 2010 and 2012, close to the pre-crisis trend of 5.3 per cent p.a. between 2004 and 2008. Overall, the last decade has seen a substantial improvement in economic growth as the region reached some 3.4 per cent p.a. between 2000 and 2010, far higher than in earlier periods (see Figure 30). This period of expansion has been moderated but not stopped by the global financial crisis that broke out in 2009. Nevertheless, the region contracted temporarily as costs of borrowing increased, global trade declined and remittances and revenues from tourism fell.

During the following recovery period, economic growth has been driven mainly by external factors associated with the evolution of commodity prices in international markets. Global demand for commodities from the region has been strong due to a significant increase in demand especially from Asian economies. Moreover, starting from a sound monetary and fiscal base, several Latin American countries managed to successfully enact counter-cyclical stimulus policies to help weather the external shock and resume growth quickly (UNCTAD, 2012). Together, this allowed the region to recover quickly and return to positive and increasing growth rates by the end of 2009. As the recovery accelerated in 2010, however, several large economies in the region needed to lean against the strong inflow of short-term, foreign capital as the region was increasingly seen as an attractive destination for liquidity generated in advanced economies. This has forced some of them to implement restrictive measures, including moderate forms of capital control, in order to avoid appreciation of their exchange rates and a fall in exports. In the meantime, these pressures have been replaced by increasing volatility of their exchange rates as capital flows moved into reverse over 2012 (United Nations, 2013). Notwithstanding these difficulties, output volatility has declined by around 60 per cent further into the crisis, when compared with the immediate pre-crisis period. As global growth is set to weaken again, the region will suffer from slowing world trade and a deceleration of commodity prices. As a consequence, growth is expected to slow, albeit moderately, reaching an average of only 4 per cent over the next 5 years, which will put the region somewhat below the global rate of economic expansion (see IMF, 2012b).

Figure 30. Annual growth in Latin America, 1980–17



Note: Projections from 2012 onwards.
Source: International Monetary Fund, October 2012.

Social and labour market indicators have improved considerably, but further progress will remain more limited

The strong and steady growth in Latin America and the Caribbean has considerably improved social and labour market conditions over the past several years (see Table 3).[27] In particular, employment progressed steadily and faster than the labour force. The regional employment-to-population ratio increased from 58.7 per cent in 2002 to 61.9 per cent in 2012, whereas the participation rate increased continuously from 64.6 per cent to 66.3 per cent over the same period. This rapid increase in employment resulted mainly from an acceleration of worker flows out of unemployment into new jobs, a process that had started already at the beginning of the 2000s and was only weakly affected by the crisis in 2009 (see Figure 31). At the same time, inflows of workers out of existing jobs into unemployment decelerated sharply after the crisis, further lowering the unemployment rate.

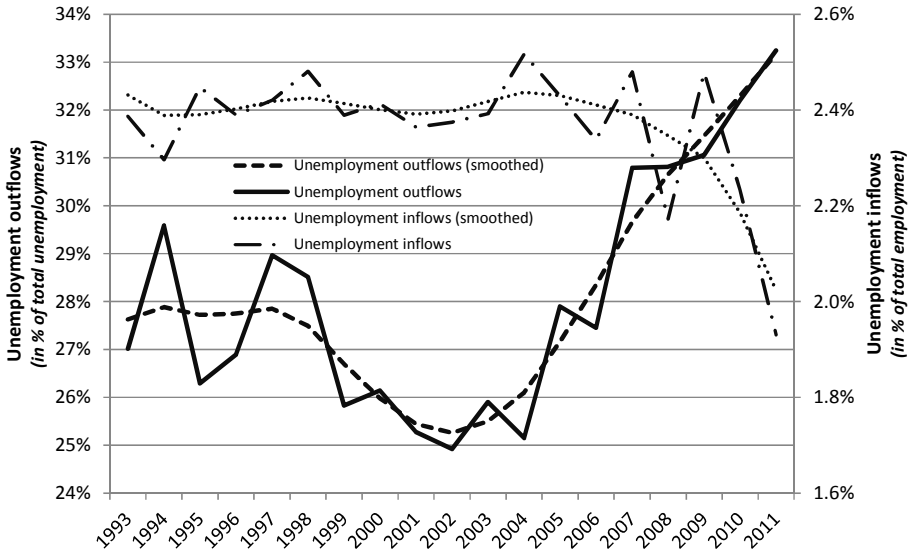
[27] Regional estimates presented here diverge from those published in the *Panorama Laboral 2012* (ILO, 2012k), mainly as a result of differences in geographical coverage. Work on convergence in these estimates is currently being undertaken.

Table 3. Labour market trends and prospects in Latin America and the Caribbean

		2009	2010	2011	2012p	2013p	2014p	2015p	2016p	2017p
Labour force participation rate (%)		65.8	66.1	66.1	66.3	66.4	66.5	66.6	66.7	66.7
Unemployment rate (%)	Total	7.8	6.8	6.5	6.6	6.7	6.8	6.8	6.8	6.8
	Male	6.5	5.8	5.6	5.6	5.7	5.7	5.7	5.7	5.7
	Female	9.6	8.3	7.9	7.9	8.1	8.2	8.3	8.3	8.3
	Youth	15.7	14.1	13.4	13.5	13.6	13.7	13.7	13.8	13.8
	Adult	5.7	5.0	4.9	4.9	5.1	5.2	5.2	5.3	5.3
Employment growth (% p.a.)	Total	0.6	3.2	2.0	1.8	1.6	1.7	1.7	1.6	1.6
Sectoral employment	Agriculture	16.4	16.2	15.8	15.7	15.3	15.0	14.6	14.3	13.9
	Industry	22.0	21.8	21.7	21.7	21.9	22.0	22.1	22.3	22.4
	Services	61.6	62.0	62.4	62.6	62.8	63.0	63.3	63.5	63.7
Status and income	Wage and salary earners	63.5	63.5	63.8	63.8	63.9	63.9	63.9	64.0	64.0
	Self-employed	25.9	26.2	26.1	26.1	26.2	26.3	26.3	26.4	26.4
	Vulnerable employment share	31.9	31.9	31.5	31.5	31.4	31.3	31.2	31.1	31.0
	Working poverty, US$ 2 a day (%)	8.7	7.9	7.6	7.4	7.1	6.7	6.4	6.1	5.8

Note: Figures here differ slightly from those published in the ILO *Panorama Laboral 2012* (ILO, 2012k), mainly as a result of differences in geographical coverage.
Source: ILO, *Trends Econometric Models*, October 2012 (see Annexes 4 and 5); IMF (2012b).

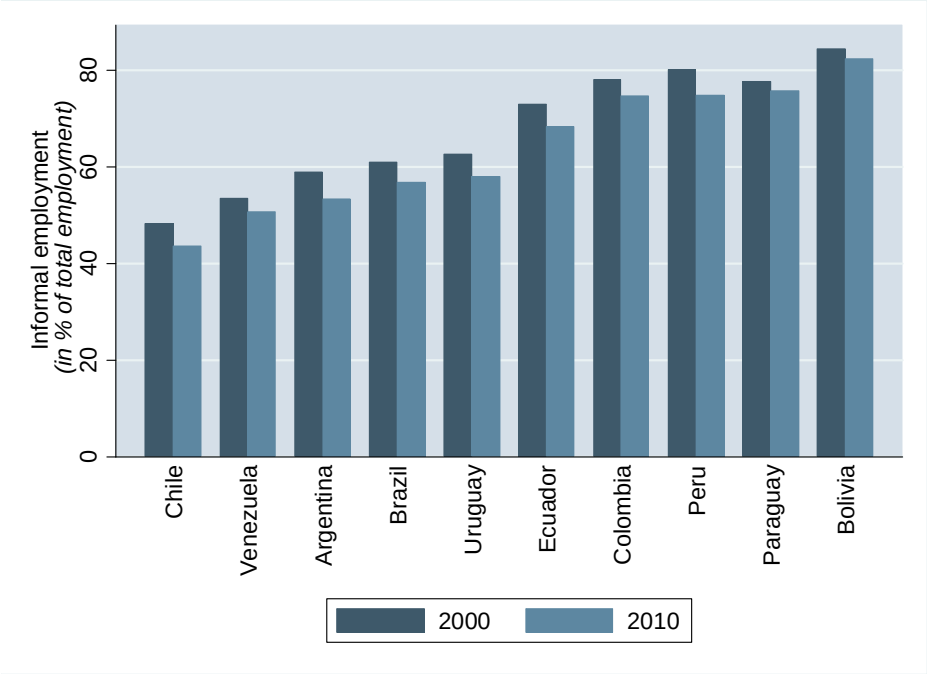
Figure 31. Unemployment flows: Latin America and the Caribbean



Source: ILO, *Trends Econometric Models*, 2012.

The strong increase in employment helped improve the social conditions of the roughly 291 million people that are currently in the regional labour force. In 2012, around 19 million of them were unemployed (down by almost 3 million since 2002) and less than 32 per cent were in vulnerable employment (down by almost 5 percentage points since 2001). At the same time, informal employment continued to decline on a broad front (see Figure 32), due partly to sustained government efforts in a number of countries. Nevertheless, even in well-performing countries in the region, still more than 40 per cent are in informal employment.

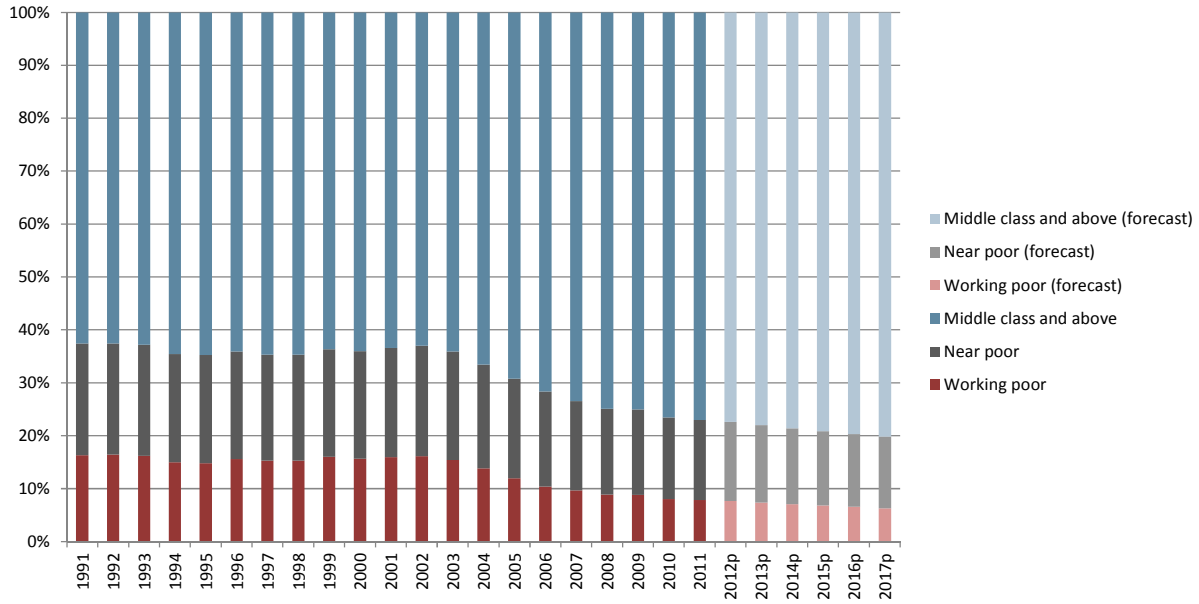
Figure 32. Informal employment in Latin America (selected countries, 2000 vs. 2010)



Source: ILO, *Trends Econometric Models*, October 2012; ILO, *Key Indicators of the Labour Market*, 7th edition.

On the back of improving social indicators, working poverty has also declined, in some cases considerably so (see Figure 33). Between 2002 and 2012, the incidence of workers living in households with consumption levels of less than US$2 per person and per day declined from 16 per cent of total employment in 2002 to less than 8 per cent in 2012. Similarly, for workers in extreme poverty (consuming less than US$1.25 per person and per day), the rate declined from 8 per cent of total employment to less than 4 per cent over the same period. This reduction in working poverty was accompanied by a general decline in poverty as moderate poverty fell from 44 per cent of the population to 30.4 per cent between 2002 and 2012, whereas extreme poverty fell from 19.3 per cent to 12.8 per cent over the same decade. The fall in poverty did help to further expand the Latin American middle-class, bringing about a consumer class of workers having access to a consumption basket of at least US$4 per person per day that constitute now almost 78 per cent of total employment, up from 63.1 per cent in 2002. When measured in terms of consumption levels comparable to advanced economies, this economic group now constitutes almost 30 per cent of total employment, more than 10 percentage points higher than a decade ago. Increases in minimum wages between 2006 and 2011 might also have helped.

Figure 33. Declining working poverty and the emergence of a consumer class in Latin America and the Caribbean



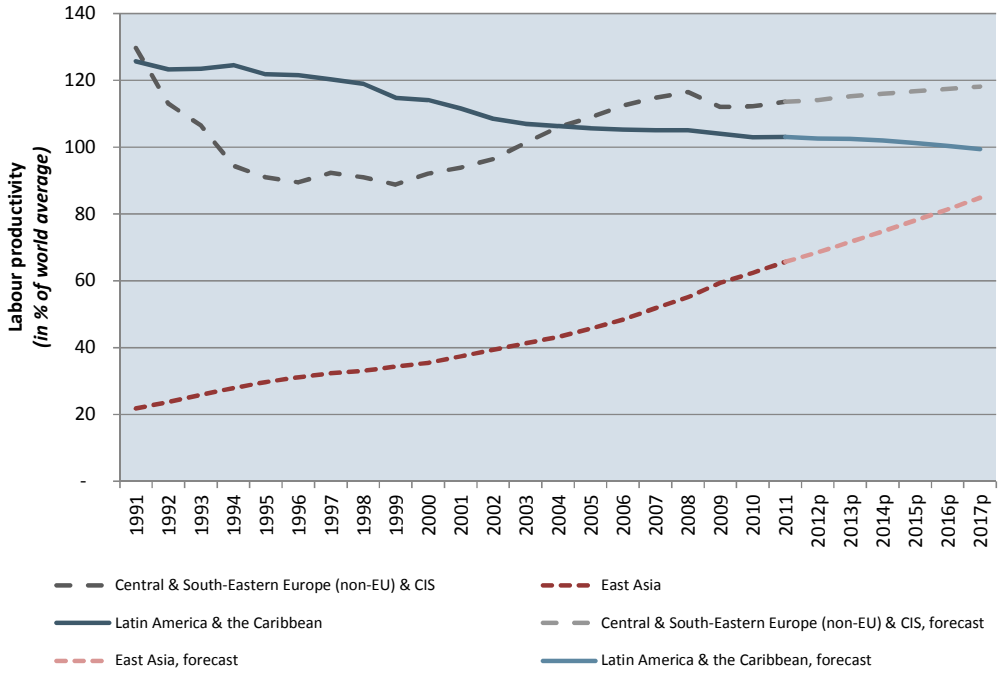
Source: ILO, *Trends Econometric Models*, October 2012.

Despite negative spillovers from the global slowdown and an expected softening of growth in the region, labour market conditions are set to improve further. On the back of a continuous increase of labour force participation, the employment-to-population rate expanded slightly. This expansion in employment will, however, not be sufficiently strong to bring the unemployment rate down, which will gradually edge up to reach 6.8 per cent by 2017. Employment is expanding particularly in the services sector, continuing a long-term trend, at the expense of a reduction in the share of manufacturing employment, whereas agricultural employment will remain stable at around 15 per cent of total employment. Vulnerable employment is not expected to decline further even though working poverty continues to recede, falling to close to 6 per cent over the next 5 years. At the same time, the middle-income consumer class will expand further, covering more than 80 per cent of total employment by 2017.

Labour productivity improves only moderately

Labour productivity improved only moderately in the Latin American and the Caribbean region and is projected to fall below the world average by the end of the forecast period (see Figure 34). Frail labour productivity growth indeed remains the most important weak spot in the region and is likely to constitute a constraining factor for stronger improvements of economic and social conditions over the medium term. Situating itself slightly above the world average of US$22,000 per worker, the region has not converged further to developed economies levels and has continuously lost ground vis-à-vis the world average. In the mid-2000s, the Central and South-Eastern Europe and CIS region surpassed productivity levels in Latin America and by the end of the projection period, East Asia is expected to have closed the labour productivity gap to less than 20 per cent.

Figure 34. Labour productivity in Latin America and the Caribbean improves less than the world average



Source: ILO, *Trends Econometric Models*, October 2012.

The slowdown in productivity growth is all the more worrying as the reduction in informal employment and working poverty should have boosted labour productivity further. Partly, this has to do with the lack of faster reallocation of resources across sectors, away from agriculture into high productivity manufacturing and services. In the Latin American region, there are still 16 per cent of workers employed in agriculture – four times more than in the developed economies and often in subsistence farming – with low productivity and few prospects for increasing it. As shown in ILO (2012k), services expanded in all countries in the region with the exception of Panama, which already has a large service industry specialized in trade and financial services. However, the manufacturing industries did not expand systematically across the region, as only 6 countries out of 17 analysed saw their share of manufacturing increase between 2000 and 2010. As a consequence, labour productivity gains from reallocation across sectors have been very low by international comparison and are not expected to contribute to an acceleration of growth over the medium term (see Table 4).

Table 4. Labour productivity gains from sectoral reallocation

	1991–99	1999–2007	2007–11	2011–17
Developed Economies and European Union	0.2	0.2	0.0	0.5
Central and South-Eastern Europe (non-EU) and CIS	–1.0	0.7	0.2	0.3
East Asia	2.1	1.7	1.2	2.0
South-East Asia and the Pacific	1.7	1.1	0.4	1.1
South Asia	0.5	1.1	0.7	1.0
Latin America and the Caribbean	0.4	0.5	0.2	0.2
Middle East	0.0	0.5	0.3	0.0
North Africa	0.0	0.2	0.3	0.2
Sub-Saharan Africa	0.3	1.0	0.1	1.0
World	0.9	1.0	0.5	0.9

Note: Contributions to labour productivity growth in percentage points.

Source: ILO, *Trends Econometric Models*, October 2012.

Stronger investment could further boost jobs and productivity

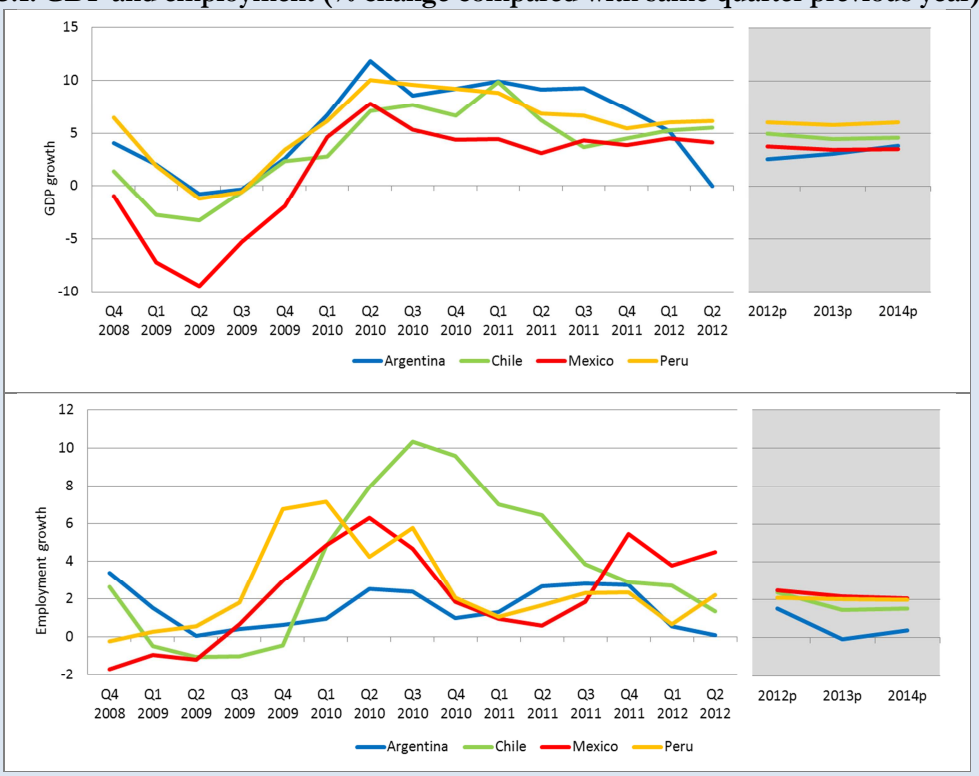
Stronger and more diversified investment would help the region to reap the full benefits of its recent progress. Indeed, acceleration in capital deepening has allowed the region to move to a steadier path of economic expansion in comparison with earlier periods of recovery. Due to the recent boom in commodity prices, countries could afford a strong push to higher public spending and an extension of social programmes to support their economy. But there is also evidence for some countries in the region that the biggest boost to domestic demand came from the labour market due to stronger investment that led to faster job creation and an improvement in real wages. The annual average growth rate of GDP of 3 per cent between 1981 and 2010 was fuelled by an increase in employment of 1.6 percentage points, by investment of 1.3 percentage points but almost absent total factor productivity growth. In contrast during the period 2003–10, growth stood at 4.1 per cent, with a contribution by employment of 1.8 percentage points, by capital deepening of 1.7 percentage points and by an increase of total factor productivity of 1.2 percentage points (ECLAC, 2012). This highlights the need to encourage long-term investment and promote further growth and convergence in productivity levels. Some observers stress that productivity growth in Latin America and the Caribbean only amounts to about half its potential and is not catching up to the technological frontier (Moreno, 2011). Indeed, if the region employed its existing resources of physical and human capital at the same level of productive efficiency as the United States per capita income would be doubled.

Country spotlight 3. Growth and job creation in Argentina, Chile, Mexico and Peru

During the global economic crisis, GDP in Argentina, Chile, Mexico and Peru declined, but only Mexico experienced a sharp contraction of more than 9 per cent due to its close ties with the United States. Recovery proceeded swiftly at the end of 2009 and beginning of 2010 with positive GDP growth rates in all four countries. Throughout 2010 and 2011, quarterly GDP growth rates remained at stable levels, reaching around 9 per cent in Argentina and 4 per cent in Mexico. The crisis had the least severe impact on Argentina with only two quarters of contraction (Q2 and Q3 2009) and considerable GDP growth in 2010 and 2011. However, Argentina's economy decelerated in recent quarters due to economic uncertainty and plummeted to

zero growth in Q2 2012. The projection for the coming years shows the recession to be short-lived and Argentina is expected to grow at around 3 per cent from 2012 to 2014. Chile, Mexico and Peru show growth rates at stable levels for 2012 to 2014, similar to recent quarters; Chile is expected to grow at 4.5 per cent, Mexico at 3.5 per cent and Peru at 6 per cent.

Figure CS3.1. GDP and employment (% change compared with same quarter previous year)



Note: The figures display quarterly growth in GDP (top panel) and employment (bottom panel) between Q4 2008 and Q2 2012 and annual projections between 2012 and 2014 (values shaded in grey). Quarterly growth rates are calculated on the basis of the same quarter in the previous year.
Source: IMF; ILO LABORSTA database. For projections: IMF; ILO, *Trends Econometric Models*, October 2012.

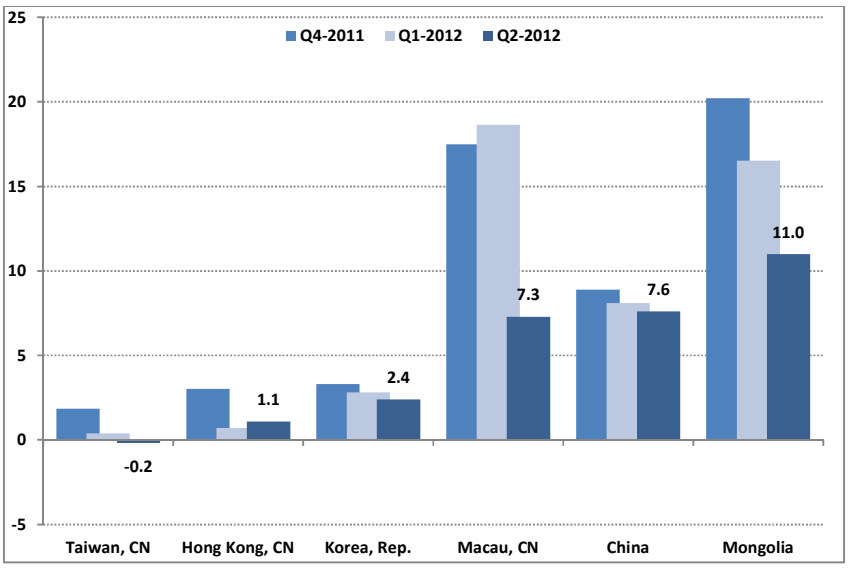
The crisis had a severe but brief impact on employment in Argentina, Chile, Mexico and Peru. Contractions in employment growth were registered for one quarter in Peru and three quarters in Chile and Mexico in 2009 while Argentina stayed at low but positive employment growth rates. The jobs recovery in Peru, Chile and Mexico was volatile and accelerated sharply after the crisis but decelerated throughout 2010 and 2011. Chile saw a substantial employment recovery that only gradually tapered off after having reached 10 per cent in Q3 2010. Mexico performed well in the past four quarters, reaching employment growth of 4.5 per cent in Q2 2012. Argentina's good performance in GDP growth from 2009 to 2011 was not reflected in employment growth, which remained low but stable at around 1 to 2 per cent. However, the downturn in GDP at the end of 2011 and beginning of 2012 reflected a negative impact on jobs with employment growth barely above zero in the first half of 2012. Employment in Argentina is expected to contract in 2013 but should reach positive growth again in 2014. In contrast, employment growth in Chile, Mexico and Peru is projected to stay within a band between 1.5 and 2.5 per cent for 2012–2014.

East Asia

Economic activity remains strong but started to weaken as a result of the global slowdown

Economic activity in the sub-region decelerated considerably as the uncertainty of the Euro area debt crisis persisted and the global economic recovery continued to stall. GDP growth in East Asia fell from 8.2 per cent in 2011 to 6.8 per cent in 2012, its lowest rate of growth in more than a decade (IMF, 2012c). As of the second quarter of 2012, activity was notably weak in Taiwan, China (–0.2 per cent), Hong Kong, China (1.1 per cent) and the Republic of Korea (2.4 per cent) due to feeble demand in key foreign trade and investment partners (see Figure 35). Despite extraordinary quarterly growth throughout 2011, GDP growth decelerated from 18.6 per cent in the first quarter of 2012 to 7.3 per cent in the second quarter of 2012 in Macau, China, while slowing from 16.5 per cent to 11 per cent in Mongolia.

Figure 35. Real gross domestic product, Q4 2011 – Q2 2012 (% change, year-on-year)



Source: CEIC Global Database; official national sources.

China's economy, which has been remarkably resilient since the onset of the global financial crisis in 2008, showed signs of its vulnerability to the global environment as well. GDP growth in China decelerated from 8.9 per cent at the end of 2011 to 8.1 per cent in the first quarter of 2012 and 7.6 per cent in the second quarter of 2012 due to falling external demand and the unwinding of initial policy response measures to the global financial crisis. Given its importance in regional and global markets, further macroeconomic stimulus from China was highly anticipated, beyond the slight loosening of monetary policies in the first half of 2012 and the approval of 30 infrastructure projects totalling US$157 billion in early September (ADB, 2012; Sweeney, 2012).

Global export flows from East Asia trended downward through the first part of 2012, as China's exports grew by only 4.9 per cent, and export trade from the Republic of Korea and Mongolia contracted respectively by 4.6 per cent and 2.8 per cent in April.[28] The fall in trade demand

[28]CEIC Global Database, referencing IMF: Direction of Trade Statistics (DOTS).

and production from East Asia was driven heavily by the lingering debt crisis in the Euro area. Since the fourth quarter of 2011, exports from East Asia to the Euro area have proved volatile with an overall negative trajectory (see Table 5). Exports to the Euro area from China (where exports to the European Union constituted nearly 20 per cent of the country's total world exports) contracted by 4.9 per cent in March and 4.0 per cent in April.[29] Exports from the Republic of Korea to the Euro area have continued to decline since the end of 2011 (except for February 2012), shrinking by as much as 43.1 per cent in January 2012 and 18.8 per cent in April 2012. In terms of industrial production, China contracted by 22.2 per cent in the first quarter of 2012, and production has also been mostly negative or flat in the Republic of Korea and in Taiwan, China through the first half of 2012.[30]

Table 5. Exports from East Asia to the Euro area, October 2011 – April 2012 (% change, year-on-year)

	Oct 11	Nov 11	Dec 11	Jan 12	Feb 12	Mar 12	Apr 12
China	5.8	3.3	6.1	–5.6	1.4	–4.9	–4.0
Hong Kong, China	8.5	–3.5	4.5	–2.4	–6.3	–6.3	–5.3
Macau, China	33.5	–15.8	–18.5	–35.5	63.2	–9.3	–21.6
Mongolia	–13.3	35.7	–16.9	–41.2	73.0	10.7	–19.9
Republic of Korea	–14.6	–5.4	–15.4	–43.1	16.4	–17.4	–18.8
Taiwan, China	3.8	–22.5	–14.5	–8.4	6.8	–11.7	3.7

Note: Taiwan, China includes exports to all of Europe.
Source: CEIC, Global Database, referencing IMF, Direction of Trade Statistics (DOTS) and official national sources.

Slow growth is set to weaken employment

With economic activity slowing, labour markets across East Asia in 2012 were consequently sluggish. Employment in East Asia expanded only 0.5 per cent or an estimated 4.5 million, consisting of 3.0 million male and 1.5 million female workers.[31] The rate of job growth continued to lag considerably behind the pre-crisis average employment growth rate of 1.2 per cent per annum from 2002 to 2007. The most recent mid-year data indicate year-on-year employment growth of 4.9 per cent in Macau, China and 2.7 per cent in Hong Kong, China in June, and 1.9 per cent in the Republic of Korea and 1.2 per cent in Taiwan, China in July.[32] With moderating export demand and industrial production, employment in manufacturing in the Republic of Korea contracted on a year-on-year basis in each month of the first half of 2012. In Taiwan, China, growth in manufacturing jobs steadily declined since January and was nearly flat from May to July 2012.

From 2007 to 2012, unemployment in East Asia expanded by 6.9 million, a considerable increase of 21.8 per cent in the unemployed population. While the overall unemployment rate for

[29] Share of total exports to the European Union is based on WTO, Statistics Database, April 2012.

[30] CEIC Global Database, referencing official national sources.

[31] ILO, *Trends Econometric Models*, October 2012.

[32] Official national sources.

East Asia remained low, it has increased from 3.8 per cent in 2007 to 4.3 per cent in 2011 to 4.4 per cent in 2012.[33] As of mid-2012, the unemployment rate stood at 4.3 per cent in Taiwan, China in July, 4.1 per cent in urban areas of China in the second quarter, 3.4 per cent in Hong Kong, China in June, 3.1 per cent in the Republic of Korea in July and 2.0 per cent in Macau, China in June.[34] Unemployment rates were consistently higher for men than women.

The slowdown in 2012 took a toll on East Asian youth in particular. The unemployment rate among young job-seekers edged upward to 9.5 per cent in 2012, an increase of 0.3 percentage points from 2011, with joblessness among young men (11.2 per cent) even higher compared with young women (7.6 per cent).[35] Collectively, young East Asian job-seekers were 2.7 times more likely than their adult counterparts to be unemployed. Youth unemployment rates were notably high in Hong Kong, China (15.1 per cent in June), Taiwan, China (13.0 per cent in July) and the Republic of Korea (9.6 per cent in July).[36]

In addition to the challenge of job creation, raising the quality of employment remains a prominent concern for the sub-region, partly reflected by the low share of wage or salaried workers in total employment. In 2012, only one in two workers in East Asia was employed as a wage or salaried worker with the share higher for men (52.7 per cent) than women (46.9 per cent).[37] Moreover, the percentage of workers classified in vulnerable employment as own-account or contributing family workers remained high at 48.1 per cent, only a slight decline from 49.0 per cent in 2011. In terms of the gender gap, the vulnerable employment rate was 7.1 percentage points higher for women than for men, with around 30 per cent of all employed East Asian women engaged as contributing family workers. Those in vulnerable employment are more likely to work in informal conditions with low earnings and limited social protection. Surveys across six cities in China revealed that nearly one-third of all non-agricultural workers, or 36 million, was informally employed.[38]

The economic and labour market outlook in 2013 remains clouded by volatility in the global environment, but could improve with greater resolution in the Euro area debt crisis, heightened consumer confidence in the United States, and possible stimulus measures carried out in the East Asian economies. GDP growth is forecast at 7.7 per cent in 2013, with a concomitant increase in employment of 4.2 million. The total unemployment rate is projected to edge upward to 4.5 per cent, with youth unemployment increasing 0.2 percentage points to 9.7 per cent. In the short and

[33]ILO, *Trends Econometric Models*.

[34]Official national sources.

[35]ILO: Trends Econometric Models.

[36]Official national sources.

[37]ILO: Trends Econometric Models.

[38]ILO and WIEGO: Women in Informal Employment: Globalizing and Organizing (Geneva, forthcoming), referencing data from the China Urban Labour Survey, available at: http://laborsta.ilo.org/informal_economy_E.html.

medium term, key labour market challenges and priorities ahead for East Asian economies include creating decent jobs for youth and raising the overall quality of employment, particularly for its most vulnerable and informal workers.

One key element for raising job quality in East Asia is to boost labour productivity levels, which could lead to sustainable increases in wages and working conditions. Labour productivity growth in East Asia was a robust 6.1 per cent in 2012 and projected to increase to 6.8 per cent in 2013. While these represent the highest rates among the various sub-regions of the world, they lag behind the sub-region's pre-crisis trend of 8.5 per cent on average annually from 2002 to 2007. Moreover, despite steady increases in productivity in recent decades, the labour productivity level in East Asia remained only one-fifth of that in the Developed Economies and the European Union. The importance of increasing labour productivity and higher wages as drivers of economic growth in East Asia will become even more prominent in the coming decade with deeper market integration and the urgency of moving up in global production systems, coupled with tightening labour force growth. To this end, facilitating greater structural transformation and better allocation of resources, fostering research and innovation, increasing the technical skills of young graduates and adopting more efficient green workplace practices will be instrumental in China.[39] In Mongolia, policies should aim to accelerate efforts towards economic diversification and rural integration while broadening productivity and wage gains to neglected sectors.[40]

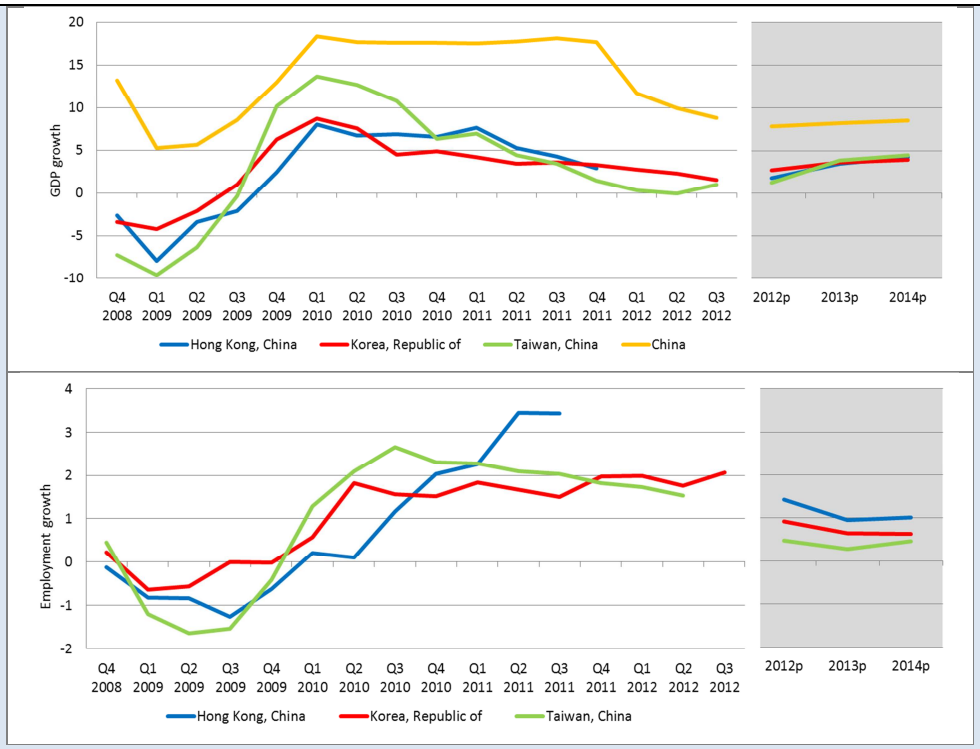
Country spotlight 4. Growth and job creation in Hong Kong (China), the Republic of Korea and Taiwan (China)

The shock to GDP growth in East Asia during the global economic crisis was sharp but brief in comparison with the Developed Economies and European Union region. Since the strong recovery period after the crisis, the pace of growth decelerated steadily throughout 2010, 2011 and the first half of 2012. Growth rates in recent quarters were low compared with earlier levels; Taiwan (China) contracted slightly in Q1 2012 and registered no growth in Q2 2012 and the Republic of Korea grew at only 2.5 per cent in 2012. Taiwan (China) and the Republic of Korea were adversely affected by deteriorating demand conditions in the United States and in the European Union. China's economy contracted only briefly over 2009, recovering fast as a result of a carefully implemented economic stimulus plan and China's growth accelerated to a constant and high level throughout 2010 and 2012. The first half of 2012 showed decelerating GDP growth rates but growth remained at 9 per cent. China is projected to retain annual growth rates of approximately 8 per cent from 2012 to 2014 while Hong Kong (China), the Republic of Korea and Taiwan (China) are expected to grow but at around 2 to 4 per cent.

Figure CS4.1. GDP and employment (% change compared with same quarter previous year)

[39]World Bank and Development Research Center of the State Council of the People's Republic of China: China 2030: Building a Modern, Harmonious, and Creative High-Income Society (Washington, DC, World Bank, 2012).

[40]ILO: Global Jobs Pact Country Scan: Mongolia (Geneva, 2011), available at: http://www.ilo.org/jobspact/country/country-scans/WCMS_162366/lang--en/index.htm.



Note: The figures display quarterly growth in GDP (top panel) and employment (bottom panel) between Q4 2008 and Q2 2012 and annual projections between 2012 and 2014 (values shaded in grey). Quarterly growth rates are calculated on the basis of the same quarter in the previous year. Quarterly employment data for China were not available.
Source: IMF; National Statistics, Republic of China (Taiwan); ILO LABORSTA database. For projections: IMF; ILO, *Trends Econometric Models*, October 2012.

Employment losses in selected East Asian economies were less severe in percentage terms than the declines in economic growth, though contractions persisted through 2009. Hong Kong (China), the Republic of Korea and Taiwan (China) experienced a steady and persistent job recovery in 2010 and 2011. Robust GDP growth in Hong Kong (China) continued to support rapid employment growth with its highest growth level registered in Q3 2011 of about 3.5 per cent. However, quarterly employment data were not available at the end of 2011 and the first two quarters of 2012 and the projected employment growth rates for Hong Kong (China) in 2012 to 2014 indicate a significant deceleration of job recovery to a level of approximately 1 per cent. The Republic of Korea and Taiwan (China) are also expected to decelerate employment growth in 2012 to 2014 to a level of 0.5 to 1 per cent.

South-East Asia and the Pacific

Economic growth has proved resilient

Economic growth in South-East Asia and the Pacific is projected to have accelerated to 5.2 per cent in 2012, following growth of 4.6 per cent the previous year (see Annex 1, Table A1). This regional trend has been supported in part by developments in Indonesia, the region's largest economy, where GDP growth has been both robust and steady in recent years (between the first quarter of 2011 and the second quarter of 2012, year-on-year quarterly GDP growth has ranged between 6.3 per cent and 6.5 per cent). On the other hand, GDP growth in the region has been weighed down by developments in Thailand, which grew by only 0.4 per cent in the first quarter of 2012 due largely to widespread flooding in the country. Amongst Pacific island countries, Papua New Guinea's

economy continued to expand rapidly and GDP growth in 2012 is projected at 7.7 per cent, following a growth rate of 8.9 per cent in 2011, driven by activities in relation to the construction of a large-scale liquefied natural gas (LNG) project (IMF, 2012e). Samoa's economy, on the other hand, is estimated to have slowed in 2012, with growth lowering to 1.4 per cent, compared with 2.1 per cent the previous year as the post-tsunami construction activities phased out and tourism slowed (IMF, 2012b; IMF, 2012f).

The recovery from the global economic crisis is also mirrored in the region's labour markets. The regional unemployment rate is projected to have remained steady at 4.4 per cent in 2012, following a decline from 4.7 per cent in 2010 to 4.4 per cent in 2011 (see Annex 1, Table A2). In Indonesia, the unemployment rate has continued to fall, reaching 6.3 per cent in 2012, down from a decade high of 10.4 per cent in 2006. The unemployment rate in the Philippines also edged down to 6.9 per cent in the second quarter of 2012, compared with 7.2 per cent the same quarter the previous year. This decline has been driven by trends in male unemployment: the unemployment rate for Filipino men declined from 7.6 per cent to 7.0 per cent during the same period but the unemployment rate for women remained unchanged at 6.7 per cent in the same period. On the other hand, unemployment in Thailand rose to 0.9 per cent in the second quarter of 2012, compared with 0.6 per cent the same period the previous year. In Samoa, the unemployment rate has risen significantly from 1.3 per cent in 2006 to 5.7 per cent in 2011.[41] Young women and men aged 15–29 accounted for 76.9 per cent of the unemployed in Samoa in 2011 (see Box 7 for an overview of the situation in Samoa).

Box 7. Employment-to-population ratios in Samoa

The recent population and housing censuses carried out in recent years in many Pacific Island Countries provide important insights into labour markets in those countries and can assist in assessing trends in the MDG target 1B indicators, including the employment-to-population ratio.

In Samoa, for example, according to the Population and Housing Census of 2006, the number of people employed totalled 53,929, representing 49.1 per cent of the working-age population aged 15 and older of 109,746 (See Figure B7.1). The 2011 census indicates that the number of people employed in Samoa declined significantly to 45,177, while the working-age population rose to 115,929, pulling down the employment-to population ratio to 39.0 per cent. Part of this decline is explained by a rise in the number of unemployed, which rose nearly four-fold from 707 to 2,703 but a larger share is attributed to a large group of people in Samoa dropping out of the labour force, many of whom are likely to be dropping out of the domestic labour force and migrating overseas for work.

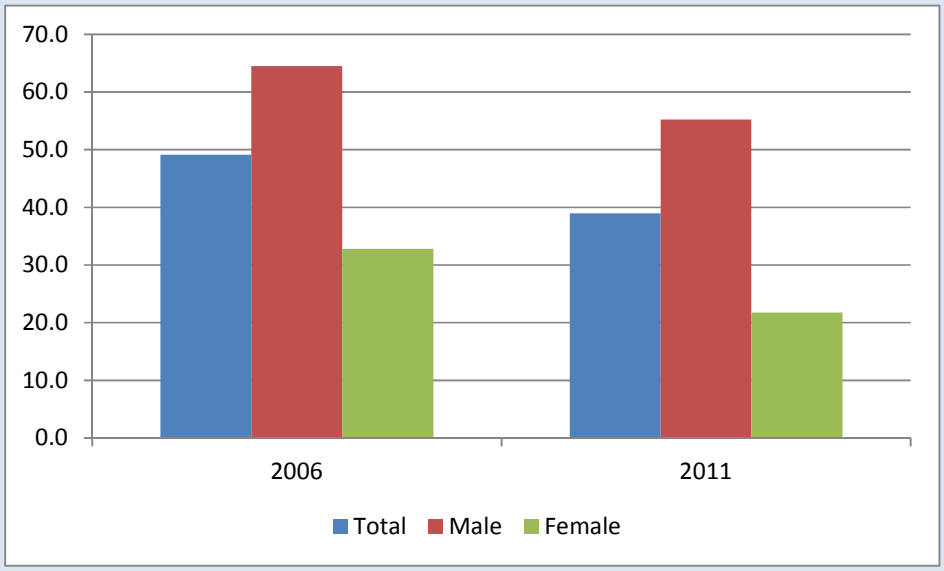
Large gender gaps exist in the employment-to-population ratio in Samoa. In 2011, the ratio for men was 55.2 per cent, compared with 21.7 per cent for women. Furthermore, the gender gap has widened between 2006 and 2011, with the difference between the male employment-to-population ratio and the female ratio increasing from 31.6 percentage points to 33.5 percentage points.

In comparison with the regional employment-to-population ratio, the corresponding rates

[41] All figures are based on the Population and Housing Census of Samoa for respective years.

in Samoa are significantly lower. In 2012, the employment-to-population ratio in South-East Asia and the Pacific was estimated at 67.0 per cent, with 78.3 per cent for men and 56.0 per cent for women (see Annex 1, Table A5).

Figure B7.1. Employment-to-population ratio by sex, Samoa 2006/2011 (%)



Source: ILO calculations based on Population and Housing Census 2006 and 2011.

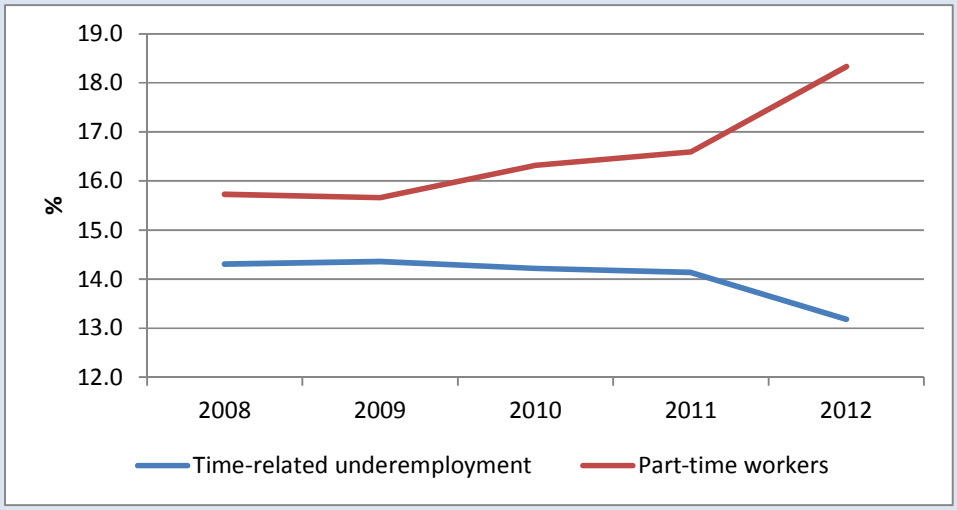
Young women and men also continue to face a difficult situation in the labour market in the South-East Asia region, with the youth-to-adult ratio of unemployment rate estimated at 5.2 in 2012 (see Annex 1, Table A3). Encouragingly, however, there have been some positive developments in the Philippines and Indonesia, the two countries in the region with the largest labour force. The youth unemployment rate in the Philippines has trended down in recent years, registering 16.0 per cent in the second quarter of 2012, compared with 16.6 per cent in the same period of 2011 and 18.8 per cent in the same period of 2010. In Indonesia, youth unemployment has declined significantly from 23.0 per cent in 2011 to 19.1 per cent in 2012. In the Philippines, unemployment rates for young men have declined relatively more rapidly during the same period, with the rate for young men falling by 3.2 percentage points compared with 2.1 percentage points for young women. On the other hand, in Indonesia, the rate for young women has fallen by 6.6 percentage points during the respective period, compared with 3.7 percentage points for men.

Between 2011 and 2012, the number of people in the labour force and those employed in the South-East Asia and the Pacific region is estimated to have expanded by 1.6 per cent, bringing the labour force to 316.2 million and total employment to 302.0 million. In some countries in the region, employment growth has been driven by part-time employment (see Box 8), partly as a result of the expanding services sector in the region. The share of employment in services is estimated to have risen from 33.1 per cent in 2002 to 36.7 per cent in 2012, while the share of workers in industry increased from 19.5 per cent to 21 per cent and the share of workers in agriculture declined from 47.4 per cent to 42.3 per cent (see Annex 1, Table A8).

Box 8. Part-time work and underemployment in Indonesia

The rapid expansion of part-time employment has played an important role in expanding employment and reducing unemployment in Indonesia in recent years. The number of part-time workers (less than 35 hours per week) has increased by 4.6 million between 2008 and 2012, during which time total employment increased by 10.8 million. Consequently the share of part-time workers in total employment increased from 15.7 per cent in 2008 to 18.3 per cent in 2012 (see Figure B8.1). In addition to part-time workers, the number of people working less than 35 hours a week and willing to work additional hours (time-related underemployment) in total employment remained rather stable at around 13.2 per cent between 2008 and 2011, before dropping to 13.2 per cent in 2012. While part-time work can provide a better balance between working life and private life, such working arrangement can be less economically secure and less stable than full-time employment. These trends have also taken place in the context of stalled discussions on labour law reform in Indonesia.

Figure B8.1. Part-time work and underemployment in Indonesia, 2008–12 (%)



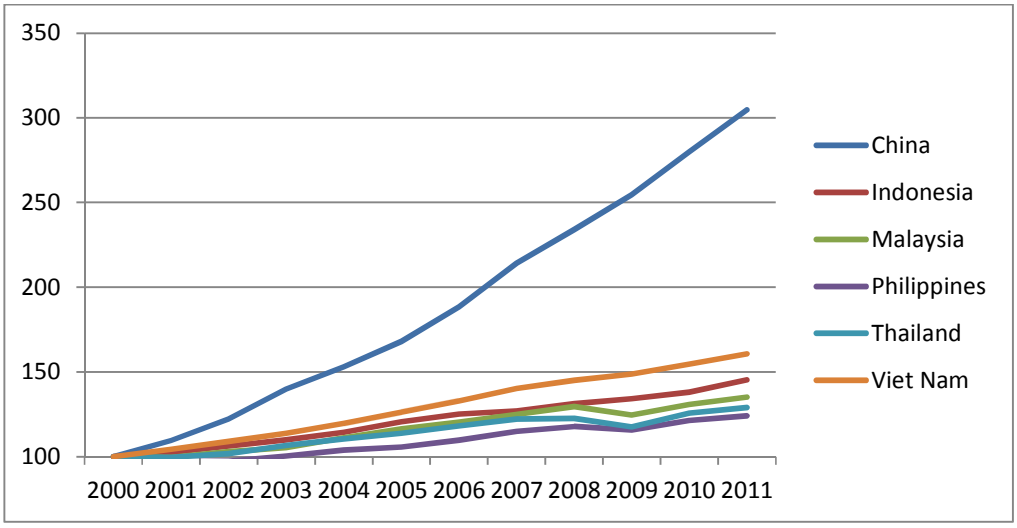
Source: ILO calculations based on BPS Statistics Indonesia.

Progress in reducing vulnerable employment remains uneven

In 2012, some 185 million people, or 61.4 per cent of the region's employed, were estimated to be in vulnerable employment, highlighting the need to continue to focus on those who are in poor quality jobs. In Indonesia, vulnerable employment has fallen from 63.4 per cent at the height of the global economic crisis in 2009 to 58.0 per cent in 2012. This trend was also observed in the Philippines, as the vulnerable employment rate, which stood at 44.2 per cent in the second quarter of 2009, declined steadily to 41.2 per cent in Q2 2012. On the other hand, in Thailand, vulnerable employment has risen from 52.5 per cent to 53.2 per cent. In the countries where data is available, vulnerable employment rates for women remain significantly higher than for men, with the gap ranging from 7.6 percentage points in Indonesia to 5.5 percentage points in the Philippines to 4.7 percentage points in Thailand. Such gender gaps are also evident in the regional labour force participation rates, with 81.8 per cent of the male working-age population participating in the labour market in 2012 compared with 58.8 per cent for women (a gap of 23.0 percentage points).

Economic growth in the region is projected to pick up further to 5.9 per cent in 2013 (from 5.2 per cent in 2012) while the unemployment rate is projected to hold steady at 4.6 per cent (from 4.5 per cent in 2012). A number of opportunities and challenges face countries in the South-East Asia and the Pacific region in the coming years. Developments outside of the region, in particular the slowing economies in China and India, the sovereign debt crisis in Europe and a sluggish economic and labour market recovery in the United States continue to pose significant risks to the region. Within the region, the establishment of the ASEAN Community in 2015, and the free flow of investment, trade and freer flow of skilled labour that the Community entails, will continue to be a key element of the policy agenda. While the potential for growth acceleration from the regional integration is great, the potential gains will not be even, whether across countries, sectors or workers. Careful consideration of the labour market impacts of ASEAN regional integration will be critical. As highlighted throughout this section, gender concerns remain an important challenge in the region, and building on the progress made to date, a greater policy focus on gender equality will be required. Sustaining the recovery in the region to continuously raise living standards will also require a focus on both employment creation and labour productivity. This is a particular challenge for the ASEAN Community. While labour productivity has grown, with for example output per worker rising by 60.7 per cent in Viet Nam between 2000 and 2011, labour productivity in China and India has been much faster (see Figure 36). In the South-East Asia and the Pacific region, output per worker is estimated to have grown at an annual rate of 3.1 per cent in 2012, compared with 2.0 per cent the previous year (see Annex 1, Table A7).

Figure 36. Trends in growth in output per worker, selected Asian countries, 2000–11



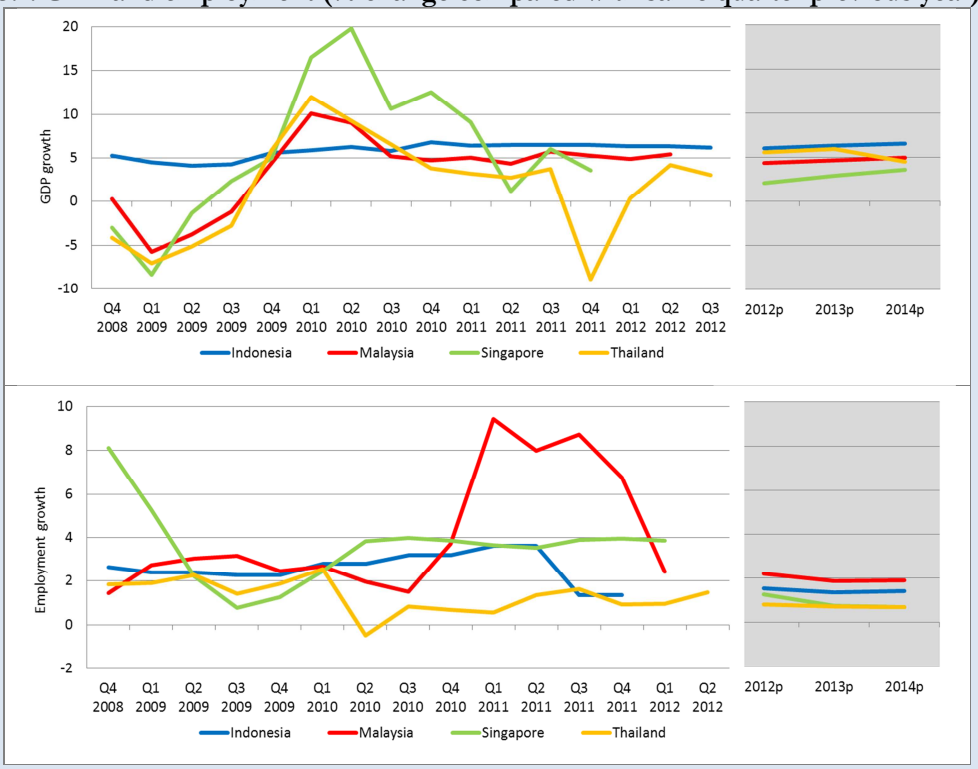
Note: Index, 2000 = 100.
Source: ILO calculations based on The Conference Board Total Economy Database, January 2012.

Country spotlight 5. Growth and job creation in Indonesia, Malaysia, Singapore and Thailand

Given their tight integration in world trade, the global economic crisis led to a contraction of GDP in Malaysia, Singapore and Thailand by 6, 8 and 7 per cent respectively in Q1 2009. The following recovery was strong in all three economies with Malaysia and Thailand growing at 10 per cent and Singapore growing at almost 20 per cent in Q1 2010. However, in 2011, growth moderated in Malaysia and decelerated in Singapore. Thailand's economy even contracted in Q4 2011 due to serious floods during the monsoon season

that damaged agricultural production and destroyed factories. Indonesia was not seriously affected by the crisis and maintained positive growth rates of around 5 per cent throughout the entire period and is expected to maintain this level through 2014. The outlook for the coming years projects a moderate increase in GDP growth for Malaysia and Singapore with levels of 2–5 per cent. Thailand is expected to grow at a rate of almost 6 per cent in 2012 with a deceleration to 4.5 per cent by 2014.

Figure CS5.1. GDP and employment (% change compared with same quarter previous year)



Note: The figures display quarterly growth in GDP (top panel) and employment (bottom panel) between Q4 2008 and Q2 2012 and annual projections between 2012 and 2014 (values shaded in grey). Quarterly growth rates are calculated on the basis of the same quarter in the previous year.
Source: IMF; OECD; ILO LABORSTA database; Statistics Indonesia. For projections: IMF; ILO, *Trends Econometric Models*, October 2012.

The global economic crisis affected employment in South-East Asia and the Pacific but employment growth remained positive in all four countries. A slow but steady recovery period took place in Indonesia, Singapore and Thailand in 2009. Thailand contracted again in Q2 2010 but slowly increased employment levels to 1.5 per cent in Q2 2012. Malaysia saw a major upturn in employment growth in Q1 2011, but growth decelerated yet again thereafter to a level of 2.4 in Q1 2012. All four countries are expected to experience lower employment growth through 2014 of around 1–2 per cent.

South Asia

Growth started to weaken

Following a strong economic performance in 2010, growth in South Asia weakened in 2011 to 6.5 per cent (IMF, 2012b). With the continuing sovereign debt crisis in the European Union (Euro area), sluggishness in the United States economy, and slowdown in China and other emerging economies, it is not surprising that economic conditions in South Asia have further deteriorated,

with growth projected to be just 4.9 per cent in 2012. Moreover, domestic problems, namely political paralysis in countries like Nepal and the Maldives, uncertainty and falling investor sentiment in India, and fragile conditions in Afghanistan and Pakistan, have also played a large role in dampening growth. The three best performers in the region continue to be India, Sri Lanka and Bangladesh. GDP growth in 2012 in these three countries is estimated to be 6.9 (revised down to 6.1 per cent in July 2012), 7.5 and 5.9 per cent, respectively (IMF, 2012b). South Asia has been the second-fastest growing region in the world in recent years, mostly thanks to India's contribution, and is likely continue to be so despite the slowdown and domestic constraints.

Growth did not deliver significant numbers of better jobs and decent work

As noted in the *Global Employment Trends* 2012 report, robust economic growth in South Asia in the 2000s was largely associated with an improvement in labour productivity rather than job creation, which has been referred to as "jobless growth", a phenomenon most notable in India. In India's case, total employment grew by just 2.7 million from 2004–05 to 2009–10, compared with over 60 million during the previous 5-year period (1999–2000 to 2004–05). However, this does not suggest a static labour market; rather there are many transitions taking place, most importantly a withdrawal from the labour force among young people and women, lowering net employment growth.

Nonetheless, even where jobs have been created, a large share of workers remained in agriculture, in the urban informal sector or in unprotected jobs in the formal sector. Thus, like many regions, growth has failed to deliver a significant number of better jobs in the formal economy. Most notably in India, the share of formal employment has declined from around 9 per cent in 1999–2000 to 7 per cent in 2009–10, in spite of record growth rates (Mehrotra et al., 2012).[42] Using a comparable definition for the latest year available, the share of workers in informal employment in the non-agricultural sector is 83.6 per cent in India (2009–10), 78.4 per cent in Pakistan (2009–10) and 62.1 per cent in Sri Lanka (2009).[43]

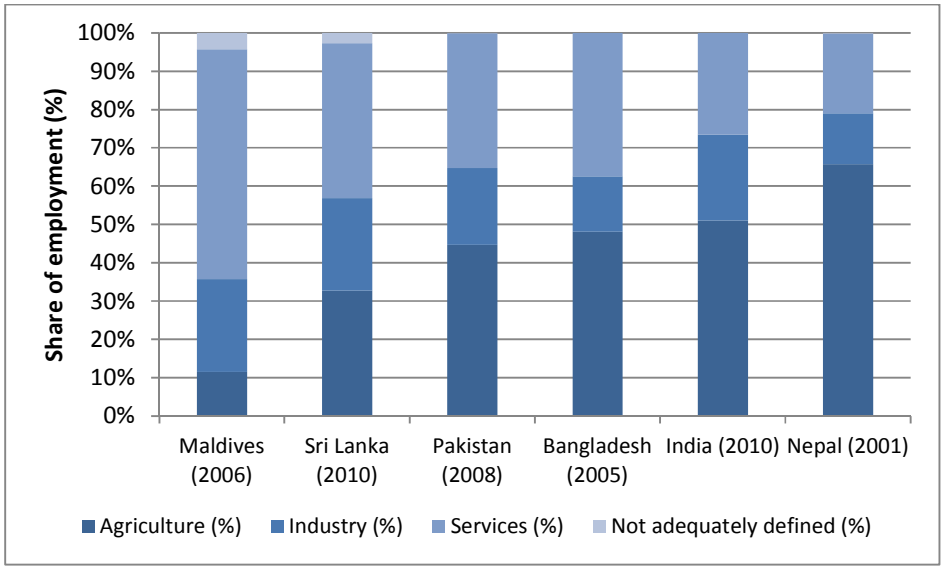
Ultimately, while the process of structural transformation in South Asia has begun, its scope and direction is uncertain. In particular, it remains unclear whether the manufacturing sector will be able to absorb large numbers of job-seekers in countries like India. As shown in Figure 37, the share of employment in agriculture is still large in India (51.1 per cent in 2010) and Nepal (65.7 per cent in 2001), while the service sector represents a major share in most countries, particularly in the Maldives (60 per cent in 2006) and Sri Lanka (40.4 per cent in 2010). The share in industry does not exceed 25 per cent in South Asia, and is in fact much lower when looking at just manufacturing workers. For example, in India, the share of workers in manufacturing was just 11 per cent in 2009–10, no higher than a decade earlier.[44]

[42] Unorganized/informal workers consist of those working in the unorganised sector or households, excluding regular workers with social security benefits, and the workers in the organized/formal sector without any employment and social security benefits provided by the employers.

[43] Source: ILO LABORSTA database; http://laborsta.ilo.org/informal_economy_E.html

[44] National Sample Survey data, 66th Round.

Figure 37. Variation in structural transformation in South Asia



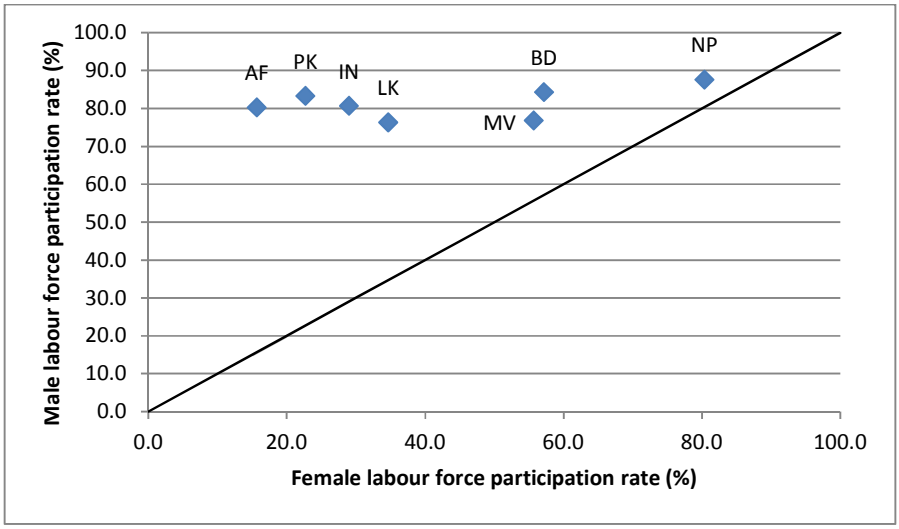
Note: The figure displays the share of employment by main sector for latest available years.
Source: ILO, *Key Indicators of the Labour Market* 7th edition.

Low rates of female labour participation persist

Due to cultural attitudes and social norms about women in the work-place, most South Asian countries exhibit very low rates of female labour force participation. Overall, the estimated labour force participation rate for women in South Asia is just 31.8 per cent (2012), which only exceeds the rates for the Middle East (18.7 per cent) and North Africa (24.4 per cent). As shown in Figure 38, labour force participation rates in 2011 (ILO estimates) are much lower for women than men in all South Asian countries except for Nepal, where female labour force participation rates were still nonetheless lower than men's. The gap in Bangladesh is lower than elsewhere due to the growth of the garment industry in recent years (around 27 percentage points compared with 51 points for India).

A major reason for the slow growth in employment in countries like India is the fall in female labour force participation: in India the participation rate for women fell from 37.3 per cent in 2004–05 to 29.0 per cent in 2009–10. This can be partly explained by increasing education enrolment in secondary schools across the country: According to Rangarajan et al. (2011) only 44 per cent of the decline in the female worker participation ratio in India from 2004–05 to 2009–10 can be accounted for by increased participation of women of working-age (15 and above) in education (Rangarajan et al., 2011).

Figure 38. Disparities in labour force participation rates (2011)



Notes: AF = Afghanistan; BD = Bangladesh; IN = India; LK = Sri Lanka; MV = Maldives; NP = Nepal; and PK = Pakistan.

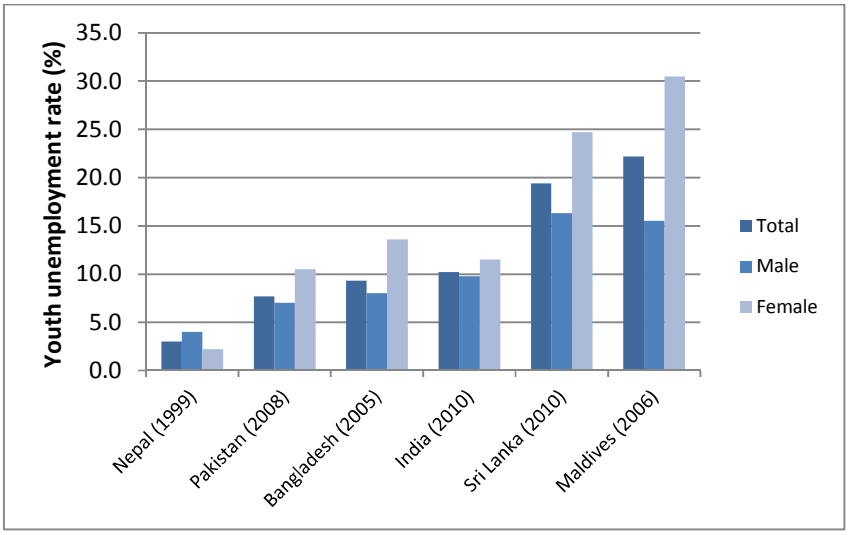
Source: ILO, *Key Indicators of the Labour Market*, 7th edition; ILO estimates.

The challenge of youth unemployment in South Asia

Unemployment rates in South Asia are low with the regional average projected to be just 3.8 per cent in 2012, which is the lowest rate globally. However, as witnessed around the world, youth in South Asia is far more vulnerable to unemployment because young people lack the right skills, work experience and job search experience, adding to the overall demand-side deficits. The estimated youth unemployment rate for South Asia is 9.6 per cent, over two times higher than the overall unemployment rate, but one of the lowest regional figures.

One factor driving this situation is skills and education mismatches: many South Asians are leaving school or university without skills that are demanded by employers, and due to long-entrenched aspirations, many of these young people "queue" for a job in the public sector. For example, the overall unemployment rate in Sri Lanka fell to 4.9 per cent in 2010 and further to 3.9 per cent in the third quarter of 2011. However, unemployment among young Sri Lankans aged 15 to 24 continues to be much higher, at 19.4 per cent in 2010 (24.7 per cent for young women) (Figure 39). The highest youth unemployment rate is found in the Maldives, with a rate of 22.2 per cent in 2006, while it exceeded 10 per cent in India in 2010.

Figure 39. Youth unemployment rates in South Asia, latest available year

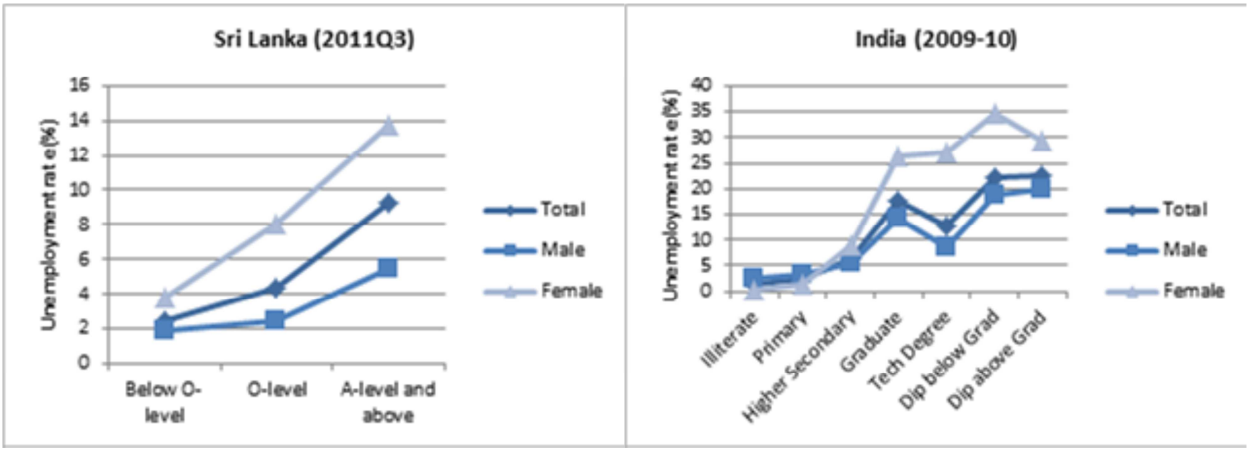


Source: ILO, *Key Indicators of the Labour Market*, 7th edition.

Looking at the relationship between educational attainment and unemployment, the highest unemployment rate in Sri Lanka is found among individuals with an A-level education or higher: 5.5 per cent for men and 13.7 per cent for women in the third quarter of 2011 (Figure 40). In comparison, the rate for Sri Lankans who did not complete their GCEs (or O-levels) is just 1.9 per cent for men and 3.8 per cent for women. In India, unemployment rates increased rapidly for high-skilled workers, in particular women. Indians with a diploma suffer particularly, with unemployment rates reaching 34.5 per cent for women and 18.9 per cent for men during 2009-2010. However, occupational choices bear a strong impact on the risk of joblessness as workers with technical education face lower unemployment rates than other graduates (only for men). At the same time, Indian employers have trouble hiring staff: according to the 2011 Manpower Talent Shortage Survey, 67 per cent of employers stated that they had difficulties filling positions.[45]

[45] Available at: http://us.manpower.com/us/en/multimedia/2011-Talent-Shortage-Survey.pdf

Figure 40. Unemployment rates by level of education, Sri Lanka and India (latest available period)



Source: Sri Lankan Labour Force Survey, Q3 2011; http://www.statistics.gov.lk/samplesurvey/2011q3report.pdf; Indian National Sample Survey 66th Round, NSSO.

Uncertain future for South Asia

The current global slowdown and domestic challenges in South Asia will mean that the goal of creating more decent work will be even more elusive over 2013. Persisting uncertainty and insecurity in Afghanistan (with the transition approaching) and Pakistan, and political paralysis in Nepal and the Maldives, implies that these economies will continue to lag behind the progress made in the fast-growing South Asian countries. At the same time, India faces its own political hurdles and wavering investor sentiment in light of a high current account and fiscal deficit. Though Bangladesh has been relatively successful in creating jobs, especially in the garment sector, which has absorbed large numbers of women, industrial relations are not harmonious, and working conditions are a major challenge. Sri Lanka may be benefiting from a "peace dividend", but needs to work hard at decreasing inequality and promoting inclusion. Overall, much is said about the potential for a demographic dividend in these economies, but this must be well managed and supported to ensure that the youth of South Asia get the right set of skills and are able to find a job in a rapidly changing economic environment.

Middle East

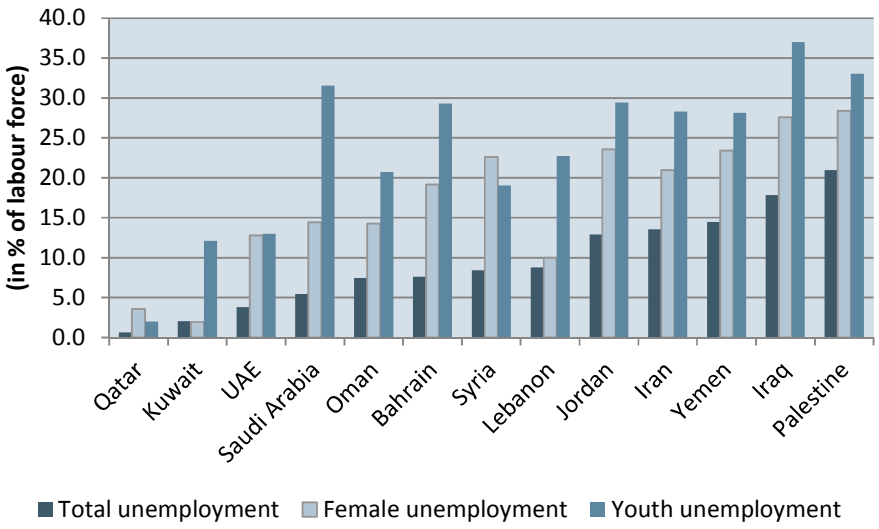
Unemployment is set to rise as growth loses momentum

Against the backdrop of slowing world trade and stable oil prices, economic growth in the Middle East region has slowed in 2012 and is expected to accelerate only moderately in 2013 and beyond. After some growth slowdown to 5.0 per cent in 2011, the regional economy decelerated to 3.2 per cent in 2012 and will see growth picking up slightly to 3.3 per cent in 2013. As in previous years, oil exporting economies such as Iraq, Kuwait and Qatar were leading the economic recovery in the region with growth rates above 6 per cent in 2012. However, with the slowdown in global growth and recession conditions in the Euro area, oil demand could decelerate, with significant adverse effects on growth rates in the region. On the other hand, oil importers and countries that experienced social unrest during the Arab Spring displayed much lower growth rates or outright depressions, such as Yemen where growth fell by more than 10 per cent in 2011 and another 1.9 per

cent in 2012, before expecting to see some positive growth in this year. The spectre of further social unrest has still not receded fully in all parts of the region and might spill over to other countries, fuelling uncertainty and instability. Together with the weak overall economic outlook, this will further increase the downside risk to growth in the region.

On the back of this deceleration of growth in most of the region, unemployment is set to rise again. Following a gradual but steady decline over most of the 2000s unemployment rates are expected to rise over the coming years. Together with North Africa, the Middle East is the only region in which the aggregate unemployment rate exceeds 10 per cent. Similar to other regions, this aggregate figure hides a large cross-country variation in unemployment rates (see Figure 41). Whereas some countries in the region struggle with – sometimes high – double-digit unemployment rates, the oil-exporting gulf countries typically benefit from low single-digit rates. But even in these countries, unemployment rates tend to fluctuate substantially, more than in other countries at a similar level of GDP per capita, mainly as a result of volatile GDP growth and a sectoral structure focused on the export of only a few (primary) commodities and services. In this respect, none of the countries in the region managed to bring down unemployment to stable and sustainable levels, rather experiencing bouts of unemployment hikes after several years of calm labour market developments.

Figure 41. Unemployment rate in Middle Eastern countries (in %, latest year)



Note: Palestine refers to the Occupied Palestine Territory (West Bank and Gaza). Unemployment rates refer to 2011, except for Syria and Iran (2010).
Source: ILO, *Key Indicators of the Labour Market*, 7th edition; ILO, *Trends Econometric Models*, October 2012.

Young people continue to suffer from limited decent work opportunities in the labour market

Young people continue to suffer particularly from high unemployment in the region. In 2012, the youth unemployment rate stood at 28.1 per cent and is expected to increase further as regional economic growth is slowing down. Unemployment for young workers under the age of 20 has even reached rates above 50 per cent in certain countries. The youth unemployment rate is more than four times that for adults, the largest youth-to-adult unemployment ratio in the world.

Unemployment is affecting young people at all skill levels. The lack of employment opportunities is so severe that even young high-skilled workers face severe challenges in getting a job at their competence level and are forced into the informal economy, seeking jobs abroad or opting out of the labour market altogether until the "right job" comes along (ILO and UNDP, 2012). Specific, conflict-related circumstances further add to problems faced by many young workers in the region to find adequate employment (see Box 9). More generally, however, in most countries of the region the high youth unemployment is primarily a reflection of inadequate decent work opportunities for the labour force at large, in combination with an education system that still does not put sufficient emphasis on technical, market-relevant skills.

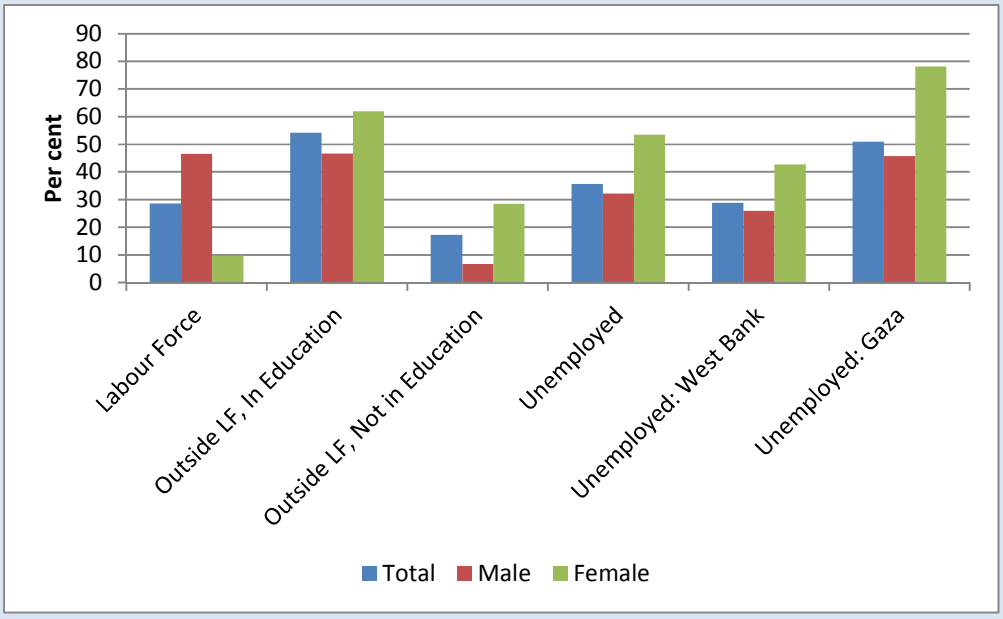
Box 9. Youth employment in the Occupied Palestinian Territory

Several countries in the region are enduring situations of conflict, including the Occupied Palestinian Territory (OPT), which has a young and rapidly growing population, 71 per cent of which is currently under the age of 30. In 2011, 28.5 per cent of the youth population aged 15–24 participated in the labour force, accounting for nearly 47 per cent of young men, but not even 10 per cent of young women. Labour force participation rates were higher in the West Bank than in Gaza, where far fewer productive employment opportunities exist.

Of those 15–24-year-olds in the labour force, 32.2 per cent of young men and 53.5 per cent of young women were unemployed in 2011, amounting to an aggregate youth unemployment rate of 35.7 per cent, 1.7 times higher than the overall unemployment rate in the OPT. The situation is most pronounced in Gaza, where approximately 46 per cent of young men and a staggering 78 per cent of young women were unemployed.

Just over three quarters of those not in the labour force were studying. What is worrying is the 17 per cent of young people in this age bracket who are neither in employment, nor studying, including 28 per cent of young women. This represents a loss of valuable economic potential, as the huge gains made by young women in education fail to translate into gains in the labour market.

Figure B9.1. Youth (aged 15–24) Labour Market Indicators in the OPT, 2011



Source: PCBS, Labour Force Survey Database, 2011.

Mobility is impeded under occupation, limiting employment prospects for Palestinian youth. In the West Bank, young people below the age of 26 who are not married do not have the option to obtain work permits to work in Israel. A fiscally squeezed Palestinian Authority is under pressure to curtail new hiring, leaving young people dependent upon a constrained private sector with limited access to productive resources.

In Gaza, whilst demand increased for construction workers in 2011, demand for young graduates was notably lacking. Graduates of all disciplines reportedly turn to the construction sector (without the requisite skills) or emergency job creation programmes, such as that of the United Nations Relief and Works Agency (UNRWA), which itself had to scale back by 75 per cent towards the end of 2011 in the face of severe funding shortfalls. There is a huge dearth in sustainable employment opportunities for Gaza's youth, and young graduates in particular, keeping most young women out of the labour market and forcing many young men to seek often hazardous work in the burgeoning informal economy, including the large-scale smuggling of goods through the vast network of tunnels under the border with Egypt.

This situation points to an overarching need to create the necessary conditions to allow the growth of a vibrant and sustainable private sector. In parallel, there needs to be large-scale investment in specifically targeted active labour market policies and programmes to support vocational training, employment guidance and business development for Palestinian youth. Future employment is clearly one of the biggest concerns facing Palestinian youth, and many are beginning to take matters into their own hands, through collectively organizing in the form of local and national youth councils, and engaging in community development, creating their own links to the world of work.

Source: ILO (2012g), The situation of workers of the occupied Arab territories.

High joblessness among young people in Middle Eastern countries is not caused by fast labour force growth. In fact, by international comparison, youth activity rates are low in the region. Only 30 per cent of young women and men participate in the labour market, representing slightly less than 2 per cent of the global youth labour force. As demographic change has also started to gradually affect the region, youth participation rates are set to reduce further as smaller and smaller youth cohorts enter working-age; this will reduce youth activity rates even faster than at the global level. In this respect, labour participation rates are particularly low for young women, with activity rates of slightly more than 13 per cent in 2012. This is the lowest rate globally and more than 30 percentage points below the participation rates for men, which are comparable to those observed in the Developed Economies region. Simply advancing participation rates for young women to the global average would allow the region to benefit from an addition to the labour force by 8.5 per cent.

Despite some progress women remain particularly disadvantaged

Besides young people, women are another seriously disadvantaged group on the labour market in Middle Eastern countries. Despite their very low participation rates that stood at less than 19 per cent in 2012 – 55 percentage points lower than for men – their unemployment rate was 19.3 per cent, more than twice the rate for men. Young women that decide to participate are even worse off, facing unemployment rates of over 70 per cent in certain countries, especially among the Gulf countries. Also, education is no panacea against the risk of becoming unemployed as women with tertiary education make up more than 60 per cent of all unemployed women in Saudi Arabia, and women with either secondary or tertiary education account for more than 50 per cent of unemployed women in all Gulf countries (Baldwin-Edwards, 2011).

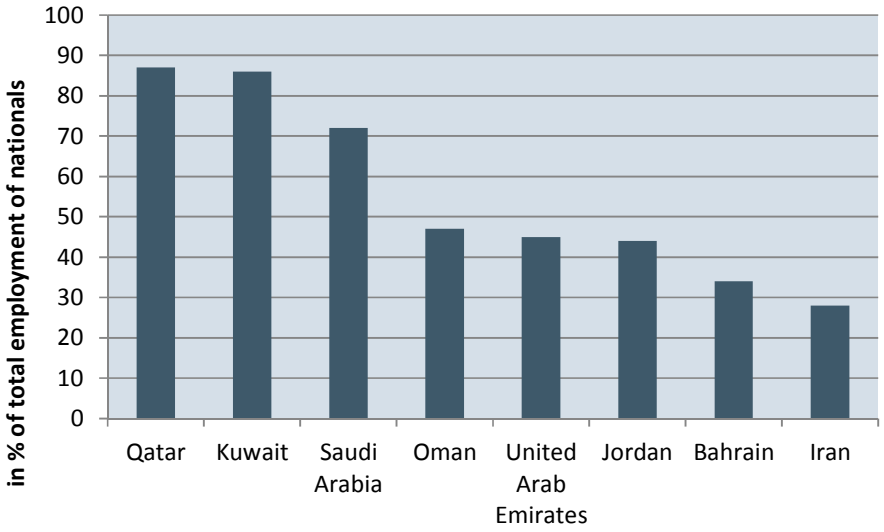
The low participation and employment rates of young women are a reflection of broader disadvantages of women in the labour market in the Middle East region. In some countries, gender segregation in public spaces as well as limitations for women to take up certain occupations or make particular educational choices limit their employment opportunities and widen incentives for inactivity. Despite strict social norms that support this gender segregation in the labour market, policy-makers in the region have started to introduce certain reforms that have helped to increase – albeit moderately – the female labour force participation rate. For instance, reforms to family law, in particular strengthening unilateral rights on divorce for women ("Kuhl reforms"), have improved incentives for labour market participation for prime-age women and allowed the adult female labour force participation rate to increase by 4 percentage points over the last decade (ILO, 2012b).

Skills mismatches prevent better outcomes for some groups on the labour market

Middle Eastern countries of the Gulf Cooperation Council (GCC) face a particular challenge to provide sufficient employment opportunities to their local population. Indeed, with strong revenues from energy commodities pushing up domestic prices and wages, private sector employment outside the efficient but highly capital-intensive energy-producing sector is scarce. In addition, available jobs in the private sector are taken up to a substantial extent by foreign workers, either because nationals are not willing to work in certain sectors such as domestic care services or because insufficient skills and competences prevent them from competing successfully in high-skilled energy and services sector jobs. Also, private sector companies have shown a preference to hire foreign workers due to the possibility for flexible work arrangements and wage differentials. In particular within smaller GCC countries, this strong demand for foreign workers has pushed total employment up to a multiple of the autochthonous working-age population. In extreme cases such as Qatar the foreign workforce is 16 times larger than that of nationals, with a substantially smaller risk of unemployment as work and resident permits for foreigners in most GCC countries are tightly linked to the work contract with the hiring company.

To avoid having to cope with similar labour market challenges as their less resource-rich regional neighbours, many GCC countries have resorted to expanding public sector employment, using large oil revenues to offer generous employment conditions with higher salaries and fewer working hours (Baldwin-Edwards, 2011). Of total employment of nationals, more than 80 per cent is in the public sector in Qatar and Kuwait, 72 per cent in Saudi Arabia and still a substantial 47 per cent in Oman (see Figure 42). Even in those countries where public employment represents a much smaller share of total employment of nationals, such as in Bahrain, more than two-thirds and up to 90 per cent of public employment is held by nationals. Partly in reaction to rising demand for a more equal sharing of the resource wealth among all nationals, countries in the region have continued using public employment and working conditions in the public sector to boost incomes in 2011, in particular for young people. In Qatar, the pay rise for nationals in the public sector could reach up to 120 per cent and even in Saudi Arabia with much larger public employment it still reached 15 per cent on average. At the same time, public employment increased further, by up to 50,000 new jobs in Oman (Gulf Talent, 2012).

Figure 42. Public sector employment (latest available year)



Note: Bahrain: 2010; Qatar: 2009; Kuwait, Oman, Saudi Arabia: 2008; UAE, Jordan, Iran: 2005
Source: Baldwin-Edwards (2011); Al Masah Capital (2011)

The large and well-paying public sector has put those nationals seeking employment in the private sector at a disadvantage. Often, conditions are not comparable, either in terms of working conditions or in terms of flexibility of employment. In contrast to nationals, foreign workers are working under restrictive conditions in many GCC countries, preventing them from competing for better-paying jobs in other companies in their host country, which makes them a preferential choice for their employers. GCC countries have tried to address these problems by extending their nationalization strategies also to the private sector, requiring up to 75 per cent of employment in private companies to be filled with nationals. With the onset of the global crisis, some GCC countries tried to further restrict the employment of foreigners by restricting residency permits for long-term residents and targeting specific sectors for further increases in the share of employment of nationals (see Al Masah Capital, 2011). Despite such attempts to regulate the access of nationals to the private sector, employment of nationals in private companies remains low in most GCC countries, ranging from 48 per cent in Oman to 1 per cent in the United Arab Emirates (Baldwin-Edwards, 2011). This severe labour market segmentation and the *de facto* segregation of nationals and foreigners into two separate and non-communicating labour markets are likely to pose serious challenges for any future increase in labour market participation. Despite the large potential of a further increase from currently low participation rates, the lack of incentives for nationals to enter the private sector and the already large public sector that will face increasing difficulties to expand further constitute serious constraints for a more dynamic expansion of employment.

Given the slowdown in employment growth expected for the coming years, governments in the Middle East region will have to step up efforts to strengthen incentives for the private sector to hire nationals. So far, stricter regulation in favour of employment of nationals does not seem to have had much success. Rather, governments in the region should foster diversification of their economy and broaden technical education in universities and vocational training centres. Incentives for private sector employment should be strengthened further and activation programmes particularly targeted

at young job-seekers expanded. Also, the very low participation rates of women and their high unemployment rates need to be addressed by lifting existing restrictions for women to take up certain occupations and by facilitating their role in public spaces. Even though the demographic change that the region has started to undertake is likely to lift some of the pressure from labour markets in the region, the low participation and employment rates suggest that a large reservoir of untapped labour resources is waiting to be integrated properly into employment under decent working conditions over the medium run.

North Africa

Volatile or low economic growth following the Arab Spring prevents improved labour market outcomes

Economic growth in North Africa turned negative in 2011, in some countries as a by-product of the Arab Spring. There was a near-collapse of economic activity in Libya, and deceleration of growth in all countries in the region except Morocco. Economic growth in Egypt dropped from 5.1 per cent in 2010 to 1.8 per cent in 2011 and remained low at 2.0 per cent in 2012, while Sudan registered negative economic growth (–11.2 per cent) in 2012 following the independence of South Sudan in 2011. Nevertheless, regional economic growth in North Africa (which does not include South Sudan) reached a record high of 9.8 per cent in 2012 on the back of the rebound in Libya. Growth in Tunisia also became positive in 2012 and is expected to accelerate further (IMF, 2012b).

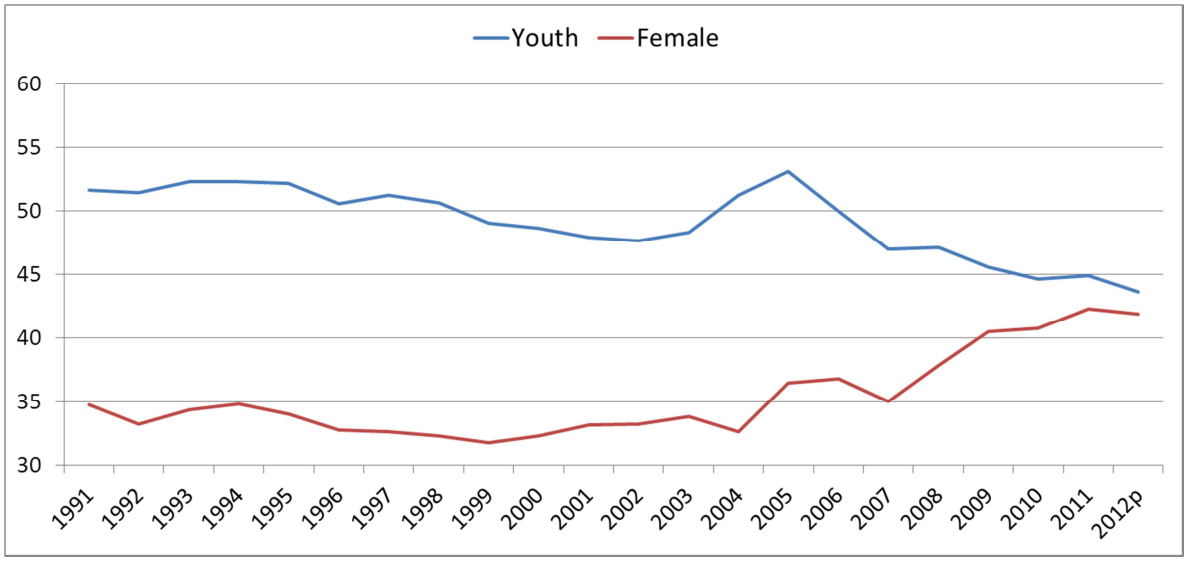
So far, the countries in North Africa seem to be little affected by the ongoing worries of their European neighbours, despite intensive trade and migration linkages. Although return migration from Southern Europe may have brought additional stress to labour markets in North Africa, the economic and labour market situation in the region seems to be more affected by developments in other emerging countries than by the slowdown in advanced economies. The intensification of linkages in particular with East Asia suggests that spillovers from this part of the world might increase in importance (see Cashin et al., 2012).

Nevertheless, together with the Middle East, North Africa remains among the regions with the highest unemployment rates, and with little signs of improvement. The unemployment rate in North Africa gradually declined from a peak of 13.2 per cent in 2000 to 8.9 per cent in 2010, but sharply increased to 10.0 per cent in 2011. In 2012, the unemployment rate is estimated to have increased to 10.3 per cent (see table A2). Unemployment in North Africa is often seen as a problem exclusively affecting women and youth, and the unemployment rates for both groups are indeed consistently higher than the rates for adult men (aged 25 and above). For example, in 2012, the male youth unemployment rate was 18.5 per cent, more than three times the male adult rate of 5.7 per cent. Similarly, the female adult unemployment rate in 2012 is estimated at 11.7 per cent, while the female youth rate at 37.0 per cent was more than six times the rate for adult men.

The risk of unemployment in the region is not limited to any particular group. Despite the disadvantaged position of youth, their share in total unemployment has been (slowly) decreasing (Figure 43). The main factor driving this longer term trend is demographic development. In 1991, one out of three persons of working-age was aged between 15 and 24, but in 2012 this proportion had dropped to 28 per cent, and it is projected to fall to one out of four persons in 2015 (Figure 44). In other words, unless the youth-to-adult ratio of unemployment rates is at an unusually high level, it can be expected that the share of youth in total employment is declining. Figure 43 shows both the longer term downward trend in this share and the relatively high share in 2005, when the youth-to-

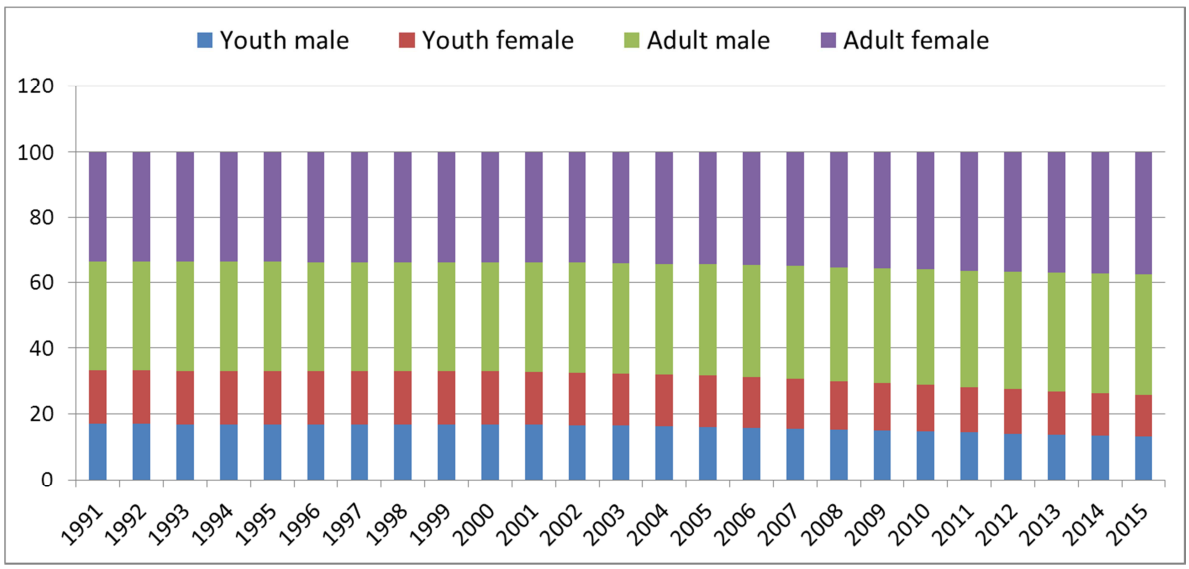
adult ratio reached a level of 3.6. Even in North Africa, which is characterized by exceptionally high youth-to-adult ratios, this ratio usually does not exceed 3.4. Demographic trends are less important in explaining the share of women in total unemployment, which is primarily driven by labour force participation rates. The female labour force participation rate in North Africa shows an increasing trend, but is still less than a third of the male participation rate. This explains why men constitute the large majority of job-seekers in North Africa, despite the disadvantaged position of women in terms of unemployment rates. In other words, even though young persons and women face additional barriers in accessing work, the creation of decent work opportunities is important for all persons of working-age.

Figure 43. Share of women and youth in total unemployment in North Africa, 1991–2012 (%)



Note: 2012p are preliminary estimates.
Source: ILO, *Trends Econometric Models*, October 2012 (see Annex 1, Tables A2 and A3).

Figure 44. Distribution of the working-age population in North Africa, 1991–2015 (%)



Source: ILO, *Trends Econometric Models*, October 2012 (see Annex 1, Tables A2 and A3).

North Africa faces several other labour market challenges besides the lack of employment opportunities. Although levels of working poverty at the US$1.25-a-day poverty line are low in the region, the working poverty rate at the US$2-a-day level is still high. In 2012, 19.7 per cent of the employed was living with their families below this poverty line. Furthermore, the vulnerable employment rate in 2012 amounted to 41.4 per cent, indicating a high proportion of workers in informal working arrangements and without adequate social protection. More than half of female workers are in vulnerable employment (61.2 per cent) compared with slightly more than one out of three men. Vulnerable employment in the region is expected to remain high and to recede only gradually starting in 2014, provided that no further risks will weigh on the growth outlook (see Annex 2).

Labour market segmentation is pervasive

Labour market segregation along gender lines is prevalent in North Africa. Occupational segregation not only limits choices for women and constitutes an obstacle for equality of opportunity, but also hampers efficiency in the allocation of labour and therefore economic growth. Excluding part of the labour market from access to occupations reduces the pool of talent, and labour and skill shortages are likely to take longer to be resolved in strongly sex-typed occupations.

In part, segregation reflects high rates of vulnerable employment for women, in particular those working as own-account workers and contributing family workers in agriculture. As shown in Figure 45 and Figure 46, proportionally more women than men work as skilled agricultural and fishery workers in Egypt and Morocco. On the other hand, women also tend to be overrepresented in high-skilled professional and associate professional jobs, often in the public sector (Fortuny and Al Husseini, 2010). In Egypt, public sector employment accounts for about one-third of employment and traditionally absorbed an important part of (female) graduates (World Bank, 2013). However, budgetary constraints and the changing role of the public sector have resulted in more queuing for the few public sector jobs that are available, which in part explains the relatively high

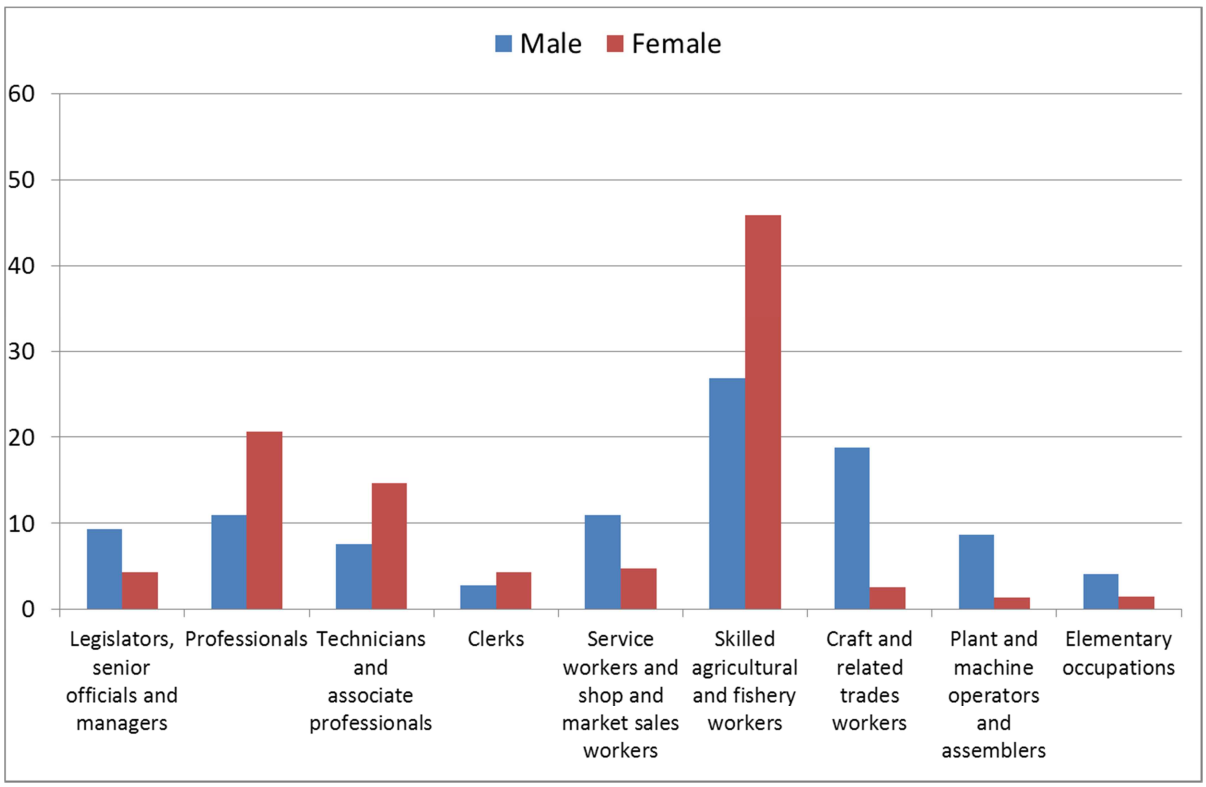
unemployment rates of well-educated persons in Algeria and Egypt. In both countries, unemployment rates for tertiary graduates are considerably higher than for those with primary or secondary education (ILO, 2011a).

Occupational distributions indicate that few employment opportunities are available for high-skilled workers in some North African countries. In Morocco, professionals and associate professionals account for not more than 5.8 per cent of workers (Figure 46). The share of workers in these occupational groups tends to go up with the level of development, and in the vast majority of developing economies already exceeds 10 per cent. Another sign of constraints posed by human resources is the high illiteracy rate in North Africa. In Morocco, the illiteracy rate was 43.9 in 2009, while in most North African countries at least one in five adults was not able to read or write (ILO, 2011a).[46] High rates of illiteracy suggest that part of the workforce is under-qualified for their job and limit increases in productivity, for example through the adoption of new technologies or broadening of the skills base.

A limited skills base is also likely to constrain structural change. Between 2000 and 2010, the share of the agricultural sector in North Africa decreased by only 1.6 percentage points, which is the lowest decrease of all regions and close to the decrease in the developed economies (which, contrary to North Africa, already have a low share of workers in agriculture). In Egypt, for example, the share of workers in agriculture was essentially stagnant between the late 1990s and 2010.

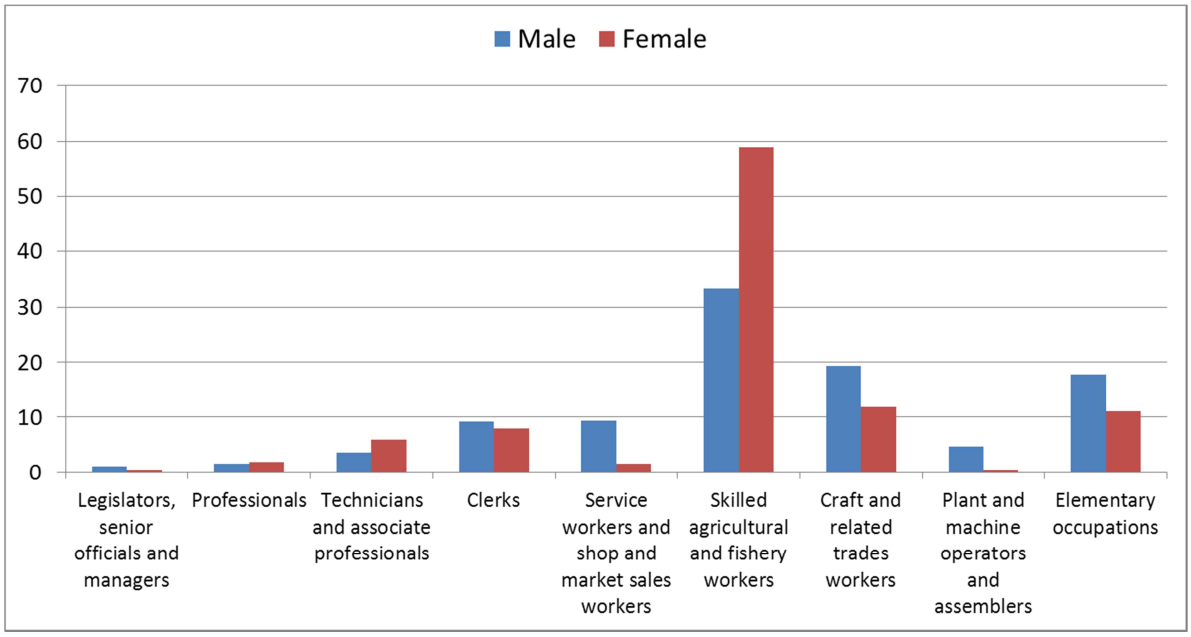
[46] The exception is Libya, where the illiteracy rate was 11.1 per cent in 2009.

Figure 45. Occupational distribution in Egypt by sex, 2007 (%)



Source: ILO, *Key Indicators of the Labour Market*, 7th edition.

Figure 46. Occupational distribution in Morocco by sex, 2008 (%)



Source: ILO, *Key Indicators of the Labour Market,* 7th edition.

Several countries in North Africa have adopted national employment strategies including common elements such as infrastructure development, facilitation of investment, strengthening of the skills base, improving labour market intermediation and special measures targeting youth. In Algeria, for example, the government adopted a national action plan in 2008 to promote employment and to address unemployment, covering the period 2008–13. This plan includes encouragement of investment, incentives to encourage companies to create jobs, improvement and modernization of labour administration, intermediation and coordination and the promotion of youth employment, in particular through active labour market policies. Under the recently launched DAIP (Dispositif d'Aide à l'Insertion Professionnelle), young people obtain an employment contract including training in an enterprise (1 year renewable) or the public sector (3 years renewable), which is fully funded by the Government for the salary and social security contributions, and at 60 per cent for the training costs. The DAIP can be followed by a CTA (Contrat de Travail Aidé) with a monthly wage subsidy funded by the Government.

Employment promotion is also one of the priorities of the Moroccan Government, whose new employment strategy aims at increasing investment, promotion of small and medium enterprises, promotion of self-employment, skills development for youth employment and the development of a social economy. The strategy also includes a package of measures focused on graduate youth and the improvement of intermediation on the labour market. Finally, Morocco has started a process of decentralization of employment services for more efficient and better quality delivery.[47]

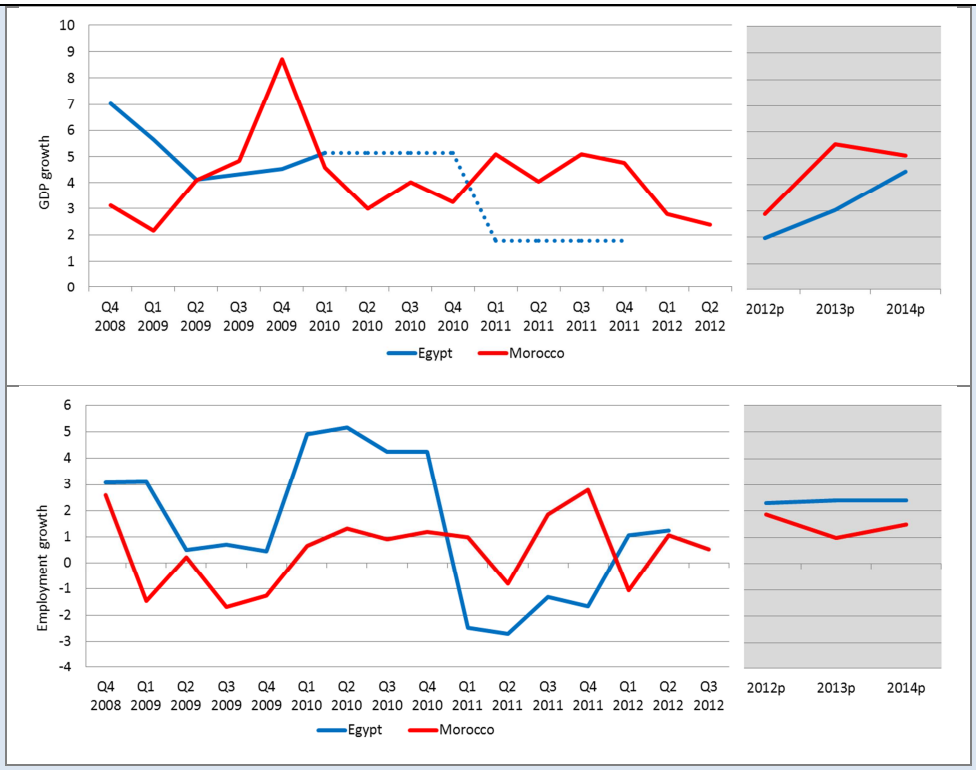
In 2013, economic growth in the region is projected at 4.4 per cent, subject to the downside risks arising from continuous political uncertainty in some economies as well as depressed demand from the nearby Euro area. The unemployment rate is projected to remain elevated at 10.3 per cent in 2013, which underlines the urgent need for inclusive decent work policies.

Country spotlight 6. Growth and job creation in Egypt and Morocco

GDP growth in Egypt and Morocco remained positive throughout the global economic crisis. Morocco recovered remarkably well in 2009, peaking at almost 9 per cent. However, Morocco's economy decelerated in 2010 and increased modestly in 2011 to a level of 5.3 per cent in Q4 2011. GDP growth in Egypt decelerated in the first two quarters of 2009 and slightly accelerated during the remainder of the year. Data are only available through 2009 and annual GDP growth was included in place of quarterly figures for 2010 and 2011. As a result of popular uprising and political instability in 2011, Egypt's economy declined to an annual growth rate of only 1.8 per cent. The outlook for the coming years for Egypt is encouraging, projecting steady annual increases in growth to a level of 4.5 per cent in 2014. Morocco's expected growth rate for 2012 is at the lowest level for the entire period under consideration, at only 2.9 per cent but is expected to accelerate to a rate of 5.5 per cent in 2013 and 5.1 per cent in 2014.

Figure CS6.1. GDP and employment (% change compared with same quarter previous year)

[47]Support to Morocco as well as Tunisia is provided two technical cooperation programmes: "Promoting productive employment and decent work for youth", financed by Spain, and "Support to employment promotion and poverty reduction (APERP)", funded by France.



Note: The figures display quarterly growth in GDP (top panel) and employment (bottom panel) between Q4 2008 and Q2 2012 and annual projections between 2012 and 2014 (values shaded in grey). Quarterly growth rates are calculated on the basis of the same quarter in the previous year. Quarterly GDP data for Egypt were not available for 2010 and 2011 and annual GDP growth rates were used instead and included for each quarter (indicated by the dotted line).
Source: IMF. For projections: IMF; ILO, *Trends Econometric Models*, October 2012.

Egypt and Morocco displayed volatile employment growth throughout the entire period under consideration. Employment losses followed the outbreak of the global economic crisis in Morocco, while Egypt registered growth rates just above zero. Egypt saw rapid employment growth in 2010, followed by a sharp decline in Q1 2011 and persistent contraction until the end of 2011 due to the political turmoil in the country. The latest available data in 2012 showed positive employment growth but at modest levels of approximately 1 per cent. The recovery period in Morocco took long and job recovery was highly volatile. Employment growth only recovered to pre-crisis levels in Q4 2011. Job losses were registered again in Q1 2012 but Q1 and Q2 2012 showed a positive growth rate of about 1 per cent. Job recovery in Morocco is projected to pick up and increase to stable levels of approximately 2.5 per cent. Morocco's economy is expected to recover jobs at a rate of about 2 per cent in 2012 before slightly declining to 1 per cent and 1.5 per cent in 2013 and 2014 respectively.

Sub-Saharan Africa

Growth continues to be positive and resilient but productive transformation challenges persist

Economic growth in Sub-Saharan Africa continued its buoyancy in 2012, defying the impact of the Euro area debt crisis for yet another year, thanks to its relatively limited linkages to the global economy and its more recent trend in diversifying its export destination markets away from Europe (AfDB, 2012; IMF, 2012a, 2012b). GDP year-on-year growth is estimated to have remained at virtually the same level in 2011 and 2012, at 5.2 and 5.3 per cent, respectively. Using the IMF

classification of countries, oil exporters and low-income countries are expected to grow at rates above the regional average, at 6.0 per cent and 5.9 per cent respectively, while moderate growth is expected in middle-income countries at 3.7 per cent. More than half of the countries in Sub-Saharan Africa registered growth rates of 4.5 per cent or more in 2012, and two countries achieved double-digit economic growth (Niger and Sierra Leone). Ghana's buoyant growth of 14.4 per cent in 2011 tapered to 8.2 per cent in 2012, while Cote d'Ivoire returned to high and positive growth of 8.1 per cent after the decline of 4.7 per cent in 2011 as peace has returned to the country. Several countries will post growth rates of above 7 per cent including Liberia, Mozambique, Nigeria and Rwanda.

On the downside, in six countries economic growth was negative in 2012 (Gambia, Guinea-Bissau, Mali, South Sudan, Sudan and Swaziland). Economic growth in several other countries was positive in 2012, but low in the face of structural problems that afflict much of the region. For example, in South Africa, the largest economy in the region, economic growth was 2.6 per cent in 2012, while growth in Botswana (3.8 per cent) and Madagascar (1.9 per cent) was disappointing. The political and fiscal crises in Madagascar largely explain the low growth rate, while the weak external demand arising from the global and Euro area crises and supply-side structural constraints have continued to weigh down on growth of Botswana and South Africa. The declining growth in South Africa has had an immediate impact on the labour market, threatening the recovery which had started gathering momentum. The already very high unemployment rate increased from 25 per cent in the first quarter of 2011 to 25.2 per cent in the first quarter of 2012, before slightly easing to 24.9 per cent in the second quarter (StatsSA, 2012).

One of the issues on which development discourse has recently centred is whether the observed strong economic performance of Sub-Saharan Africa in the past 10 years marks the beginning of a growth take-off for the region or is simply another temporary growth spell (Roxburgh et al. 2010; World Bank, 2008). Underlying the take-off proponents' argument is the implicit claim to the effect that stabilization policies are paying off after all, albeit with a time lag. Roxburgh et al. argue that Africa's growth is more than a resource boom, and can be attributed in large part to political and macroeconomic stability as well as to reforms aimed at creating a more market-driven business environment.

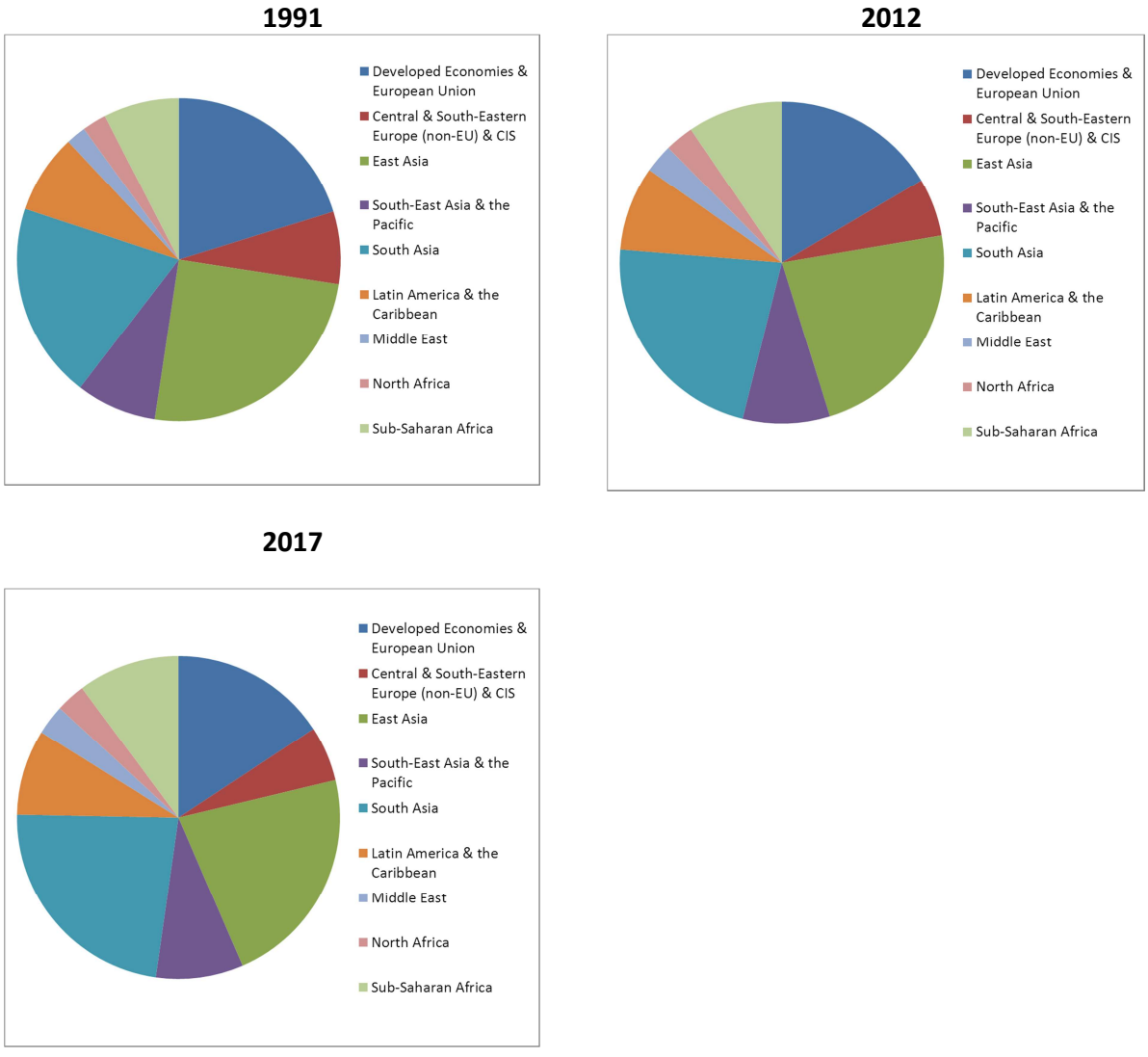
Somewhat in contrast to this position, the ILO has recently argued that Sub-Saharan Africa's strong growth is not a new phenomenon, and can be viewed as a catch-up for the 20 years of stagnation from the 1980s to the end of the 1990s (ILO, 2011b). The decade of rapid growth does not necessarily signify the beginning of sustained structural transformation in the region (see also chapter 4) and the region continues to suffer from large decent work deficits and the highly unequal distribution of the fruits of growth.

The analysis in this section demonstrates again that the solid growth of the past decade has not led to a significant improvement in labour market outcomes and poverty reduction, although there are positive developments in terms of fast productivity improvement. It is therefore urgent to redouble efforts to put in place pro-employment economic and social policies based on productive transformation and fast structural change.

As has been highlighted in numerous reports, the analysis is constrained by the paucity of labour market data in most countries of the region, and only Mauritius and South Africa currently conduct quarterly labour force surveys. Nevertheless, several trends can be discerned as will be discussed below.

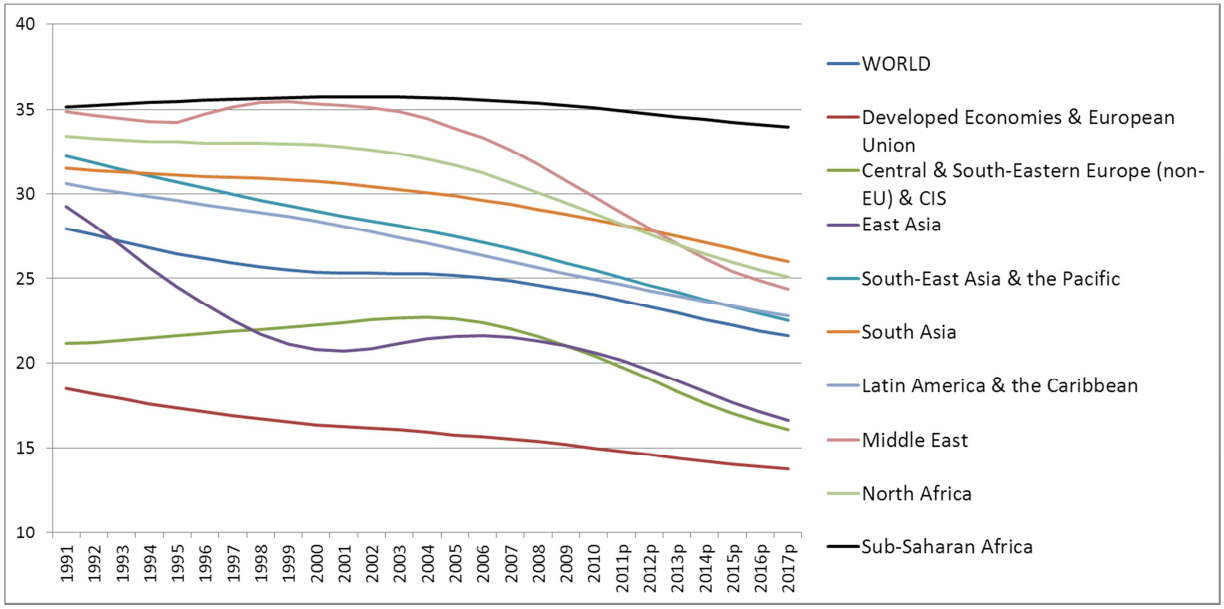
The region's working-age population is estimated to have reached 492 million in 2012, representing an increase of 137 million people since 2000 and an annual compound growth rate of 2.8 per cent. In 2012, the region accounted for 9.5 per cent of the global population of working-age, up from 7.6 per cent in 1991, and is expected to rise further to above 10 per cent by 2017 (Figure 47). Sub-Saharan Africa's growth rate of the working-age population is second only to the Middle East, but the long-term decline in the growth rate is less in Sub-Saharan Africa: the growth rate of the working-age population in the Middle East decreased from 3.7 per cent in 2000 to 2.4 per cent in 2012, while in Sub-Saharan Africa the growth rate dropped only marginally from 2.9 per cent to 2.7 per cent. Accordingly, the share of youth in the population of working-age is likely to remain higher than in other regions for years to come (Figure 48).

Figure 47. Regional shares in the global working-age population, 1991, 2012 and 2017 (projection)



Source: ILO, *Trends Econometric Models*, October 2012 (see Annex 1, Table A8).

Figure 48. Regional shares of youth population (in %), 1991–2017p



Source: ILO, *Trends Econometric Models*, October 2012 (see Annex 1, Table A9).

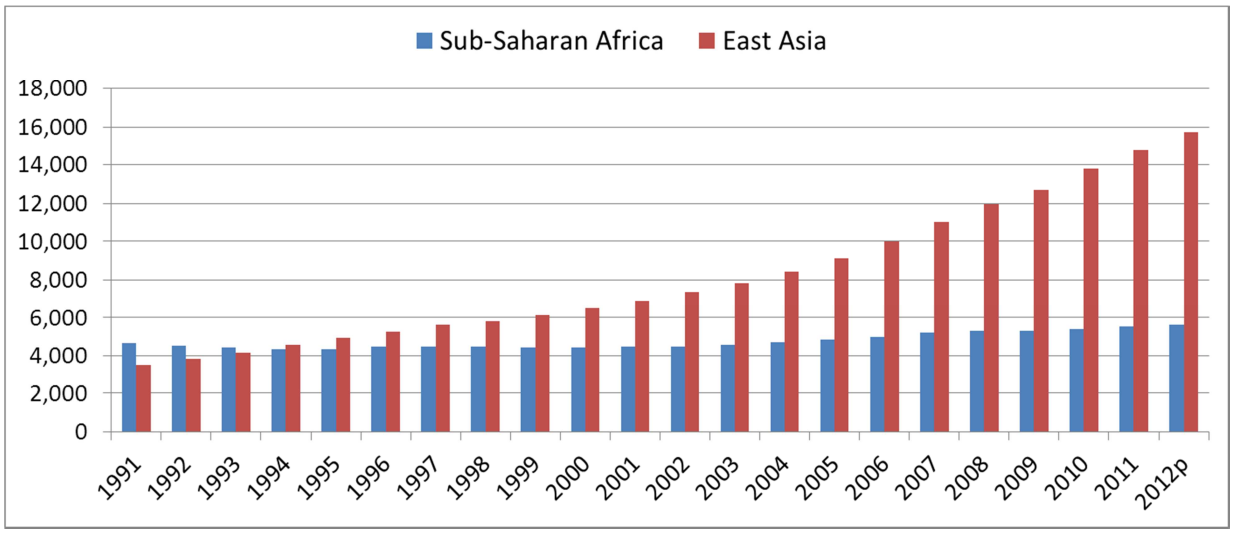
Sub-Saharan Africa's absorption of its working-age population in employment seems to compare favourably to other regions, only falling behind East Asia and the region of South-East Asia and the Pacific. Between 2000 and 2012, the employment-to-population ratio has been fluctuating between 63.8 and 65.0. Given the fairly stable level of unemployment, estimated at close to 7.6 per cent in the past 5 years, this implies that only a small proportion of the working-age population is outside the labour force – engaged in the care economy, retired, students, or discouraged workers. Indeed, the labour force participation rate edged upward by 0.1 percentage point over 2011 to 70.4 per cent in 2012, and the region's labour supply as measured by the participation rate is second only to East Asia and almost on a par with South-East Asia and the Pacific. The abundant supply of labour primarily reflects the vulnerability of workers; they cannot afford to exit the labour market as they have no alternative means of survival in the absence of adequate social security and safety net programmes in the region.

The challenge in Sub-Saharan Africa is therefore not so much to get more people integrated in the labour market, but far more to improve labour productivity, conditions of work and the returns and benefits people derive from their work. Employment only plays its intermediary role between growth and poverty reduction if it is productive. Therefore, sustained reduction of poverty requires increasing the labour productivity of women and men in wage and self-employment (Kanyenze et al., 2011). However, labour productivity in Sub-Saharan Africa is still very low, particularly in the informal economy where many workers eke out a living, and the region continues to be at the bottom of the global chart in terms of labour productivity.

In comparison with East Asia, Sub-Saharan Africa's labour productivity was 1.3 times higher in 1991 but 2.8 times lower in 2012. Between 1992 and 2003, labour productivity in SSA actually remained below its 1991 level and only surpassed this level from 2004 onwards, when a clear upward trend emerged (Figure 49). At an annual productivity growth rate, averaging 2.0 per cent during

2000–12, Sub-Saharan Africa is ahead of the Middle East (0.5 per cent), Latin America and the Caribbean (1.0 per cent) and the Developed Economies (1.0 per cent). Sub-Saharan Africa therefore seems to have embarked on a path of catch-up growth in its labour productivity, and the upward trend underlies much of the optimism about the region's prospects.

Figure 49. Labour productivity in Sub-Saharan Africa and East Asia, 1991–2012



Note: Constant 2005 international dollars.
Source: ILO, *Trends Econometric Models*, October 2012 (see Annex 1).

Part of the growth in labour productivity is due to the shift of labour from less productive to more productive sectors, in particular service sectors (see also chapter 4), but unfortunately quite limited towards industry. With the share of workers in agriculture at 62.0 per cent in 2012, Sub-Saharan Africa is the only region in which the large majority of workers are still employed in this sector (South Asia is second with 50.8 per cent). As a consequence, there is still ample scope for the region to benefit from Baumol's "structural bonus" through continuous structural change, although this would require more explicit efforts towards industrialization.[48] For example, in the period 2001–2006 Tanzania experienced rapid structural change that allowed productivity gains of 2.8 per cent annually, despite the fact that the level of productivity in both the industrial and services sector declined in this period. In other words, the productivity gains were almost entirely due to the shift of labour from less productive to more productive sectors (Sparreboom, 2013). Sub-Saharan Africa also needs productivity growth within sectors, which is often linked to technological change and higher levels of skills. In the case of Tanzania, only agriculture experienced some gains in productivity, but these gains seem to have been primarily driven by the relatively low employment growth in agriculture combined with steady increases in productivity at large farms, rather than increases of smallholder productivity (Albee, 2011).

[48]See Baumol et al. (1985), who called the effect of the transfer of labour on productivity the 'structural bonus' of economies with a large share of employment in low-productivity activities (normally agriculture).

Between 1991 and 2012, the share of employment in agriculture in Sub-Saharan Africa declined only gradually, falling not more than 5.5 percentage points (from 67.5 per cent to 62.0 per cent). This decline in agricultural employment almost exclusively benefited services sectors, leaving employment in industry stagnant at close to 8.6 per cent. Women experienced a greater shift in the share of employment by broad sector, as the share of employment in agriculture for women dropped by 9.5 percentage points, but still remained at a high level of 62.2 per cent in 2012. Employment of women in services increased by 8.9 percentage points, almost matching the decrease of employment in agriculture. While most economic activities in the services sector in Sub-Saharan Africa are characterized by low-productivity informal enterprises, it is likely that productivity is nevertheless higher than in subsistence agriculture.

In summary, the basic growth story in Sub-Saharan Africa is one of low but rising labour productivity and a slow but steady structural shift of labour from agriculture to services, but without an expansion of the industrial sector. Consistent with this, the basic jobs story is one of persistently high levels of vulnerable employment that declined only modestly over the past two decades, despite high growth. In 2012, there were 247 million workers in vulnerable employment in Sub-Saharan Africa, 62 million more than in 2000 and at least 100 million more than in 1991. The proportion of workers in vulnerable employment (defined as own-account and contributing family workers) in the region decreased from 83 per cent in 1991 to 82 per cent in 2000 and 77 per cent in 2012.[49] This proportion remains unacceptably high, and is comparable only to South Asia. In other words, even during the much touted decade of sustained growth in the region, vulnerable employment remained high, only dropping by 5 percentage points over the past 12 years, and declined too slowly to lift the majority of workers into productive employment in the foreseeable future.

A large gender gap remains in vulnerable employment as women are more likely to be in vulnerable employment than men, and this gap has widened during the past two decades. In 1991, 89.4 per cent of women and 78.5 per cent of men were in vulnerable employment, but the gender gap increased from 11 percentage points to 14 percentage points by 2012 (84.9 per cent and 70.6 per cent, respectively). For both sexes, the major shift has been within the vulnerable employment category, from contributing family workers to own-account workers, which reflects the increased share of employment in services noted before (Figure 50). The downward trend in vulnerable employment was interrupted by the crisis at its peak in 2009 when wage and salaried employment dropped by 0.3 percentage points to 20.2 per cent, but by 2011 this level had risen to 21.1 per cent.

[49] The vulnerable employment indicator has some limitations: (1) wage and salary employment is not synonymous with decent work, as workers may carry a high economic risk despite the fact that they are in wage employment; (2) the unemployed are not included in the indicator, though they are vulnerable; (3) a worker may be classified in one of the two vulnerable status groups but still not carry a high economic risk, especially in the developed economies.

Figure 50. Employment distribution by status in Sub-Saharan Africa, 1991, 2000 and 2012

Source: ILO, *Trends Econometric Models*, October 2012.

Although youth unemployment rates are lower in Sub-Saharan Africa than in most other regions, they are significantly higher than adult unemployment rates. Compared with an overall unemployment rate of close to 7.6 per cent over the past five years and adult unemployment rates of around 6.0 per cent, youth unemployment has hovered just below 12 per cent since 2007. Youth unemployment rates are also higher for females than males. Overall, in Sub-Saharan Africa, the youth unemployment problem is more of quality (underemployment, vulnerability and working poverty) than quantity. The Arab Spring that originated in North Africa and the Middle East region has also catalysed policy reactions in Sub-Saharan Africa with many governments taking pro-active measures to integrate the youth in the labour market through various active labour market policies. Supply-side policies focusing on training and entrepreneurship development are the most frequently used by governments (AfDB, 2012). Temporary job creation initiatives through public works programmes are also common. However, little is known about programme effectiveness, which constitutes a main constraint in designing youth employment programmes.[50]

Governments increasingly mainstream employment in their national development frameworks and policies

It is encouraging to observe that many governments in Sub-Saharan Africa have embarked on mainstreaming employment in their national employment policies and national development frameworks in an attempt to address the glaring gap in productive employment and decent work. In

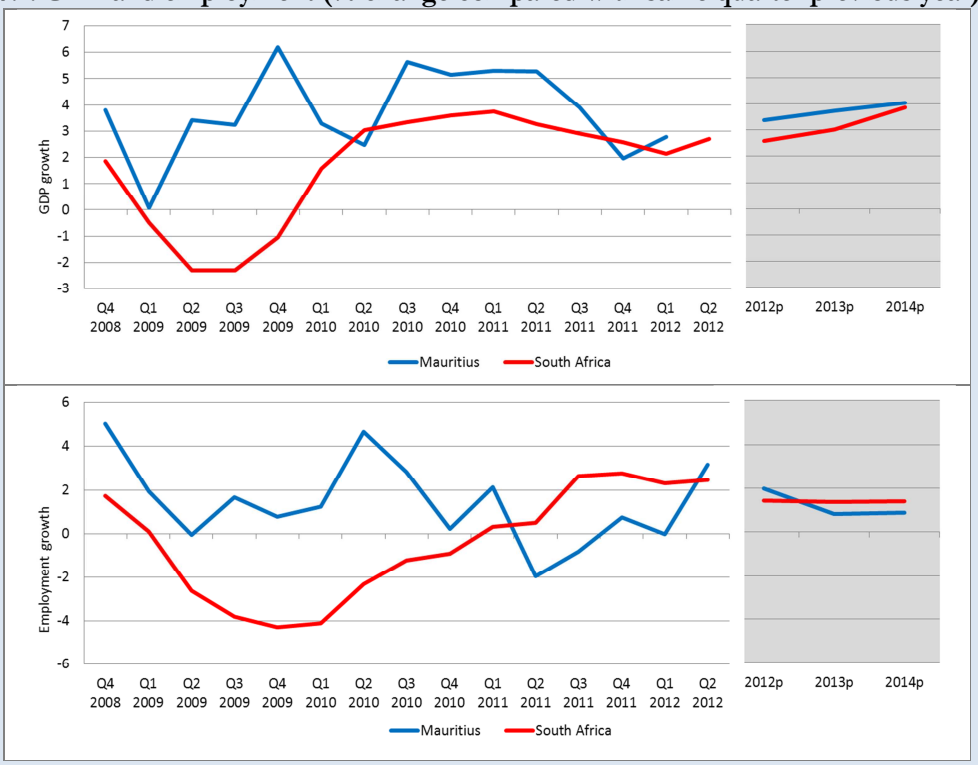
[50] See also the findings and resolutions of the International Labour Conference discussion on youth unemployment: Youth employment crisis: A call for action (ILO, 2012h), which called for building up of knowledge on youth employment policies with a view to assessing what works and what does not.

2011 and 2012, for example, Malawi, Namibia, Tanzania, and South Africa adopted new development frameworks that mainstream to varying degrees employment objectives, ranging from specified employment targets as in South Africa and Namibia to policy statements of commitment in Malawi and Tanzania.[51] Nevertheless, the next and more important step for these countries is to put in place necessary measures, including budgetary and institutional capacity, as well as productive transformation and diversification to develop the capabilities and achieve the employment objectives contained in their national development frameworks and policies.

Country spotlight 7. Growth and job creation in Mauritius and South Africa

In the Sub-Saharan Africa region, quarterly employment data are only available for Mauritius and South Africa. South Africa was hit severely by the global economic crisis and GDP plummeted throughout 2009, before growth accelerated in 2010, peaking at a rate of 3.7 per cent in Q1 2011. A slight deceleration in growth was registered in 2011, and growth rates in Q1 and Q2 2012 were at 2.1 per cent and 2.7 per cent respectively. South Africa's projected growth is similar to rates in the last quarters before accelerating to a growth rate of almost 4 per cent in 2014. Economic growth in Mauritius was highly volatile but the economy did not contract throughout the five year period under consideration. Mauritius grew at 5 per cent at the beginning of 2011 but growth decelerated to approximately 2 per cent at the end of 2011. GDP growth is expected to steadily increase in Mauritius, up to a level of 4 per cent in 2014.

Figure CS7.1. GDP and employment (% change compared with same quarter previous year)



Note: The figures display quarterly growth in GDP (top panel) and employment (bottom panel) between Q4 2008 and Q2 2012 and annual projections between 2012 and 2014 (values shaded in grey). Quarterly growth rates are calculated on

[51] Malawi Growth and Development Strategy II (2012), Namibia NDP4 (2012), South Africa National Development Plan/ Vision 2030 (2012) and Tanzania MKUKUTA II (2011).

the basis of the same quarter in the previous year.
Source: IMF, ILO LABORSTA database. For projections: IMF; ILO, *Trends Econometric Models*, October 2012.

The negative effects of the crisis on employment in South Africa were severe and employment losses more persistent in percentage terms than declines in economic growth. Employment contracted until the end of 2010 and South Africa experienced robust growth in 2011 and the first half of 2012, peaking at a level of 2.5 per cent in Q2 2012. In contrast, Mauritius registered a volatile employment growth path and employment started to contract in Q2 2011 and has not yet durably recovered to positive growth rates. Even though Mauritius' and South Africa's growth paths are varied, employment growth rates for 2012, 2013 and 2014 are projected to be similar at 0.8 per cent to 2 per cent per year.

Appendix 1. Trend unemployment during the crisis

Figure 22 on p. 70 displays estimates of changes to trend unemployment rates following the global financial crisis. This Appendix presents the methodology behind these estimates.

Shifts in trend unemployment rates are identified using the estimation of a Beveridge curve. The Beveridge curve gives an indication as to the capacity of a country's labour market to match open vacancies with job-seekers. The actual unemployment rate can then be determined by identifying ongoing labour demand at the firm level (see Pissarides 2000, chapter 1). For the purposes of the estimation, only the average or trend component of labour demand is necessary, which does not require the exact identification of a labour demand schedule. Rather, shifts of the Beveridge curve are used to identify the average upward drift in unemployment rates due to the financial crisis.

Comparable information on open vacancies does not exist across countries in the Developed Economies and European Union region. Instead, information on matched vacancies has been used, benefiting from a recent compilation of unemployment flows based on a methodology developed by Shimer (2007) and Elsby et al. (2008). While these flow indicators might only imperfectly represent the true extent of vacancy creation, their better cross-country comparability and the wide availability of this indicator make them a useful alternative.

In order to estimate the impact of the crisis on shifts in the Beveridge curve, a dynamic model of the Beveridge curve has been augmented with crisis dummies, following the approach taken by Valletta (2005) and ECB (2012). Country-crisis dummies have been identified on the basis of the evolution of GDP growth and a recent update of the financial crisis database originally collected by Laeven and Valencia (2008). In order to account for possible endogeneity problems and given the dynamic set-up of the estimated equation, the following has been estimated using the Arellano-Bond System GMM estimator and accounting for auto-correlation in the error term:[52]

$$UR_{i,t} = \alpha_i + UR_{i,t-1} + OUT_{i,t} + OUT_{i,t}^2 + \sum_{j \in \{Crisis\ Countries\}} CrisisDummy_{j,t} + \varepsilon_{i,t}$$

where i = country index; j = index of countries in crisis; UR = unemployment rate; OUT = unemployment outflow rate; *CrisisDummy* = a dummy that takes the value 1 during years in which country j has been affected by the global financial crisis.

[52] Regression results are available upon request.

Appendix 2. Okun's coefficients and banking crises

Figure 21 shows the result of an econometric analysis of the effect of banking crisis on the size of the estimated Okun's elasticity between changes in GDP growth and job creation rates. Okun's elasticities are taken from the ILO *Trends Econometric Models*. The banking crises are identified by the IMF Financial crises database (Laeven and Valencia, 2012). In order to distinguish recessions during banking crises from other downturns, periods of negative growth are cross-tabulated with banking crises to identify banking crisis recessions. Periods of positive GDP growth immediately following such banking crisis recessions are identified as recovery periods. The (average) Okun's elasticity during these periods is compared with the average elasticity during other downturns and recoveries to produce the chart. The displayed results are based on an estimation using the entire country sample (67 countries) and not restricted only to the Developed Economies and European Union region in order to have a sufficient number of banking crisis observations. Detailed econometric results are available upon request.

Appendix 3. ILO Short-term forecasting models

Facing increasing demands for quarterly updates of employment forecasts at the country level, the ILO has developed a new forecasting tool. This tool is designed to forecast unemployment, sectoral employment and labour flow dynamics on a quarterly basis for selected countries and employs vector autoregressive (VAR) techniques.

The version of the model that is used to forecast employment for 15 sectors in the United States as shown in Box 6 of this report includes four endogenous variables.[53] It can be written as follows:

$$dGDP_t = \alpha_1 + \sum_{j=1}^{l} \beta_{1,j} dGDP_{t-j} + \sum_{j=1}^{l} \gamma_{1,j} dGCF_{t-j} + \sum_{j=1}^{l} \delta_{1,j} dE_{s,t-j} + \sum_{j=1}^{l} \theta_{1,j} HI_{s,t-j} + \varepsilon_{1,t}$$

$$dGCF_t = \alpha_2 + \sum_{j=1}^{l} \beta_{2,j} dGDP_{t-j} + \sum_{j=1}^{l} \gamma_{2,j} dGCF_{t-j} + \sum_{j=1}^{l} \delta_{2,j} dE_{s,t-j} + \sum_{j=1}^{l} \theta_{2,j} HI_{s,t-j} + \varepsilon_{2,t}$$

$$dE_{s,t} = \alpha_3 + \sum_{j=1}^{l} \beta_{3,j} dGDP_{t-j} + \sum_{j=1}^{l} \gamma_{3,j} dGCF_{t-j} + \sum_{j=1}^{l} \delta_{3,j} dE_{s,t-j} + \sum_{j=1}^{l} \theta_{3,j} HI_{s,t-j} + \varepsilon_{3,t}$$

$$HI_{s,t} = \alpha_4 + \sum_{j=1}^{l} \beta_{4,j} dGDP_{t-j} + \sum_{j=1}^{l} \gamma_{4,j} dGCF_{t-j} + \sum_{j=1}^{l} \delta_{4,j} dE_{s,t-j} + \sum_{j=1}^{l} \theta_{4,j} HI_{s,t-j} + \varepsilon_{4,t}$$

$dGDP$ is the quarter-on-quarter growth rate of GDP, $dGCF$ is the quarter-on-quarter growth rate of gross fixed capital formation, dE_s stands for the quarter-on-quarter growth rate in sectoral employment and HI_s is an indicator for hiring intentions for the next quarter. t denotes a time index at the quarterly level and l is the lag order of the VAR.

The model is estimated separately for all 15 sectors and for each sector the lag order is optimally chosen according to the Akaike selection criterion. The data that are included into the model encompass the period from 1976 Q3 to 2012 Q3. Forecasts for employment are produced for the next 8 quarters ahead. With the last observed data point in 2012 Q3, this implies that our forecast horizon stretches from 2012 Q4 to 2014 Q3.

The data source for GDP and gross fixed capital formation is the OECD. The model makes use of the statistical relationship of employment and GDP (Okun's law) and estimates a sector-specific elasticity for employment to different lags of GDP. This relationship fits well with traditional explanations of labour demand for which empirical support is strong, at least in certain

[53] These 15 sectors are construction, education and health, financial activities, government, information services, leisure and hospitality, manufacturing of durable goods, manufacturing of non-durable goods, mining and lodging, other services, professional and business services, retail trade, transportation and warehousing, utilities, and wholesale trade.

countries (Bils et al., 2012). The model also includes gross fixed capital formation to account for the relationship between employment and investment (Zoega, 2010).

Finally, the model includes a sector-specific indicator for hiring intentions, which is published by the ManpowerGroup and calculated from a representative survey of employers.[54] This indicator is forward-looking in nature and corresponds to the difference between the percentage of employers that expect an increase of employment in their establishment for the next quarter and the percentage of employers that expect a decrease.

As confirmed by a pseudo-out-sample forecast evaluation analysis, the hiring indicator improves forecasts of sectoral employment in the United States in 12 out of 15 sectors. The gains in terms of root-mean-squared forecast error (RMSFE) that can be achieved are large and reach levels of more than 30 per cent, depending on sector and forecast horizon.

[54] See http://www.manpowergroup.com/press/meos_landing.cfm.

4. Structural change for decent work

Introduction

The reallocation of jobs across sectors is central to the process of structural change and productivity upgrading and yet it often entails considerable social adjustment costs that fall onto specific groups in the labour market. Lay-offs in low-productivity sectors, increased training needs of workers, or congestion in urban areas due to workers' movements from the countryside into crowded cities are only a few examples of problems that can arise from structural shifts in employment. Whether structural change leads to more and better employment opportunities is an issue that has not received sufficient attention.

This chapter provides new evidence on the role and importance of the reallocation of jobs across sectors and demonstrates that, if the reallocation occurs from low productivity to high productivity sectors, it both contributes to increased living standards and to improved labour market outcomes such as a lower incidence of vulnerable employment and less working poverty. The chapter also presents evidence as to the adverse impact the global economic crisis had on sectoral reallocation and the slowdown in value added per capita growth rates, in particular in emerging economies.

Decomposing value added per capita growth

Value added per capita growth can be decomposed into changes in productivity, variations in employment and labour force participation, and demographic dynamics (see Appendix 1):

- Growth in labour productivity arises either from changes in labour productivity within sectors – for instance through the implementation of new machines and innovative technologies that allow more output with the same amount of labour input – or from the reallocation of jobs across sectors ("structural change") when workers move from low- to high-productivity sectors (e.g. from agriculture to industry or services);

- Variations in employment and labour force participation can augment value added per capita growth if there is an increase in the activity rate of the working-age population either by reducing unemployment or by bringing more people to the labour market. In this respect, the drop in both employment-to-population and labour force participation rates in many regions with the onset of the crisis has been an important factor behind the current slow growth environment;

- Value added per capita growth can also increase in a dynamic demographic context when the share of the working-age population in the total population rises. These demographic dynamics are typically slow-moving, very persistent, reacting little to policy interventions.

Labour productivity growth through structural change has immediate consequences for employment as it requires workers to move across sectors and jobs. These dynamics in the labour market have potentially long-lasting effects if workers have difficulties in finding new employment opportunities

elsewhere. Lack of appropriate skills, limited geographical mobility and missing information regarding available jobs can create large barriers to successful job-finding. At the same time, structural change is central and necessary to increase living standards durably and equitably by allowing ever more people to benefit from higher productivity levels in more advanced parts of the economy. In the following, value added per capita growth is broken down for different regions and over different time periods in order to assess the importance of structural change in growth patterns and the impact of the crisis in this respect. In the next section, the chapter then aims at analysing the impact structural change has had on the quality and quantity of jobs in these regions.

Structural change plays a significant role for economic growth in developing regions

Patterns of value added per capita growth have varied widely across regions over the last two decades (see Figure 51). Nevertheless, some general lessons can be drawn from this regional comparison.

A first lesson is that gains in labour productivity within sectors are the main driver of growth. In particular, labour productivity growth in industry and services play an important role for aggregate economic growth. Productivity increases in industry have been particularly important in East Asia, whereas service sector productivity growth has played a larger role in most other regions, particularly in South Asia. On the other hand, productivity improvements in agriculture figure least prominently among the three broad sectors in most regions. Often, this is due to the relatively small size of the agricultural sector compared with industry and services, which decreases the scope at which agriculture can contribute to growth.

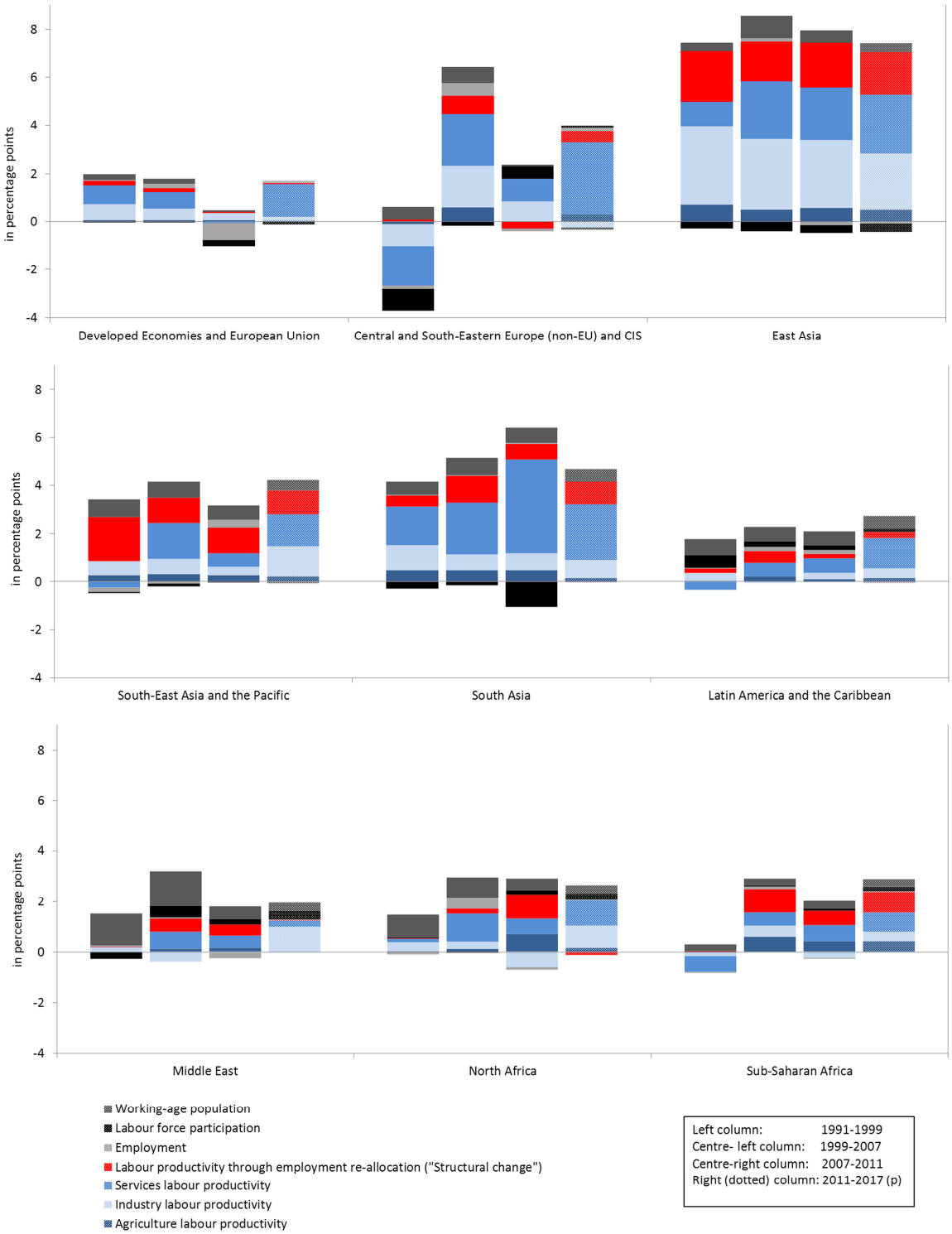
Second, in comparison with the contributions of labour productivity improvements within sectors, productive structural change has quantitatively played a less important, but still quite considerable role for growth in many regions, confirming earlier findings in the literature (Kucera and Roncolato, 2012; McMillan and Rodrik, 2011). Structural change has contributed significantly to economic growth especially in East Asia, South Asia, South-East Asia and the Pacific and Sub-Saharan Africa. The importance of sectoral reallocation has typically been smaller in Latin America and the Caribbean, the Middle East and North Africa. In contrast, Central and South-Eastern Europe has experienced significant productivity gains due to structural change only in 1999–2007, but not much before and after this period. For the Developed Economies region, productive structural change is negligible, which is explained by the marginal role that agricultural employment plays in this region.

Third, labour market and demographic components of value added per capita growth – the employment-to-population rate, the labour force participation rate and the share of working-age to total population – tend to be less important drivers of growth, but can become important at times. In the Developed Economies region, the strong rise in unemployment and the resulting drop in labour force participation due to discouragement during the crisis slowed down economic growth significantly. In South Asia, labour force participation has contributed negatively to value added per capita growth as women were dropping out of the Indian labour market in 2005–10 (Kapsos and Silberman, forthcoming). In the Middle East, growth patterns are dominated by demographic dynamics.

Over the coming years through 2017, value added per capita growth is projected to be largely driven by improved labour productivity in the services sector for most regions. This is particularly the case for the Developed Economies, Central and South-Eastern Europe, South Asia

and Latin America and the Caribbean. Economic growth in East Asia and South-East Asia and the Pacific is projected to entail large contributions of labour productivity improvements within services and also within industry. Considering that these two regions are expected to be among the fastest-growing regions in the world points to the importance of industrialization in the development process. But also productive structural change is going to matter a lot for growth in these regions, according to our projections. In Sub-Saharan and North Africa, economic growth when considered in per capita terms remains relatively weak with no particular driver outstanding and pushing growth upwards. Also the Middle East is projected to grow only modestly, with a growth pattern dominated by labour productivity improvements within industry.

Figure 51. Decomposition of value added per capita growth into its components, by region and period



Notes: The decomposition follows the methodology described in Appendix 1. Projections for 2011–17 are based on projections of sectoral value added shares produced as described in Appendix 2. For each region

and period, the average annual value added per capita growth rate can be obtained by adding up all growth components, including those with negative values.
Sources: ILO calculations; see Appendices 1 and 2 for details on data sources.

Structural change has slowed down as global investment plummeted

Structural change has slowed down considerably during the global economic crisis in several regions, further limiting its contribution to value added per capita growth (see Table 6). The main driver of structural change is the movement of workers out of agriculture, a sector that is characterized by a lower-than-average labour productivity in all regions with productivity levels that are often 50 per cent or more below the average. Central and South-Eastern Europe has experienced the strongest decrease of the structural change contribution to growth from 1999–2007 to 2007–11, amounting to more than a percentage point annually. It is in fact the only region in which structural change contributed negatively to growth during the crisis and it is the region that was hit hardest in terms of within-sector productivity growth. Structural change has also slowed down in South Asia, Sub-Saharan Africa and Latin America and the Caribbean with growth contributions that are by 0.5, 0.4 and 0.3 percentage points, respectively, lower. Out of these three regions it is only Sub-Saharan Africa that experienced a slowdown in productivity growth within sectors during the crisis.

For 2011–17, for none of the regions in which structural change declined in 2007–11, productive structural change is projected to fully recover to pre-crisis trends. In particular, in Central and South-Eastern Europe and Latin America and the Caribbean, the average contributions of structural change to value added per capita growth are projected to reach only 0.5 and 0.2 percentage points, respectively, over the period from 2011–17. This compares with 0.7 and 0.5 percentage points, respectively, between 1999 and 2007. For the Middle East and North Africa productive structural change will decelerate during 2011–17 despite remaining large shares of agricultural employment in total employment of 17 per cent and 27 per cent, respectively. For North Africa, structural change is even expected to contribute negatively to growth over the coming years.

Table 6. Contributions of changes in labour productivity to value added per capita growth

	Change in growth contribution: Pre-crisis vs. crisis		Change in growth contribution: Crisis vs. projection	
	Within sector productivity growth	Sectoral reallocation	Within sector productivity growth	Sectoral reallocation
Developed Economies and European Union	–0.9	–0.1	1.2	0.0
Central and South-Eastern Europe (non-EU) and CIS	–2.7	–1.0	1.3	0.8
East Asia	–0.2	0.2	–0.3	–0.1
South-East Asia and the Pacific	–1.3	0.1	1.6	–0.1
South Asia	1.8	–0.5	–1.9	0.3
Latin America and the Caribbean	0.2	–0.3	0.9	0.1
Middle East	0.2	–0.1	0.6	–0.4
North Africa	–0.8	0.8	1.3	–1.1
Sub-Saharan Africa	–0.7	–0.4	0.7	0.3

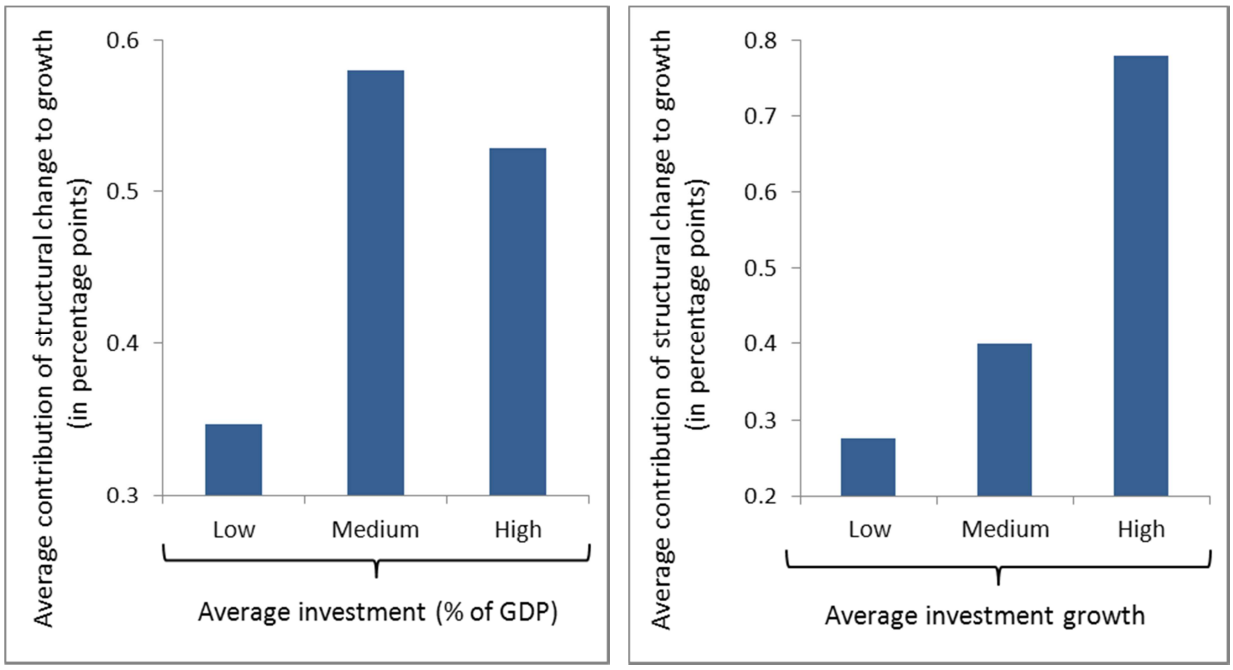
Note: Contributions to economic growth in percentage points. The table compares the average contributions of labour productivity growth occurring within a sector and through sectoral reallocation between the pre-crisis period (1999–2007), the crisis years (2007–11) and the projection period (2011–17). The decomposition follows the methodology described in Appendix 1. Projections (p) for 2011–17 are based on projections of sectoral value added shares produced as described in Appendix 2.
Source: ILO calculations; see Appendix 1 and 2 for details on data sources.

The global decline in investment in 2007–11 is key to an understanding of this slowdown in structural change. There are three channels through which investment drives structural change. First, investment into high-productivity sectors can stimulate the sectoral reallocation of jobs. Second, capital deepening within a high-productivity sector may enhance labour productivity and, henceforth, wages in that sector, which can increase the incentives of workers to move into this sector. Finally, investment plays a crucial role in expanding infrastructure and urban amenities, which facilitates geographic mobility of workers, and, henceforth, industry and service sectors, which are usually clustered in areas that benefit from infrastructure investment.

Both investment shares and investment growth rates are important drivers of structural change (see Figure 52). In developing countries in which investment as a share of GDP is at a medium or high level, structural change contributes on average more than 0.5 percentage points annually to value added per capita growth. In countries with comparably low investment shares, the contribution is only about 0.35 percentage points. There are similar findings when relating investment growth to productive structural change. Structural change contributes considerably more to value added per capita growth in countries with high growth rates of investment. The positive correlations of investment shares and investment growth rates, respectively, with productive structural change are statistically significant. This result indicates that, at least partly, the withdrawal of capital from investments in the developing world may be responsible for the slowdown of productive reallocation of labour that can be observed in many regions during the crisis.

Figure 52. The relation of investment and structural change, 1999-2011

a. Investment shares and structural change **b. Investment growth and structural change**



Notes: Investment is measured by gross fixed capital formation. The figure is based on investment data for 62 developing countries. "Low", "Medium" and "High" refer to terciles of the average investment shares and the average investment growth rate, respectively. The columns show the annual contribution of structural change to growth, averaged over countries that belong to a certain tercile.
Sources: ILO calculations; data on gross fixed capital formation are from World Bank; see Appendices 1 and 2 for details on other data sources.

Labour markets benefit from structural change

Even though structural change is quantitatively less important for value added per capita growth than within-sector changes in productivity, it can have considerable effects on labour markets. This section, therefore, analyses the relation between both short- and long-run drivers of growth, on the one hand, and labour market outcomes as measured by vulnerable employment, working poverty or the gender gap in labour force participation, on the other.[55]

Results are presented in Figure 53-Figure 57 which illustrate the relation between growth patterns and labour market outcomes as derived from a regression analysis. Each figure shows by how much trends in a particular labour market outcome are estimated to change in relation to a 1 percentage point increase in a particular growth component, holding overall value added per capita growth constant. The figures also include a confidence interval that indicates the precision of the estimate.

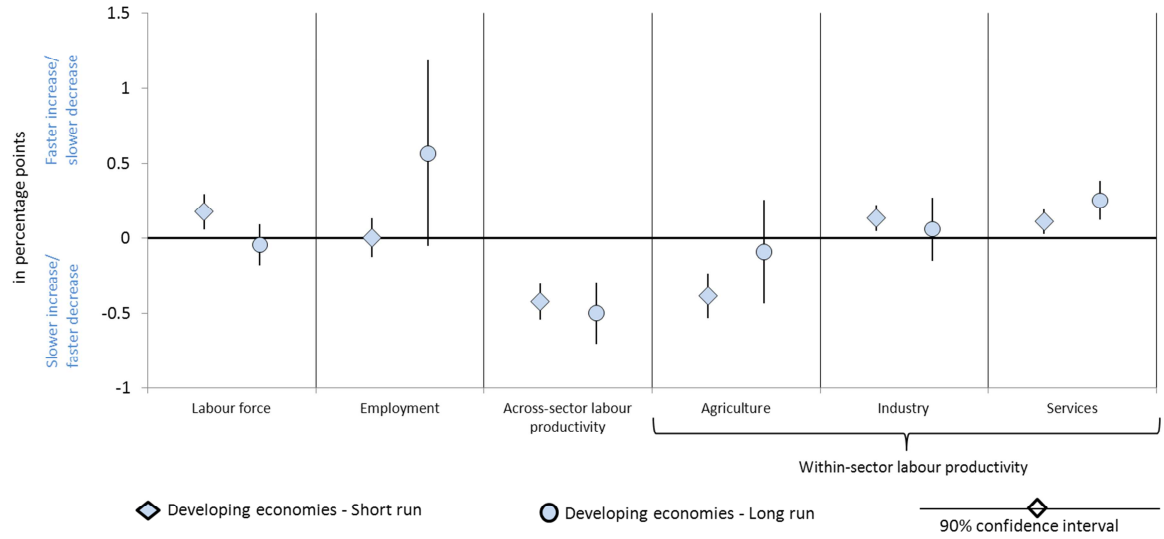
[55] The methodology is outlined in more detail in Appendix 3.

Structural change has potential to produce a faster reduction of vulnerable employment

Structural change is the most effective driver of growth to bring down rates of vulnerable employment in developing economies, both in the short and in the long run (see Figure 53). It is the across-sector labour productivity component of growth that is associated strongest with the speed at which vulnerable employment decreases, compared with other growth components. The association is significant as indicated by the confidence interval which does not overlap with zero.

A growth model that is based on structural change lowers the share of workers in vulnerable employment faster than other growth models, if structural change is associated with a reallocation of labour away from agriculture into industry and service sectors. Empirical evidence shows that vulnerable employment is often particularly present in the agricultural sector (ILO, 2011a). As a consequence, productive structural change is effective in lowering the prevalence of vulnerable employment on average.

Figure 53. Vulnerable employment dynamics and contributors to value added per capita growth in developing economies



Note: Estimates are based on regressions that are described in Appendix 3. The vertical axis shows the extent to which trends in the share of vulnerable employment change in relation to different components of value added per capita growth which are listed along the horizontal axis. The components are based on a decomposition that follows the methodology described in Appendix 1, considering agriculture, industry and services as sectors. If the confidence interval does not overlap with zero, estimates are statistically significant at a confidence level of 90 per cent.
Source: ILO calculations; see Appendices 1 and 2 for details on data sources.

Strong labour force growth in developing countries is associated with higher rates of vulnerable employment in the short run. In well-functioning labour markets, higher participation rates are desirable, given that they tend to come along with more employment opportunities for underrepresented groups in the labour market such as women or older workers. However, results suggest that these increased opportunities often do not come along with wage and salaried

employment, at least in developing countries and in the short run. Indeed, women such as those in rural areas of India are frequently self-employed and do not participate in the salaried workforce (Klasen and Pieters, 2012).

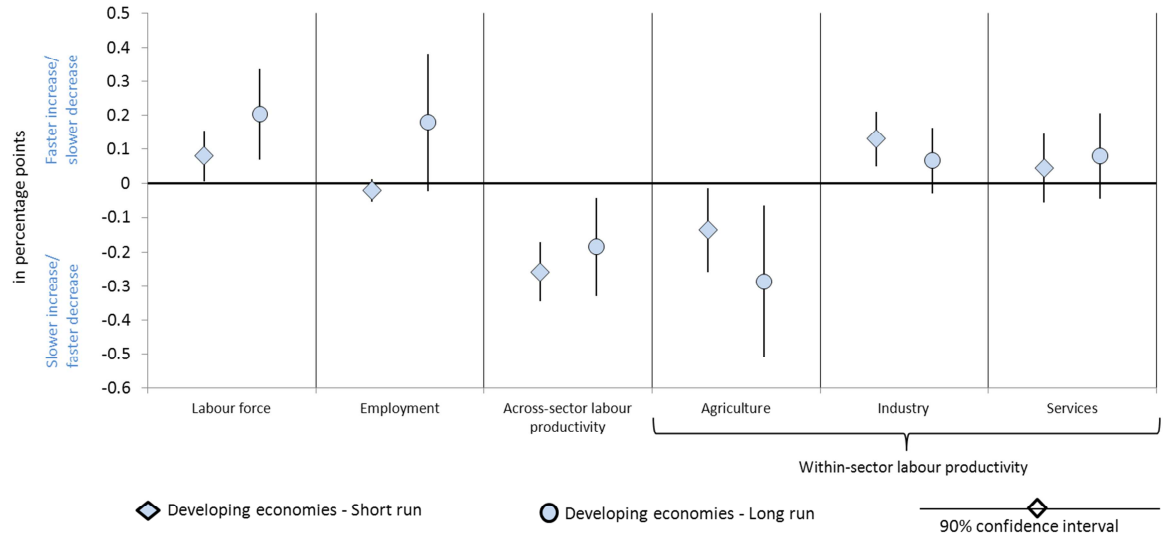
Growth models based on increased agricultural labour productivity also help lower the incidence of vulnerable employment, at least in the short run. Agricultural productivity mainly rises as a result of surplus labour moving into other sectors and out of the rural economy. To the extent that workers leaving the agricultural sector can find employment in industry or services with higher productivity levels, this sectoral reallocation lowers vulnerable employment permanently. However, if increases in agricultural productivity simply imply labour shedding in the long-run, trends in vulnerable employment do not improve durably.

Structural change has potential to increase the pace at which working poverty is reduced

Structural change helps bring down working poverty, defined as the share of workers in total employment who consume US$1.25 at purchasing power parity (PPP) or less per day, an indicator of working conditions under extreme poverty and the lack of access to essential goods and services. Figure 54 shows the estimated relation between different types of value added per capita growth and trends in working poverty.[56] In particular, it shows that in countries or years in which more economic growth can be traced back to structural change, the share of poor in total employment decreases faster, in the short as well as in the long run. It is jobs in high-productivity sectors that bring workers out of poverty. The living standard of workers who manage to move out of subsistence agriculture and take up these jobs improves on average.

[56] This analysis is based upon the updated ILO estimates of working poverty (see Kapsos and Bourmpoula, forthcoming). Doing the analysis for actual data on national poverty rates from World Bank PovcalNet, for which a sufficient number of observations is available, produces similar results.

Figure 54. Working poverty dynamics and contributors to value added per capita growth in developing economies



Note: Estimates are based on regressions that are described in Appendix 3. The vertical axis shows the extent to which trends in the share of working poor change in relation to different components of value added per capita growth which are listed along the horizontal axis. The components are based on a decomposition that follows the methodology described in Appendix 1, considering agriculture, industry and services as sectors. If the confidence interval does not overlap with zero, estimates are statistically significant at a confidence level of 90 per cent.
Source: ILO calculations; see Appendices 1 and 2 for details on data sources.

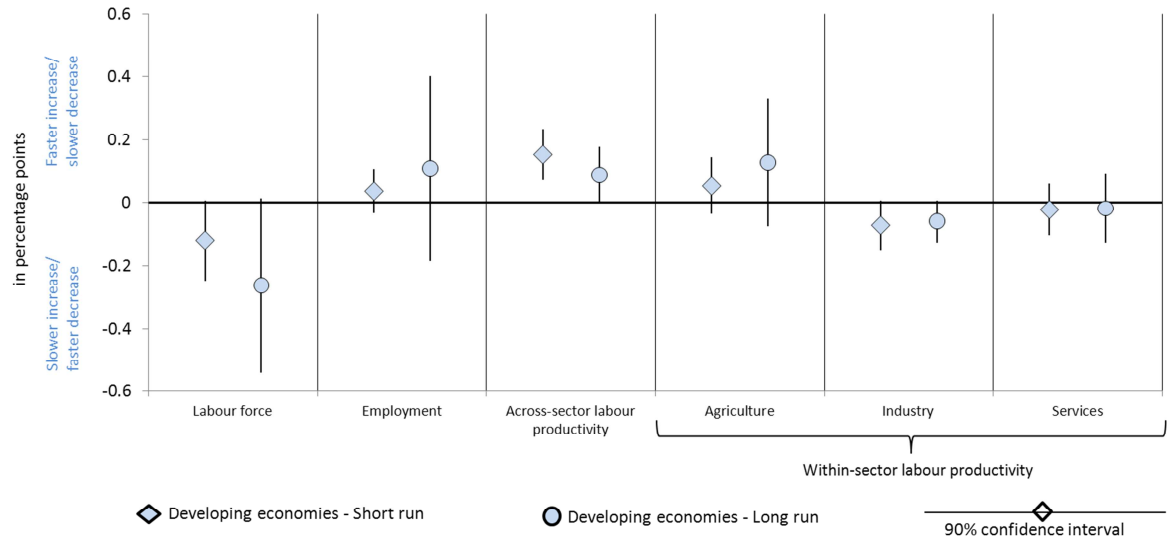
On the other hand, growth which is driven by higher labour force participation and employment is associated with a faster-increasing working poverty rate in the long run. Hence, even though employment-intensive growth helps bring down unemployment rates, this often seems to come at the expense of average job quality. These results suggest that at least some of the unemployed take up jobs that do not guarantee a decent income. Finally, agricultural productivity growth is positively associated with decreases in working poverty. Improving productivity in this sector helps the poorest, which can largely be found in agriculture, even more so in a longer term perspective.

Structural change can favour the emergence of a working middle-class

Growth patterns that are based more on structural change than on other factors tend to come along with a faster increase in the middle-class share of workers in developing countries, at least in the short term (Figure 55). This is evident when looking at the estimated short term relation between the across-sector labour productivity component of growth and trends in the working middle-class share. The relation is estimated to be positive and significant, given that the confidence interval does not overlap with zero. In other words, the more productivity gains are generated through structural change, the faster the working middle-class increases in average.

In this context, the working middle-class is defined as the share of workers that live on between US$4 and US$13 PPP per day, which are common thresholds in the literature. Estimates of the working middle-class are part of the ILO's new estimates of employment by economic classes (Kapsos and Bourmpoula, forthcoming). As discussed in chapter 1, the middle-class itself can be viewed as an essential driver of the economic development process.

Figure 55: Middle-class employment dynamics and contributors to value added per capita growth in developing economies



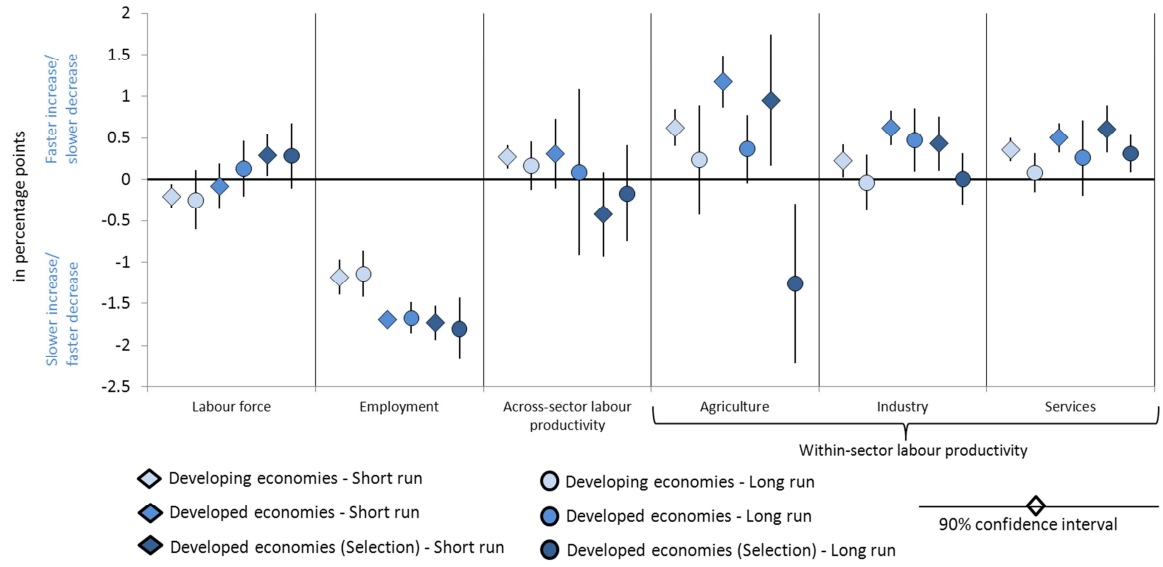
Note: Estimates are based on regressions that are described in Appendix 3. The vertical axis shows the extent to which trends in the share of the working middle-class change in relation to different components of value added per capita growth which are listed along the horizontal axis. The components are based on a decomposition that follows the methodology described in Appendix 1, considering agriculture, industry and services as sectors. If the confidence interval does not overlap with zero, estimates are statistically significant at a confidence level of 90 per cent.
Source: ILO calculations; see Appendices 1 and 2 for details on data sources.

Strong labour force growth is associated with a reduction in the size of the working middle-class. This result suggests that fast increases in labour force participation reduce the average quality of jobs available and lower the income of some of those in employment. Taking a closer look at the data that underlie the analysis, this negative association is particularly strong in Sub-Saharan Africa, the Middle East and North Africa where social security systems are less well developed and surplus labour is absorbed in the informal economy. It is also strong for Central and South-Eastern Europe, which, however, seems to be partly driven by workers' moves into an expanding upper class rather than increases in working poverty. Moreover, the negative association is stronger in the long than in the short run, suggesting that increases in the labour force do not automatically come along with a rise in middle-class jobs that would help absorb these additional workers.

Structural change is neutral to youth unemployment

Structural change is found to be largely neutral to youth unemployment, an issue of major importance in most developed and some developing economies in recent years (Figure 56). If anything, it is associated very weakly, and only in the short-term with increases in youth unemployment in developing economies. On the other hand, employment-driven growth strongly contributes to bringing down youth unemployment rates, stressing the importance of a favourable labour market to help improve the outlook for young job-seekers.

Figure 56. Youth unemployment dynamics and contributors to value added per capita growth in developing and developed economies



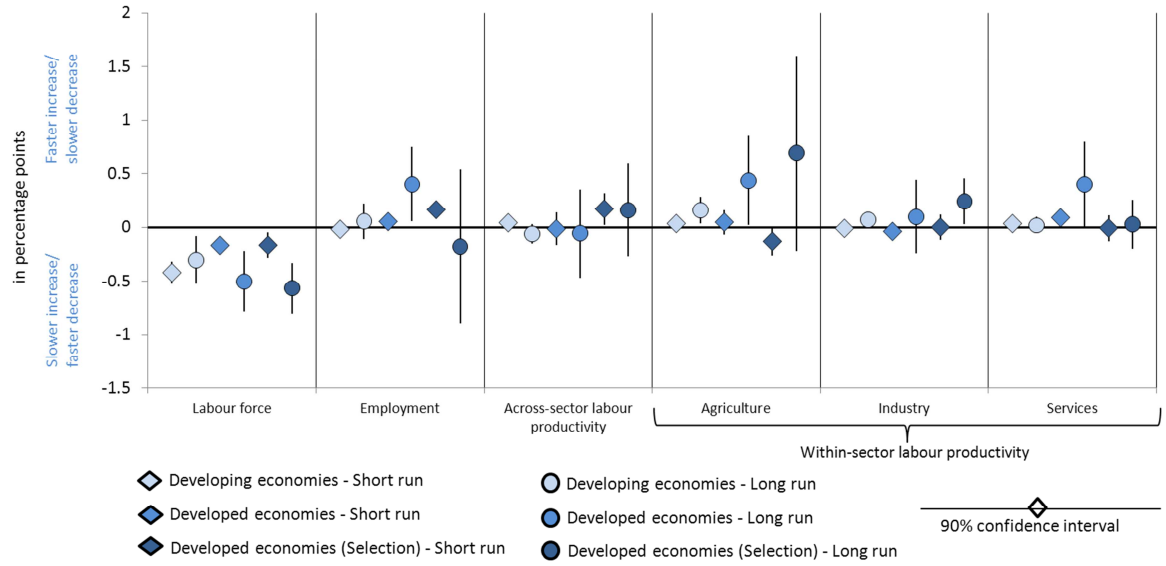
Note: Estimates are based on regressions that are described in Appendix 3. The vertical axis shows the extent to which trends in the youth unemployment rate change in relation to different components of value added per capita growth which are listed along the horizontal axis. The components are based on a decomposition that follows the methodology described in Appendix 1, considering agriculture, industry and services as sectors for developing economies and developed economies. For a selection of developed economies, the decomposition also considers 21 disaggregate sectors. If the confidence interval does not overlap with zero, estimates are statistically significant at a confidence level of 90 per cent.
Source: ILO calculations; see Appendices 1 and 2 for details on data sources.

Moreover, the analysis suggests the existence of a short term trade-off between youth unemployment and improvements of productivity within agriculture, industry and services. Indeed, the estimated short term relation is significant for all sectors, both in developed and developing economies, as indicated by Figure 56. However, typically this relation does not hold in the long run. It is even reversed for agricultural productivity in a selection of developed economies, for which the decomposition is implemented at a more disaggregate level, considering 21 sectors.

Structural change is neutral to the gender gap in prime-age labour force participation

Structural change seems to be largely neutral to the gap in labour force participation rates between women and men, at least for the age cohort of 35 to 54 years (Figure 57).[57] Structural change, therefore, does not affect the social sustainability of growth by undermining equal opportunities for women and men on the labour market. Moreover, the more growth relies upon the labour force participation component itself, the smaller the gap in labour force participation between the two sexes. This result suggests that increases in overall labour force participation rates are mostly driven by women. Moreover, there is some evidence for developed countries that productivity improvements within agriculture, industry and services come along with an increase in the gender gap of labour force participation rates in the long run.

Figure 57. Dynamics in the labour force participation gap and contributors to value added per capita growth in developing and developed economies



Note: Estimates are based on regressions that are described in Appendix 3. The vertical axis shows the extent to which trends in the difference between male and female labour force participation rates change in relation to different components of value added per capita growth which are listed along the horizontal axis. The components are based on a decomposition that follows the methodology described in Appendix 1, considering agriculture, industry and services as sectors for developing economies and developed economies. For a selection of developed economies, the decomposition also considers 21 disaggregate sectors. If the confidence interval does not overlap with zero, estimates are statistically significant at a confidence level of 90 per cent.

Source: ILO calculations; see Appendices 1 and 2 for details on data sources.

[57] By restricting the age category accordingly, the impact of child-bearing on this difference is taken out at least to some extent.

Conclusion

This chapter has shown that structural change is an important driver of value added per capita growth and plays an important role in promoting productive employment and decent work. In particular, structural change can help reduce the incidence of vulnerable employment and working poverty and increase the middle-class share of workers. In other words, policies to promote productive transformation and structural change are a key part of the policy package to promote productive employment and decent work.

However, between 2007 and 2011, such gains due to job reallocation across sectors have decreased in Central and South-Eastern Europe, Latin America and the Caribbean, South Asia, Sub-Saharan Africa and the Middle East. Employment has moved out of low-productivity agriculture into industry and services at a much slower pace than before in these regions. None of these regions is in fact projected to get fully back on its pre-crisis path of structural change, suggesting that the crisis caused more damage than previously thought in the development prospects of many developing countries. Especially for Central and South-Eastern Europe and Latin America and the Caribbean, the contribution of structural change to growth is projected to remain considerably below pre-crisis levels. Structural change in the Middle East and North Africa is expected to slow down between 2011 and 2017.

Appendix 1. The decomposition of value added per capita growth

The decomposition of value added per capita growth is a descriptive tool that this chapter makes extensive use of. Although it is important to bear in mind that decompositions are unsuitable for the establishment of any causal relationships, the decomposition is still useful to quantify the individual contributions of different factors to overall economic growth. This Appendix provides some technical details on how this chapter decomposes economic growth into its components.

The notion of *growth* in this chapter refers to gross value added as opposed to GDP per capita growth. GDP corresponds to gross value added plus taxes minus subsidies on products, so the two macroeconomic aggregates are in fact closely related. However, since decompositions require data by sector and these sector-specific data are available only for gross value added, it is gross value added per capita growth that is decomposed.

In what follows, this Appendix describes the data sources that are used, before going through the two steps of the decomposition. Within a box, an example illustrates each of the two steps and details out how to calculate growth components in practice.

Data

All growth decompositions in this chapter rely on total gross value added data which stem from the World Bank's *World development Indicators* (WDI), complemented with data from the UN Statistics Division, using the methodology described in Appendix 2 to derive estimates for missing values and arrive at medium-term projections. Total employment data and projections are taken from the October 2012 update of the ILO's *Global Employment Trends* (GET) model. The source of labour force data and projections is *Economically Active Population, Estimates and Projections (6th edition, July update)* (EAPEP). Estimates and projections of the working-age population, which the ILO defines as the population aged 15 or above, come from UN Population Division's *World Population Prospects, 2010 Revision*.

For 163 countries, the growth decompositions distinguish between agriculture, industry and services as sectors.[58] For these decompositions, sectoral value added data comes from the World Bank's WDI and the UN Statistics Division, using the methodology outlined in Appendix 2 to derive estimates for missing values and projections.[59] Sectoral employment data and projections have their origin in the October 2012 update of the ILO's GET model.

[58]Compared to the 178 countries which enter the regional figures referred to in other chapters of this report, Afghanistan, Cuba, Guadeloupe, Democratic People's Republic of Korea, Libya, Macau (China), Martinique, Myanmar, Netherlands Antilles, Puerto Rico, Réunion, Somalia, Taiwan (China), West Bank and Gaza Strip and Zimbabwe do not enter the analysis in this chapter due to absence of data.

[59]Services value added includes imputed bank service charges, import duties, and any statistical discrepancies noted by national compilers as well as discrepancies arising from rescaling (World Bank, 2012b). Results therefore need to be interpreted with caution (Timmer and de Vries, 2009; Kucera and Roncolato, 2012; Griliches, 1992).

For a subset of 29 countries from the Developed Economies region, data availability allows a more refined growth decomposition that takes into account 21 different sectors.[60] The analysis draws from *EU KLEMS March 2011 update* which contains detailed sectoral data for gross value added and employment. In order to ensure consistency of the analysis, data are adjusted to match total employment from the ILO's GET model.

Step 1. Decomposition of value added per capita growth

In order to grasp the main idea of the decomposition, it is essential to understand that value added per capita y in year t can be written as follows:

$$y_t = w_t\, e_t l_t p_t \qquad (1)$$

where w stands for labour productivity defined as value added divided by employment in terms of the number of workers, e stands for the employment rate defined as the share of employment in labour force, l is the labour force participation rate and p is the share of working-age population in total population.

The decomposition of growth relies on the Shapley methodology (Shorrocks, 1999) of which a variant is embedded into the World Bank's Growth Decomposition tool (World Bank, 2012b). The Shapley methodology decomposes growth into its components. Each component refers to the contribution of the four factors' changes over time to value added per capita growth.

When implementing a decomposition of value added per capita growth, the size of each component can be interpreted as the marginal impact of a particular driver of growth. It shows the growth rate of value added per capita with only the respective factor changing as observed, but all other factors remaining unchanged. Factors can remain unchanged either at the level of the first year of the time period considered or at the level of the final year. Taking a weighted average, the Shapley decomposition approach considers all possibilities of *remaining unchanged*. The methodology yields an *exact* decomposition, so that all components exactly sum to total value added per capita growth. Growth can then be written as:

$$\hat{y_t} = \overline{w_t} + \overline{e_t} + \overline{l_t} + \overline{p_t} \qquad (2)$$

where $\hat{y}$ corresponds to value added per capita growth and $\overline{w}$, $\overline{e}$, $\overline{l}$ and $\overline{p}$ stand for the growth components that can be associated with changes in labour productivity, employment rate, labour force participation and the share of working-age in total population, respectively.

Applying the Shapley methodology to a growth decomposition in which these four factors are considered, the respective growth components of equation (2) for growth from year *t-1* to year *t* can be derived as:

[60] These 29 countries are Australia, Austria, Belgium, Cyprus, Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Ireland, Italy, Japan, Republic of Korea, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Poland, Portugal, Slovakia, Slovenia, Spain, Sweden, United Kingdom and the United States.

$$\overline{w_t} = \frac{(w_t - w_{t-1})}{(y_{t-1})}\left(\frac{e_t l_t p_t}{4} + \frac{e_{t-1} l_{t-1} p_{t-1}}{4} + \frac{e_{t-1} l_t p_t}{12} + \frac{e_t l_{t-1} p_t}{12} + \frac{e_t l_t p_{t-1}}{12} + \frac{e_{t-1} l_{t-1} p_t}{12} + \frac{e_t l_{t-1} p_{t-1}}{12} + \frac{e_{t-1} l_t p_{t-1}}{12}\right) \quad (3)$$

$$\overline{e_t} = \frac{(e_t - e_{t-1})}{(y_{t-1})}\left(\frac{w_t l_t p_t}{4} + \frac{w_{t-1} l_{t-1} p_{t-1}}{4} + \frac{w_{t-1} l_t p_t}{12} + \frac{w_t l_{t-1} p_t}{12} + \frac{w_t l_t p_{t-1}}{12} + \frac{w_{t-1} l_{t-1} p_t}{12} + \frac{w_t l_{t-1} p_{t-1}}{12} + \frac{w_{t-1} l_t p_{t-1}}{12}\right) \quad (4)$$

$$\overline{l_t} = \frac{(l_t - l_{t-1})}{(y_{t-1})}\left(\frac{w_t e_t p_t}{4} + \frac{w_{t-1} e_{t-1} p_{t-1}}{4} + \frac{w_{t-1} e_t p_t}{12} + \frac{w_t e_{t-1} p_t}{12} + \frac{w_t e_t p_{t-1}}{12} + \frac{w_{t-1} e_{t-1} p_t}{12} + \frac{w_t e_{t-1} p_{t-1}}{12} + \frac{w_{t-1} e_t p_{t-1}}{12}\right) \quad (5)$$

$$\overline{p_t} = \frac{(p_t - p_{t-1})}{(y_{t-1})}\left(\frac{w_t e_t l_t}{4} + \frac{w_{t-1} e_{t-1} l_{t-1}}{4} + \frac{w_{t-1} e_t l_t}{12} + \frac{w_t e_{t-1} l_t}{12} + \frac{w_t e_t l_{t-1}}{12} + \frac{w_{t-1} e_{t-1} l_t}{12} + \frac{w_t e_{t-1} l_{t-1}}{12} + \frac{w_{t-1} e_t l_{t-1}}{12}\right) \quad (6)$$

The first term on the right-hand side of the equations is the change of the respective factor, weighted with value added per capita in the first year of the period that is considered. The second term contains a weighted average of all possible combinations of the other components remaining unchanged at either the first or the last year of the period. The result in equations (3) – (6) is the first-step decomposition of growth.

Step 2. Decomposition of labour productivity component

As second step, the labour productivity component of growth is further decomposed into sector-specific *within* components and an *across* component. This decomposition considers that an increase in labour productivity can result from either productivity improvements within a sector or from a reallocation of jobs across sectors, i.e. from low- to high-productivity sectors. As sectors, the decomposition encompasses agriculture, industry and services.

For some developed economies, a more disaggregate approach is possible using 21 sectors. These closely follow the ISIC classification of industries and are agriculture, mining and quarrying, food and beverages, textiles products and footwear, wood products, pulp and paper products, chemicals, non-metallic mineral products, basic metals, machinery, electrical and optical equipment, transport equipment, other manufacturing, electricity and water supply, construction, wholesale and retail trade, hotels and restaurants, transport and communication, financial intermediation, real-estate services, and social and personal services.

The *within* component for a sector s provides a measure of how a change in productivity within this sector, w^s, contributes to value added per capita growth, holding the share of the sector's employment in total employment, j^s, at a constant level. Here the constant level corresponds to the simple average of the share at the beginning and the end of the growth period considered. The *within* component for sector s can be written as follows:

$$\overline{w_t^{WI,s}} = \frac{(w_t^s - w_{t-1}^s)}{(w_t - w_{t-1})}\left(\frac{j_t^s + j_{t-1}^s}{2}\right)\overline{w_t} \quad (7)$$

The *across* component, in contrast, is a measure of the net importance of sectoral employment in- and outflows in terms of productivity gains. It provides a measure of *structural change*, or, more precisely, of productivity gains due to structural change. It can be written as:

$$\overline{w_t^{AC}} = \sum_{s \in S} \frac{(j_t^s - j_{t-1}^s)}{(w_t - w_{t-1})}\left(\frac{w_t^s + w_{t-1}^s}{2}\right)\overline{w_t} \quad (8)$$

If a sector is a lower-than-average productivity sector and loses employment relative to other sectors, the *across* component will contribute positively to growth. For a higher-than-average productivity sector, the result will be the opposite with employment losses contributing negatively to growth.

Summing up all sectoral *within* components and the *across* component results once more in an *exact* decomposition. By construction, all components sum to the total contribution of labour productivity to value added per capita growth which can be formally written as follows:

$$\overline{w_t} = \overline{w_t^{AC}} + \sum_{s \in S} \overline{w_t^{WI,s}} \qquad (9)$$

The decomposition into *within* and *across* components of labour productivity, described in equations (7) – (8) corresponds to what this chapter refers to as second-step decomposition of growth.

Box A1

Example: Decomposition of value added per capita growth (Steps 1 and 2)

To illustrate the calculations that are done for the decomposition, this box introduces a practical example. Consider a fictive economy with the following raw data:

Variable	Year 1	Year 2	Change (Abs.)
Value added	10 000	11 000	+1 000
Total population	1 000	1 020	+20
Working-age population	700	710	+10
Labour force	450	455	+5
Employment	400	420	+20
Value added: Agriculture	500	500	+0
Value added: Industry	5 500	6 200	+700
Value added: Services	4 000	4 300	+300
Employment: Agriculture	40	35	-5
Employment: Industry	200	213	+13
Employment: Services	160	172	+12

Based on these raw data, it is straightforward to derive the main ingredients for equations (3) –

(8) which consist of ratios that are calculated on the basis of the raw data. These look as follows:

Variable	Symbol	Year 1	Year 2	Growth (in per cent)
Value added per capita	y	10.000	10.784	+7.84
Working-age in total population	p	0.700	0.696	-0.56
Labour force participation rate	l	0.643	0.641	-0.31
Employment rate	e	0.889	0.923	+3.85
Labour productivity	w	25.000	26.190	+4.76
Share of agriculture in total employment	j^{AGR}	0.100	0.083	-16.67
Share of industry in total employment	j^{IND}	0.500	0.507	+1.43
Share of services in total employment	j^{SER}	0.400	0.410	+2.38
Labour productivity: Agriculture	w^{AGR}	12.500	14.286	+14.29
Labour productivity: Industry	w^{IND}	27.500	29.108	+5.85
Labour productivity: Services	w^{SER}	25.000	25.000	+0.00

Step 1. Decomposing total value added per capita growth into labour productivity, employment rate, labour force participation and demographic component

Using the Shapley methodology to decompose economic growth into components that can be associated with changes in labour productivity, the employment rate, labour force participation and the share of working-age in total population, respectively, equations (3) – (6) produce the following result for the given example:

Growth component	Symbol	Growth component (in percentage points)
Total in working-age population	$\bar{p}$	-0.58
Labour force participation rate	$\bar{l}$	-0.33

Employment rate	$\bar{e}$	+3.92
Labour productivity	$\bar{w}$	+4.83
Value added per capita growth	$\hat{y}$	+7.84

The growth components roughly correspond to the growth rates of labour productivity, the employment rate, labour force participation and the share of working-age in total population, respectively, which facilitates the interpretation. However, in contrast to the individual growth rates, all growth components add up exactly to total value added per capita growth.

Step 2. Decomposing the labour productivity component into within-sector and across-sector subcomponents

The second step decomposes the labour productivity component of growth into a subcomponent that can be associated with productivity changes *within* a sector, where the example distinguishes between agriculture, industry and services, and one that can be associated with productivity changes that occur due to the reallocation of employment *across* sector, also labelled as *productive structural change*. On the basis of equations (7) and (8), the following values for the *within* and *across* sector components can be calculated:

Growth component	Symbol	Growth component (in percentage points)
Labour productivity: Within agriculture	$\bar{w}^{WI,AGR}$	+0.66
Labour productivity: Within industry	$\bar{w}^{WI,IND}$	+3.29
Labour productivity: Within services	$\bar{w}^{WI,SER}$	+0.00
Labour productivity: Across	$\bar{w}^{AC}$	+0.88
Labour productivity	$\bar{\mathbf{w}}$	+4.83

In the example, the within-services labour productivity component takes on a value of zero, since labour productivity in services does not change from year 1 to year 2. The within-agriculture and within-industry components are positive, given that labour productivity in these sectors increase. The across-sector component has equally a positive value, since the employment share in agriculture is lower in year 2 compared with year 1, while the reverse is true for industry and services. This information combined with the fact that agriculture is a low-productivity sector and industry and services are high-productivity sectors in our example makes the overall *productive structural change* component contribute positively to value added per capita growth.

In summary, transforming the raw data through the decomposition quantifies the drivers

of growth, which are not always immediately apparent from the raw data.

Appendix 2. Forecasts and imputations of value added

The growth decompositions that are detailed in Appendix 1 require data on total gross value added and gross value added at the sector level. For the decomposition that takes into account agriculture, industry and services as sectors, this chapter contains regional figures which, for consistency over time, have to rely on a balanced dataset for the countries that make part of the regions. The chapter also contains projections of value added per capita growth and its sources. This Appendix describes the methodology that is used to:

- estimate missing data points for total and sectoral value added in 1991–2011 in the wave non-response case, i.e. when countries report data for some, but not all years;
- project total and sectoral value added in 2012–17.

The decomposition of growth by region requires balanced value added data for 1991–2011 and forecasts for 2012–17.[61] The World Bank's *World Development Indicator*s database (WDI) contains sectoral value added data in constant US$2,000 for 161 countries from 1991 to 2011.[62] For 73 of these countries, total and sector value added data are balanced from 1991 to 2011. For the other 88 countries, 35.5 per cent of data points for total value added from 1991 to 2011 are missing with the information on all three sectors' value added being either incomplete or missing. To the 161 countries, data for six additional countries are added from the UN Statistics Division.

The sample is restricted to these 167 countries for which at least some data points are available. For four out of these 167 countries, the generation of a balanced dataset with imputations and forecasts for 1991 to 2011 of total and sector value added is infeasible, since some input data for the projection model are not available.

For 163 countries, the projection model outlined below allows a balanced value added dataset to be created and it is those countries that enter the regional aggregates for which value added per capita growth decompositions are implemented. It is equally those 163 countries that enter the empirical analysis in which growth components are related to labour market indicators. These 163 countries account for 97.4 per cent of employment worldwide.[63]

Total value added

In the first step, the projection model completes the data series for all 163 countries with respect to total value added, imputing 1991–2011 values whenever there are missing data points and projecting 2012–17 values for all countries.

Since the available series do not contain any gaps, but instead are incomplete either at the beginning of the data period or at the end or both, value added is simply extrapolated backwards and

[61] Data for 2012 are not yet available at the time this report is released.

[62] Note that these numbers refer to data availability as of beginning of September 2012.

[63] This data coverage ratio is calculated for 2011.

forwards on the basis of real GDP growth rates as estimated and projected by the IMF in its *World Economic Outlook*, October 2012. This procedure produces a balanced panel for 1991-2011. In the next step, the IMF's projections of real GDP growth rates for 2012–17 are applied to all 163 countries' gross value added. This procedure complements the balanced panel of total value added, arriving at a dataset for 163 countries for 1991–2017.

As a first quality check, it is insightful to verify how value added and GDP are related to each other when both are observed, given that GDP growth rates are used to extrapolate value added. For this purpose, the check compares 1991–2011 data on GDP from the IMF with our 1991–2011 sample of value added data for 163 countries from the World Bank and the UN Statistics Division. The correlations between levels and growth rates are above 0.99 and 0.86, respectively. Correlations in a comparable range can also be observed when looking at each region separately. These results provide strong empirical support for the validity of using GDP growth rates to impute value added.

A second quality check investigates whether growth rates of GDP are systematically higher or lower than growth rates of value added. The pattern is relatively balanced with 1,337 observations, where value added grows faster than GDP and 1,484 observations, where the reverse is true. The pattern is similarly balanced when considering each region separately. As a consequence, there is no reason to worry about a systematic over- or underestimation of imputed value added.

Value added by sector

The second step of the projection model imputes sector value added data for those countries that do not report balanced data for agriculture, industry and services value added, and derives mid-term projections for these variables.

For this purpose, an empirical model is set up to predict the shares of each sector in total value added. Since the dependent variables are shares and have the specific property of lying between zero and one and adding up to one, we apply a log-ratio transformation to ensure that predictions fulfil these properties. The logarithm of the share of agriculture over the share of services in value added, and the logarithm of the share of industry over the share of services in value added in differenced form are then the dependent variables of two equations. It is worth noting that in this framework, it does not matter for the predictions which sector's value added share is chosen to be the denominator of the dependent variables, given that all choices produce the same predictions.

The equations are estimated for each region separately using Zellner's seemingly unrelated regression (SUR) estimation methodology[64] and look as follows:

$$\Delta \log\left({}^{A_{it}}/_{S_{it}}\right) = \alpha_0 + \alpha_1 \Delta \log GDPPC_{it} + \alpha_2 \Delta \log GDPPC_{it-1} + \alpha_3 \Delta \log URB_{it} + \alpha_4 \Delta \log URB_{it-1} + \mu_{it}^{A}$$

$$\Delta \log\left({}^{I_{it}}/_{S_{it}}\right) = \beta_0 + \beta_1 \Delta \log GDPPC_{it} + \beta_2 \Delta \log GDPPC_{it-1} + \beta_3 \Delta \log URB_{it} + \beta_4 \Delta \log URB_{it-1} + \mu_{it}^{I}$$

[64]SUR is in our case equivalent to OLS, since we include the same set of explanatory variables into both equations.

A, I and S are the shares of agriculture, industry and services, respectively, in total value added. In order to account for the well-established relation between the level of development and the sectoral structure of an economy (Chenery and Taylor, 1968), $GDPPC$ is included and stands for GDP per capita in constant 2005 international US dollars, taken from the World Bank's WDI. Urbanization rate URB comes from the UN Population Division. Moving out of agriculture is expected to come along with increased urbanization.

All variables are introduced in log-differences and enter the equation both contemporaneously and with a lag.[65] Looking at the regression results by region, the four independent variables are jointly significant at the 5 per cent level in 16 of the 18 equations that are estimated for nine regions. In 13 of the equations they are significant at the 1 per cent level.

Based on the estimated coefficients, predictions of the dependent variables can be calculated, which, after a re-transformation, can be applied in differenced form in a backward and forward manner to the available data on sectoral shares in value added. This includes again the projection period 2012–17. For this purpose, *GDPPC* is extrapolated on the basis of GDP growth rates from *World Economic Outlook* (IMF, 2012b) and population data from the UN population division. Equally, urbanization forecasts are taken from the UN population division. The application of this procedure results in a balanced dataset of sector value added for 163 countries for 1991–2017.

To check for the quality of predictions, cross-validation techniques are applied, randomly excluding 10 per cent of the observed sample, before estimating equations (1) and (2) and predicting sectoral value added shares on the basis of this reduced sample. This random drop of observations is repeated 300 times in a jack-knife type of procedure. Each time, the implemented algorithm calculates separately for agriculture, industry and services how well predicted values fit the actual values of the excluded observations in terms of the percentage deviation. Table 7 shows the cross-validation results.

Table 7. Cross-validation results on the precision of sectoral value added share predictions

Summary statistics over 300 random repetitions	Percentage of observations with a percentage deviation of the predicted from the actual value of less than 1%, 5% or 10%								
	Agriculture			Industry			Services		
	<10%	<5%	<1%	<10%	<5%	<1%	<10%	<5%	<1%
Mean	84.5	61.5	15.9	96.3	88.1	44.5	92.8	79.8	28.3
Maximum	89.8	70.0	21.8	99.0	93.1	52.0	97.4	85.8	35.1
Minimum	76.9	54.6	10.3	92.7	82.8	37.3	87.8	73.6	21.1

[65] The inclusion of further lags does not add significantly to the explanatory power of the regressions.

To understand the table, consider for example the first upper-left cell. This cell implies that on average, 84.5 per cent of the predictions of agricultural value added shares deviated less than 10 per cent from the actual data point for the observations that had been excluded from the sample. In one of the 300 repetitions, it happened that 89.8 per cent of the predictions were within the 10 per cent-range around the actual data point. The minimum observed was 76.9 per cent.

If the actual data point for the agricultural share was 20 per cent, a deviation of less than 10 per cent implies a prediction for the share in the range between 18 and 22 per cent. A deviation of less than 5 per cent implies in the same example a prediction between 19 and 21 per cent. A deviation of less than 1 per cent corresponds to a prediction between 19.8 per cent and 22.2 per cent, the prediction hitting almost exactly the target.

From cross-validation, it becomes apparent that the predictions of services value added are most accurate, while those for agriculture value added tend to be the least accurate. On the whole, the cross-validation procedure gives very satisfying results with large prediction errors occurring only with a very low probability, providing confidence in the validity of the chosen approach.

Appendix 3. Patterns of growth and labour market outcomes

In order to analyse whether a certain pattern of growth is supportive for good labour market outcomes, the analysis in this chapter relies on country-specific growth decompositions as a tool through which growth patterns can be identified.

Inference is made on the basis of regression techniques, using changes in selected labour market indicators as dependent variable. As independent variables, both the respective component of value added per capita growth from the growth decomposition and the total value added per capita growth rate enter the regression. Specifying the regression equation in this way ensures that it is the intensity of growth that is captured. In other words, it makes a difference if we observe a certain value for a growth component in an economy in recession with a negative growth rate or in an economy that grows at double-digit speed. The inclusion of value added per capita growth accounts for this difference.

Regressions account for differences in short- and long-run effects. The short-run analysis aims at capturing the immediate relationship between a particular pattern of growth and a particular labour market outcome, relying on data from annual growth decompositions, annual changes in labour market indicators and annual value added per capita growth at the country-level for 1991-2011. The following equation is estimated with ordinary least-squares (OLS) country-specific fixed-effects panel estimation techniques:

$$\Delta\, LMI_{it} = \alpha_0 + \alpha_1 COMP_{it} + \alpha_2 \hat{y}_{it} + \varepsilon_i + \varepsilon_{it}$$

In contrast, the long-run analysis, which is designed to capture the relationship between a particular pattern of growth and a particular labour market outcome within a longer time period, makes use of growth decompositions, changes in labour market indicators and average annual per capita growth over this longer period. The following cross-section equation is estimated in this case with simple OLS estimation techniques:

$$\Delta\, LMI_{i} = \alpha_0 + \alpha_1 COMP_{i} + \alpha_2 \hat{y}_{t} + \varepsilon_{it}$$

In the above two equations, LMI stands for one of the labour market indicators and $COMP$ corresponds to the respective component of growth. $\hat{y}$ represents value added per capita growth, ε_i the country-specific fixed effect and ε_{it} the error term.

Results are presented in Figure 53, which show the point estimate of α_1 together with the 90 per cent confidence interval. The variable $COMP$ is taken from the growth decompositions that are described in Appendix 1 of this chapter.

The results for *Developing Economies* and *Developed Economies* are generated by setting $COMP$ in the above two equations equal to $\bar{l}$, $\bar{e}$, $\overline{w}^{AC}$, $\overline{w}^{WI,AGR}$, $\overline{w}^{WI,IND}$ and $\overline{w}^{WI,SER}$, measuring how much value added per capita growth is driven by changes in labour force participation and employment, structural change and labour productivity changes in agriculture, industry and services, respectively. All components $COMP$ in this case are taken from the growth decompositions that distinguish between these three sectors. The period that is considered for the long-run analysis is 1999–2011.

Results for *Developed Economies (Selection),* shown in Figure 56 and Figure 57 use for $COMP$ the components from those growth decompositions that consider 21 sectors. Following the above, the analysis uses $\bar{l}$, $\bar{e}$ and $\bar{w}^{AC}$ of this decomposition to measure how intensive growth is in labour force participation, employment and structural change, respectively. To measure how much growth is driven by within-sector labour productivity improvements, the *within* components of the 21 more disaggregate sectors are aggregated to the three broad sectors, before they enter the regression. The period for the long-run analysis is, due to data limitations, set to 1999–2007.

5. Recovering from the second jobs dip: Challenges and policies

In 2012, the world of work began experiencing a double dip in jobs. With growth weakening in major economies and regions and the global slowdown affecting ever more countries, employment growth has sharply decelerated and unemployment has begun to rise. While growth is projected to modestly accelerate in 2013, mounting uncertainty regarding the outlook and the capacity of policy-makers to find appropriate instruments to deal with the crisis is holding back investment and hiring.

The persistent problems in employment generation have mounted severe challenges. Long-term unemployment is on the rise; mismatches in skills and occupations make it increasingly difficult for those without a job to find decent work opportunities. This is threatening long-term progress in poverty reduction and increased living standards that the world economy has managed to achieve over the past decade.

Policy-makers need to take the necessary actions to prevent a further deterioration of the economic and social outlook. The global economy is far from a regular, cyclical downturn that would correct itself automatically. Rather, without decisive corrective action, it might be pushed into a period of stagnation and social turmoil for years to come. As this report has shown, past experiences from historical financial crises point to the risk of a prolonged period of low growth and high joblessness if no further action is taken. To avoid a further deterioration, policy-makers should concentrate on four interrelated issues: (i) tackling policy uncertainty, (ii) coordinating action to support aggregate demand, (iii) addressing rising labour market mismatch problems and (iv) focusing action on youth joblessness.

Tackle uncertainty to increase investment and job creation

The crisis in the Euro area, the fiscal cliff and now the debt ceiling debate in the United States, growing policy incoherence (discussed in chapter 1) and failure to implement timely reform measures, largely in the advanced economies, have led to heightened uncertainty and currently prevent a broader and more sustainable recovery in developed economies, which has had negative spillover effects to some developing economies. In advanced economies, firms are holding back their investment and hiring plans until they see the new risks and opportunities more clearly. Similarly, deleveraging of banks and households has gone unabated through the recovery period, partly as a result of the uncertain outlook. Private actors, largely in the EU area, prefer to lower their outstanding commitments in order to be able to better face new, upcoming risks. As long as this high uncertainty continues, the recovery is unlikely to take off and recessionary conditions will continue to spread globally. Stabilizing expectations and providing a more transparent policy outlook is therefore key to jumpstart the global economy.

Depressed labour markets and low wage growth are weighing on household disposable income, thereby lowering aggregate demand and prolonging the deleveraging process, in particular in countries that had experienced a strong housing bubble in the build-up of the crisis. Weak private consumption and low consumer confidence further add to the unwillingness of firms to expand capacity. Recent discussions in Spain to install a debt moratorium for households with large, unsustainable mortgages are a step in the right direction to foster stronger consumption growth and ultimately job creation. In addition, targeted credit provision to sectors with impaired access to

funds and which are contributing strongly to employment growth, such as small and medium-sized enterprises in the service industry, can strengthen employment creation and overcome the liquidity constraints that firms continue to face (Calvo, 2011).

A second source of uncertainty stems from the lack of a credible exit strategy for distressed countries. In several (mostly European) countries, sovereign debt levels have reached barely sustainable levels, with serious adverse consequences for the real economy in these countries. So far, policy-makers have not seemed ready to provide a consistent and sound strategy to surmount real and financial problems in these countries. A number of solutions have been implemented to face immediate liquidity problems, such as the outright monetary transaction program (OMT) of the ECB, and the European Stability Mechanism (ESM), which allows direct support to individual banks and helps to break the vicious circle between bank bailouts and national debt. What is further needed is mutualisation of at least part of the debt these countries have accumulated (ILO, 2012d). More ad hoc solutions to problems as they emerge are unlikely to reduce uncertainty.

Finally, several policy measures need to be implemented quickly to restore confidence in financial market stability. First, reform proposals for the financial sector and targeted measures to support the banking industry need to be implemented swiftly. In this regard, the fact that some of the reform instruments that were signed into law in 2010 in the United States as part of the Dodd–Frank Act are still not fully operational, continues to contribute to the uncertain outlook. Similarly, in the Euro area new measures to safeguard the banking sector have in principle been voted and enshrined in the European Stability Mechanism (ESM) but will not actually start to function before the summer of 2013. These measures need to come into effect to further improve financial intermediation. Also, many policy efforts have been aimed at improving conditions for sovereigns to (re-) finance their debt burden, with far less policy action to improve credit conditions for businesses. A better functioning financial sector would also be one that directs more credit and investment towards the real economy, spurring investment and employment. As indicated in the last issue of the *Global Employment Trends* report, a fully fledged, operational reform framework that stabilizes financial markets is likely to contribute substantially to stronger employment growth. Waiting longer and delaying implementation further adds to uncertainty, thereby restricting credit especially to SMEs and keeping unemployment high and even rising.

Coordinate stimulus for global demand and employment creation

What is needed is an internationally coordinated effort to support global demand more broadly. Currently, the attempt to solve high and unsustainable sovereign debt through austerity measures has created a dangerous downward spiral whereby fiscal retrenchment in one country spills over to neighbours, creating new imbalances that require even more fiscal adjustments. Such policies are unlikely to lead to a sustainable recovery even if the downward spiral eventually bottoms out. Similarly, the strategy currently followed in some European countries to focus on export competitiveness in order to restore engines of growth cannot succeed for all member countries at the same time; as price competitiveness improves in one country, competitors within the region will have to follow suit, further adding to the danger of a downward, deflationary spiral (see ILO, 2010).

Rather, policy actions need to be coordinated globally in order to rebalance growth and to foster multi-polar growth engines. Currently, global growth is impaired by crisis conditions in a few countries that have spilled over, affecting global trade and financial conditions throughout the world. Global growth should rest on strong domestic conditions in several large economies to help stabilize

economic activity around the world. This requires that many more countries than currently should strengthen their domestic economy rather than relying strongly on export-driven growth. While those countries that have been harmed by large and persistent current-account deficits that have led to a dangerous foreign-debt overhang may need to focus on restoring external competitiveness through internal or external devaluation. Other countries, particular among emerging economies, should start focusing more on strengthening domestic demand. This will allow more diversification of the global drivers of growth.

The growing purchasing power of the emerging middle-class in many developing economies could help bring about such a development, supporting stronger investment and consumption in these economies. In time, this could help provide a substantial boost to global aggregate demand, contributing to more balanced and sustainable global economic growth.

Coordinated stimulus requires monetary policy to remain accommodative and to continue its reflationary stance. In particular, major central banks need to keep up with providing liquidity through unconventional policy interventions. In this respect, the deceleration in global inflation is likely to make the task of global rebalancing more difficult for policy-makers. On the one hand, in the presence of nominal wage rigidities it will prevent crisis countries in the Euro area from benefiting from faster improvements in competitiveness, as they cannot devalue their nominal exchange rate. On the other hand, low inflation and even more the risk of a deflation keeps the debt burden up or even rising, thereby further pushing sovereigns, banks and households into deleveraging. Monetary policy-makers, therefore, need to ensure that inflation expectations remain stable or slightly upward-rising. Temporary surges of inflation, in this respect, can help prevent deflationary sentiments from taking hold and might provide growth margins for crisis countries in the Euro area (Schmitt-Grohé and Uribe, 2012).

Address labour market mismatch and promote structural change

The bulk of unemployment created by the crisis has been cyclical. However, the deep and prolonged recession in labour markets has intensified structural problems that predated the crisis. In particular, skills mismatches and occupational shifts have worsened, which is hampering the jobs recovery and reducing the effectiveness of policy interventions to stimulate growth. At the same time, global economic woes have lowered the pace of structural change in many developing regions, an essential ingredient for them to improve employment quality and offer more decent work opportunities to their working-age population. Both call for policies to facilitate workers' mobility across sectors in order to support continuous job creation and stimulate successful productive transformation. In addition, developing countries need to accelerate productivity growth within sectors, especially in agriculture. This in itself can enable structural change out of agriculture and into higher value-added sectors.

Skill and occupational mismatches can prove to be a transitory phenomenon if properly addressed. In particular during times of rapid structural change, new jobs appear in different sectors and with different competence requirements than those that disappear. Targeted educational and vocational training policies can help to address these problems and prevent job-seekers from losing employability in the more dynamic sectors of the economy. Such policies should be integrated into a wider package of active labour market policies in order to provide the right mix of training and incentives that help workers quickly move to new opportunities.

In addition, well-designed unemployment benefit systems can support a quick and successful restructuring of the economy. As documented by chapter 4, productive structural change, i.e. the reallocation of jobs from low- to high-productive sectors, comes along with less vulnerable employment, less working poverty and a larger working middle-class. However, moving from agriculture to jobs in industry or services often involves significant costs. Workers often have to move from rural to urban areas and face an initial period of unemployment during their job search. Moreover, they face increased risks of unemployment related to probationary periods and potential skills mismatch. Unemployment benefits can alleviate these costs and risks, thereby encouraging and facilitating structural change. In particular, they can help improve the quality of labour market matches, reducing skill and occupational mismatch, and bring benefits both to employment quality and productivity (Acemoglu, 2001; Centeno, 2004; Caliendo et al., 2009). By facilitating labour market turnover, well-designed unemployment benefits also help lift job creation rates and – particularly relevant for developing countries – a shift from agricultural to service employment of around 3 percentage points over the medium run (Boeri and Macis, 2010). Both results suggest that income support for job-seekers as part of the Social Protection floor or – where available and affordable – a fully fledged unemployment benefit system can play a strong role both in addressing skills mismatch and in promoting structural change. Where employment in agriculture is particularly significant, governments also need to pursue measures to accelerate productivity growth in that sector and diversify the work and investment opportunities in rural areas.

Increase efforts to promote youth employment – with a special focus on long-term unemployment for youth

Policy-makers must focus on the problem of youth unemployment. The high youth unemployment rates that continue rising globally have spurred concerns over a "lost generation" with long-term adverse consequences both for their labour market chances and for the economy more broadly (see ILO, 2012a, 2012c). Long-term unemployment in early career has long-lasting consequences in terms of skill loss, lower productivity and additional strain on public finances, which is difficult to compensate for. To draw further attention to this particularly vulnerable group, the ILO devoted its 101st International Labour Conference to discussing policies and measures that are required to tackle the high joblessness among young people. This culminated in "The Youth Employment Crisis: A call for action", a set of tripartite conclusions agreed by governments, workers and employers that contain a list of tried and tested interventions to promote youth employment under five policy areas.[66] Besides pro-employment macroeconomic policies and active labour market policies, three specific interventions relevant for youth employment should also receive wider consideration in dealing with the youth employment crisis. In particular, governments should:

- *Enhance young people's employability*. Key areas include: improving the links between education, training and the world of work through social dialogue on skills mismatch; enhancing technical vocational education and training, including apprenticeships; introducing mechanisms for early identification of potential early school leavers to encourage them to stay in school or access other employment, education or training opportunities; including

[66]The conclusions are available for download at: http://www.ilo.org/wcmsp5/groups/public/---ed_norm/---relconf/documents/meetingdocument/wcms_185950.pdf

job-search techniques in school curricula; improving young people's access to information on career opportunities; and youth employment guarantee schemes.

- *Encourage youth entrepreneurship*. Policy areas related to this include ensuring that there is an enabling environment for young people to start and run businesses and improving access to finance (by subsidizing credit, guaranteeing loans and supporting microcredit initiatives) for the operation of sustainable youth enterprises, in particular micro-, small and medium-sized enterprises, cooperatives and social enterprises.
- *Promote labour standards and rights of young people*. Key areas include adopting a rights-based approach to youth employment, by ensuring that young people receive equal treatment and are afforded rights at work; committing to develop youth employment policies that take international labour standards into account; promoting and protecting young workers' rights to organize and to bargain collectively; and ensuring adequate social protection for all young workers to facilitate transitions into stable employment and decent work.

Annexes

Annex 1. Global and regional tables

Table A1. Annual real GDP growth rates, world and regions (%)

Region	2006	2007	2008	2009	2010	2011	2012*	2013*	2014*	2015*	2016*	2017*
World	5.3	5.4	2.8	–0.6	5.1	3.8	3.3	3.6	4.1	4.4	4.5	4.6
Developed Economies and European Union	3.0	2.7	0.1	–3.7	2.5	1.5	1.2	1.4	2.1	2.5	2.5	2.5
Central and South-Eastern Europe (non-EU) and CIS	8.2	7.8	4.3	–6.0	5.5	5.5	3.5	3.8	4.0	4.1	4.1	4.1
East Asia	10.9	12.1	7.9	7.1	9.9	8.2	6.8	7.4	7.7	7.8	7.8	7.8
South-East Asia and the Pacific	6.1	6.7	4.5	1.6	7.6	4.6	5.2	5.5	5.5	5.7	5.8	5.9
South Asia	8.9	9.4	6.5	5.5	9.1	6.5	4.9	5.7	6.1	6.5	6.6	6.7
Latin America and the Caribbean	5.7	5.8	4.2	–1.5	6.2	4.5	3.2	3.9	4.1	4.0	4.0	4.0
Middle East	6.3	5.6	4.4	2.1	5.5	5.0	3.2	3.3	3.5	3.8	3.9	4.0
North Africa	6.1	5.9	4.9	3.6	4.1	–0.5	9.8	4.4	4.5	5.4	5.6	5.6
Sub-Saharan Africa	6.4	7.1	5.6	2.8	5.3	5.2	5.3	5.3	5.6	5.8	5.6	5.8

* 2012 are preliminary estimates; 2013–17 are projections.
Source: IMF, *World Economic Outlook*, October 2012.

Table A2. Unemployment rate by sex, world and regions (%)

Both sexes	2000	2005	2006	2007	2008	2009	2010	2011	2012*		
									CI Lower Bound	Preliminary Estimate	CI Upper Bound
World	6.3	6.1	5.7	5.4	5.6	6.2	6.0	5.9	5.8	5.9	6.1
Developed Economies and European Union	6.7	6.9	6.3	5.8	6.1	8.4	8.8	8.4	8.4	8.6	8.6
Central and South-Eastern Europe (non-EU) and CIS	10.7	9.1	9.0	8.3	8.3	10.1	9.4	8.7	8.1	8.2	8.4
East Asia	4.5	4.2	4.0	3.8	4.3	4.4	4.2	4.3	4.3	4.4	4.6
South-East Asia and the Pacific	5.0	6.4	6.1	5.5	5.3	5.2	4.7	4.4	4.3	4.4	4.5
South Asia	4.5	4.7	4.1	3.9	3.9	4.1	3.9	3.8	3.7	3.8	3.9
Latin America and the Caribbean	8.6	8.1	7.5	7.0	6.6	7.8	6.8	6.5	6.4	6.6	6.7
Middle East	11.5	11.2	10.9	10.3	10.5	10.7	11.2	11.1	10.5	11.1	11.8
North Africa	13.2	11.0	10.0	9.6	9.1	9.1	8.9	10.0	9.9	10.3	10.6
Sub-Saharan Africa	8.5	7.5	7.5	7.4	7.5	7.6	7.6	7.6	7.4	7.5	7.6

Males	2000	2005	2006	2007	2008	2009	2010	2011	2012*		
									CI Lower Bound	Preliminary Estimate	CI Upper Bound
World	6.1	5.8	5.5	5.2	5.4	6.1	5.8	5.7	5.6	5.7	5.9
Developed Economies and European Union	6.3	6.6	6.1	5.6	6.0	8.8	9.1	8.7	8.7	8.8	8.9
Central and South-Eastern Europe (non-EU) and CIS	10.5	9.3	9.2	8.6	8.6	10.5	9.7	8.8	8.2	8.4	8.6
East Asia	5.1	4.7	4.5	4.3	4.9	5.0	4.8	4.9	4.9	5.1	5.2
South-East Asia and the Pacific	5.1	6.0	5.7	5.3	5.1	5.2	4.4	4.1	4.1	4.1	4.2
South Asia	4.4	4.3	4.0	3.6	3.7	4.0	3.5	3.4	3.5	3.5	3.6
Latin America and the Caribbean	7.3	6.6	6.1	5.6	5.3	6.5	5.8	5.6	5.4	5.6	5.7
Middle East	9.8	9.4	9.0	8.5	8.7	9.0	9.3	9.2	8.7	9.3	9.8
North Africa	11.6	9.1	8.3	8.2	7.5	7.2	7.0	7.7	7.7	7.9	8.2
Sub-Saharan Africa	7.9	7.0	6.9	7.0	7.1	7.2	7.2	7.1	7.0	7.1	7.2

Females	2000	2005	2006	2007	2008	2009	2010	2011	2012*		
									CI Lower Bound	Preliminary Estimate	CI Upper Bound
World	6.6	6.5	6.1	5.7	5.8	6.4	6.3	6.2	6.1	6.2	6.4
Developed Economies and European Union	7.3	7.3	6.7	6.1	6.2	7.9	8.4	8.2	8.2	8.3	8.4
Central and South-Eastern Europe (non-EU) and CIS	10.9	8.9	8.8	8.0	8.0	9.6	9.1	8.5	7.9	8.1	8.2
East Asia	3.8	3.5	3.3	3.1	3.6	3.7	3.5	3.6	3.6	3.7	3.8
South-East Asia and the Pacific	4.9	6.9	6.6	5.7	5.4	5.1	5.1	4.7	4.7	4.7	4.8
South Asia	4.7	5.6	4.4	4.6	4.3	4.5	4.9	4.6	4.5	4.6	4.7
Latin America and the Caribbean	10.8	10.4	9.7	9.1	8.5	9.6	8.3	7.9	7.7	7.9	8.1
Middle East	19.6	19.0	18.9	18.2	18.6	18.4	19.7	19.5	18.3	19.3	20.4
North Africa	18.6	17.2	15.6	13.8	14.1	15.1	14.7	17.1	16.7	17.2	17.7
Sub-Saharan Africa	9.2	8.1	8.1	8.0	8.1	8.1	8.1	8.1	8.0	8.1	8.2

*2012 are preliminary estimates; CI = confidence interval.
Source: ILO, *Trends Econometric Models*, October 2012; for further information see Annex 4 and "Estimates and projections of labour market indicators", in particular *Trends Econometric Models: A Review of Methodology*, available at: http://www.ilo.org/empelm/what/projects/lang--en/WCMS_114246/index.htm. Differences from earlier estimates are due to revisions of World Bank and IMF estimates of GDP and its components that are used in the models, as well as updates of the labour market information used. The latter is based on ILO, *Key Indicators of the Labour Market*, 7th Edition, 2012 update.

Table A3. Unemployment rate for youth and adults, world and regions (%)

Youth	2000	2005	2006	2007	2008	2009	2010	2011	2012*		
									CI Lower Bound	Preliminary Estimate	CI Upper Bound
World	12.7	12.8	12.2	11.6	11.8	12.8	12.6	12.4	12.3	12.6	12.8
Developed Economies and European Union	13.5	14.3	13.3	12.5	13.3	17.4	18.1	17.6	17.7	17.9	18.1
Central and South-Eastern Europe (non-EU) and CIS	19.7	18.2	18.3	17.4	17.0	20.4	19.2	17.7	16.8	17.1	17.5
East Asia	9.3	8.6	8.3	7.9	9.1	9.2	8.9	9.2	9.3	9.5	9.8
South-East Asia and the Pacific	13.2	17.5	17.1	14.9	14.1	14.0	13.4	12.7	12.8	13.0	13.1
South Asia	10.3	10.0	9.3	9.3	9.0	9.7	10.2	9.7	9.6	9.8	10.0
Latin America and the Caribbean	15.7	16.4	15.3	14.2	13.6	15.7	14.1	13.4	13.1	13.5	13.9
Middle East	25.5	25.5	25.3	24.6	25.4	25.5	27.5	27.6	26.6	28.1	29.6
North Africa	26.1	24.4	22.2	20.8	20.3	20.4	20.1	23.3	23.1	23.8	24.5
Sub-Saharan Africa	13.2	12.0	11.8	11.8	11.9	12.0	11.9	11.9	11.7	11.9	12.0
Adults	**2000**	**2005**	**2006**	**2007**	**2008**	**2009**	**2010**	**2011**	**2012***		
									CI Lower Bound	**Preliminary Estimate**	**CI Upper Bound**
World	4.6	4.4	4.2	3.9	4.1	4.7	4.5	4.5	4.4	4.5	4.6
Developed Economies and European Union	5.6	5.8	5.3	4.8	5.0	7.1	7.5	7.2	7.2	7.3	7.4
Central and South-Eastern Europe (non-EU) and CIS	8.9	7.4	7.3	6.7	6.8	8.3	7.8	7.2	6.7	6.9	7.0
East Asia	3.5	3.2	3.0	2.9	3.3	3.4	3.3	3.4	3.4	3.5	3.6
South-East Asia and the Pacific	2.5	3.3	3.1	3.1	3.1	3.0	2.7	2.5	2.4	2.5	2.5
South Asia	2.6	3.0	2.6	2.3	2.4	2.6	2.3	2.2	2.3	2.3	2.4
Latin America and the Caribbean	6.4	5.8	5.4	5.1	4.8	5.7	5.0	4.9	4.8	4.9	5.0
Middle East	6.8	6.8	6.6	6.4	6.6	7.0	7.4	7.4	7.0	7.5	7.9
North Africa	9.0	6.8	6.5	6.5	6.1	6.2	6.2	6.8	6.9	7.1	7.3
Sub-Saharan Africa	6.7	5.9	5.8	5.8	5.9	6.0	6.0	6.0	5.9	6.0	6.0

*2012 are preliminary estimates; CI = confidence interval.
Source: ILO, *Trends econometric models*, October 2012; see also source of Table A2.

Table A4. Unemployment in the world (millions)

	2000	2005	2006	2007	2008	2009	2010	2011	2012*		
									CI Lower Bound	Preliminary Estimate	CI Upper Bound
Total	174.9	185.7	177.1	169.0	175.7	198.4	194.6	193.1	193.0	197.3	201.4
Male	102.0	105.8	101.8	97.2	102.0	117.0	113.0	112.0	112.0	114.6	117.0
Female	72.9	79.9	75.2	71.8	73.7	81.4	81.7	81.1	81.0	82.7	84.4
Youth	72.8	77.9	74.1	70.4	71.0	76.2	74.7	73.2	72.2	73.8	75.4
Adult	42.9	45.0	43.1	41.2	41.7	45.1	43.9	42.9	42.4	43.4	44.3

*2012 are preliminary estimates; CI = confidence interval.
Note: Totals may differ due to rounding.
Source: ILO, *Trends Econometric Models*, October 2012; see also source of Table A2.

Table A5. Employment-to-population ratio, world and regions (%)

Both sexes	2000	2005	2006	2007	2008	2009	2010	2011	2012*		
									CI Lower Bound	Preliminary Estimate	CI Upper Bound
World	61.2	61.2	61.2	61.3	61.0	60.3	60.3	60.3	60.4	60.3	60.2
Developed Economies and European Union	56.6	56.2	56.7	57.1	57.1	55.5	55.0	55.0	54.9	54.8	54.8
Central and South-Eastern Europe (non-EU) and CIS	52.3	52.4	52.7	53.5	53.9	53.0	53.6	54.4	54.9	54.8	54.7
East Asia	72.6	71.4	71.3	71.3	70.6	70.3	70.3	70.1	69.9	69.8	69.7
South-East Asia and the Pacific	66.9	65.9	65.9	66.3	66.4	66.4	66.8	67.0	67.1	67.0	67.0
South Asia	57.2	58.2	57.8	57.1	56.4	55.5	54.9	55.0	55.0	55.0	54.9
Latin America and the Caribbean	58.5	60.1	60.6	60.9	61.4	60.7	61.6	61.8	62.0	61.9	61.8
Middle East	40.7	42.5	42.4	42.5	41.8	42.0	42.1	42.5	43.1	42.8	42.4
North Africa	42.0	43.4	43.4	44.0	44.3	44.3	44.5	44.1	44.3	44.1	43.9
Sub-Saharan Africa	63.8	64.7	64.8	64.9	64.9	64.9	64.8	65.0	65.2	65.1	65.0

Males	2000	2005	2006	2007	2008	2009	2010	2011	2012*		
									CI Lower Bound	Preliminary Estimate	CI Upper Bound
World	73.8	73.4	73.5	73.6	73.3	72.6	72.6	72.7	72.8	72.7	72.6
Developed Economies and European Union	65.8	64.4	64.8	65.2	64.9	62.4	61.8	61.8	61.7	61.6	61.5
Central and South-Eastern Europe (non-EU) and CIS	61.9	61.8	62.1	63.0	63.6	62.4	63.2	64.2	64.9	64.8	64.6
East Asia	77.9	76.9	76.8	76.8	76.1	75.8	75.8	75.6	75.5	75.4	75.3
South-East Asia and the Pacific	78.6	77.8	77.7	77.7	77.7	77.6	78.2	78.5	78.5	78.4	78.4
South Asia	79.6	79.9	79.8	79.6	79.1	78.5	78.5	78.5	78.5	78.4	78.4
Latin America and the Caribbean	74.8	74.9	75.3	75.4	75.7	74.5	75.2	75.1	75.2	75.1	75.0
Middle East	66.7	67.1	66.9	67.0	66.3	66.5	66.7	67.1	67.8	67.4	67.0
North Africa	66.2	68.3	68.0	68.0	68.6	68.8	68.9	68.5	68.6	68.4	68.2
Sub-Saharan Africa	70.9	70.6	70.7	70.7	70.8	70.7	70.6	70.8	71.0	70.9	70.9

Females	2000	2005	2006	2007	2008	2009	2010	2011	2012*		
									CI Lower Bound	Preliminary Estimate	CI Upper Bound
World	48.6	49.0	49.0	49.0	48.7	48.1	47.9	47.9	48.0	47.9	47.8
Developed Economies and European Union	48.0	48.4	49.0	49.5	49.7	48.9	48.6	48.5	48.5	48.4	48.4
Central and South-Eastern Europe (non-EU) and CIS	43.8	44.2	44.5	45.2	45.3	44.8	45.2	45.8	46.2	46.1	46.0
East Asia	67.0	65.7	65.6	65.6	64.8	64.5	64.6	64.3	64.1	64.0	63.9
South-East Asia and the Pacific	55.6	54.4	54.4	55.1	55.5	55.5	55.6	55.9	56.0	56.0	55.9
South Asia	33.3	35.3	34.7	33.5	32.5	31.3	30.2	30.3	30.4	30.4	30.3
Latin America and the Caribbean	42.9	46.0	46.5	47.1	47.7	47.6	48.8	49.1	49.5	49.4	49.3
Middle East	13.1	15.4	15.2	15.1	14.4	14.5	14.5	14.8	15.3	15.1	14.9
North Africa	18.0	18.7	19.2	20.3	20.4	20.2	20.4	20.0	20.3	20.2	20.1
Sub-Saharan Africa	56.9	58.9	59.0	59.1	59.2	59.2	59.2	59.3	59.4	59.4	59.3

*2012 are preliminary estimates; CI = confidence interval.
Source: ILO, *Trends Econometric Models*, October 2012; see also source of Table A2.

Table A6. Annual employment growth, world and regions (%)

Region	2001–06	2007	2008	2009	2010	2011	2012*		
							CI Lower Bound	Preliminary Estimate	CI Upper Bound
World	1.8	1.7	1.1	0.4	1.4	1.5	1.2	1.3	1.5
Developed Economies and European Union	0.8	1.5	0.6	–2.2	–0.2	0.4	0.2	0.3	0.4
Central and South-Eastern Europe (non-EU) and CIS	0.9	2.1	1.2	–1.1	1.5	1.7	0.8	1.0	1.2
East Asia	1.2	1.2	0.0	0.6	1.0	0.6	0.4	0.5	0.7
South-East Asia and the Pacific	1.7	2.4	2.1	1.7	2.3	2.1	1.5	1.6	1.7
South Asia	2.5	0.9	0.7	0.5	1.0	2.1	1.9	2.0	2.0
Latin America and the Caribbean	2.5	2.3	2.6	0.6	3.2	2.0	1.6	1.8	2.0
Middle East	4.6	3.8	1.7	3.4	3.2	3.4	2.2	3.0	3.7
North Africa	3.2	3.7	3.0	2.2	2.5	1.1	1.6	2.0	2.3
Sub-Saharan Africa	3.0	2.8	2.9	2.7	2.8	2.9	2.8	2.9	3.0

*2012 are preliminary estimates; CI = confidence interval.
Source: ILO, *Trends Econometric Models*, October 2012; see also source of Table A2.

Table A7. Output per worker, level and annual growth

	Output per worker 2011	2001–06	2007	2008	2009	2010	2011	2012*		
								CI Lower Bound	Preliminary Estimate	CI Upper Bound
World	22’685	2.0	3.5	1.4	–1.3	3.7	2.2	1.8	1.9	2.0
Developed Economies and European Union	72’898	1.4	1.1	–0.5	–1.8	3.0	1.0	0.8	0.9	1.0
Central and South-Eastern Europe (non-EU) and CIS	25’747	5.5	5.6	3.0	–5.1	3.8	3.4	2.2	2.4	2.6
East Asia	14’895	7.4	10.8	7.9	6.4	8.9	7.6	6.1	6.3	6.4
South-East Asia and the Pacific	9’965	3.6	4.2	2.2	–0.1	5.3	2.4	3.5	3.5	3.6
South Asia	7’698	4.2	8.1	3.1	7.1	7.7	4.2	2.8	2.9	3.0
Latin America and the Caribbean	23’368	0.6	3.2	1.5	–2.3	2.6	2.3	1.2	1.4	1.6
Middle East	40’528	0.1	1.5	2.9	–1.9	1.7	2.0	–0.5	0.3	1.0
North Africa	17’806	1.3	1.8	2.2	1.5	1.6	0.2	9.3	9.7	10.0
Sub-Saharan Africa	5’491	2.0	3.7	2.3	–0.1	2.3	1.6	2.1	2.2	2.3

*2012 are preliminary estimates; CI = confidence interval.
Note: Output calculated on the basis of constant 2005 PPP-adjusted international dollars.
Source: ILO, *Trends Econometric Models*, October 2012; see also source of Table A2.

Table A8. Labour force participation rate by sex, world and regions (%)

Both sexes	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012*
World	65.2	65.1	65.1	65.0	65.1	65.2	65.0	64.8	64.6	64.3	64.1	64.1	64.1
Developed Economies and European Union	60.7	60.5	60.3	60.2	60.2	60.3	60.5	60.6	60.8	60.5	60.3	60.0	60.0
Central and South-Eastern Europe (non-EU) and CIS	58.5	57.8	57.9	57.6	57.4	57.7	57.9	58.4	58.8	59.0	59.2	59.6	59.8
East Asia	76.0	75.7	75.4	75.0	74.7	74.5	74.3	74.1	73.8	73.6	73.4	73.3	73.1
South-East Asia and the Pacific	70.5	70.8	70.5	70.6	70.6	70.4	70.2	70.1	70.1	70.0	70.1	70.1	70.1
South Asia	59.9	60.1	60.2	60.5	60.7	61.0	60.3	59.5	58.6	57.9	57.1	57.1	57.1
Latin America and the Caribbean	64.0	64.3	64.6	64.5	65.2	65.4	65.5	65.5	65.7	65.8	66.1	66.1	66.3
Middle East	46.0	46.2	46.5	46.9	47.3	47.9	47.5	47.4	46.7	47.0	47.5	47.8	48.1
North Africa	48.4	47.8	47.5	48.1	48.5	48.8	48.3	48.7	48.8	48.8	48.8	49.0	49.1
Sub-Saharan Africa	69.7	69.8	69.9	69.9	69.9	69.9	70.0	70.1	70.2	70.2	70.2	70.3	70.4
Males	**2000**	**2001**	**2002**	**2003**	**2004**	**2005**	**2006**	**2007**	**2008**	**2009**	**2010**	**2011**	**2012***
World	78.6	78.3	78.1	78.0	78.0	77.9	77.8	77.6	77.5	77.3	77.1	77.1	77.1
Developed Economies and European Union	70.2	69.8	69.4	69.1	68.9	69.0	69.0	69.0	69.0	68.4	68.0	67.6	67.5
Central and South-Eastern Europe (non-EU) and CIS	69.2	68.3	68.0	67.6	67.8	68.2	68.3	68.9	69.6	69.7	70.0	70.4	70.7
East Asia	82.1	81.7	81.4	81.1	80.9	80.7	80.4	80.3	80.0	79.8	79.6	79.6	79.4
South-East Asia and the Pacific	82.8	83.1	82.8	83.1	83.2	82.7	82.4	82.1	81.9	81.8	81.9	81.8	81.8
South Asia	83.3	83.3	83.3	83.3	83.3	83.4	83.1	82.6	82.1	81.7	81.4	81.3	81.3
Latin America and the Caribbean	80.7	80.5	80.3	80.0	80.2	80.2	80.1	79.9	80.0	79.7	79.8	79.6	79.5
Middle East	74.0	73.9	73.8	73.8	73.8	74.0	73.5	73.3	72.7	73.1	73.6	74.0	74.3
North Africa	74.9	74.2	74.1	74.5	75.0	75.2	74.1	74.1	74.1	74.1	74.1	74.2	74.3
Sub-Saharan Africa	77.0	76.7	76.5	76.2	75.9	75.9	75.9	76.0	76.2	76.1	76.1	76.2	76.3
Females	**2000**	**2001**	**2002**	**2003**	**2004**	**2005**	**2006**	**2007**	**2008**	**2009**	**2010**	**2011**	**2012***
World	52.0	52.0	52.1	52.1	52.2	52.4	52.2	52.0	51.7	51.4	51.2	51.1	51.1
Developed Economies and European Union	51.8	51.7	51.7	51.9	52.0	52.2	52.5	52.7	53.0	53.0	53.0	52.8	52.8
Central and South-Eastern Europe (non-EU) and CIS	49.2	48.6	49.1	48.7	48.3	48.5	48.8	49.1	49.3	49.6	49.7	50.0	50.2
East Asia	69.7	69.4	69.1	68.7	68.3	68.0	67.8	67.7	67.2	67.0	66.9	66.7	66.4
South-East Asia and the Pacific	58.5	58.8	58.4	58.4	58.4	58.5	58.3	58.5	58.7	58.5	58.6	58.7	58.8
South Asia	35.0	35.4	35.8	36.3	36.8	37.4	36.3	35.1	33.9	32.8	31.7	31.8	31.8
Latin America and the Caribbean	48.1	48.7	49.6	49.8	50.8	51.3	51.5	51.8	52.1	52.6	53.1	53.3	53.6
Middle East	16.3	16.7	17.2	17.8	18.3	19.0	18.7	18.5	17.7	17.8	18.1	18.4	18.7
North Africa	22.1	21.7	21.2	21.9	22.4	22.6	22.7	23.6	23.7	23.8	24.0	24.2	24.4
Sub-Saharan Africa	62.7	63.1	63.5	63.8	64.0	64.1	64.2	64.2	64.4	64.4	64.4	64.5	64.6

*2012 are preliminary projections.

Source: ILO, *Economically Active Population Estimates and Projections* (EAPEP) database, 6th edition (July 2012 update).[67]

[67] The July 2012 update version of the ILO EAPEP database (6th edition) only updates the 2011 estimates for those countries where the reported participation rates became available, and hence the base year for the projections.

Table A9. Labour force participation rate for adults and youth, world and regions (%)

Youth	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012*
World	52.9	52.5	52.2	51.9	51.9	51.9	51.3	50.6	50.1	49.4	48.8	48.6	48.5
Developed Economies and European Union	52.6	51.7	50.9	49.9	49.9	50.0	50.4	50.1	50.0	48.7	47.5	47.1	47.3
Central and South-Eastern Europe (non-EU) and CIS	43.2	41.9	41.5	40.5	40.2	40.1	40.2	40.6	41.9	42.1	42.0	41.9	42.0
East Asia	65.5	64.3	63.5	62.9	62.4	62.0	61.8	61.6	60.8	60.6	60.3	60.2	59.8
South-East Asia and the Pacific	56.3	56.8	55.9	56.0	55.9	55.3	54.3	53.5	53.0	52.7	52.5	52.3	52.3
South Asia	48.0	48.1	48.3	48.4	48.5	48.6	47.3	45.6	44.1	42.7	41.3	41.2	41.0
Latin America and the Caribbean	54.6	54.6	54.4	53.6	54.1	54.2	53.7	53.4	53.4	52.6	52.8	52.6	52.5
Middle East	32.7	32.8	32.9	33.1	33.2	33.3	32.4	31.6	30.5	30.3	30.3	30.3	30.3
North Africa	36.1	34.2	34.9	35.7	36.5	36.8	34.9	34.3	34.1	33.7	33.6	33.5	33.4
Sub-Saharan Africa	53.9	54.0	54.1	54.1	54.2	54.1	54.0	53.9	53.9	53.7	53.6	53.6	53.6
Adults	**2000**	**2001**	**2002**	**2003**	**2004**	**2005**	**2006**	**2007**	**2008**	**2009**	**2010**	**2011**	**2012***
World	69.4	69.4	69.4	69.5	69.5	69.6	69.5	69.4	69.3	69.1	69.0	68.9	68.8
Developed Economies and European Union	62.3	62.2	62.1	62.2	62.2	62.3	62.4	62.6	62.7	62.6	62.6	62.3	62.2
Central and South-Eastern Europe (non-EU) and CIS	62.9	62.4	62.7	62.6	62.5	62.8	63.0	63.4	63.4	63.5	63.6	63.9	63.9
East Asia	78.8	78.7	78.5	78.3	78.1	77.9	77.7	77.5	77.3	77.0	76.8	76.6	76.3
South-East Asia and the Pacific	76.2	76.4	76.2	76.3	76.2	76.1	76.1	76.2	76.2	76.0	76.1	76.0	76.0
South Asia	65.2	65.3	65.5	65.7	66.0	66.3	65.8	65.2	64.6	64.0	63.4	63.4	63.4
Latin America and the Caribbean	67.8	68.1	68.6	68.7	69.3	69.5	69.7	69.7	70.0	70.3	70.6	70.6	70.7
Middle East	53.2	53.5	53.9	54.3	54.8	55.3	55.1	55.1	54.3	54.5	54.7	54.9	55.0
North Africa	54.4	54.4	53.6	54.0	54.2	54.3	54.4	55.0	55.1	55.1	55.1	55.1	55.1
Sub-Saharan Africa	78.5	78.6	78.7	78.7	78.7	78.7	78.8	79.0	79.2	79.2	79.1	79.2	79.3

*2012 are preliminary projections.
Source: ILO, *EAPEP* database, 6th edition (July 2012 update); see also source of Table A8.

Table A10. Employment shares by sector and sex, world and regions (%)

Both sexes	Agriculture				Industry				Services			
	2000	2007	2011	2012*	2000	2007	2011	2012*	2000	2007	2011	2012*
World	40.5	35.5	33.3	33.5	20.4	22.1	22.6	22.5	39.1	42.4	44.1	44.0
Developed Economies and European Union	5.5	3.9	3.6	3.5	27.3	25.1	22.5	22.6	67.3	70.9	73.8	73.9
Central and South-Eastern Europe (non-EU) and CIS	25.2	18.8	19.8	18.8	25.2	26.3	24.6	27.1	49.6	54.9	55.5	54.1
East Asia	47.7	38.9	33.4	33.7	23.4	27.2	29.8	29.2	28.9	33.9	36.8	37.1
South-East Asia and the Pacific	49.6	44.2	40.8	41.5	16.4	18.3	19.0	19.0	34.0	37.6	40.2	39.6
South Asia	59.5	53.1	51.0	50.8	15.6	19.5	21.0	21.0	24.9	27.4	28.1	28.1
Latin America and the Caribbean	20.3	17.0	15.8	15.7	21.6	22.5	21.7	21.7	58.0	60.4	62.4	62.6
Middle East	22.4	19.1	16.5	16.4	24.3	26.1	26.4	26.4	53.3	54.8	57.1	57.2
North Africa	32.4	30.9	27.2	29.8	19.5	21.1	24.0	22.4	48.1	48.0	48.9	47.8
Sub-Saharan Africa	66.4	63.1	61.8	62.0	7.9	8.5	8.7	8.7	25.7	28.4	29.5	29.3
Males	**Agriculture**				**Industry**				**Services**			
	2000	2007	2011	2012*	2000	2007	2011	2012*	2000	2007	2011	2012*
World	38.2	33.6	32.0	32.6	23.9	26.1	26.3	26.0	37.9	40.4	41.7	41.4
Developed Economies and European Union	6.0	4.5	4.3	4.2	36.4	35.0	32.1	32.0	57.6	60.5	63.6	63.7
Central and South-Eastern Europe (non-EU) and CIS	25.2	19.1	20.4	18.3	30.9	33.3	29.7	33.7	43.9	47.6	49.9	48.0
East Asia	41.4	34.3	30.1	31.3	26.3	30.1	32.6	31.2	32.2	35.6	37.3	37.5
South-East Asia and the Pacific	48.5	43.5	40.1	42.0	18.4	20.8	21.5	21.2	33.1	35.6	38.4	36.8
South Asia	53.3	46.3	44.5	44.3	17.4	21.6	23.0	23.0	29.3	32.1	32.5	32.6
Latin America and the Caribbean	25.1	21.5	20.8	20.7	26.3	28.2	27.6	27.6	48.6	50.3	51.6	51.7
Middle East	19.8	16.5	14.1	14.0	26.6	28.4	29.2	29.3	53.6	55.2	56.7	56.7
North Africa	30.3	28.3	25.5	29.0	21.8	24.0	26.8	24.6	47.9	47.7	47.8	46.3
Sub-Saharan Africa	65.3	62.4	61.1	61.8	9.6	10.6	10.7	10.6	25.1	27.0	28.2	27.6
Females	**Agriculture**				**Industry**				**Services**			
	2000	2007	2011	2012*	2000	2007	2011	2012*	2000	2007	2011	2012*
World	44.0	38.4	35.4	35.0	15.1	16.2	16.9	17.1	40.9	45.4	47.7	47.9
Developed Economies and European Union	4.7	3.2	2.8	2.7	15.5	12.9	11.0	11.1	79.8	83.9	86.1	86.2
Central and South-Eastern Europe (non-EU) and CIS	25.2	18.5	19.1	19.4	18.2	17.6	18.3	18.9	56.7	63.9	62.5	61.7
East Asia	55.2	44.5	37.5	36.7	19.9	23.7	26.4	26.8	24.9	31.8	36.1	36.5
South-East Asia and the Pacific	51.1	45.0	41.7	40.7	13.7	14.8	15.6	16.0	35.2	40.2	42.7	43.3
South Asia	75.2	70.1	68.6	68.4	11.0	14.2	15.5	15.6	13.8	15.7	16.0	16.0
Latin America and the Caribbean	12.4	10.2	8.6	8.4	13.8	13.9	13.2	13.2	73.8	75.9	78.2	78.3
Middle East	36.4	32.0	28.5	28.3	11.7	14.9	12.2	12.0	51.9	53.0	59.4	59.7
North Africa	39.9	39.6	32.9	32.3	11.1	11.6	14.6	14.9	49.0	48.9	52.5	52.8
Sub-Saharan Africa	67.8	63.9	62.6	62.2	5.7	6.1	6.4	6.5	26.5	30.0	31.0	31.3

*2012 are preliminary projections.
Source: ILO, *Trends Econometric Models*, October 2012; see also source of Table A2.

Table A11. Employment by sector and sex, world and regions (millions)

Both sexes	Agriculture				Industry				Services			
	2000	2007	2011	2012*	2000	2007	2011	2012*	2000	2007	2011	2012*
World	1057.3	1048.6	1028.4	1048.8	533.6	653.8	696.6	703.2	1020.3	1251.3	1360.6	1375.4
Developed Economies and European Union	24.2	18.7	17.0	16.5	121.2	119.1	105.4	105.7	299.2	336.4	345.1	346.5
Central and South-Eastern Europe (non-EU) and CIS	37.1	29.9	32.5	31.2	37.2	41.7	40.4	44.9	73.0	87.2	91.2	89.8
East Asia	354.2	314.2	276.0	280.0	174.0	219.7	245.9	242.4	215.0	273.8	303.5	307.8
South-East Asia and the Pacific	120.1	121.2	121.3	125.3	39.7	50.2	56.6	57.3	82.3	103.1	119.6	119.6
South Asia	304.5	318.3	319.2	324.6	79.7	117.0	131.3	134.3	127.6	164.6	175.8	179.7
Latin America and the Caribbean	42.2	41.9	42.2	42.6	44.9	55.4	58.0	59.1	120.4	148.6	166.7	170.2
Middle East	9.1	10.6	10.2	10.5	9.9	14.4	16.4	16.9	21.7	30.3	35.5	36.6
North Africa	15.3	18.2	17.5	19.5	9.2	12.5	15.4	14.7	22.7	28.3	31.4	31.4
Sub-Saharan Africa	150.4	175.7	192.4	198.6	17.8	23.8	27.1	27.9	58.3	79.0	91.7	93.9
Males	**Agriculture**				**Industry**				**Services**			
	2000	2007	2011	2012*	2000	2007	2011	2012*	2000	2007	2011	2012*
World	600.2	594.7	594.4	613.4	376.5	462.0	489.3	490.8	595.6	715.1	774.8	780.1
Developed Economies and European Union	15.1	11.9	11.0	10.8	91.0	91.9	82.0	82.1	144.0	159.0	162.6	163.3
Central and South-Eastern Europe (non-EU) and CIS	20.6	16.7	18.5	16.8	25.3	29.1	27.0	30.9	35.9	41.7	45.2	44.0
East Asia	169.0	152.5	136.9	143.5	107.4	133.5	148.2	142.8	131.4	158.0	170.0	171.9
South-East Asia and the Pacific	68.0	69.1	68.8	73.2	25.7	33.0	36.9	36.9	46.4	56.5	65.8	64.2
South Asia	195.9	198.4	203.6	206.8	63.8	92.7	105.2	107.3	107.6	137.8	148.9	152.2
Latin America and the Caribbean	32.6	31.9	32.9	33.2	34.2	41.9	43.7	44.4	63.1	74.6	81.7	83.2
Middle East	6.8	7.6	7.3	7.5	9.2	13.0	15.2	15.6	18.4	25.4	29.4	30.2
North Africa	11.2	12.8	12.6	14.6	8.1	10.9	13.3	12.4	17.7	21.6	23.7	23.4
Sub-Saharan Africa	81.0	93.8	102.8	107.0	12.0	15.9	18.0	18.4	31.2	40.5	47.4	47.8
Females	**Agriculture**				**Industry**				**Services**			
	2000	2007	2011	2012*	2000	2007	2011	2012*	2000	2007	2011	2012*
World	457.1	453.9	434.0	435.4	157.1	191.8	207.2	212.4	424.7	536.2	585.9	595.3
Developed Economies and European Union	9.2	6.7	6.0	5.8	30.2	27.2	23.4	23.6	155.3	177.4	182.5	183.2
Central and South-Eastern Europe (non-EU) and CIS	16.5	13.2	14.1	14.4	11.9	12.6	13.5	14.0	37.2	45.6	45.9	45.8
East Asia	185.2	161.6	139.1	136.4	66.6	86.2	97.7	99.6	83.6	115.8	133.6	135.9
South-East Asia and the Pacific	52.1	52.1	52.5	52.1	14.0	17.1	19.6	20.5	35.9	46.6	53.8	55.5
South Asia	108.6	120.0	115.6	117.9	15.9	24.3	26.1	27.0	19.9	26.9	26.9	27.5
Latin America and the Caribbean	9.7	10.0	9.4	9.3	10.7	13.5	14.3	14.7	57.3	74.0	85.0	87.0
Middle East	2.3	3.0	2.9	3.0	0.7	1.4	1.2	1.3	3.3	4.9	6.1	6.4
North Africa	4.1	5.4	4.8	4.9	1.1	1.6	2.2	2.3	5.0	6.7	7.7	8.0
Sub-Saharan Africa	69.4	81.9	89.7	91.6	5.9	7.9	9.1	9.5	27.2	38.4	44.4	46.1

* 2012 are preliminary projections.
Source: ILO, *Trends Econometric Models*, October 2012; see also source of Table A2.

Table A12. Vulnerable employment shares by sex, world and regions (%)

Both sexes	2000	2005	2006	2007	2008	2009	2010	2011	2012*	2017*
World	53.1	52.3	51.9	51.4	50.3	50.0	50.2	49.6	49.2	48.4
Developed Economies and European Union	11.2	10.8	10.6	10.4	10.2	10.1	10.3	10.1	10.1	9.6
Central and South-Eastern Europe (non-EU) and CIS	23.8	22.3	21.6	20.3	20.0	20.2	20.3	20.0	19.7	19.0
East Asia	58.4	56.1	55.8	55.1	52.6	51.1	51.2	50.0	48.9	46.1
South-East Asia and the Pacific	65.2	62.9	62.7	62.4	62.5	61.6	62.0	61.2	61.1	59.4
South Asia	81.3	80.7	80.2	79.9	79.0	78.2	78.6	77.5	76.9	75.8
Latin America and the Caribbean	35.8	33.8	32.9	32.3	31.8	31.9	31.9	31.5	31.5	31.0
Middle East	33.5	31.6	30.8	29.6	28.4	28.4	27.4	27.1	27.0	26.5
North Africa	42.1	43.1	41.8	41.9	41.3	41.4	40.6	41.3	41.4	40.1
Sub-Saharan Africa	81.8	79.7	79.3	78.8	78.1	78.5	78.2	77.5	77.2	75.5
Males	**2000**	**2005**	**2006**	**2007**	**2008**	**2009**	**2010**	**2011**	**2012***	**2017***
World	51.3	50.7	50.5	50.0	49.2	49.0	49.3	48.7	48.4	47.8
Developed Economies and European Union	11.8	11.9	11.7	11.6	11.4	11.4	11.7	11.4	11.4	10.9
Central and South-Eastern Europe (non-EU) and CIS	24.0	22.6	21.9	20.4	20.1	20.5	20.1	19.7	19.5	18.8
East Asia	53.4	51.6	51.5	50.9	48.8	47.7	47.8	46.9	46.0	44.0
South-East Asia and the Pacific	61.4	59.5	59.4	58.8	59.4	58.5	58.9	58.3	58.2	56.7
South Asia	78.6	77.9	78.1	77.8	76.9	76.2	76.7	75.6	75.0	74.0
Latin America and the Caribbean	35.3	33.5	32.5	31.8	31.3	31.4	31.7	31.3	31.3	30.8
Middle East	30.8	28.6	27.9	26.7	26.0	26.1	25.3	25.0	24.9	24.3
North Africa	37.3	37.9	36.5	36.2	35.5	35.9	34.7	35.3	35.5	34.1
Sub-Saharan Africa	76.4	73.3	72.9	72.3	71.4	72.0	71.8	71.0	70.6	68.6
Females	**2000**	**2005**	**2006**	**2007**	**2008**	**2009**	**2010**	**2011**	**2012***	**2017***
World	55.8	54.8	54.1	53.5	52.1	51.4	51.5	50.8	50.4	49.4
Developed Economies and European Union	10.5	9.5	9.2	9.0	8.7	8.6	8.7	8.5	8.5	8.0
Central and South-Eastern Europe (non-EU) and CIS	23.6	21.9	21.1	20.2	20.0	19.9	20.5	20.4	19.9	19.2
East Asia	64.5	61.6	61.2	60.3	57.2	55.2	55.3	53.8	52.4	48.8
South-East Asia and the Pacific	70.6	67.6	67.2	67.3	66.7	65.8	66.2	65.2	65.1	63.0
South Asia	88.1	87.4	85.5	85.3	84.3	83.4	83.9	82.6	81.9	80.6
Latin America and the Caribbean	36.7	34.2	33.5	33.0	32.6	32.7	32.4	31.9	31.9	31.3
Middle East	48.3	46.3	45.1	43.5	40.4	39.7	38.2	37.8	37.6	36.4
North Africa	59.6	62.0	60.5	60.9	60.6	60.2	60.1	61.4	61.2	58.9
Sub-Saharan Africa	88.2	87.2	86.9	86.5	85.9	86.1	85.8	85.1	84.9	83.6

*2012/7 are preliminary projections.
Source: ILO, *Trends Econometric Models*, October 2012; see also source of Table A2.

Table A13. Vulnerable employment by sex, world and regions (millions)

Both sexes	2000	2005	2006	2007	2008	2009	2010	2011	2012*	2017*
World	1'386.2	1'493.4	1'507.7	1'517.8	1'502.7	1'498.8	1'525.8	1'529.2	1'538.8	1'609.5
Developed Economies and European Union	50.0	49.8	49.4	49.4	48.6	47.2	48.0	47.1	47.2	46.1
Central and South-Eastern Europe (non-EU) and CIS	35.1	34.2	33.5	32.3	32.2	32.1	32.7	32.9	32.7	32.0
East Asia	434.1	442.2	445.7	445.3	424.5	415.2	420.1	413.2	405.9	388.5
South-East Asia and the Pacific	158.0	165.8	168.1	171.3	175.1	175.5	180.6	182.1	184.7	192.4
South Asia	415.9	472.1	477.0	479.5	477.2	474.6	481.9	485.1	490.9	530.6
Latin America and the Caribbean	74.4	79.2	79.0	79.4	80.2	81.0	83.6	84.2	85.7	91.4
Middle East	13.7	16.3	16.4	16.4	16.0	16.5	16.5	16.8	17.3	19.2
North Africa	19.9	23.9	23.8	24.7	25.1	25.7	25.8	26.5	27.2	29.3
Sub-Saharan Africa	185.3	209.8	214.8	219.5	223.8	230.9	236.6	241.3	247.4	280.1
Males	**2000**	**2005**	**2006**	**2007**	**2008**	**2009**	**2010**	**2011**	**2012***	**2017***
World	806.7	866.7	878.4	885.9	881.8	883.7	903.1	905.9	912.8	959.4
Developed Economies and European Union	29.6	30.5	30.3	30.4	29.9	29.0	29.6	29.1	29.2	28.7
Central and South-Eastern Europe (non-EU) and CIS	19.6	19.2	18.8	17.9	17.8	17.9	17.9	17.9	17.9	17.6
East Asia	217.7	223.7	225.8	226.2	217.1	213.7	216.4	213.7	210.9	206.2
South-East Asia and the Pacific	86.0	91.2	92.6	93.3	95.9	96.0	99.1	100.0	101.4	105.7
South Asia	288.6	321.5	328.6	333.6	334.3	335.2	343.9	345.9	349.8	376.8
Latin America and the Caribbean	45.8	47.8	47.3	47.2	47.5	47.7	49.3	49.5	50.3	53.1
Middle East	10.6	12.2	12.4	12.3	12.3	12.7	12.8	13.0	13.3	14.5
North Africa	13.8	16.5	16.2	16.4	16.6	17.2	17.0	17.5	17.9	18.9
Sub-Saharan Africa	94.9	104.1	106.5	108.7	110.4	114.3	117.1	119.4	122.3	137.9
Females	**2000**	**2005**	**2006**	**2007**	**2008**	**2009**	**2010**	**2011**	**2012***	**2017***
World	579.5	626.7	629.3	631.9	620.9	615.1	622.7	623.3	626.0	650.1
Developed Economies and European Union	20.4	19.3	19.1	19.0	18.6	18.2	18.3	18.1	18.0	17.4
Central and South-Eastern Europe (non-EU) and CIS	15.5	15.0	14.8	14.4	14.4	14.2	14.8	15.0	14.8	14.4
East Asia	216.3	218.5	219.9	219.1	207.4	201.5	203.7	199.4	195.0	182.3
South-East Asia and the Pacific	72.0	74.5	75.5	78.0	79.3	79.5	81.5	82.1	83.3	86.7
South Asia	127.3	150.7	148.4	145.9	142.9	139.4	138.0	139.2	141.1	153.8
Latin America and the Caribbean	28.5	31.4	31.6	32.2	32.8	33.3	34.3	34.7	35.4	38.3
Middle East	3.1	4.1	4.1	4.1	3.7	3.8	3.7	3.9	4.0	4.6
North Africa	6.1	7.5	7.6	8.3	8.5	8.6	8.8	9.0	9.3	10.3
Sub-Saharan Africa	90.4	105.7	108.3	110.8	113.3	116.6	119.5	121.9	125.1	142.2

*2012/7 are preliminary projections.
Source: ILO, *Trends Econometric Models*, October 2012; see also source of Table A2.

Table A14a. Working poor indicators, world and regions (US$1.25 a day)

Both sexes	Numbers of people (millions)					Share in total employment (%)				
	2000	2007	2011*	2012*	2017*	2000	2007	2011*	2012*	2017*
World	695.3	488.0	396.7	383.8	288.3	26.6	16.5	12.9	12.3	8.7
Central and South-Eastern Europe (non-EU) and CIS	7.3	3.9	3.1	2.9	1.8	5.0	2.5	1.9	1.7	1.1
East Asia	232.2	93.3	52.2	46.3	14.6	31.2	11.5	6.3	5.6	1.7
South-East Asia and the Pacific	81.7	49.0	36.8	35.4	22.2	33.7	17.9	12.4	11.7	6.9
South Asia	224.5	198.0	160.9	155.9	119.4	43.9	33.0	25.7	24.4	17.1
Latin America and the Caribbean	16.1	11.3	9.7	9.6	7.7	7.8	4.6	3.6	3.5	2.6
Middle East	0.6	0.8	1.0	1.1	1.0	1.4	1.5	1.6	1.8	1.4
North Africa	4.5	3.1	3.1	4.2	4.1	9.5	5.3	4.9	6.4	5.6
Sub-Saharan Africa	128.4	128.6	129.8	128.4	117.4	56.7	46.2	41.7	40.1	31.6

* 2011 are preliminary estimates; 2012/7 are preliminary projections.
Note: Totals may differ due to rounding.
Source: ILO, *Trends Econometric Models*, October 2012; see also source of Table A2.

Table A14b. Working poor indicators, world and regions (US$2 a day)

Both sexes	Numbers of people (millions)					Share in total employment (%)				
	2000	2007	2011*	2012*	2017*	2000	2007	2011*	2012*	2017*
World	1’195.1	991.6	868.3	853.7	730.8	45.8	33.6	28.1	27.3	22.0
Central and South-Eastern Europe (non-EU) and CIS	19.1	9.3	8.1	7.8	6.3	12.9	5.9	4.9	4.7	3.7
East Asia	410.2	221.0	128.5	113.2	36.7	55.2	27.4	15.6	13.6	4.4
South-East Asia and the Pacific	148.2	115.8	100.8	98.3	73.6	61.2	42.2	33.9	32.5	22.7
South Asia	397.4	414.3	391.1	391.2	371.4	77.7	69.1	62.5	61.3	53.0
Latin America and the Caribbean	32.3	23.5	20.4	20.1	17.2	15.6	9.6	7.6	7.4	5.8
Middle East	3.3	4.5	4.8	5.2	5.2	8.0	8.1	7.8	8.1	7.2
North Africa	12.6	11.3	11.4	12.9	12.8	26.7	19.2	17.8	19.7	17.5
Sub-Saharan Africa	172.0	191.9	203.2	204.9	207.6	75.9	68.9	65.3	64.0	55.9

* 2011 are preliminary estimates; 2012/7 are preliminary projections.
Note: Totals may differ due to rounding.
Source: ILO, *Trends Econometric Models*, October 2012; see also source of Table A2.

Table A15a. Employment by economic class in developing world and regions, both sexes

Region	Year	Employment by class (millions)				
		Extremely poor (below US$1.25)	Moderately poor (between US$1.25 and US$2)	Near poor (between US$2 and US$4)	Developing middle-class (between US$4 and US$13)	Developed middle-class and above (above US$13)
Developing world	1991	835	396	283	235	98
	2001	678	507	519	399	104
	2011*	397	472	661	800	290
	2017*	288	442	637	943	536
Central and South-Eastern Europe (non-EU) and CIS	1991	4	7	23	79	35
	2001	7	11	35	81	13
	2011*	3	5	17	90	48
	2017*	2	4	15	83	65
East Asia	1991	401	156	84	21	11
	2001	218	174	210	126	23
	2011*	52	76	210	375	112
	2017*	15	22	109	407	290
South-East Asia and the Pacific	1991	93	48	33	20	4
	2001	74	69	62	34	7
	2011*	37	64	102	76	18
	2017*	22	51	107	111	33
South Asia	1991	221	129	62	6	3
	2001	228	179	102	15	2
	2011*	161	230	185	47	4
	2017*	119	252	237	86	6
Latin America and the Caribbean	1991	13	14	34	73	29
	2001	17	17	44	94	41
	2011*	10	11	40	129	77
	2017*	8	9	38	140	100
Middle East	1991	1	2	7	11	9
	2001	1	3	11	17	11
	2011*	1	4	14	25	18
	2017*	1	4	16	29	22
North Africa	1991	5	7	14	9	3
	2001	4	8	20	13	2
	2011*	3	8	28	22	4
	2017*	4	9	29	25	6
Sub-Saharan Africa	1991	97	33	27	14	4
	2001	129	46	36	18	4
	2011*	130	73	64	35	9
	2017*	117	90	86	62	15

* 2011 are preliminary estimates. 2017 are preliminary projections.
Note: Totals may differ due to rounding.
Source: Kapsos and Bourmpoula (forthcoming).

Table A15b. Employment shares by economic class in developing world and regions, both sexes

Region	Year	Employment by class (% of total)				
		Extremely poor (below US$1.25)	Moderately poor (between US$1.25 and US$2)	Near poor (between US$2 and US$4)	Developing middle-class (between US$4 and US$13)	Developed middle-class and above (above US$13)
Developing world	1991	45.2	21.4	15.3	12.7	5.3
	2001	30.7	23.0	23.5	18.1	4.7
	2011*	15.2	18.0	25.2	30.5	11.1
	2017*	10.1	15.5	22.4	33.1	18.8
Central and South-Eastern Europe (non-EU) and CIS	1991	2.6	4.7	15.7	53.4	23.7
	2001	4.6	7.5	24.0	55.1	8.7
	2011*	1.9	3.0	10.6	55.0	29.4
	2017*	1.1	2.7	8.9	49.2	38.3
East Asia	1991	59.7	23.2	12.4	3.1	1.6
	2001	29.1	23.2	28.0	16.7	3.1
	2011*	6.3	9.2	25.5	45.4	13.6
	2017*	1.7	2.6	12.9	48.3	34.4
South-East Asia and the Pacific	1991	47.0	24.1	16.6	10.2	2.2
	2001	29.9	28.0	25.0	14.0	3.0
	2011*	12.4	21.5	34.4	25.5	6.1
	2017*	6.9	15.9	33.0	34.2	10.1
South Asia	1991	52.5	30.8	14.7	1.4	0.6
	2001	43.4	34.0	19.3	2.8	0.4
	2011*	25.7	36.8	29.5	7.5	0.6
	2017*	17.1	36.0	33.9	12.3	0.8
Latin America and the Caribbean	1991	8.1	8.3	20.8	45.1	17.7
	2001	8.0	7.9	20.6	44.4	19.1
	2011*	3.6	4.0	15.1	48.4	28.9
	2017*	2.6	3.2	12.9	47.5	33.8
Middle East	1991	2.2	7.2	22.6	36.8	31.3
	2001	1.4	6.9	25.1	40.4	26.2
	2011*	1.6	6.2	22.4	41.0	28.8
	2017*	1.4	5.7	21.8	40.1	31.0
North Africa	1991	12.7	18.8	36.2	24.8	7.4
	2001	8.9	16.9	41.8	27.8	4.6
	2011*	4.9	12.9	43.3	33.5	5.5
	2017*	5.6	11.9	40.1	34.6	7.8
Sub-Saharan Africa	1991	55.3	18.7	15.4	8.3	2.3
	2001	55.4	19.8	15.4	7.6	1.8
	2011*	41.7	23.6	20.6	11.4	2.8
	2017*	31.6	24.3	23.2	16.7	4.2

* 2011 are preliminary estimates. 2017 are preliminary projections.
Note: Totals may differ due to rounding.
Source: Kapsos and Bourmpoula (forthcoming).

Annex 2. Unemployment projections

Table P1. Unemployment 2007–17 (rates)

Region	2007	2008	2009	2010	2011	2012*	2013*	2014*	2015*	2016*	2017*
	Rate (%)										
World	5.4	5.6	6.2	6.0	5.9	5.9	6.0	6.0	6.0	6.0	6.0
Developed Economies and European Union	5.8	6.1	8.4	8.8	8.4	8.6	8.7	8.6	8.4	8.2	8.0
Central and South-Eastern Europe (non-EU) and CIS	8.3	8.3	10.1	9.4	8.7	8.2	8.2	8.1	8.0	8.0	7.9
East Asia	3.8	4.3	4.4	4.2	4.3	4.4	4.5	4.6	4.6	4.7	4.7
South-East Asia and the Pacific	5.5	5.3	5.2	4.7	4.4	4.4	4.5	4.5	4.5	4.5	4.5
South Asia	3.9	3.9	4.1	3.9	3.8	3.8	3.9	3.9	4.0	4.0	4.0
Latin America and the Caribbean	7.0	6.6	7.8	6.8	6.5	6.6	6.7	6.8	6.8	6.8	6.8
Middle East	10.3	10.5	10.7	11.2	11.1	11.1	11.1	11.1	11.1	11.1	11.1
North Africa	9.6	9.1	9.1	8.9	10.0	10.3	10.3	10.2	10.1	10.0	9.9
Sub-Saharan Africa	7.4	7.5	7.6	7.6	7.6	7.5	7.5	7.5	7.4	7.4	7.4

Region	2008	2009	2010	2011	2012*	2013*	2014*	2015*	2016*	2017*
	Change from 2007 (percentage points)									
World	0.1	0.8	0.6	0.5	0.5	0.6	0.6	0.6	0.6	0.5
Developed Economies and European Union	0.3	2.6	3.0	2.7	2.8	2.9	2.8	2.6	2.4	2.2
Central and South-Eastern Europe (non-EU) and CIS	0.0	1.8	1.1	0.3	–0.1	–0.1	–0.2	–0.3	–0.4	–0.4
East Asia	0.6	0.7	0.4	0.6	0.7	0.8	0.8	0.9	0.9	0.9
South-East Asia and the Pacific	–0.2	–0.3	–0.8	–1.1	–1.1	–1.0	–1.0	–1.0	–1.0	–1.0
South Asia	0.0	0.2	0.0	–0.1	–0.1	0.0	0.0	0.1	0.1	0.1
Latin America and the Caribbean	–0.4	0.7	–0.2	–0.5	–0.5	–0.3	–0.3	–0.2	–0.2	–0.2
Middle East	0.1	0.4	0.9	0.8	0.8	0.8	0.8	0.8	0.7	0.7
North Africa	–0.5	–0.5	–0.7	0.4	0.7	0.7	0.6	0.5	0.4	0.3
Sub-Saharan Africa	0.1	0.2	0.1	0.1	0.1	0.1	0.0	0.0	0.0	–0.1

* 2012 are preliminary estimates; 2013–17 are preliminary projections; the Upper and Lower bound of the confidence interval are shown in the figures of Annex 3.
Source: ILO, *Trends Econometric Models*, October 2012; see also source of Table A2 and Annex 5.

Table P2. Unemployment 2007–17 (numbers of people)

Region	2007	2008	2009	2010	2011	2012*	2013*	2014*	2015*	2016*	2017*
	Number (millions)										
World	169.0	175.7	198.4	194.6	193.1	197.3	202.5	205.3	207.3	209.0	210.6
Developed Economies and European Union	29.1	30.8	42.6	44.7	43.1	43.9	44.8	44.4	43.5	42.5	41.7
Central and South-Eastern Europe (non-EU) and CIS	14.4	14.6	17.9	16.8	15.6	14.9	14.9	14.7	14.6	14.6	14.5
East Asia	31.6	36.6	37.7	36.1	37.3	38.6	39.6	40.2	40.8	41.3	41.7
South-East Asia and the Pacific	16.0	15.6	15.5	14.4	13.6	13.9	14.4	14.7	15.0	15.2	15.4
South Asia	24.3	24.3	26.1	24.9	24.5	25.4	26.4	27.2	27.9	28.5	29.1
Latin America and the Caribbean	18.6	17.8	21.3	19.2	18.7	19.1	19.8	20.3	20.8	21.2	21.6
Middle East	6.4	6.6	7.0	7.6	7.7	8.0	8.2	8.4	8.6	8.8	9.0
North Africa	6.2	6.1	6.2	6.2	7.2	7.5	7.7	7.8	7.9	7.9	8.0
Sub-Saharan Africa	22.4	23.4	24.2	24.8	25.4	26.1	26.8	27.5	28.2	28.9	29.6

Region	2008	2009	2010	2011	2012*	2013*	2014*	2015*	2016*	2017*
	Change from 2007 (millions)									
World	6.7	29.5	25.7	24.1	28.4	33.5	36.4	38.4	40.0	41.7
Developed Economies and European Union	1.7	13.5	15.6	14.0	14.8	15.7	15.3	14.4	13.5	12.6
Central and South-Eastern Europe (non-EU) and CIS	0.2	3.4	2.4	1.1	0.5	0.4	0.3	0.2	0.2	0.1
East Asia	5.0	6.0	4.5	5.7	7.0	8.0	8.6	9.2	9.7	10.1
South-East Asia and the Pacific	−0.4	−0.5	−1.6	−2.3	−2.1	−1.6	−1.3	−1.0	−0.8	−0.6
South Asia	0.0	1.8	0.6	0.2	1.1	2.1	2.9	3.7	4.3	4.8
Latin America and the Caribbean	−0.8	2.7	0.6	0.1	0.5	1.2	1.7	2.2	2.6	3.0
Middle East	0.2	0.6	1.2	1.4	1.6	1.9	2.1	2.2	2.4	2.6
North Africa	−0.2	0.0	0.0	0.9	1.2	1.4	1.5	1.6	1.7	1.8
Sub-Saharan Africa	1.0	1.8	2.4	3.1	3.7	4.4	5.1	5.8	6.5	7.2

* 2012 are preliminary estimates; 2013–17 are preliminary projections.

Source: ILO, *Trends Econometric Models*, October 2012; see also source of Table A2 and Annex 5.

Table P3. Unemployment 2007–17 (rates), downside scenario

Region	2007	2008	2009	2010	2011	2012*	2013*	2014*	2015*	2016*	2017*
	Rate (%)										
World	5.4	5.6	6.2	6.0	5.9	5.9	6.1	6.2	6.2	6.2	6.1
Developed Economies and European Union	5.8	6.1	8.4	8.8	8.4	8.6	9.2	9.5	9.5	9.1	8.8
Central and South-Eastern Europe (non-EU) and CIS	8.3	8.3	10.1	9.4	8.7	8.2	8.3	8.2	8.1	8.0	8.0
East Asia	3.8	4.3	4.4	4.2	4.3	4.4	4.6	4.7	4.8	4.8	4.8
South-East Asia and the Pacific	5.5	5.3	5.2	4.7	4.4	4.4	4.5	4.6	4.7	4.6	4.6
South Asia	3.9	3.9	4.1	3.9	3.8	3.8	3.9	3.9	4.0	4.0	4.0
Latin America and the Caribbean	7.0	6.6	7.8	6.8	6.5	6.6	6.7	6.8	6.8	6.8	6.8
Middle East	10.3	10.5	10.7	11.2	11.1	11.1	11.2	11.2	11.1	11.1	11.1
North Africa	9.6	9.1	9.1	8.9	10.0	10.3	10.3	10.3	10.2	10.0	9.9
Sub-Saharan Africa	7.4	7.5	7.6	7.6	7.6	7.5	7.5	7.5	7.5	7.4	7.4

Region	2008	2009	2010	2011	2012*	2013*	2014*	2015*	2016*	2017*
	Change from 2007 (percentage points)									
World	0.1	0.8	0.6	0.5	0.5	0.7	0.8	0.8	0.8	0.7
Developed Economies and European Union	0.3	2.6	3.0	2.7	2.8	3.4	3.8	3.7	3.4	3.0
Central and South-Eastern Europe (non-EU) and CIS	0.0	1.8	1.1	0.3	−0.1	0.0	−0.1	−0.2	−0.3	−0.4
East Asia	0.6	0.7	0.4	0.6	0.7	0.9	0.9	1.0	1.0	1.0
South-East Asia and the Pacific	−0.2	−0.3	−0.8	−1.1	−1.1	−1.0	−0.9	−0.8	−0.9	−0.9
South Asia	0.0	0.2	0.0	−0.1	−0.1	0.0	0.1	0.1	0.1	0.1
Latin America and the Caribbean	−0.4	0.7	−0.2	−0.5	−0.5	−0.3	−0.2	−0.2	−0.2	−0.2
Middle East	0.1	0.4	0.9	0.8	0.8	0.8	0.8	0.8	0.8	0.8
North Africa	−0.5	−0.5	−0.7	0.4	0.7	0.7	0.7	0.6	0.5	0.4
Sub-Saharan Africa	0.1	0.2	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.0

* 2012 are preliminary estimates; 2013–17 are preliminary projections based on the downside scenario.

Source: ILO, *Trends Econometric Models*, October 2012; see also source of Table A2 and Annex 5.

Table P4. Unemployment 2007–17 (numbers of people), downside scenario

Region	2007	2008	2009	2010	2011	2012*	2013*	2014*	2015*	2016*	2017*
	Number (millions)										
World	169.0	175.7	198.4	194.6	193.1	197.3	206.0	212.2	215.0	215.5	215.6
Developed Economies and European Union	29.1	30.8	42.6	44.7	43.1	43.9	47.2	49.2	49.1	47.4	45.6
Central and South-Eastern Europe (non-EU) and CIS	14.4	14.6	17.9	16.8	15.6	14.9	15.0	14.9	14.8	14.7	14.6
East Asia	31.6	36.6	37.7	36.1	37.3	38.6	40.5	41.4	41.9	42.1	42.3
South-East Asia and the Pacific	16.0	15.6	15.5	14.4	13.6	13.9	14.3	15.1	15.4	15.6	15.6
South Asia	24.3	24.3	26.1	24.9	24.5	25.4	26.3	27.3	28.1	28.7	29.2
Latin America and the Caribbean	18.6	17.8	21.3	19.2	18.7	19.1	19.9	20.4	20.9	21.3	21.6
Middle East	6.4	6.6	7.0	7.6	7.7	8.0	8.3	8.5	8.7	8.9	9.0
North Africa	6.2	6.1	6.2	6.2	7.2	7.5	7.7	7.8	7.9	8.0	8.1
Sub-Saharan Africa	22.4	23.4	24.2	24.8	25.4	26.1	26.8	27.6	28.3	28.9	29.7
Region		**2008**	**2009**	**2010**	**2011**	**2012***	**2013***	**2014***	**2015***	**2016***	**2017***
		Change from 2007 (millions)									
World		6.7	29.5	25.7	24.1	28.4	37.1	43.2	46.1	46.6	46.7
Developed Economies and European Union		1.7	13.5	15.6	14.0	14.8	18.2	20.1	20.0	18.4	16.5
Central and South-Eastern Europe (non-EU) and CIS		0.2	3.4	2.4	1.1	0.5	0.6	0.5	0.4	0.2	0.2
East Asia		5.0	6.0	4.5	5.7	7.0	8.8	9.8	10.3	10.5	10.6
South-East Asia and the Pacific		−0.4	−0.5	−1.6	−2.3	−2.1	−1.6	−0.9	−0.6	−0.4	−0.4
South Asia		0.0	1.8	0.6	0.2	1.1	2.0	3.0	3.8	4.4	4.9
Latin America and the Caribbean		−0.8	2.7	0.6	0.1	0.5	1.3	1.9	2.3	2.7	3.1
Middle East		0.2	0.6	1.2	1.4	1.6	1.9	2.1	2.3	2.5	2.7
North Africa		−0.2	0.0	0.0	0.9	1.2	1.5	1.6	1.7	1.7	1.8
Sub-Saharan Africa		1.0	1.8	2.4	3.1	3.7	4.5	5.2	5.9	6.6	7.3

* 2012 are preliminary estimates; 2013–17 are preliminary projections based on the downside scenario.

Source: ILO, *Trends Econometric Models*, October 2012; see also source of Table A2 and Annex 5.

Table P5. Youth unemployment 2007–17 (rates)

Region	2007	2008	2009	2010	2011	2012*	2013*	2014*	2015*	2016*	2017*
	Rate (%)										
World	11.6	11.8	12.8	12.6	12.4	12.6	12.7	12.8	12.8	12.8	12.9
Developed Economies and European Union	12.5	13.3	17.4	18.1	17.6	17.9	17.7	17.3	16.8	16.3	15.9
Central and South-Eastern Europe (non-EU) and CIS	17.4	17.0	20.4	19.2	17.7	17.1	17.3	17.3	17.3	17.4	17.4
East Asia	7.9	9.1	9.2	8.9	9.2	9.5	9.8	10.0	10.2	10.3	10.5
South-East Asia and the Pacific	14.9	14.1	14.0	13.4	12.7	13.0	13.4	13.7	13.9	14.0	14.2
South Asia	9.3	9.0	9.7	10.2	9.7	9.8	10.0	10.1	10.2	10.2	10.3
Latin America and the Caribbean	14.2	13.6	15.7	14.1	13.4	13.5	13.6	13.7	13.7	13.8	13.8
Middle East	24.6	25.4	25.5	27.5	27.6	28.1	28.7	28.9	29.2	29.3	29.4
North Africa	20.8	20.3	20.4	20.1	23.3	23.8	23.9	23.8	23.5	23.3	23.2
Sub-Saharan Africa	11.8	11.9	12.0	11.9	11.9	11.9	11.9	11.8	11.8	11.8	11.8

Region	2008	2009	2010	2011	2012*	2013*	2014*	2015*	2016*	2017*
	Change from 2007 (percentage points)									
World	0.2	1.2	1.0	0.8	1.0	1.1	1.2	1.2	1.2	1.2
Developed Economies and European Union	0.8	4.9	5.7	5.2	5.5	5.2	4.8	4.3	3.8	3.4
Central and South-Eastern Europe (non-EU) and CIS	–0.4	3.0	1.8	0.3	–0.3	–0.1	–0.1	–0.1	0.0	0.0
East Asia	1.1	1.3	0.9	1.3	1.6	1.9	2.1	2.2	2.4	2.6
South-East Asia and the Pacific	–0.7	–0.9	–1.4	–2.1	–1.9	–1.5	–1.2	–1.0	–0.9	–0.7
South Asia	–0.4	0.4	0.9	0.4	0.5	0.6	0.7	0.8	0.9	1.0
Latin America and the Caribbean	–0.6	1.5	–0.2	–0.8	–0.7	–0.6	–0.5	–0.5	–0.4	–0.4
Middle East	0.8	1.0	2.9	3.1	3.5	4.1	4.4	4.6	4.7	4.8
North Africa	–0.5	–0.4	–0.8	2.5	3.0	3.1	2.9	2.7	2.5	2.4
Sub-Saharan Africa	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0

* 2012 are preliminary estimates; 2013–17 are preliminary projections.

Source: ILO, *Trends Econometric Models*, October 2012; see also source of Table A2 and Annex 5.

Table P6. Youth unemployment 2007-17 (numbers of people)

Region	2007	2008	2009	2010	2011	2012*	2013*	2014*	2015*	2016*	2017*
	Number (millions)										
World	70.4	71.0	76.2	74.7	73.2	73.8	74.2	74.1	73.8	73.5	73.3
Developed Economies and European Union	8.1	8.5	10.8	10.9	10.4	10.6	10.4	10.1	9.7	9.4	9.1
Central and South-Eastern Europe (non-EU) and CIS	4.6	4.6	5.4	5.0	4.4	4.1	4.0	3.9	3.8	3.6	3.6
East Asia	11.9	13.4	13.6	12.9	13.1	13.3	13.2	13.0	12.8	12.6	12.4
South-East Asia and the Pacific	8.8	8.3	8.2	7.8	7.4	7.5	7.7	7.8	7.9	7.9	7.9
South Asia	13.1	12.3	13.1	13.4	12.9	13.0	13.3	13.5	13.6	13.7	13.7
Latin America and the Caribbean	8.0	7.6	8.7	7.9	7.5	7.5	7.6	7.7	7.7	7.7	7.8
Middle East	3.3	3.3	3.3	3.5	3.5	3.6	3.6	3.6	3.5	3.6	3.6
North Africa	2.9	2.9	2.8	2.8	3.2	3.3	3.3	3.2	3.2	3.2	3.1
Sub-Saharan Africa	9.7	10.0	10.3	10.4	10.7	10.9	11.1	11.4	11.6	11.8	12.1

Region	2008	2009	2010	2011	2012*	2013*	2014*	2015*	2016*	2017*
	Change from 2007 (millions)									
World	0.6	5.8	4.2	2.8	3.4	3.8	3.6	3.4	3.0	2.8
Developed Economies and European Union	0.5	2.8	2.9	2.4	2.5	2.3	2.1	1.7	1.3	1.0
Central and South-Eastern Europe (non-EU) and CIS	0.0	0.8	0.4	−0.2	−0.5	−0.6	−0.7	−0.9	−1.0	−1.1
East Asia	1.5	1.7	1.0	1.2	1.4	1.3	1.1	0.9	0.7	0.5
South-East Asia and the Pacific	−0.5	−0.6	−1.0	−1.4	−1.3	−1.1	−1.0	−0.9	−0.9	−0.9
South Asia	−0.8	0.0	0.3	−0.3	−0.1	0.2	0.3	0.5	0.5	0.6
Latin America and the Caribbean	−0.3	0.8	−0.1	−0.5	−0.4	−0.3	−0.3	−0.3	−0.2	−0.2
Middle East	0.0	0.0	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3
North Africa	−0.1	−0.1	−0.2	0.3	0.3	0.3	0.3	0.2	0.2	0.2
Sub-Saharan Africa	0.3	0.5	0.7	0.9	1.2	1.4	1.6	1.9	2.1	2.4

* 2012 are preliminary estimates; 2013–17 are preliminary projections.

Source: ILO, *Trends Econometric Models*, October 2012; see also source of Table A2 and Annex 5.

Table P7. Youth unemployment 2007–17 (rates), downside scenario

Region	2007	2008	2009	2010	2011	2012*	2013*	2014*	2015*	2016*	2017*
	Rate (%)										
World	11.6	11.8	12.8	12.6	12.4	12.6	12.8	13.0	13.1	13.1	13.0
Developed Economies and European Union	12.5	13.3	17.4	18.1	17.6	17.9	18.3	18.5	18.1	17.4	16.6
Central and South-Eastern Europe (non-EU) and CIS	17.4	17.0	20.4	19.2	17.7	17.1	17.4	17.6	17.6	17.6	17.6
East Asia	7.9	9.1	9.2	8.9	9.2	9.5	10.0	10.3	10.4	10.5	10.6
South-East Asia and the Pacific	14.9	14.1	14.0	13.4	12.7	13.0	13.4	14.0	14.3	14.4	14.4
South Asia	9.3	9.0	9.7	10.2	9.7	9.8	9.9	10.1	10.2	10.3	10.3
Latin America and the Caribbean	14.2	13.6	15.7	14.1	13.4	13.5	13.6	13.7	13.8	13.8	13.8
Middle East	24.6	25.4	25.5	27.5	27.6	28.1	28.7	29.1	29.4	29.5	29.5
North Africa	20.8	20.3	20.4	20.1	23.3	23.8	24.0	23.9	23.7	23.4	23.2
Sub-Saharan Africa	11.8	11.9	12.0	11.9	11.9	11.9	11.9	11.9	11.9	11.8	11.8

Region	2008	2009	2010	2011	2012*	2013*	2014*	2015*	2016*	2017*
	Change from 2007 (percentage points)									
World	0.2	1.2	1.0	0.8	1.0	1.2	1.4	1.5	1.4	1.4
Developed Economies and European Union	0.8	4.9	5.7	5.2	5.5	5.8	6.0	5.7	5.0	4.2
Central and South-Eastern Europe (non-EU) and CIS	–0.4	3.0	1.8	0.3	–0.3	0.0	0.2	0.2	0.2	0.2
East Asia	1.1	1.3	0.9	1.3	1.6	2.1	2.3	2.5	2.6	2.7
South-East Asia and the Pacific	–0.7	–0.9	–1.4	–2.1	–1.9	–1.5	–0.8	–0.6	–0.5	–0.5
South Asia	–0.4	0.4	0.9	0.4	0.5	0.6	0.8	0.9	0.9	1.0
Latin America and the Caribbean	–0.6	1.5	–0.2	–0.8	–0.7	–0.6	–0.5	–0.4	–0.4	–0.4
Middle East	0.8	1.0	2.9	3.1	3.5	4.1	4.5	4.8	4.9	4.9
North Africa	–0.5	–0.4	–0.8	2.5	3.0	3.2	3.1	2.9	2.6	2.4
Sub-Saharan Africa	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0

* 2012 are preliminary estimates; 2013–17 are preliminary projections based on the downside scenario.

Source: ILO, *Trends Econometric Models*, October 2012; see also source of Table A2 and Annex 5.

Table P8. Youth unemployment 2007–17 (numbers of people), downside scenario

Region	2007	2008	2009	2010	2011	2012*	2013*	2014*	2015*	2016*	2017*
	Number (millions)										
World	70.4	71.0	76.2	74.7	73.2	73.8	74.8	75.5	75.4	74.8	74.1
Developed Economies and European Union	8.1	8.5	10.8	10.9	10.4	10.6	10.7	10.8	10.5	10.0	9.5
Central and South-Eastern Europe (non-EU) and CIS	4.6	4.6	5.4	5.0	4.4	4.1	4.1	3.9	3.8	3.7	3.6
East Asia	11.9	13.4	13.6	12.9	13.1	13.3	13.4	13.3	13.1	12.8	12.6
South-East Asia and the Pacific	8.8	8.3	8.2	7.8	7.4	7.5	7.7	8.0	8.2	8.1	8.1
South Asia	13.1	12.3	13.1	13.4	12.9	13.0	13.2	13.5	13.6	13.7	13.8
Latin America and the Caribbean	8.0	7.6	8.7	7.9	7.5	7.5	7.6	7.7	7.8	7.8	7.8
Middle East	3.3	3.3	3.3	3.5	3.5	3.6	3.6	3.6	3.6	3.6	3.6
North Africa	2.9	2.9	2.8	2.8	3.2	3.3	3.3	3.2	3.2	3.2	3.1
Sub-Saharan Africa	9.7	10.0	10.3	10.4	10.7	10.9	11.1	11.4	11.6	11.9	12.1

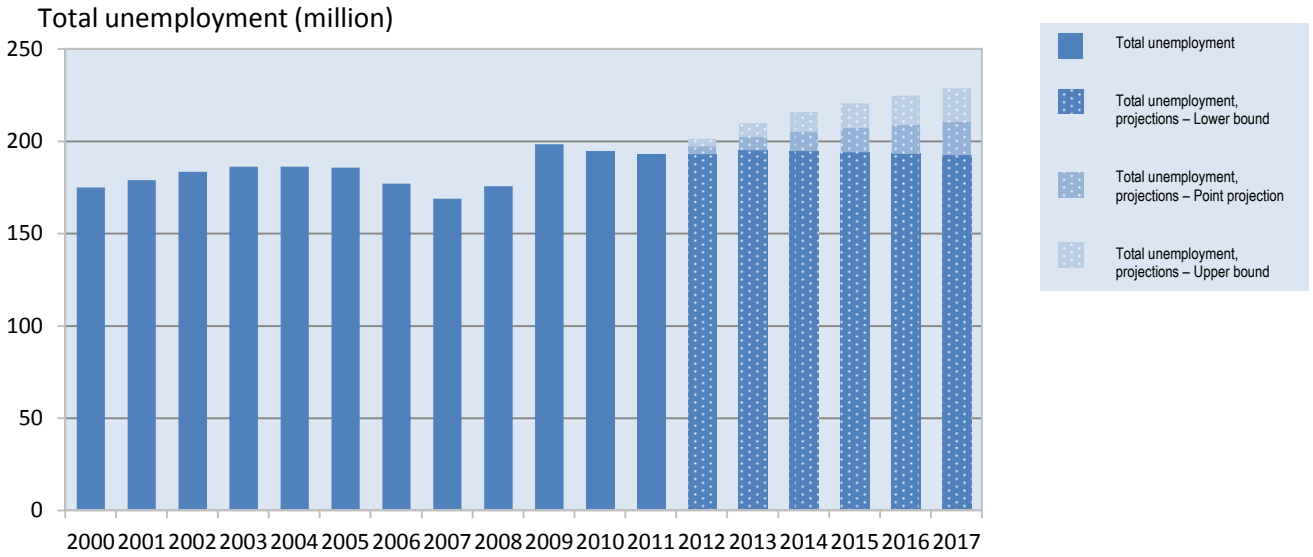
Region	2008	2009	2010	2011	2012*	2013*	2014*	2015*	2016*	2017*
	Change from 2007 (millions)									
World	0.6	5.8	4.2	2.8	3.4	4.4	5.1	5.0	4.4	3.7
Developed Economies and European Union	0.5	2.8	2.9	2.4	2.5	2.7	2.7	2.5	2.0	1.5
Central and South-Eastern Europe (non-EU) and CIS	0.0	0.8	0.4	−0.2	−0.5	−0.5	−0.7	−0.8	−0.9	−1.0
East Asia	1.5	1.7	1.0	1.2	1.4	1.5	1.4	1.2	0.9	0.7
South-East Asia and the Pacific	−0.5	−0.6	−1.0	−1.4	−1.3	−1.1	−0.8	−0.7	−0.7	−0.7
South Asia	−0.8	0.0	0.3	−0.3	−0.1	0.1	0.4	0.5	0.6	0.6
Latin America and the Caribbean	−0.3	0.8	−0.1	−0.5	−0.4	−0.3	−0.3	−0.2	−0.2	−0.2
Middle East	0.0	0.0	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3
North Africa	−0.1	−0.1	−0.2	0.3	0.3	0.3	0.3	0.3	0.2	0.2
Sub-Saharan Africa	0.3	0.5	0.7	0.9	1.2	1.4	1.7	1.9	2.2	2.4

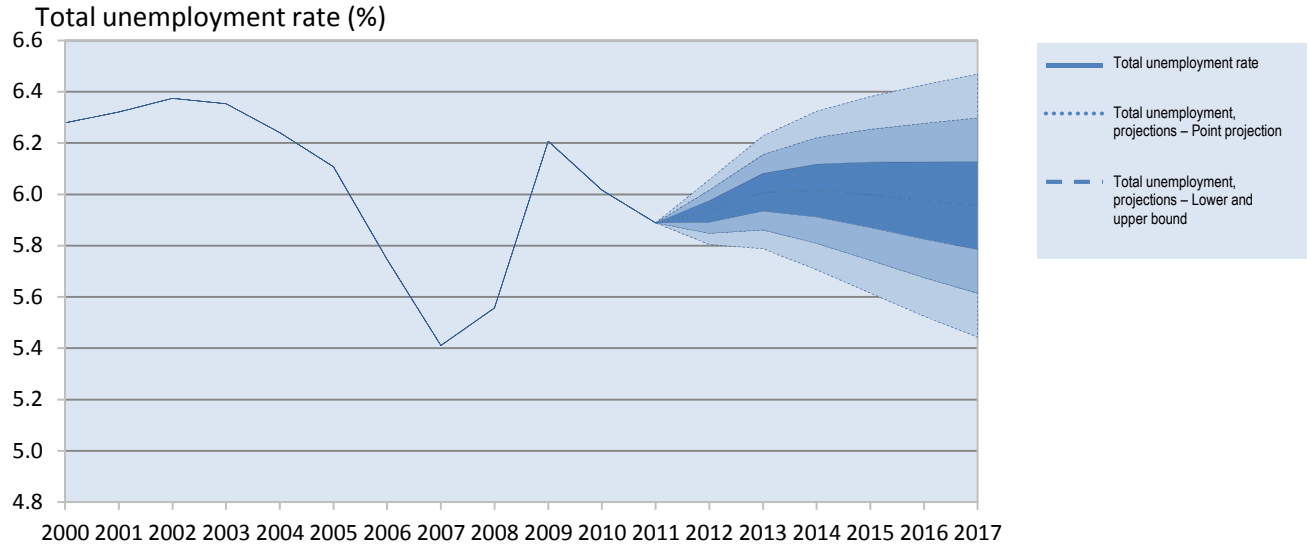
* 2012 are preliminary estimates; 2013–17 are preliminary projections based on the downside scenario.

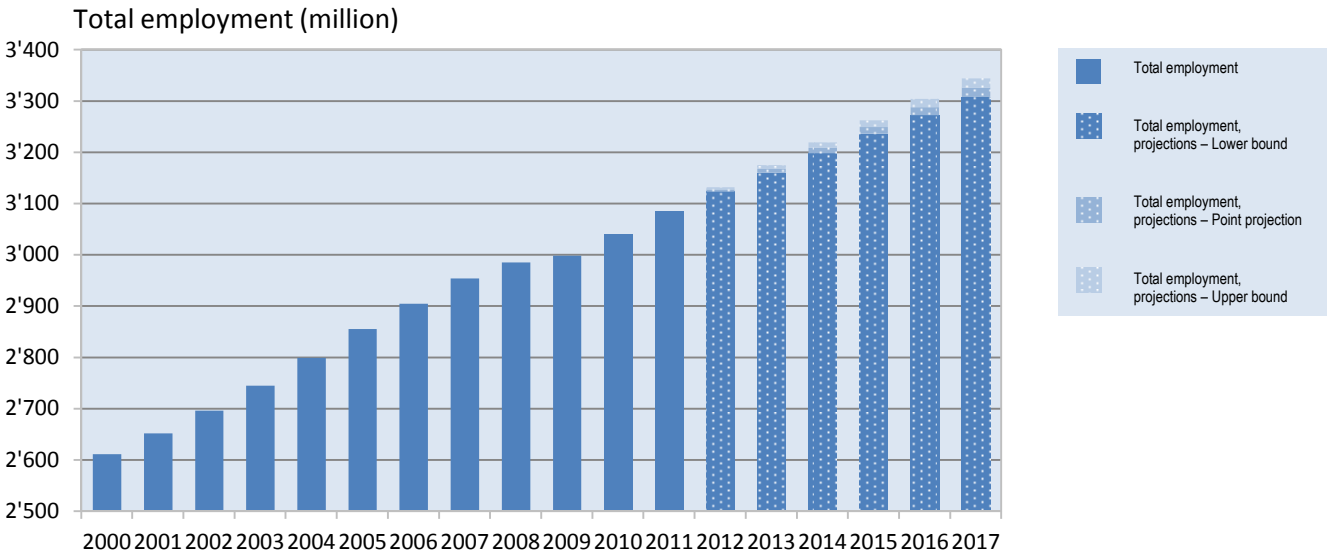
Source: ILO, *Trends Econometric Models*, October 2012; see also source of Table A2 and Annex 5.

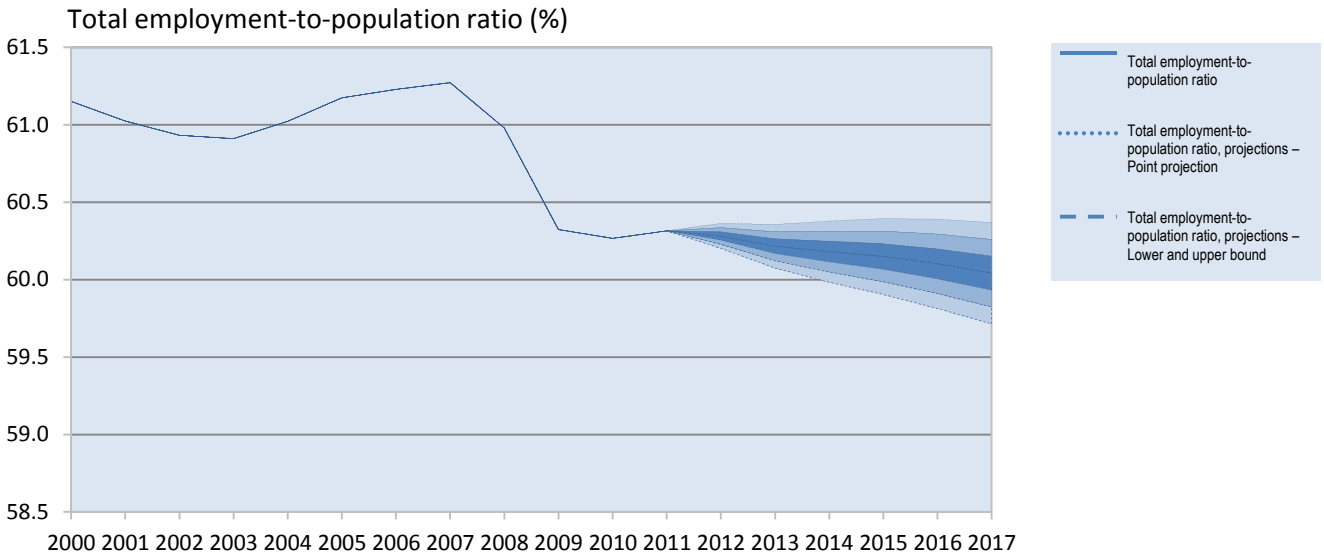
Annex 3. Global and regional figures

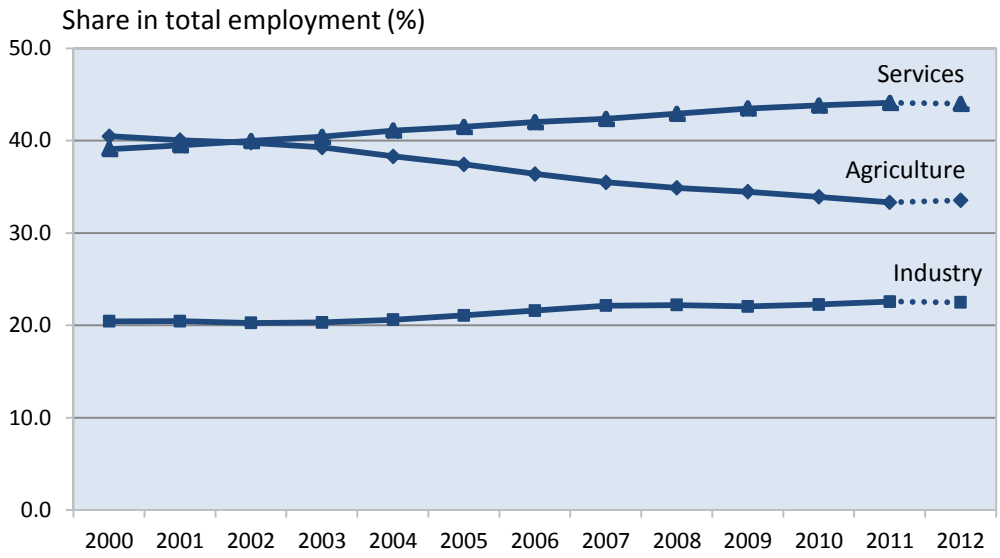
World

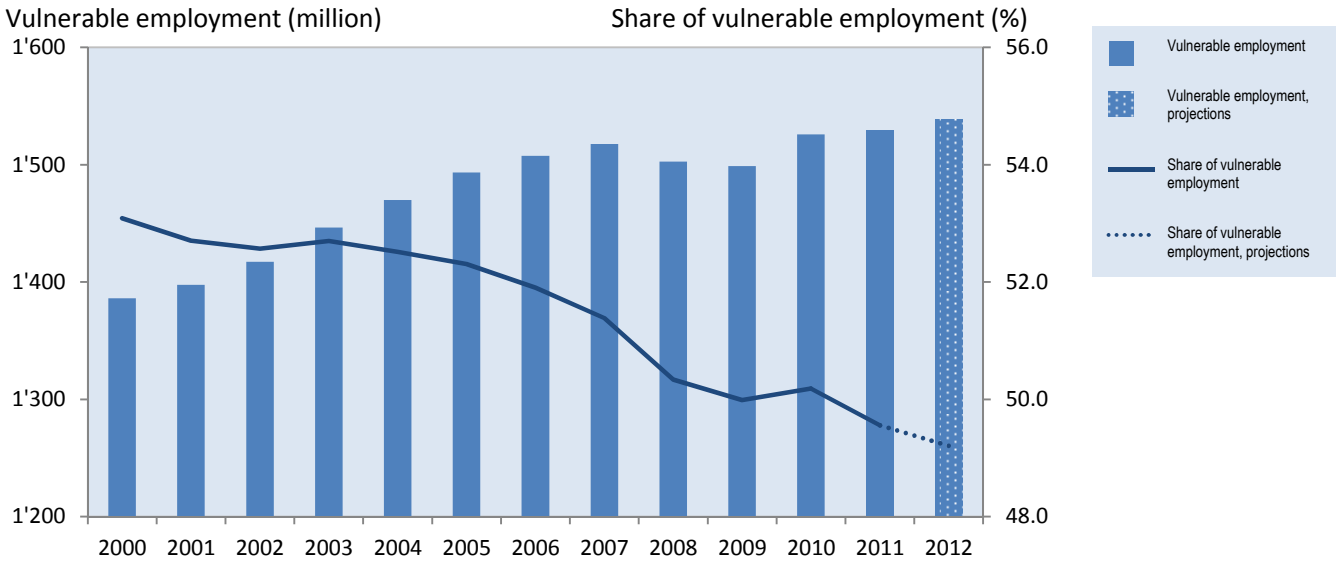


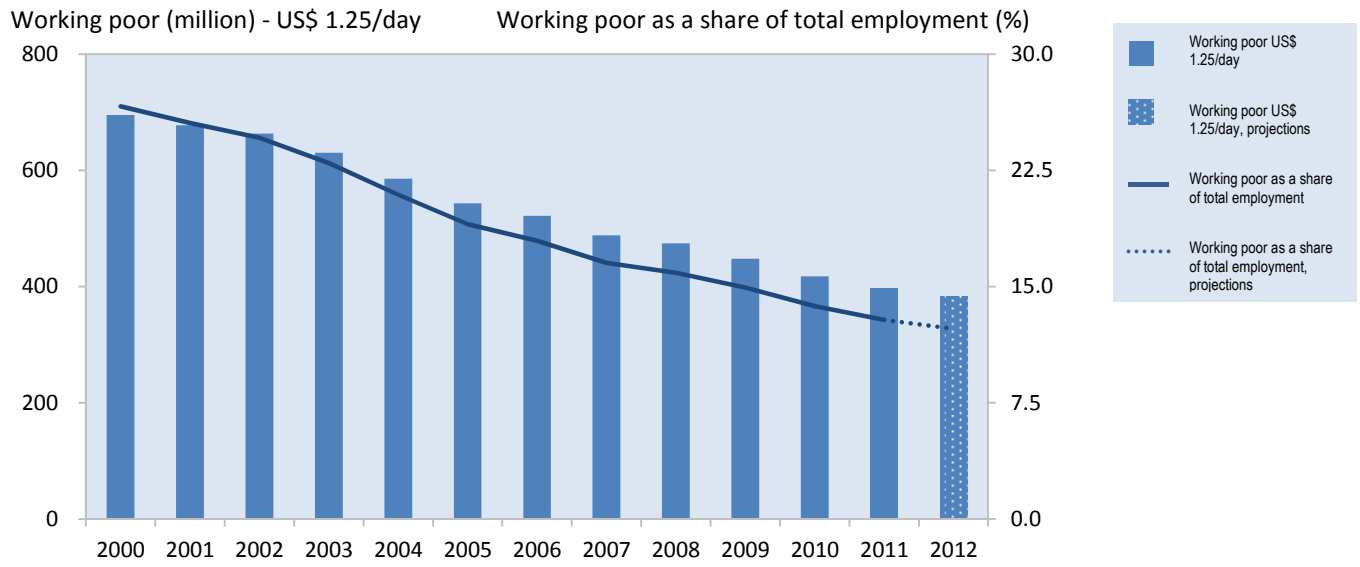


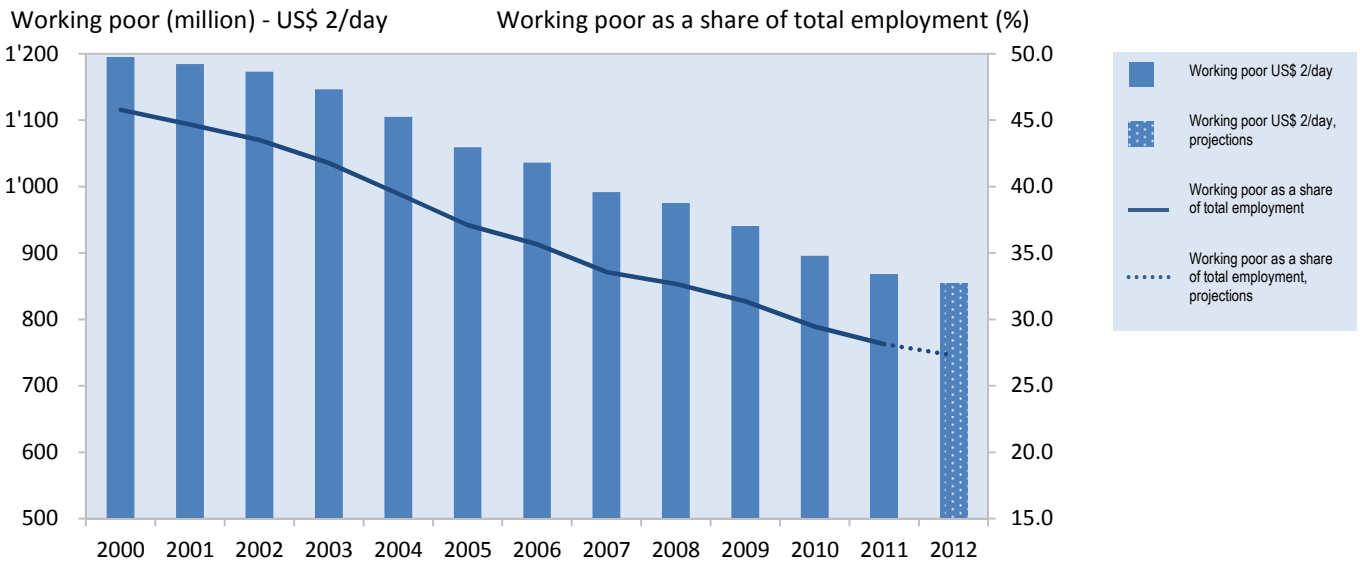

Total employment (million)
3'400
3'300
3'200
3'100
3'000
2'900
2'800
2'700
2'600
2'500
2000 2001 2002 2003 2004 2005 2006 2007 2008 2009 2010 2011 2012 2013 2014 2015 2016 2017
Total employment
Total employment, projections – Lower bound
Total employment, projections – Point projection
Total employment, projections – Upper bound


Total employment-to-population ratio (%)
61.5
61.0
60.5
60.0
59.5
59.0
58.5
2000 2001 2002 2003 2004 2005 2006 2007 2008 2009 2010 2011 2012 2013 2014 2015 2016 2017
Total employment-to-population ratio
Total employment-to-population ratio, projections – Point projection
Total employment-to-population ratio, projections – Lower and upper bound

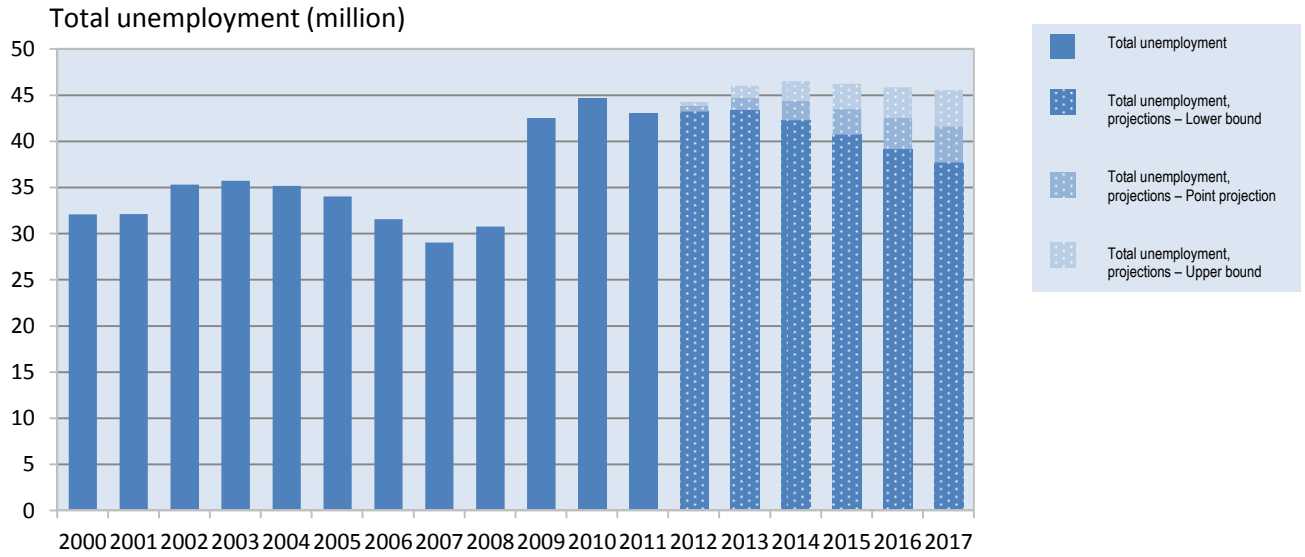

Share in total employment (%)
50.0
40.0
30.0
20.0
10.0
0.0
Services
Agriculture
Industry
2000 2001 2002 2003 2004 2005 2006 2007 2008 2009 2010 2011 2012

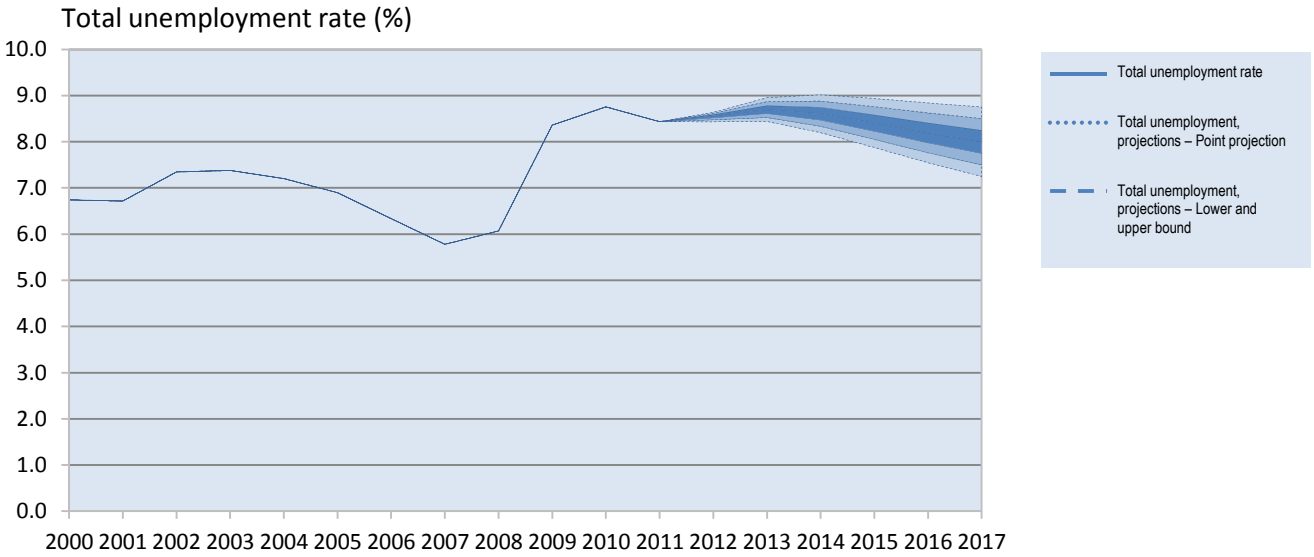

Vulnerable employment (million)
Share of vulnerable employment (%)
1'600
1'500
1'400
1'300
1'200
56.0
54.0
52.0
50.0
48.0
2000 2001 2002 2003 2004 2005 2006 2007 2008 2009 2010 2011 2012
Vulnerable employment
Vulnerable employment, projections
Share of vulnerable employment
Share of vulnerable employment, projections

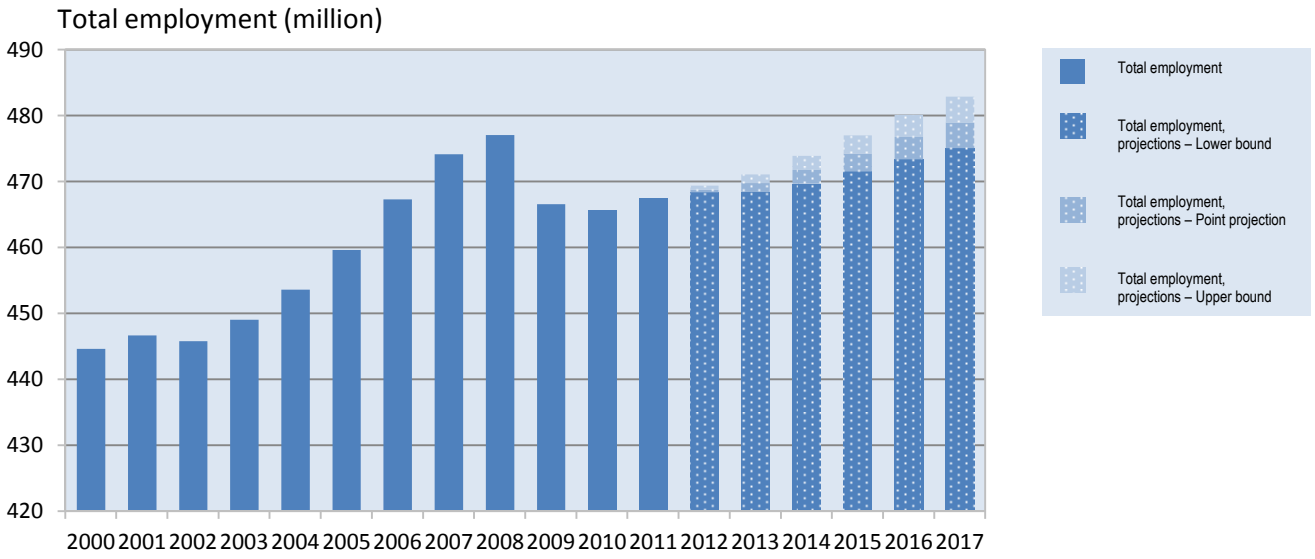

Working poor (million) - US$ 1.25/day
Working poor as a share of total employment (%)
800
600
400
200
0
30.0
22.5
15.0
7.5
0.0
2000 2001 2002 2003 2004 2005 2006 2007 2008 2009 2010 2011 2012
Working poor US$ 1.25/day
Working poor US$ 1.25/day, projections
Working poor as a share of total employment
Working poor as a share of total employment, projections

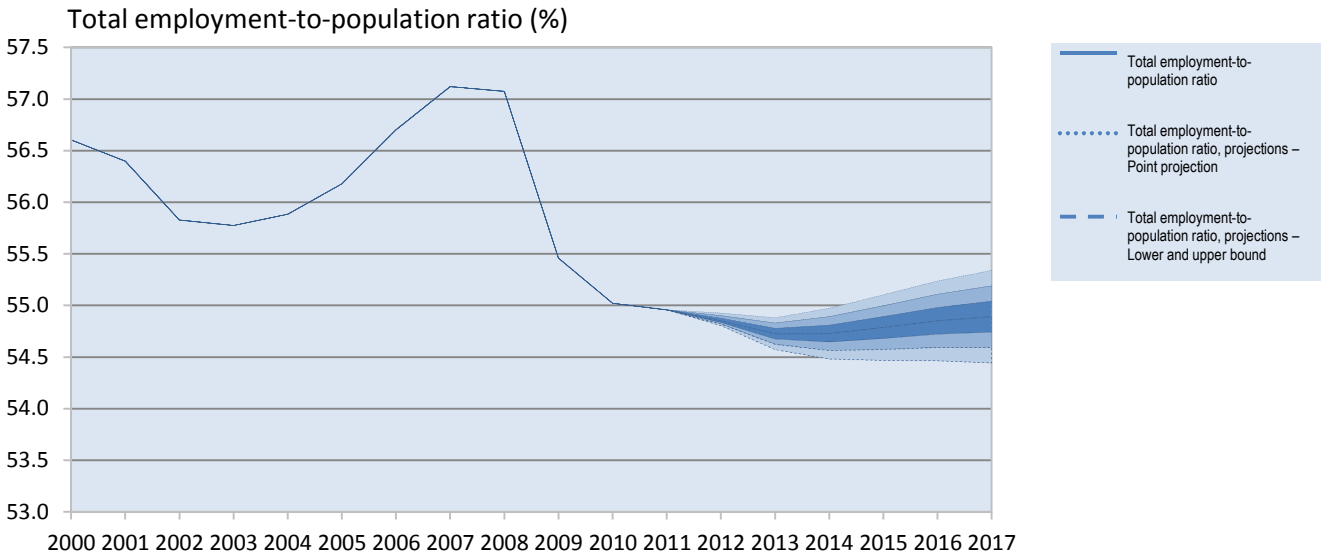

Working poor (million) - US$ 2/day
Working poor as a share of total employment (%)
1'200
1'100
1'000
900
800
700
600
500
50.0
45.0
40.0
35.0
30.0
25.0
20.0
15.0
2000 2001 2002 2003 2004 2005 2006 2007 2008 2009 2010 2011 2012
Working poor US$ 2/day
Working poor US$ 2/day, projections
Working poor as a share of total employment
Working poor as a share of total employment, projections

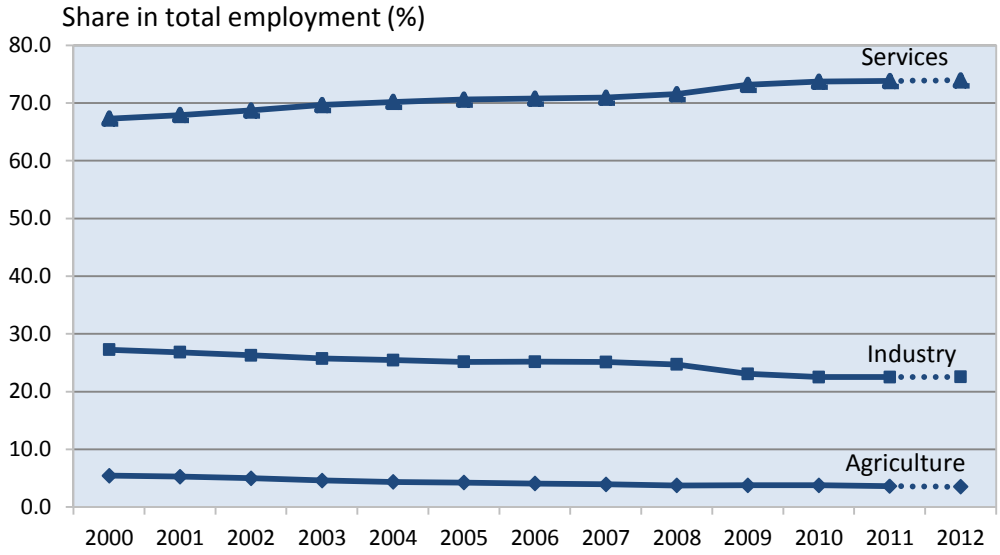
Developed Economies and European Union

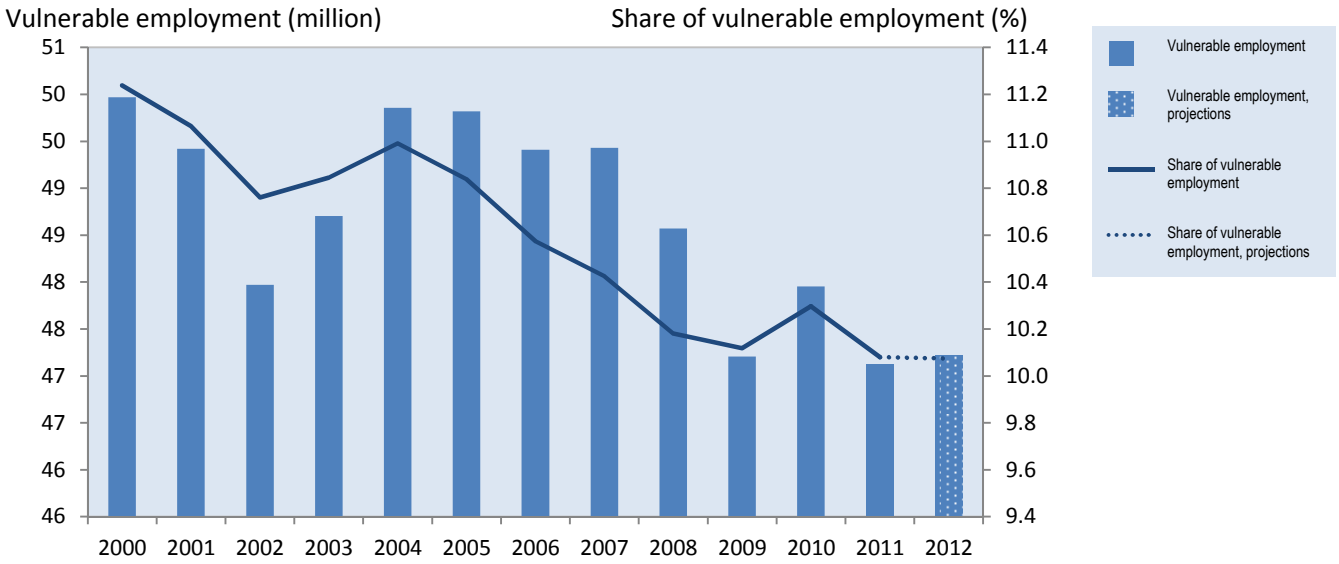




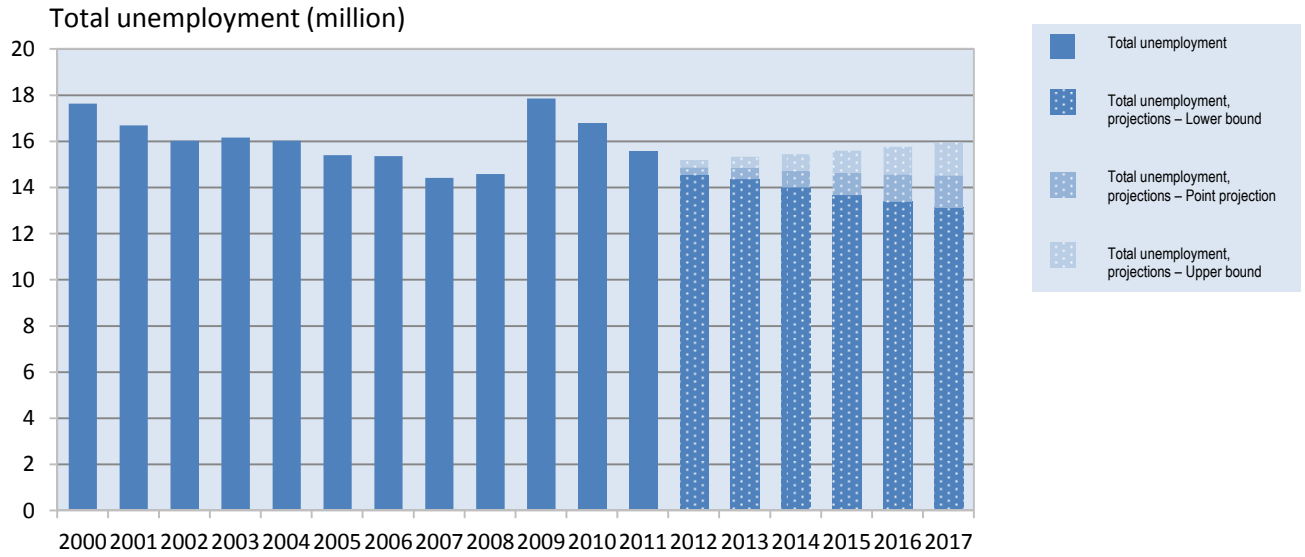

Total employment (million)
490
480
470
460
450
440
430
420
2000 2001 2002 2003 2004 2005 2006 2007 2008 2009 2010 2011 2012 2013 2014 2015 2016 2017
Total employment
Total employment, projections – Lower bound
Total employment, projections – Point projection
Total employment, projections – Upper bound

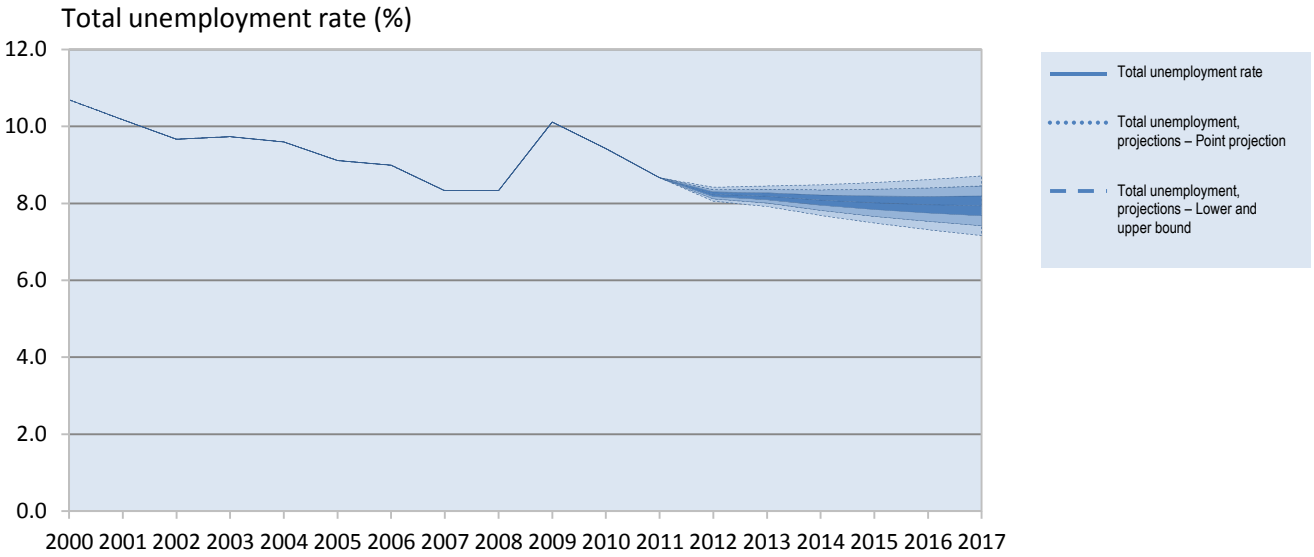

Total employment-to-population ratio (%)
57.5
57.0
56.5
56.0
55.5
55.0
54.5
54.0
53.5
53.0
2000 2001 2002 2003 2004 2005 2006 2007 2008 2009 2010 2011 2012 2013 2014 2015 2016 2017
Total employment-to-population ratio
Total employment-to-population ratio, projections – Point projection
Total employment-to-population ratio, projections – Lower and upper bound

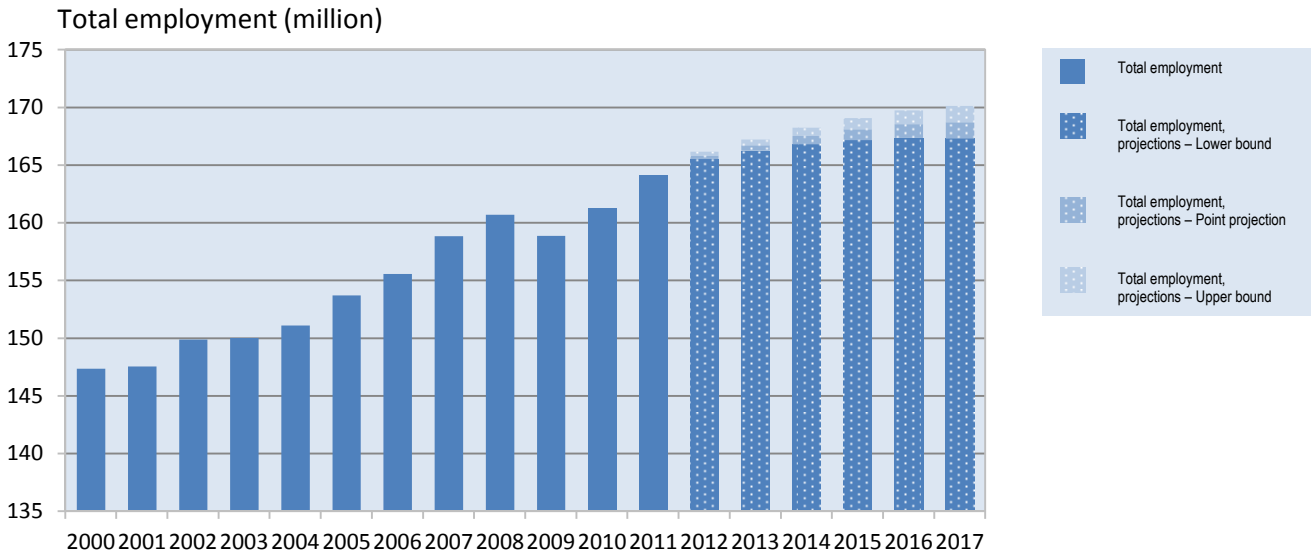

Share in total employment (%)
80.0
70.0
60.0
50.0
40.0
30.0
20.0
10.0
0.0
Services
Industry
Agriculture
2000 2001 2002 2003 2004 2005 2006 2007 2008 2009 2010 2011 2012

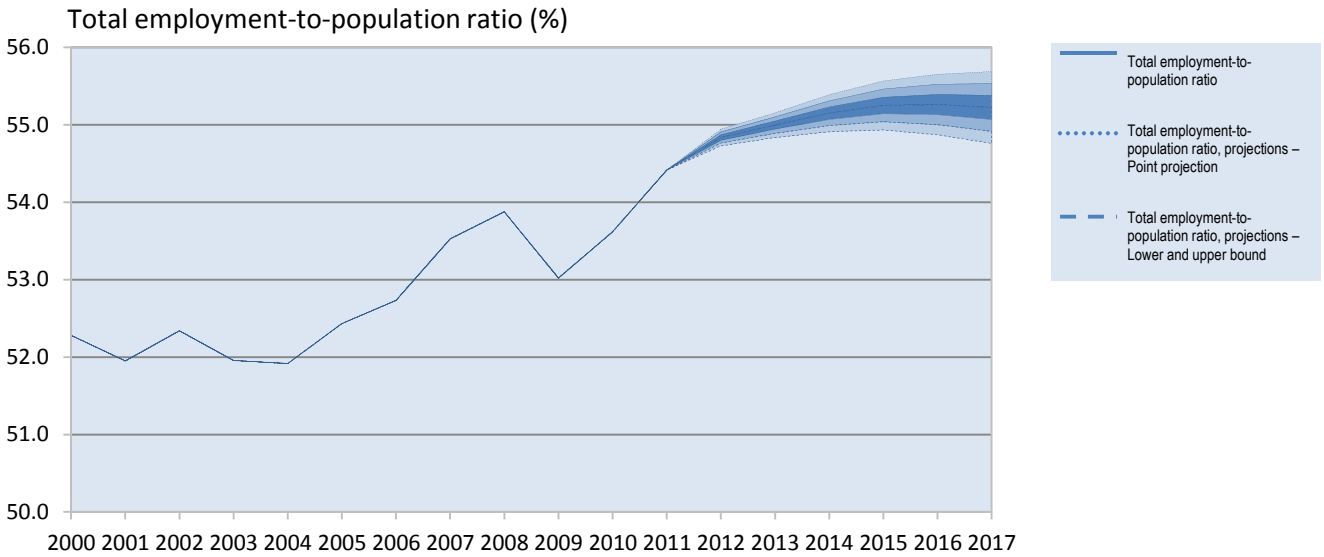

Vulnerable employment (million)
Share of vulnerable employment (%)
51
50
50
49
49
48
48
47
47
46
46
11.4
11.2
11.0
10.8
10.6
10.4
10.2
10.0
9.8
9.6
9.4
2000 2001 2002 2003 2004 2005 2006 2007 2008 2009 2010 2011 2012
Vulnerable employment
Vulnerable employment, projections
Share of vulnerable employment
Share of vulnerable employment, projections

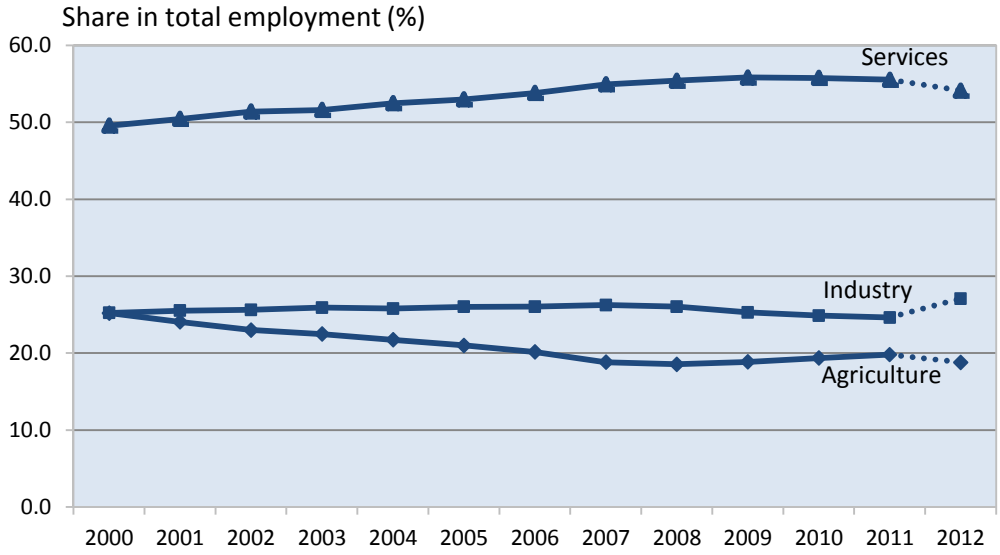
Central and South-Eastern Europe (non-EU) and CIS

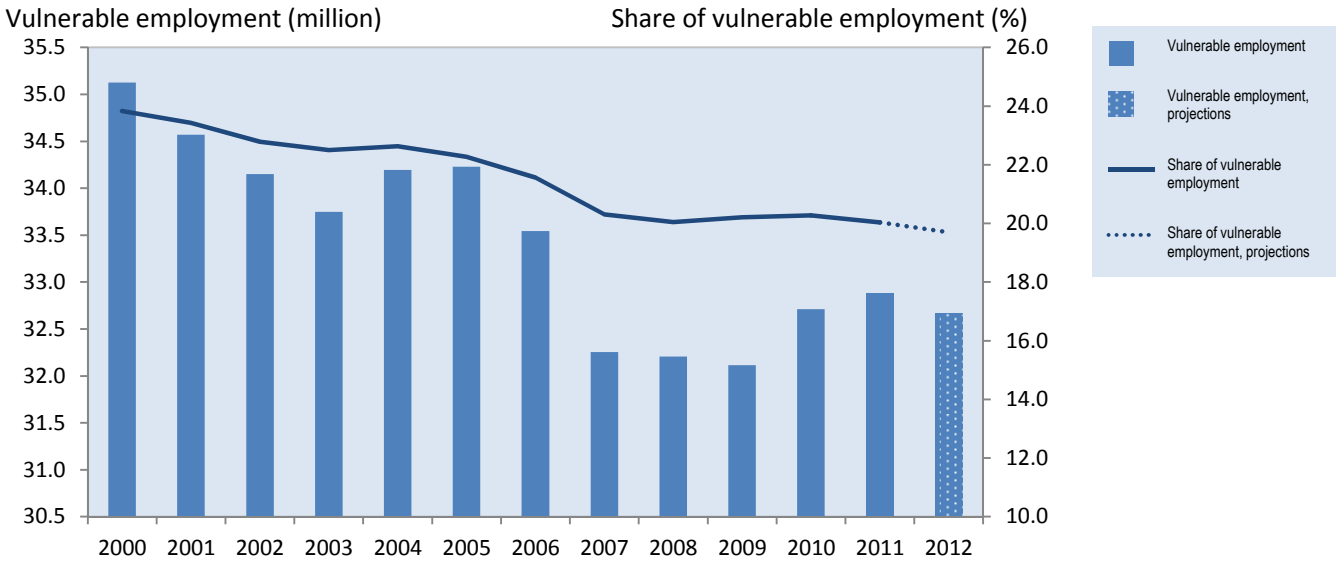


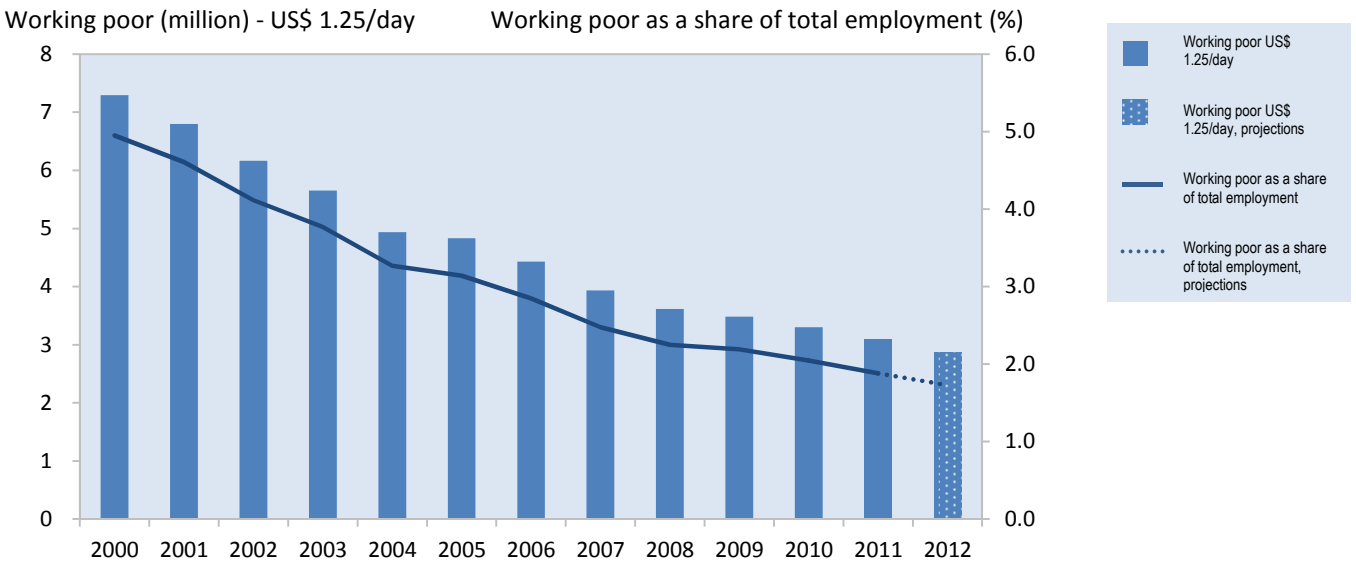


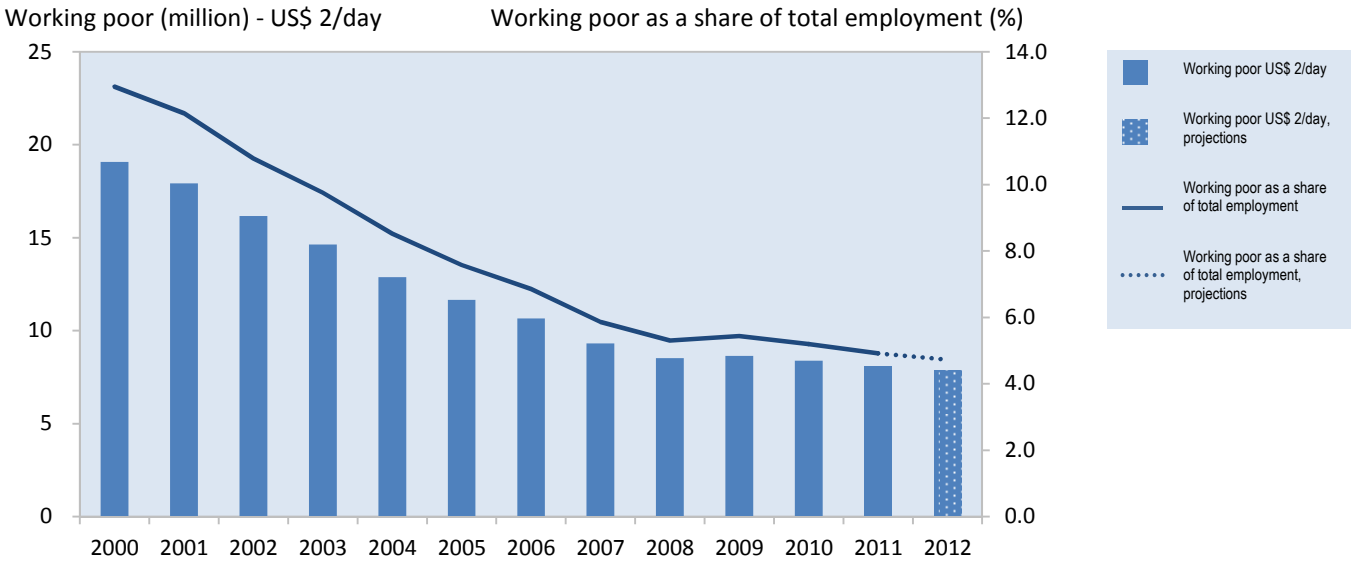

Total employment (million)
175
170
165
160
155
150
145
140
135
2000 2001 2002 2003 2004 2005 2006 2007 2008 2009 2010 2011 2012 2013 2014 2015 2016 2017
Total employment
Total employment, projections – Lower bound
Total employment, projections – Point projection
Total employment, projections – Upper bound


Total employment-to-population ratio (%)
56.0
55.0
54.0
53.0
52.0
51.0
50.0
2000 2001 2002 2003 2004 2005 2006 2007 2008 2009 2010 2011 2012 2013 2014 2015 2016 2017
Total employment-to-population ratio
Total employment-to-population ratio, projections – Point projection
Total employment-to-population ratio, projections – Lower and upper bound

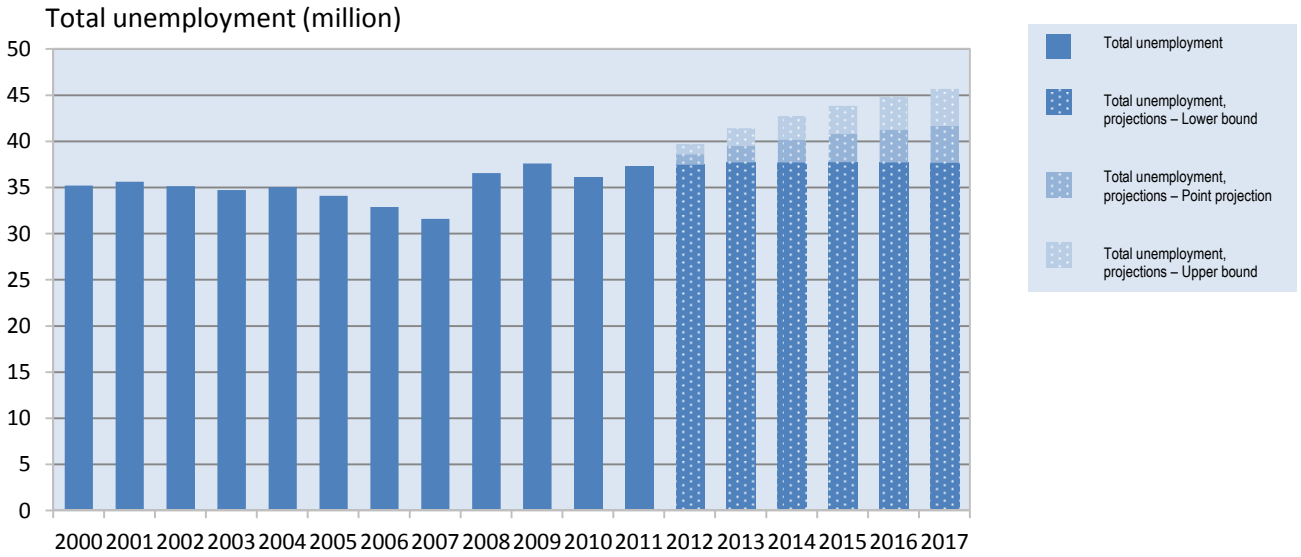

Share in total employment (%)
60.0
50.0
40.0
30.0
20.0
10.0
0.0
Services
Industry
Agriculture
2000 2001 2002 2003 2004 2005 2006 2007 2008 2009 2010 2011 2012

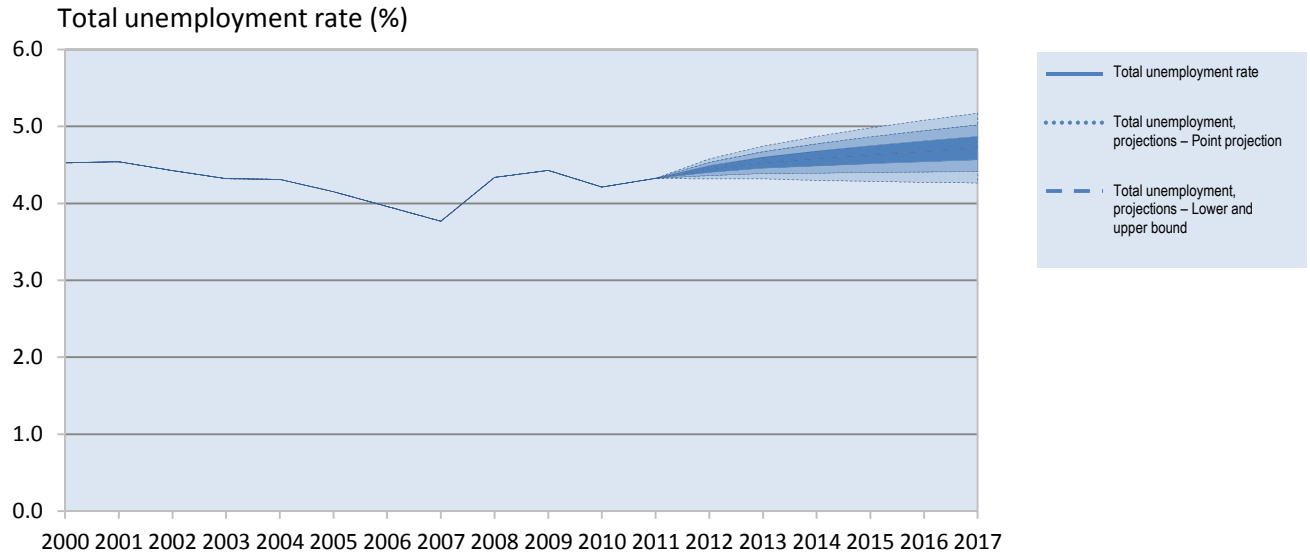

Vulnerable employment (million)
Share of vulnerable employment (%)
35.5
35.0
34.5
34.0
33.5
33.0
32.5
32.0
31.5
31.0
30.5
26.0
24.0
22.0
20.0
18.0
16.0
14.0
12.0
10.0
2000 2001 2002 2003 2004 2005 2006 2007 2008 2009 2010 2011 2012
Vulnerable employment
Vulnerable employment, projections
Share of vulnerable employment
Share of vulnerable employment, projections

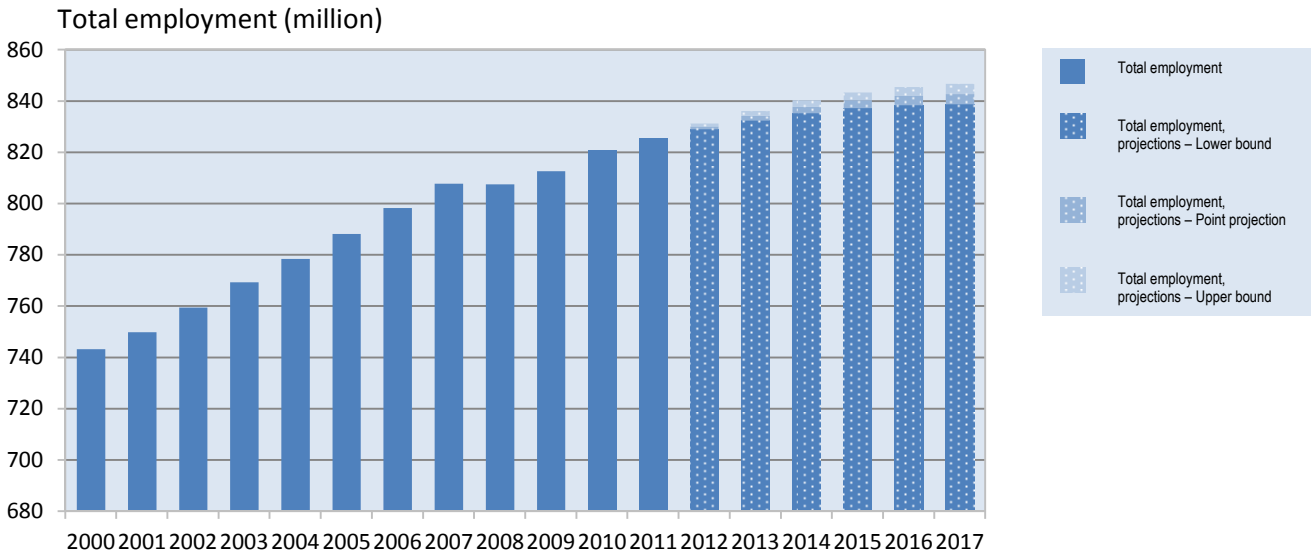

Working poor (million) - US$ 1.25/day
Working poor as a share of total employment (%)
8
7
6
5
4
3
2
1
0
6.0
5.0
4.0
3.0
2.0
1.0
0.0
2000
2001
2002
2003
2004
2005
2006
2007
2008
2009
2010
2011
2012
Working poor US$ 1.25/day
Working poor US$ 1.25/day, projections
Working poor as a share of total employment
Working poor as a share of total employment, projections

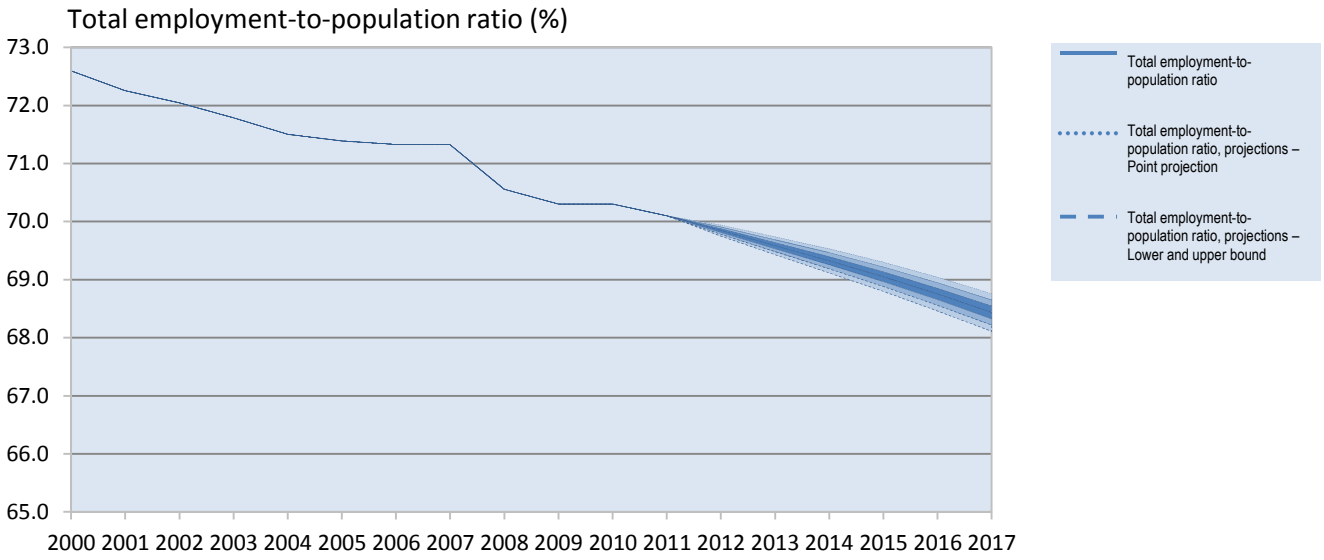

Working poor (million) - US$ 2/day
Working poor as a share of total employment (%)
25
20
15
10
5
0
14.0
12.0
10.0
8.0
6.0
4.0
2.0
0.0
2000
2001
2002
2003
2004
2005
2006
2007
2008
2009
2010
2011
2012
Working poor US$ 2/day
Working poor US$ 2/day, projections
Working poor as a share of total employment
Working poor as a share of total employment, projections

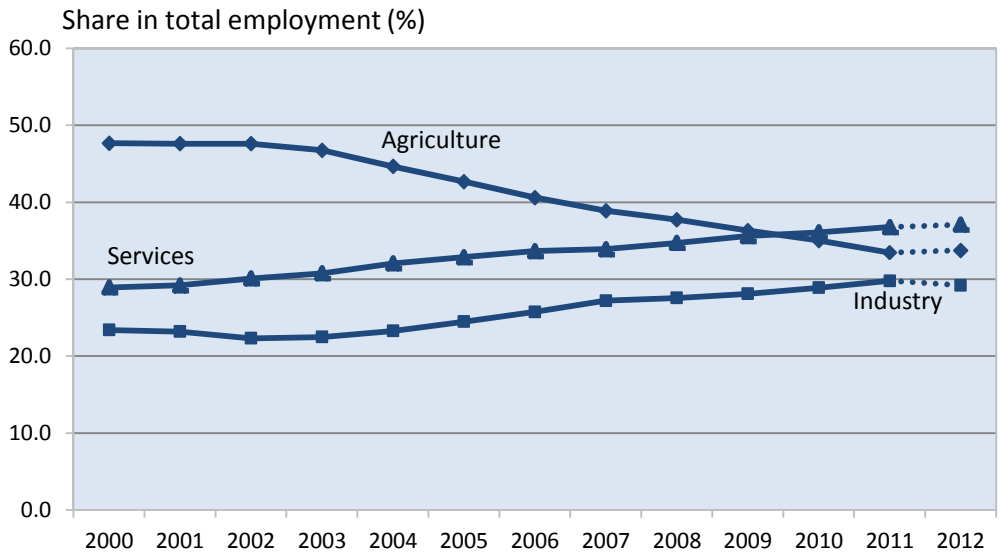
East Asia

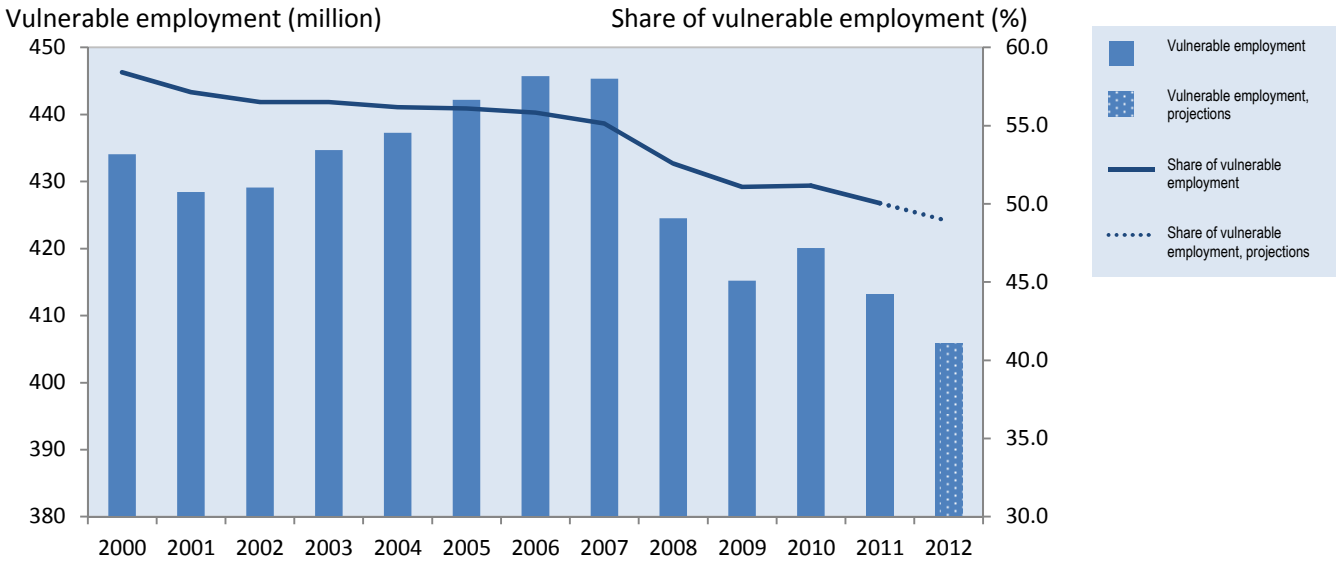

Total unemployment (million)
50
45
40
35
30
25
20
15
10
5
0
2000 2001 2002 2003 2004 2005 2006 2007 2008 2009 2010 2011 2012 2013 2014 2015 2016 2017
Total unemployment
Total unemployment, projections – Lower bound
Total unemployment, projections – Point projection
Total unemployment, projections – Upper bound

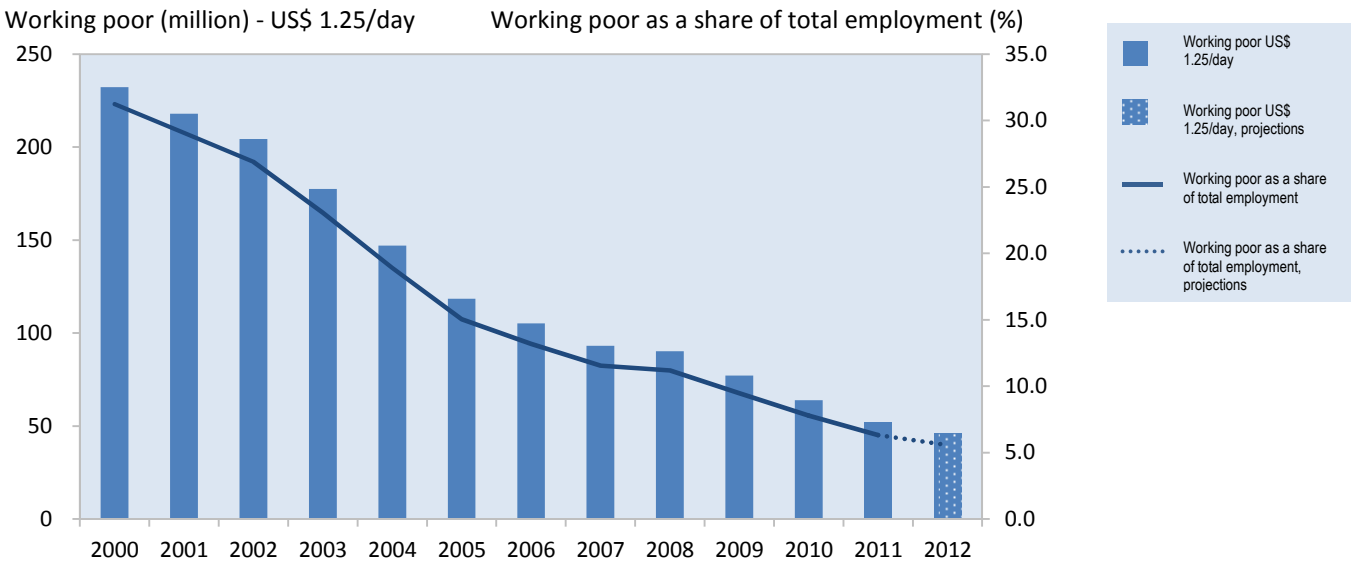

Total unemployment rate (%)
6.0
5.0
4.0
3.0
2.0
1.0
0.0
2000 2001 2002 2003 2004 2005 2006 2007 2008 2009 2010 2011 2012 2013 2014 2015 2016 2017
Total unemployment rate
Total unemployment, projections – Point projection
Total unemployment, projections – Lower and upper bound


Total employment (million)
860
840
820
800
780
760
740
720
700
680
2000 2001 2002 2003 2004 2005 2006 2007 2008 2009 2010 2011 2012 2013 2014 2015 2016 2017
Total employment
Total employment, projections – Lower bound
Total employment, projections – Point projection
Total employment, projections – Upper bound


Total employment-to-population ratio (%)
73.0
72.0
71.0
70.0
69.0
68.0
67.0
66.0
65.0
2000 2001 2002 2003 2004 2005 2006 2007 2008 2009 2010 2011 2012 2013 2014 2015 2016 2017
Total employment-to-population ratio
Total employment-to-population ratio, projections – Point projection
Total employment-to-population ratio, projections – Lower and upper bound

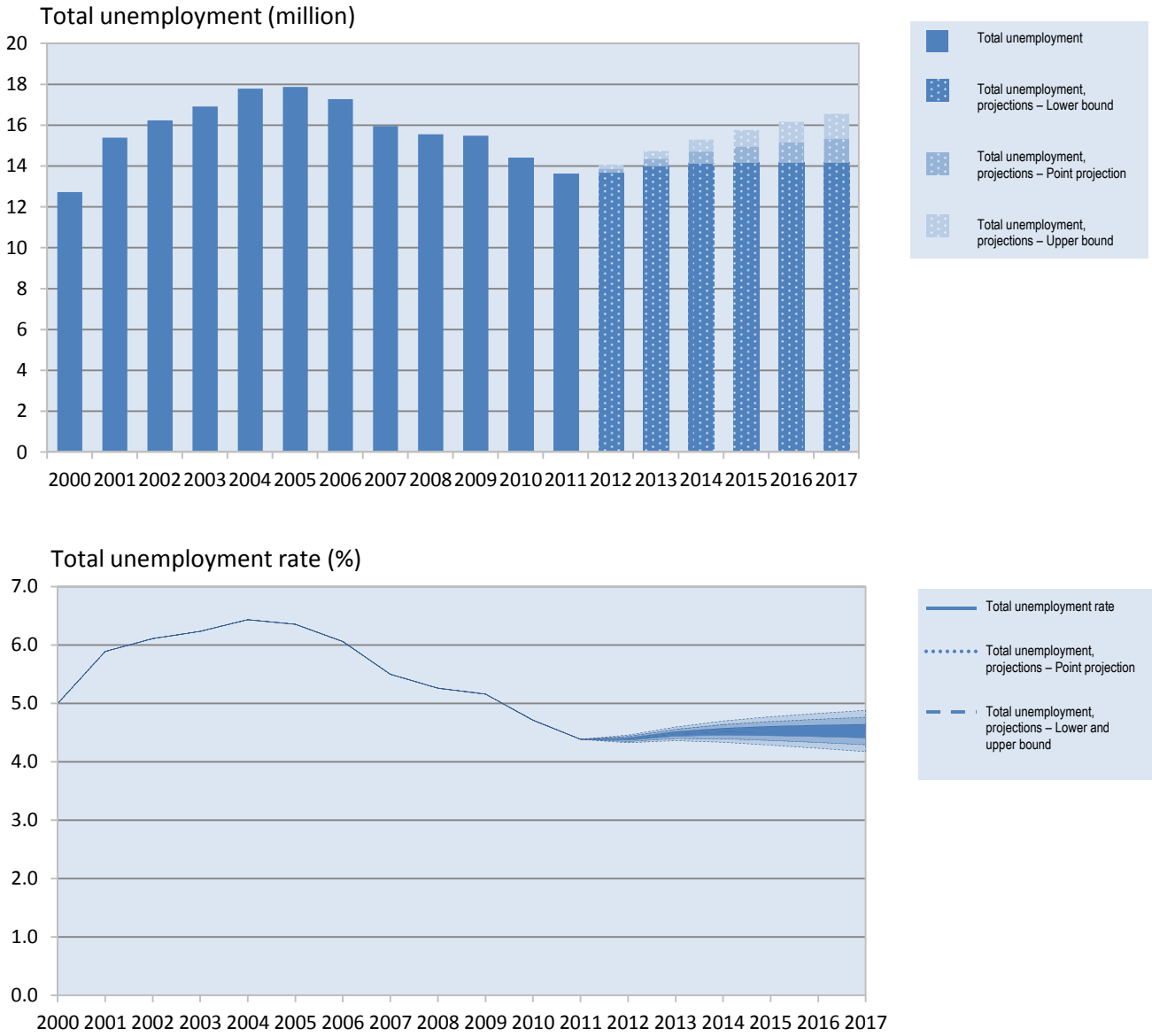

Share in total employment (%)
60.0
50.0
40.0
30.0
20.0
10.0
0.0
Agriculture
Services
Industry
2000
2001
2002
2003
2004
2005
2006
2007
2008
2009
2010
2011
2012

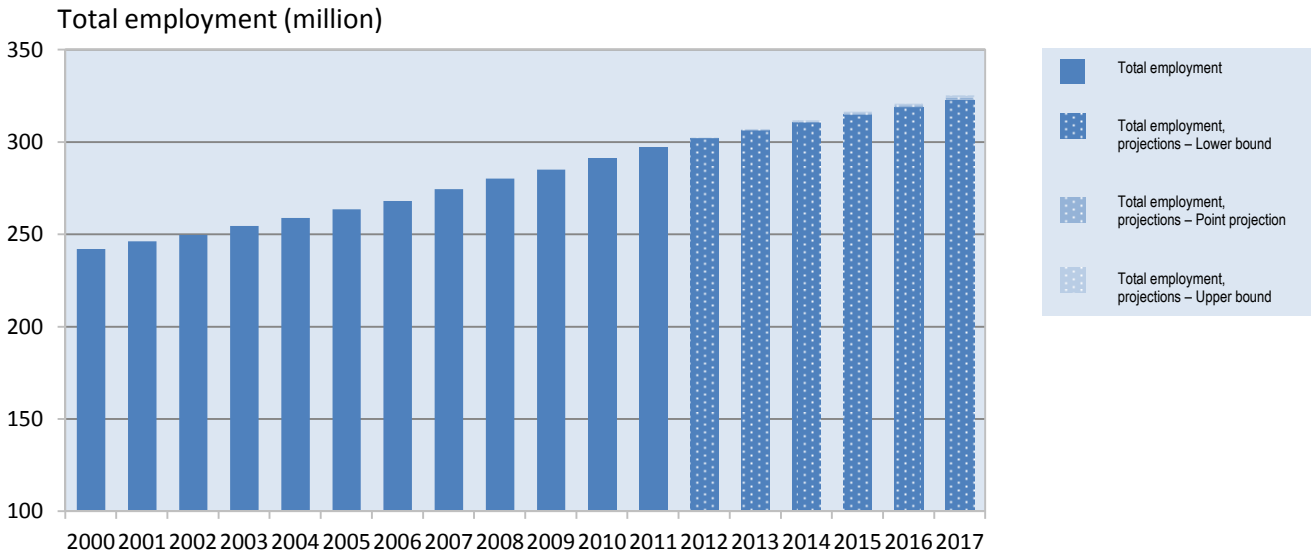

Vulnerable employment (million)
Share of vulnerable employment (%)
450
440
430
420
410
400
390
380
60.0
55.0
50.0
45.0
40.0
35.0
30.0
2000
2001
2002
2003
2004
2005
2006
2007
2008
2009
2010
2011
2012
Vulnerable employment
Vulnerable employment, projections
Share of vulnerable employment
Share of vulnerable employment, projections

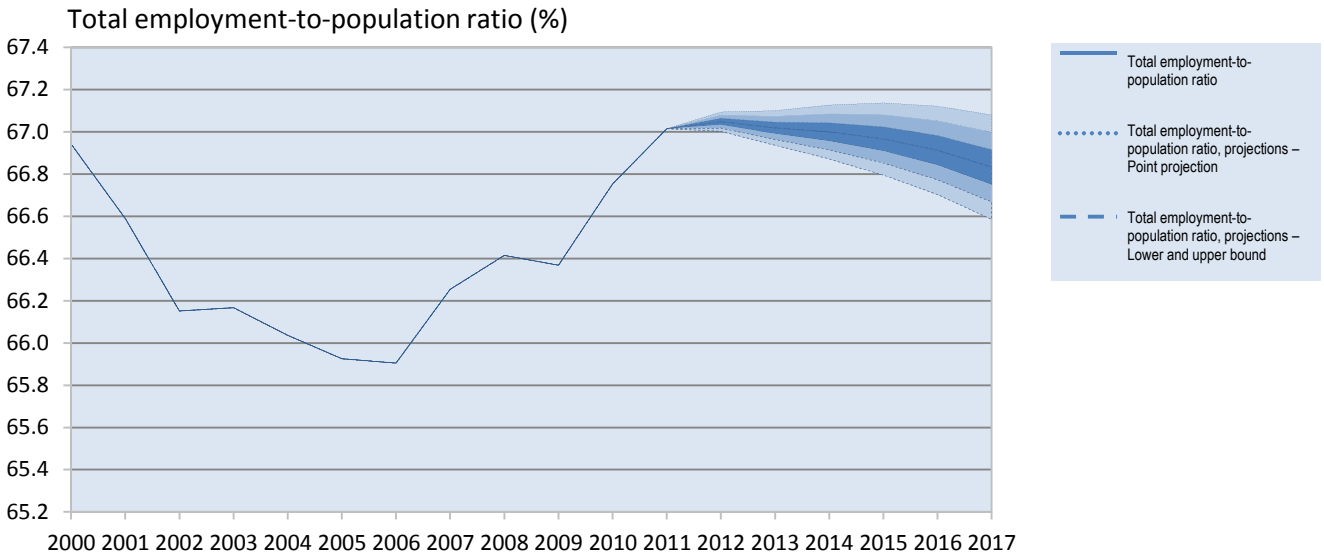

Working poor (million) - US$ 1.25/day
Working poor as a share of total employment (%)
250
200
150
100
50
0
35.0
30.0
25.0
20.0
15.0
10.0
5.0
0.0
2000 2001 2002 2003 2004 2005 2006 2007 2008 2009 2010 2011 2012
Working poor US$ 1.25/day
Working poor US$ 1.25/day, projections
Working poor as a share of total employment
Working poor as a share of total employment, projections

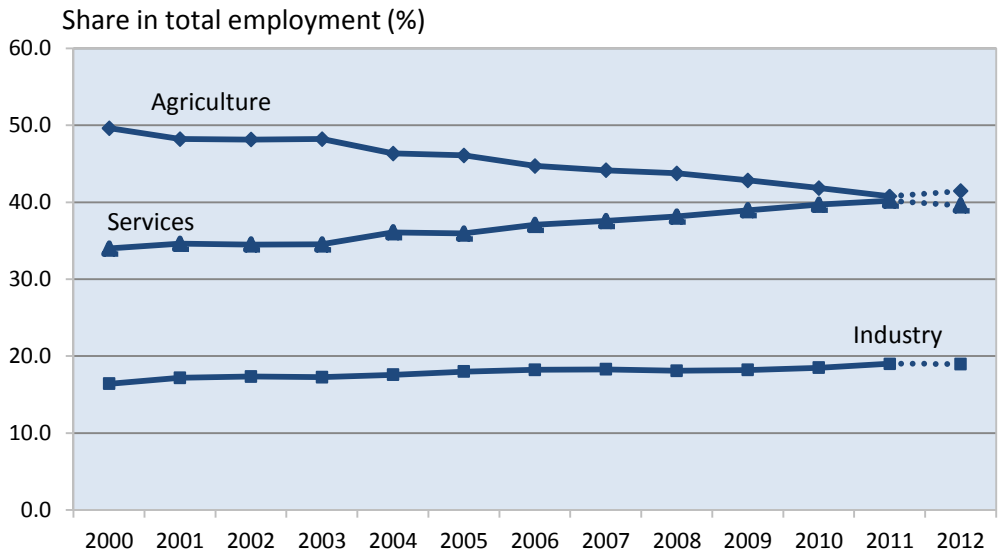

Working poor (million) - US$ 2/day
Working poor as a share of total employment (%)
450
400
350
300
250
200
150
100
50
0
60.0
50.0
40.0
30.0
20.0
10.0
0.0
2000 2001 2002 2003 2004 2005 2006 2007 2008 2009 2010 2011 2012
Working poor US$ 2/day
Working poor US$ 2/day, projections
Working poor as a share of total employment
Working poor as a share of total employment, projections

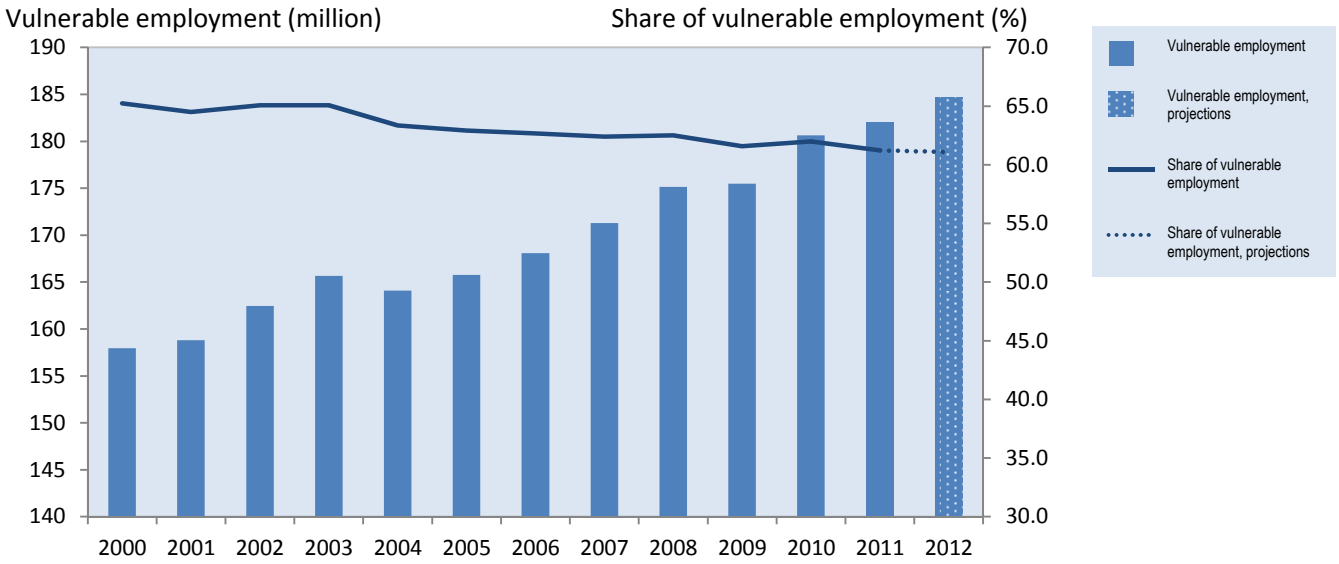
South-East Asia and the Pacific

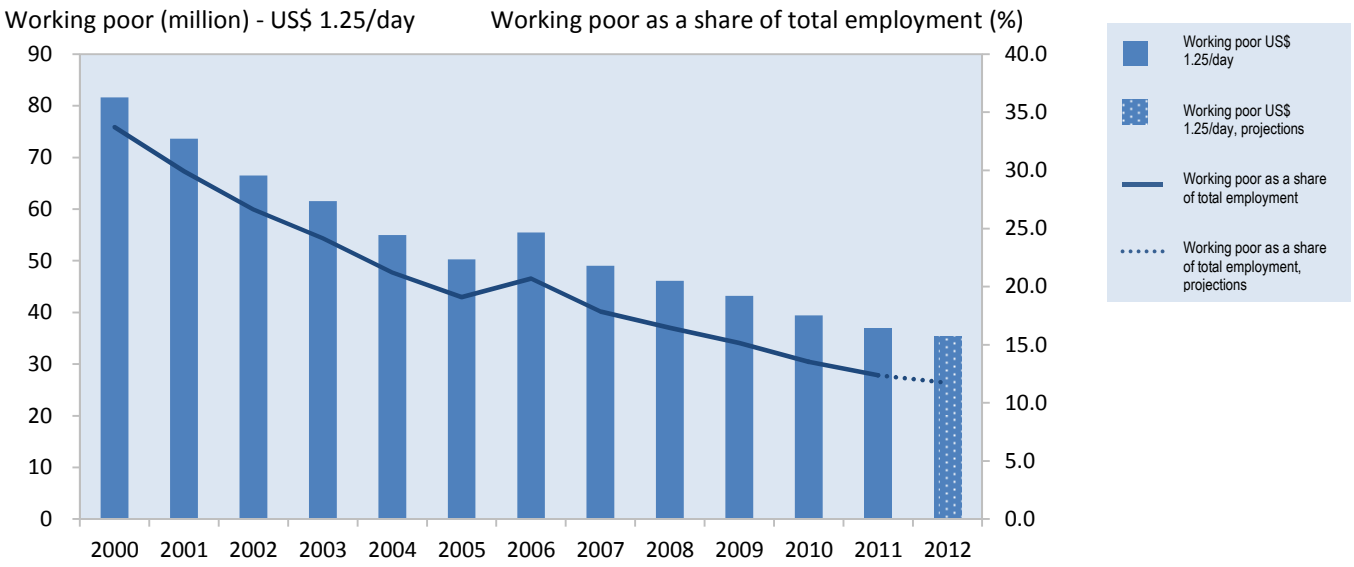



Total employment (million)
350
300
250
200
150
100
2000 2001 2002 2003 2004 2005 2006 2007 2008 2009 2010 2011 2012 2013 2014 2015 2016 2017
Total employment
Total employment, projections – Lower bound
Total employment, projections – Point projection
Total employment, projections – Upper bound


Total employment-to-population ratio (%)
67.4
67.2
67.0
66.8
66.6
66.4
66.2
66.0
65.8
65.6
65.4
65.2
2000 2001 2002 2003 2004 2005 2006 2007 2008 2009 2010 2011 2012 2013 2014 2015 2016 2017
Total employment-to-population ratio
Total employment-to-population ratio, projections – Point projection
Total employment-to-population ratio, projections – Lower and upper bound

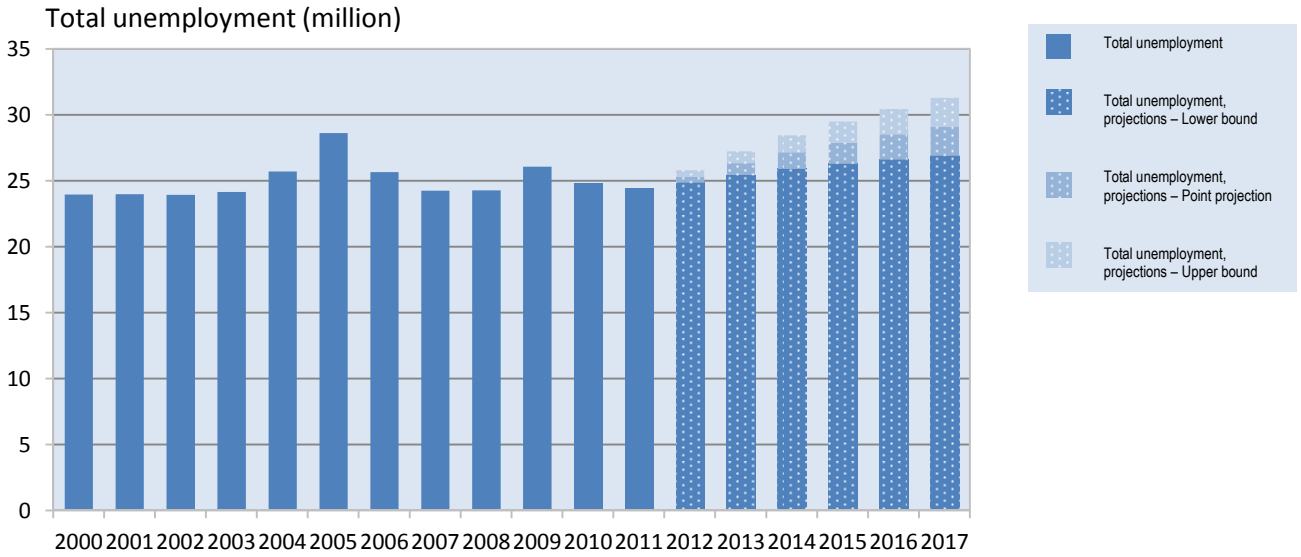

Share in total employment (%)
60.0
50.0
40.0
30.0
20.0
10.0
0.0
Agriculture
Services
Industry
2000
2001
2002
2003
2004
2005
2006
2007
2008
2009
2010
2011
2012

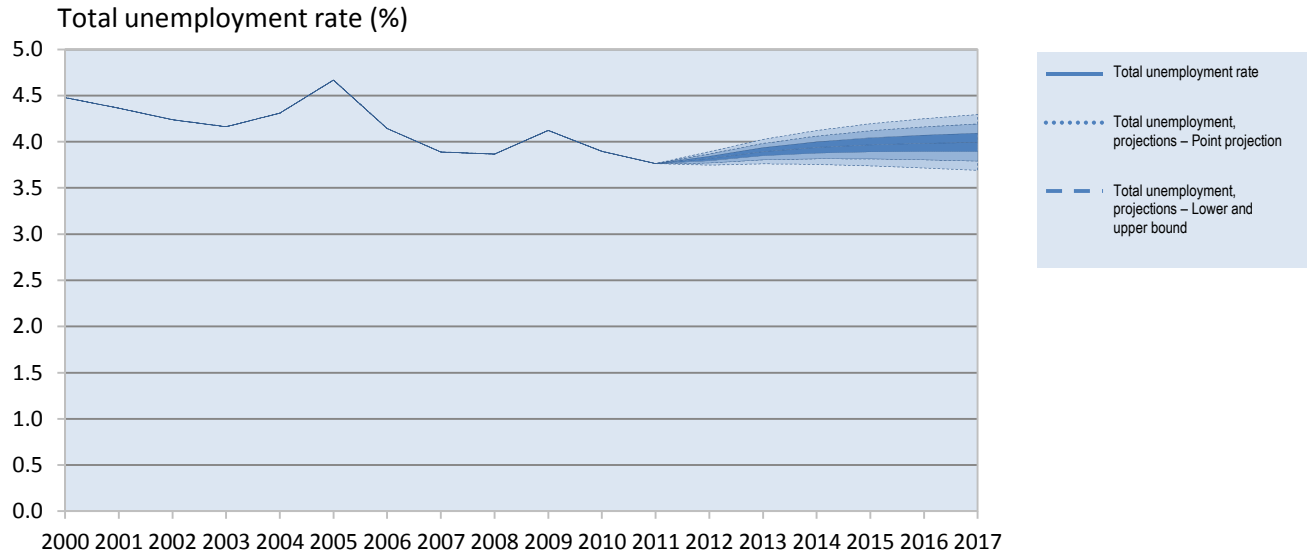

Vulnerable employment (million)
Share of vulnerable employment (%)
190
185
180
175
170
165
160
155
150
145
140
70.0
65.0
60.0
55.0
50.0
45.0
40.0
35.0
30.0
2000
2001
2002
2003
2004
2005
2006
2007
2008
2009
2010
2011
2012
Vulnerable employment
Vulnerable employment, projections
Share of vulnerable employment
Share of vulnerable employment, projections

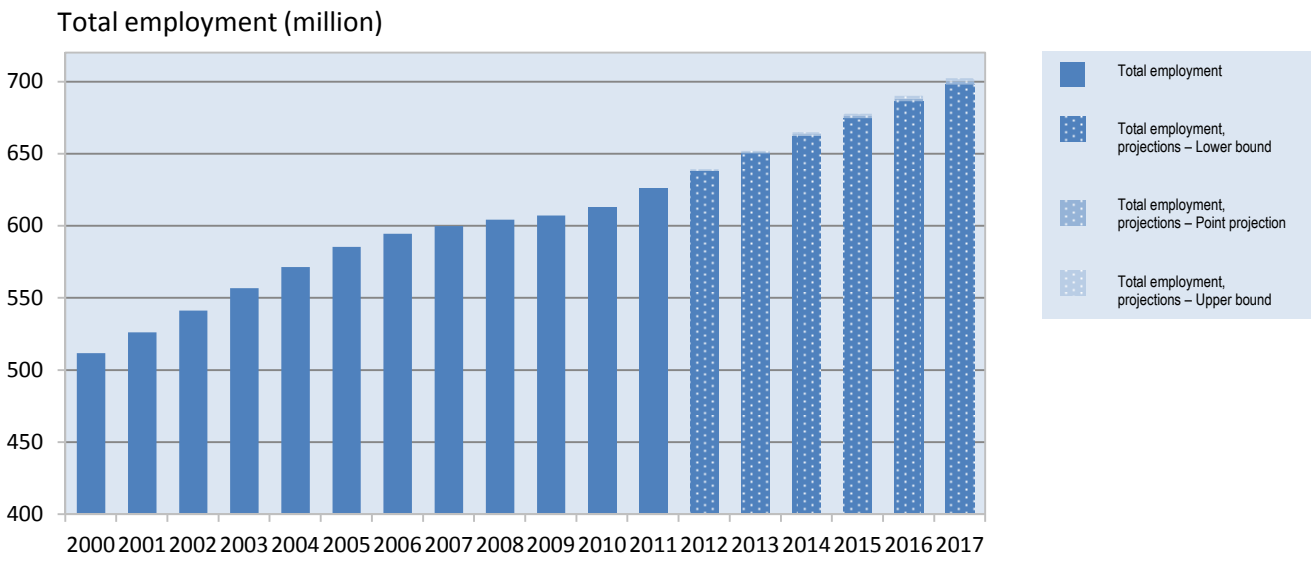

Working poor (million) - US$ 1.25/day
Working poor as a share of total employment (%)
90
80
70
60
50
40
30
20
10
0
40.0
35.0
30.0
25.0
20.0
15.0
10.0
5.0
0.0
2000
2001
2002
2003
2004
2005
2006
2007
2008
2009
2010
2011
2012
Working poor US$ 1.25/day
Working poor US$ 1.25/day, projections
Working poor as a share of total employment
Working poor as a share of total employment, projections

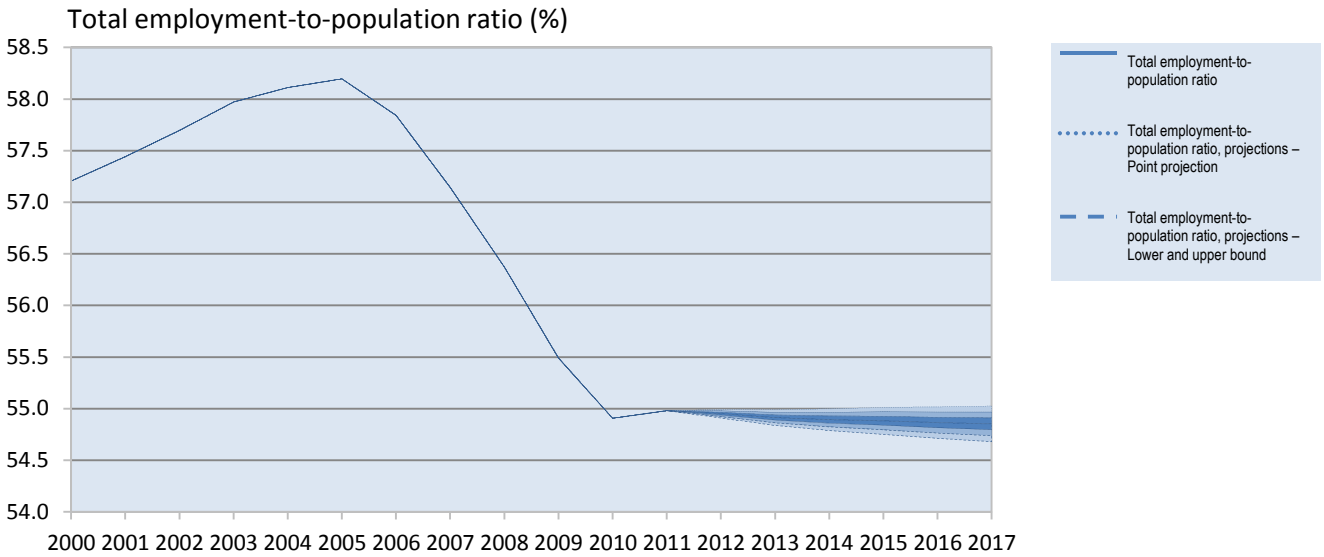

Working poor (million) - US$ 2/day
Working poor as a share of total employment (%)
160
140
120
100
80
60
40
20
0
70.0
60.0
50.0
40.0
30.0
20.0
10.0
0.0
2000
2001
2002
2003
2004
2005
2006
2007
2008
2009
2010
2011
2012
Working poor US$ 2/day
Working poor US$ 2/day, projections
Working poor as a share of total employment
Working poor as a share of total employment, projections

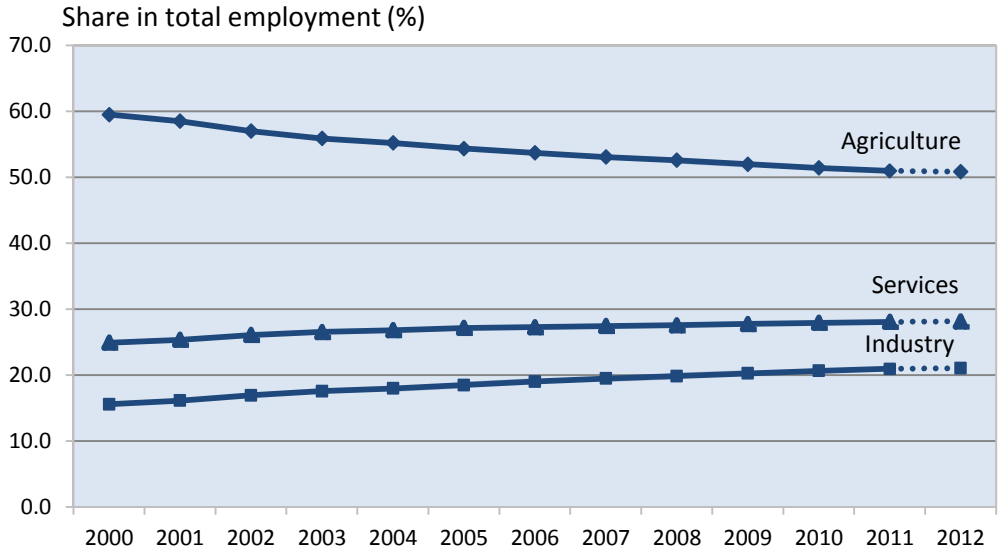
South Asia

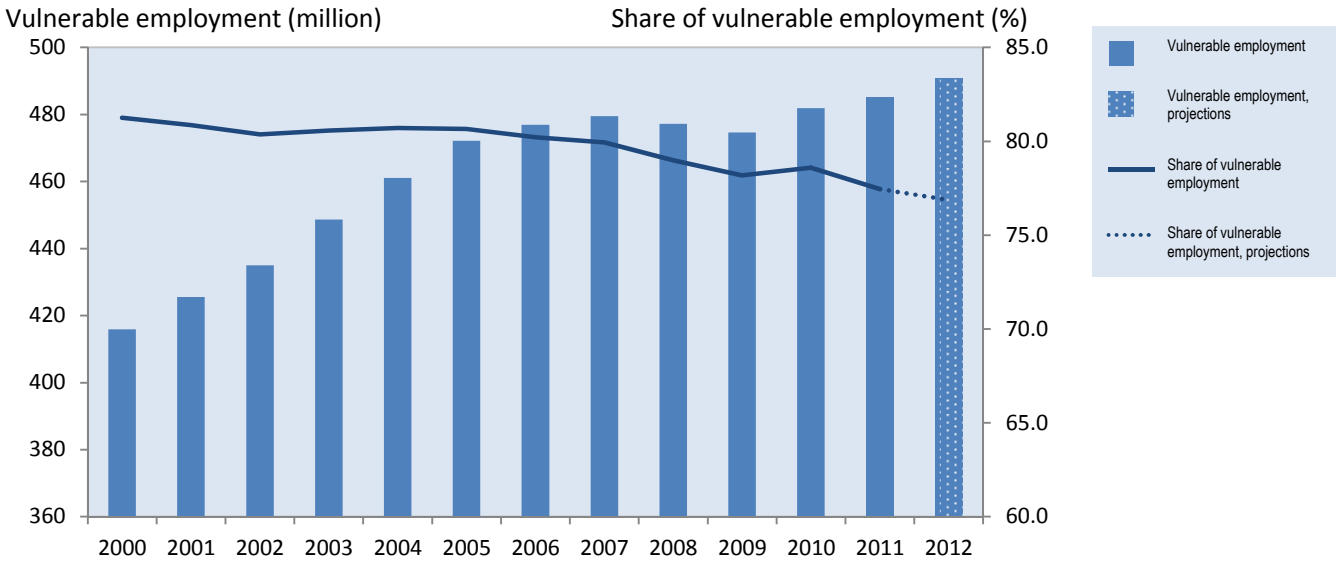

Total unemployment (million)
35
30
25
20
15
10
5
0
2000 2001 2002 2003 2004 2005 2006 2007 2008 2009 2010 2011 2012 2013 2014 2015 2016 2017
Total unemployment
Total unemployment, projections – Lower bound
Total unemployment, projections – Point projection
Total unemployment, projections – Upper bound

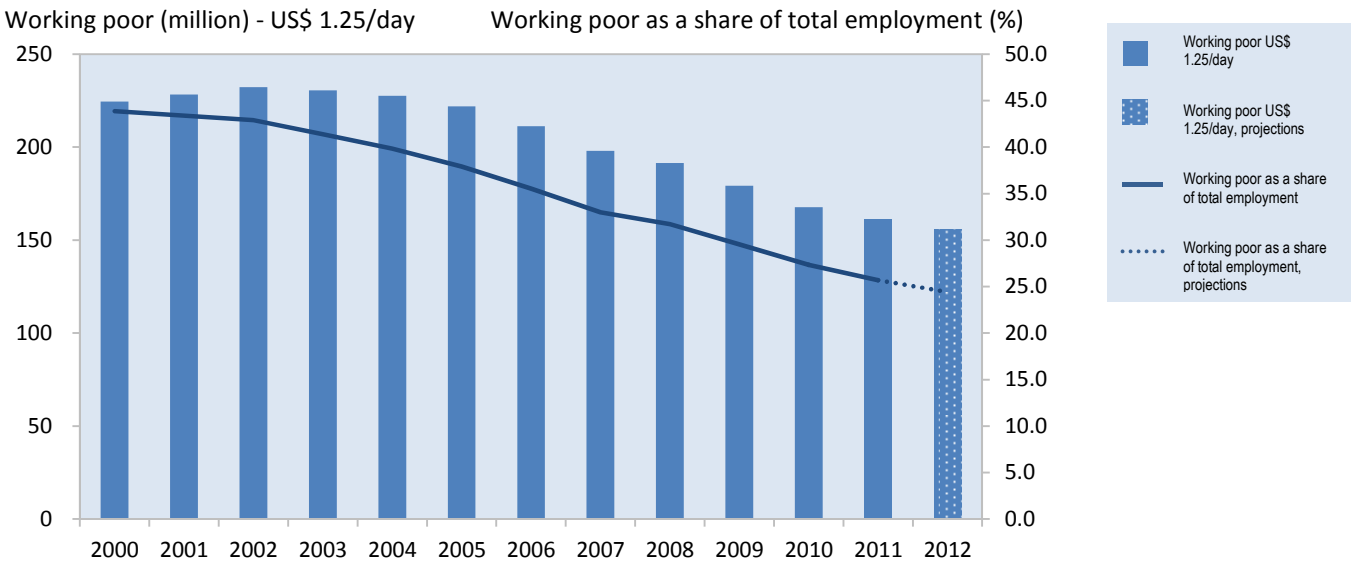

Total unemployment rate (%)
5.0
4.5
4.0
3.5
3.0
2.5
2.0
1.5
1.0
0.5
0.0
2000 2001 2002 2003 2004 2005 2006 2007 2008 2009 2010 2011 2012 2013 2014 2015 2016 2017
Total unemployment rate
Total unemployment, projections – Point projection
Total unemployment, projections – Lower and upper bound


Total employment (million)
700
650
600
550
500
450
400
2000 2001 2002 2003 2004 2005 2006 2007 2008 2009 2010 2011 2012 2013 2014 2015 2016 2017
Total employment
Total employment, projections – Lower bound
Total employment, projections – Point projection
Total employment, projections – Upper bound


Total employment-to-population ratio (%)
58.5
58.0
57.5
57.0
56.5
56.0
55.5
55.0
54.5
54.0
2000 2001 2002 2003 2004 2005 2006 2007 2008 2009 2010 2011 2012 2013 2014 2015 2016 2017
Total employment-to-population ratio
Total employment-to-population ratio, projections – Point projection
Total employment-to-population ratio, projections – Lower and upper bound

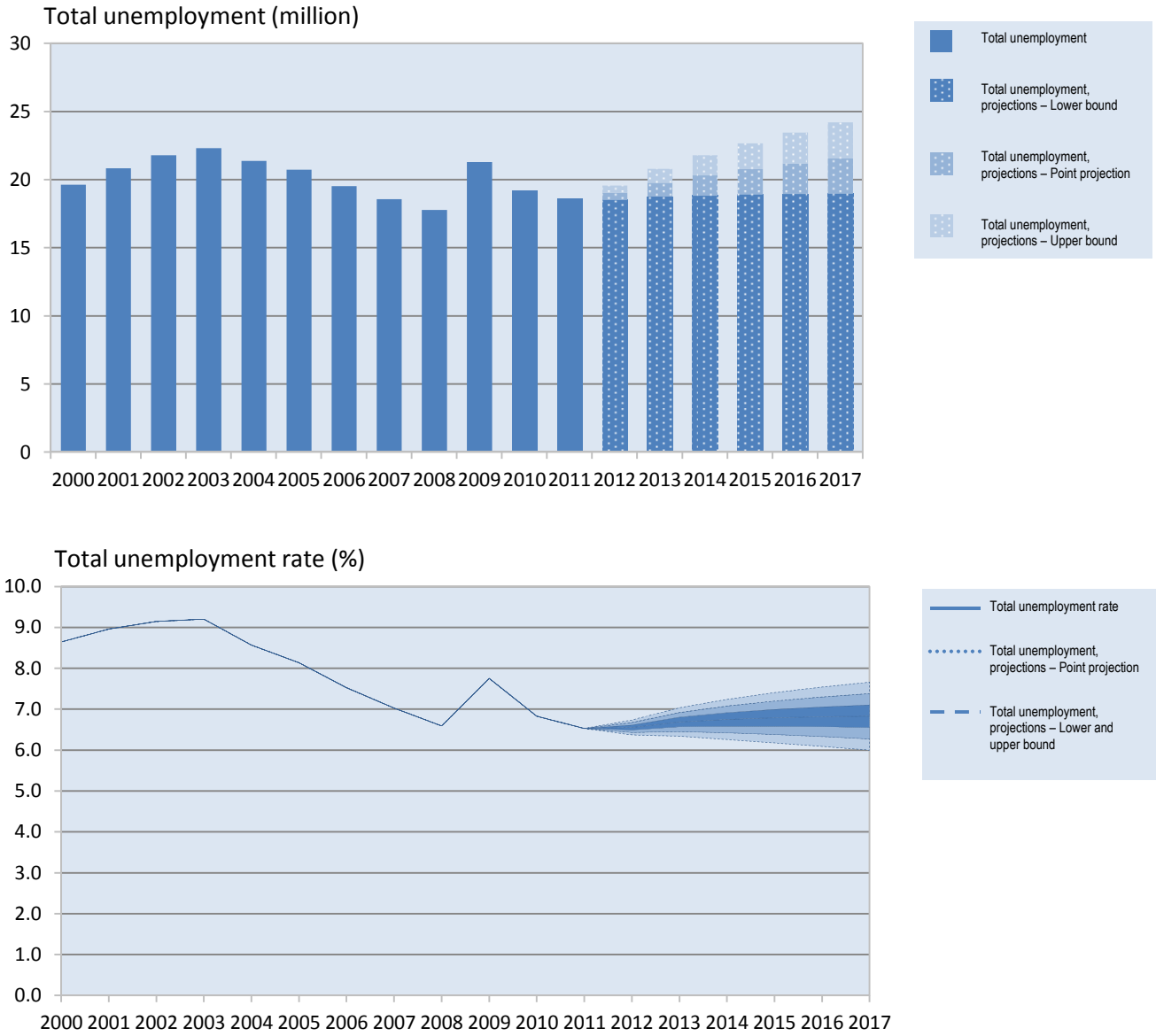

Share in total employment (%)
70.0
60.0
50.0
40.0
30.0
20.0
10.0
0.0
Agriculture
Services
Industry
2000 2001 2002 2003 2004 2005 2006 2007 2008 2009 2010 2011 2012

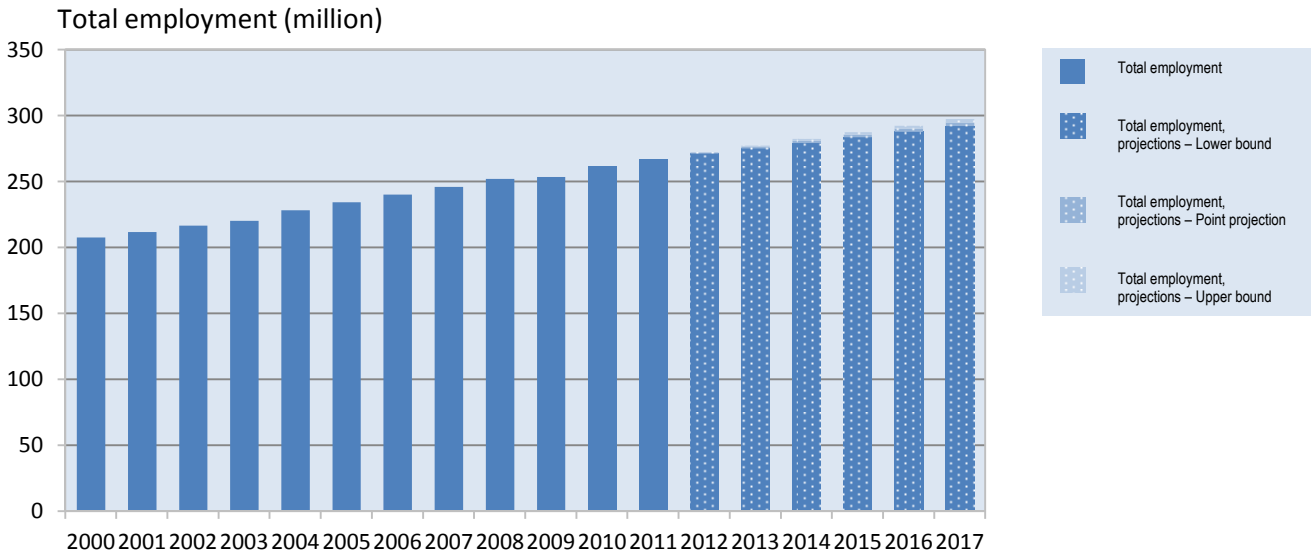

Vulnerable employment (million)
Share of vulnerable employment (%)
500
480
460
440
420
400
380
360
85.0
80.0
75.0
70.0
65.0
60.0
2000 2001 2002 2003 2004 2005 2006 2007 2008 2009 2010 2011 2012
Vulnerable employment
Vulnerable employment, projections
Share of vulnerable employment
Share of vulnerable employment, projections

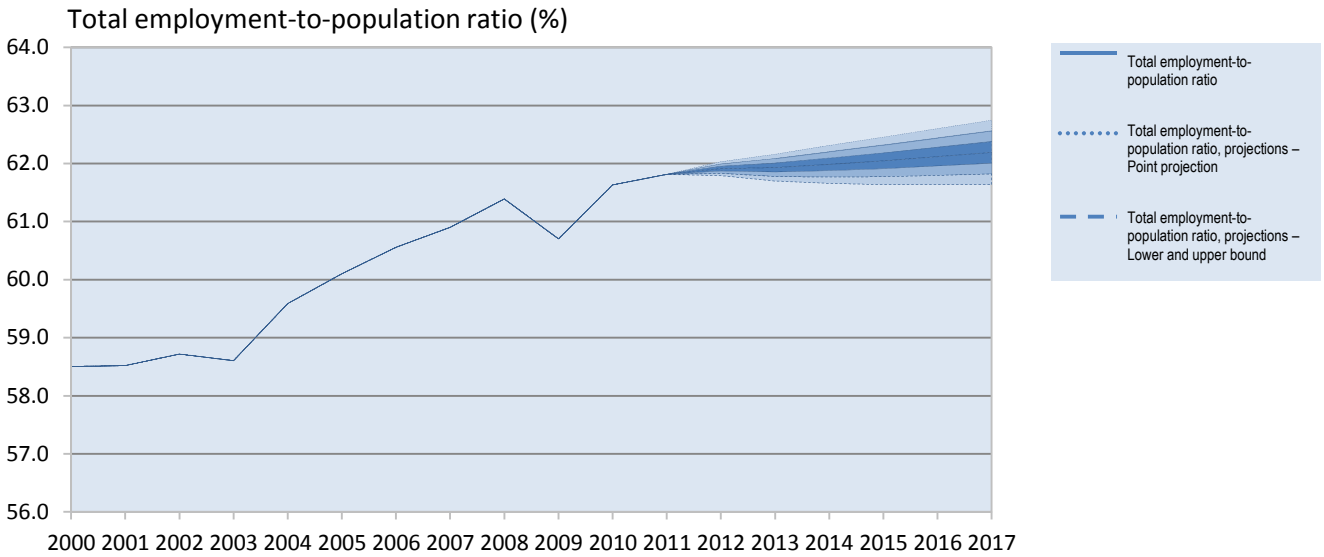

Working poor (million) - US$ 1.25/day
Working poor as a share of total employment (%)
250
200
150
100
50
0
50.0
45.0
40.0
35.0
30.0
25.0
20.0
15.0
10.0
5.0
0.0
2000
2001
2002
2003
2004
2005
2006
2007
2008
2009
2010
2011
2012
Working poor US$ 1.25/day
Working poor US$ 1.25/day, projections
Working poor as a share of total employment
Working poor as a share of total employment, projections

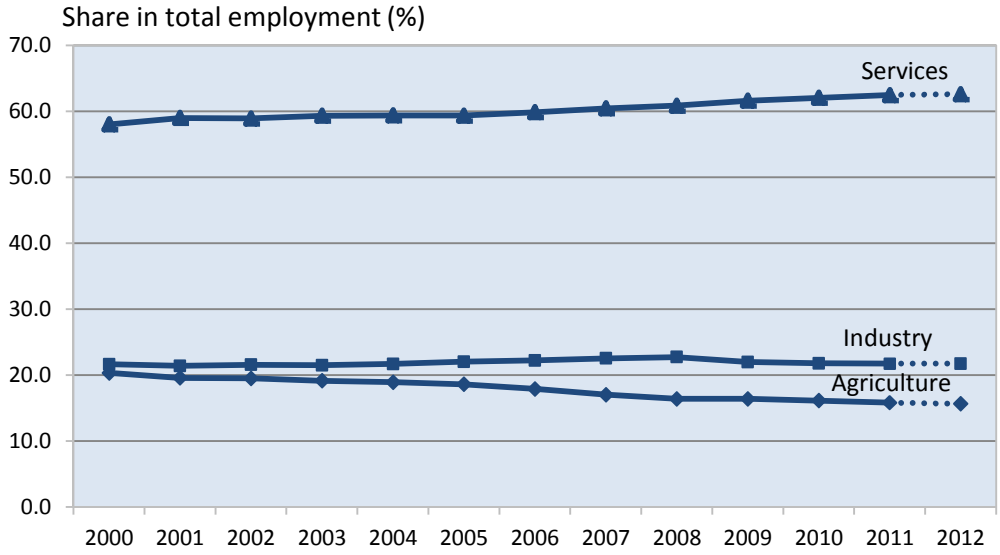

Working poor (million) - US$ 2/day
Working poor as a share of total employment (%)
430
420
410
400
390
380
370
90.0
80.0
70.0
60.0
50.0
40.0
30.0
2000
2001
2002
2003
2004
2005
2006
2007
2008
2009
2010
2011
2012
Working poor US$ 2/day
Working poor US$ 2/day, projections
Working poor as a share of total employment
Working poor as a share of total employment, projections

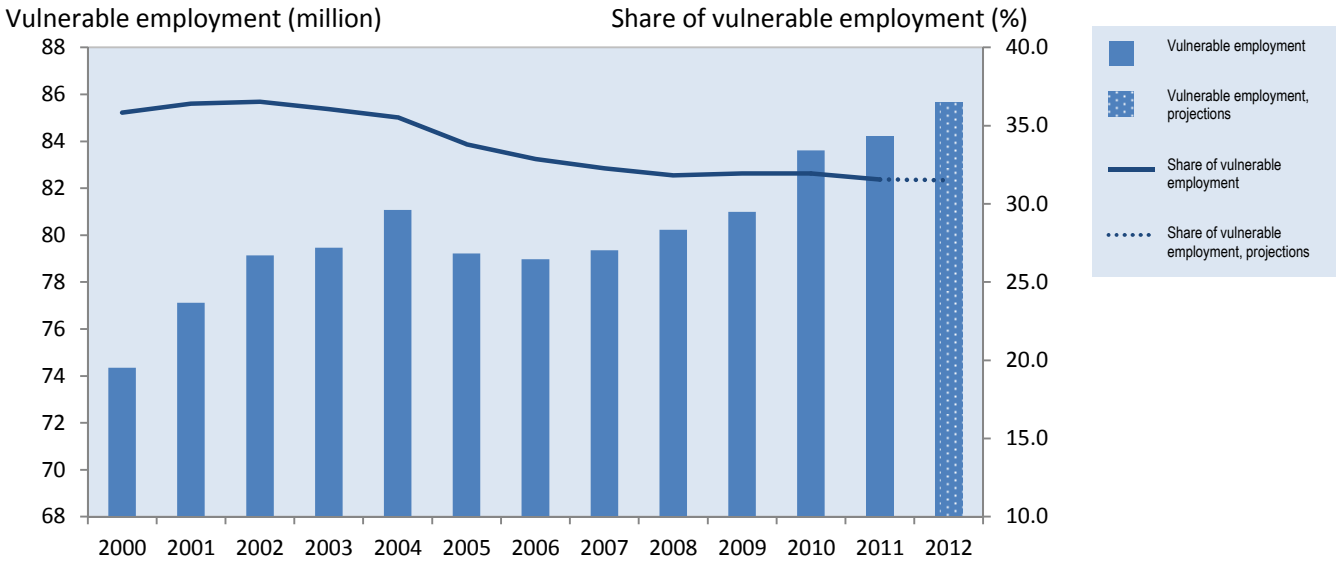
Latin America and the Caribbean

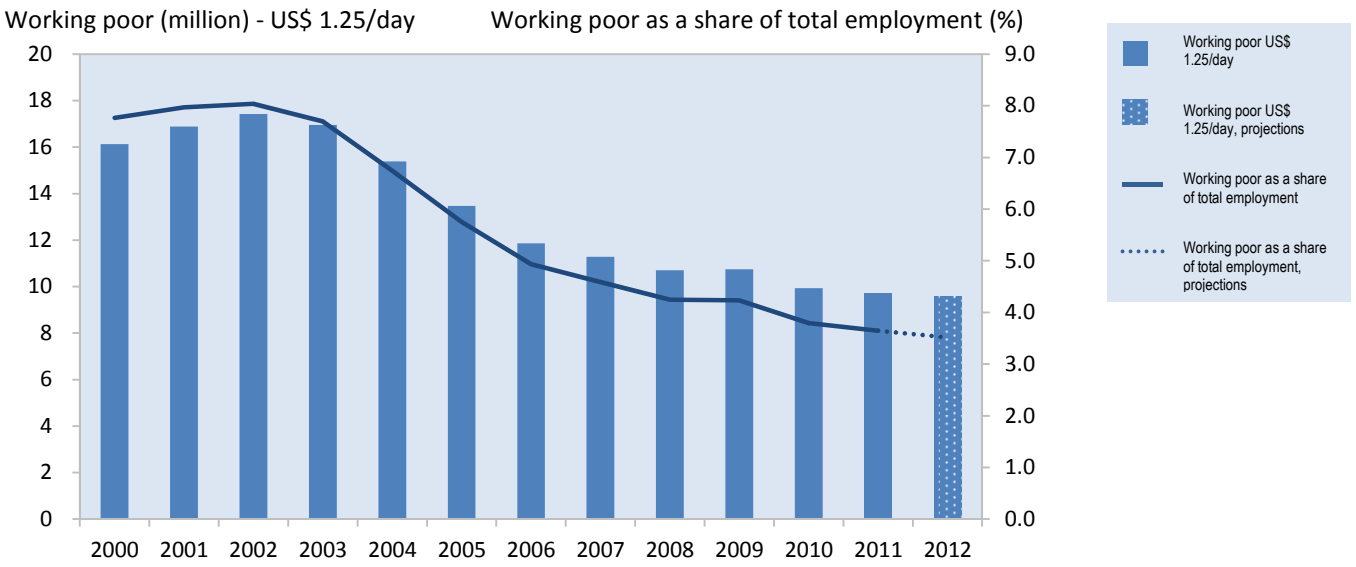



Total employment (million)
350
300
250
200
150
100
50
0
2000 2001 2002 2003 2004 2005 2006 2007 2008 2009 2010 2011 2012 2013 2014 2015 2016 2017
Total employment
Total employment, projections – Lower bound
Total employment, projections – Point projection
Total employment, projections – Upper bound


Total employment-to-population ratio (%)
64.0
63.0
62.0
61.0
60.0
59.0
58.0
57.0
56.0
2000 2001 2002 2003 2004 2005 2006 2007 2008 2009 2010 2011 2012 2013 2014 2015 2016 2017
Total employment-to-population ratio
Total employment-to-population ratio, projections – Point projection
Total employment-to-population ratio, projections – Lower and upper bound

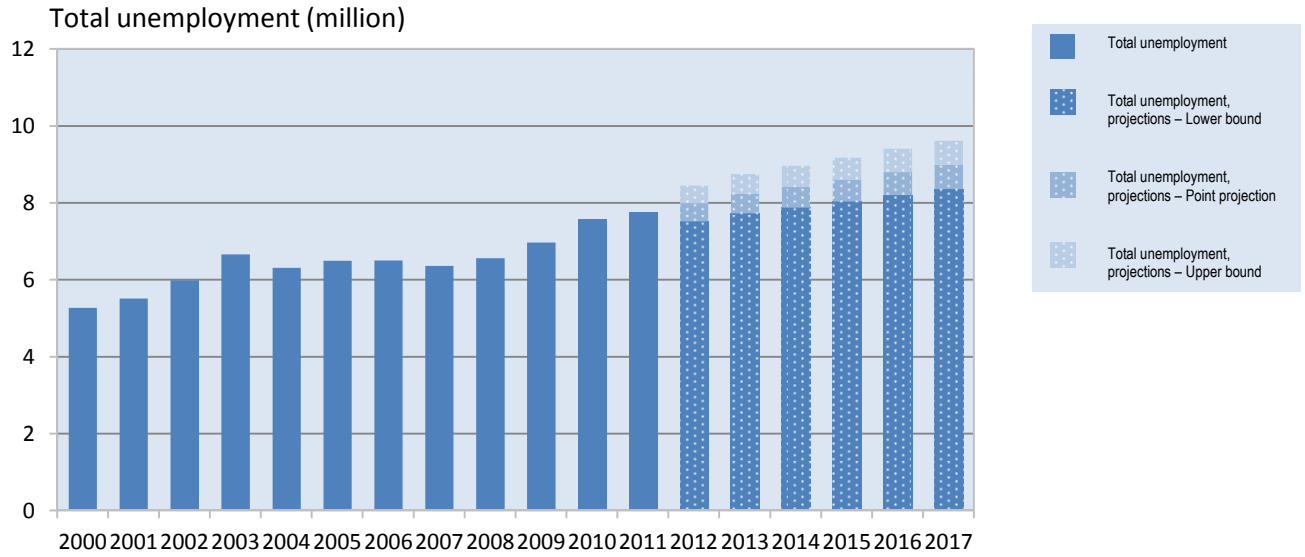

Share in total employment (%)
70.0
60.0
50.0
40.0
30.0
20.0
10.0
0.0
Services
Industry
Agriculture
2000
2001
2002
2003
2004
2005
2006
2007
2008
2009
2010
2011
2012

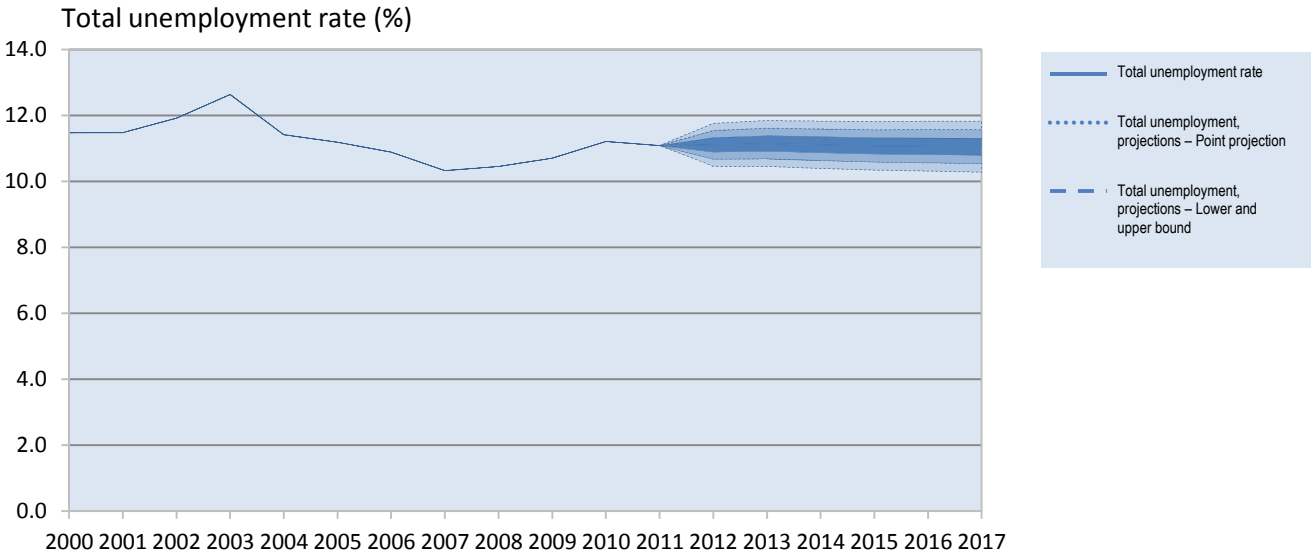

Vulnerable employment (million)
Share of vulnerable employment (%)
88
86
84
82
80
78
76
74
72
70
68
40.0
35.0
30.0
25.0
20.0
15.0
10.0
2000
2001
2002
2003
2004
2005
2006
2007
2008
2009
2010
2011
2012
Vulnerable employment
Vulnerable employment, projections
Share of vulnerable employment
Share of vulnerable employment, projections

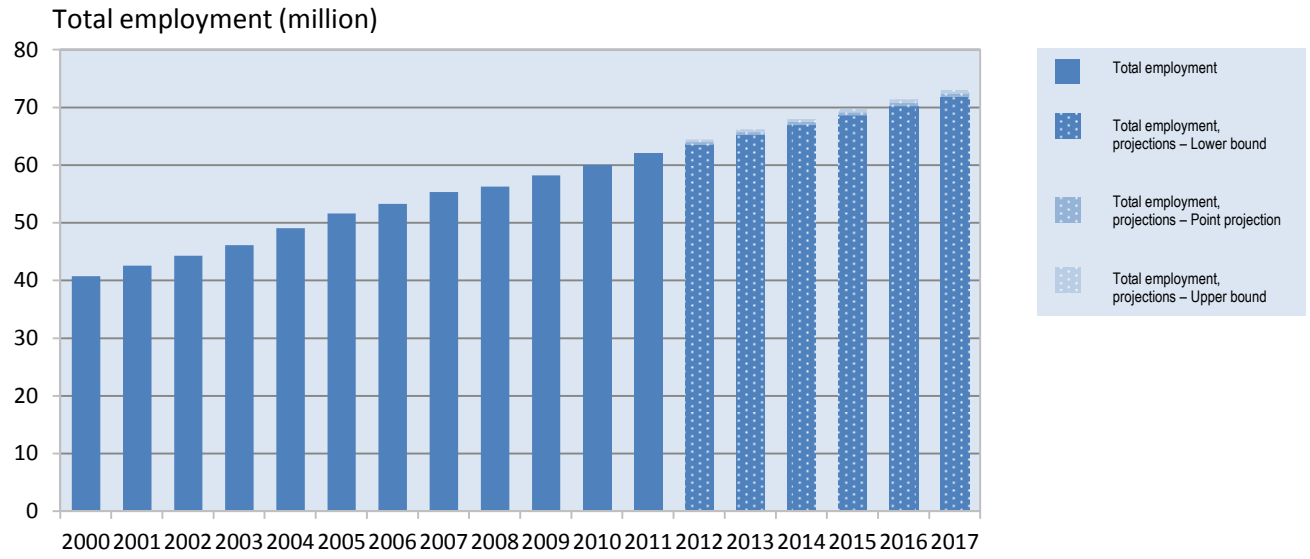

Working poor (million) - US$ 1.25/day
Working poor as a share of total employment (%)
20
18
16
14
12
10
8
6
4
2
0
9.0
8.0
7.0
6.0
5.0
4.0
3.0
2.0
1.0
0.0
2000 2001 2002 2003 2004 2005 2006 2007 2008 2009 2010 2011 2012
Working poor US$ 1.25/day
Working poor US$ 1.25/day, projections
Working poor as a share of total employment
Working poor as a share of total employment, projections

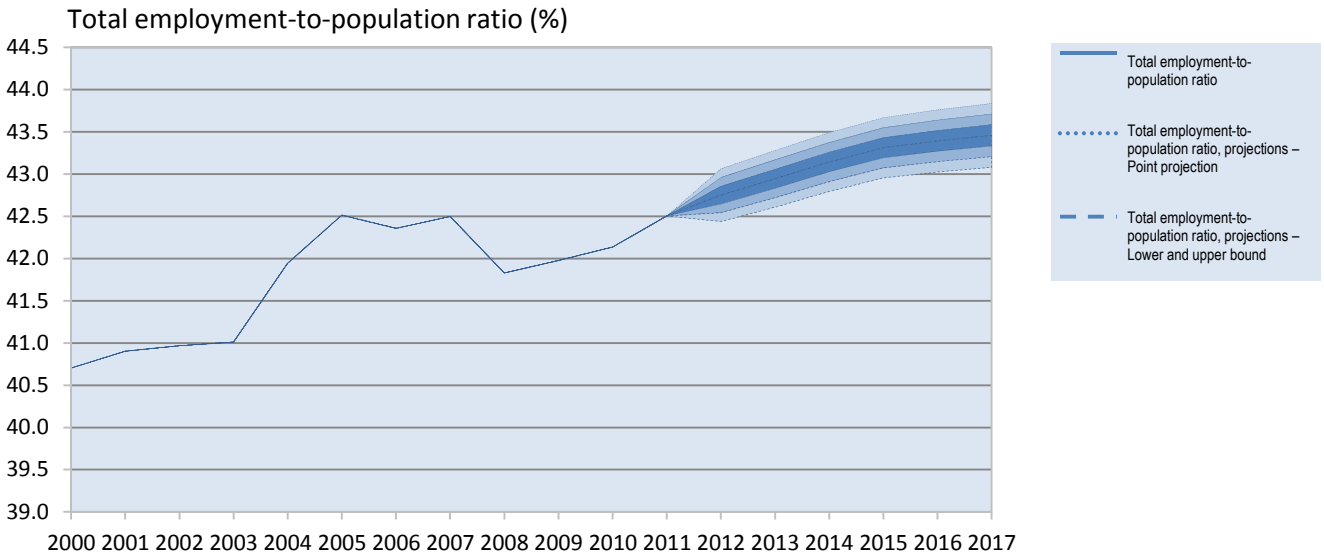

Working poor (million) - US$ 2/day
Working poor as a share of total employment (%)
40
35
30
25
20
15
10
5
0
18.0
16.0
14.0
12.0
10.0
8.0
6.0
4.0
2.0
0.0
2000 2001 2002 2003 2004 2005 2006 2007 2008 2009 2010 2011 2012
Working poor US$ 2/day
Working poor US$ 2/day, projections
Working poor as a share of total employment
Working poor as a share of total employment, projections

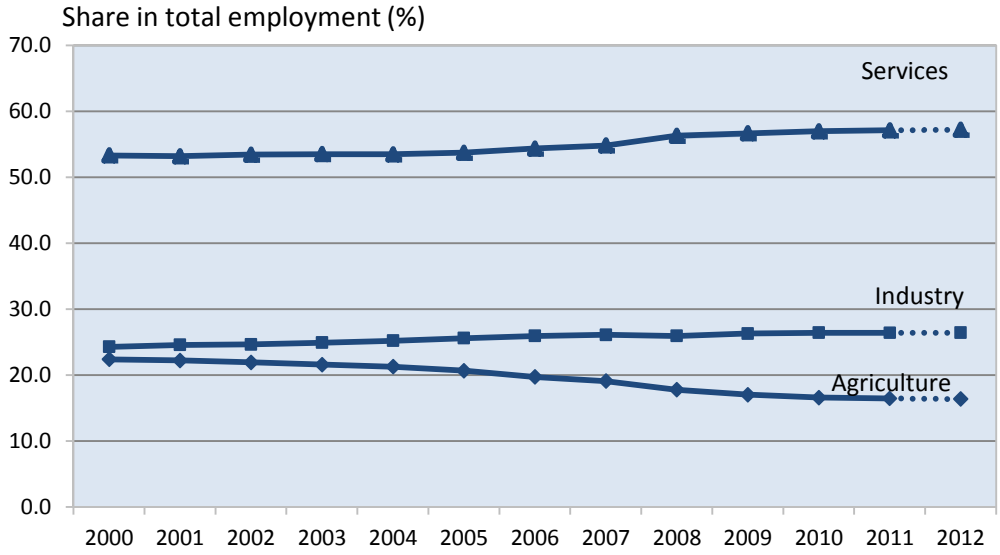
Middle East

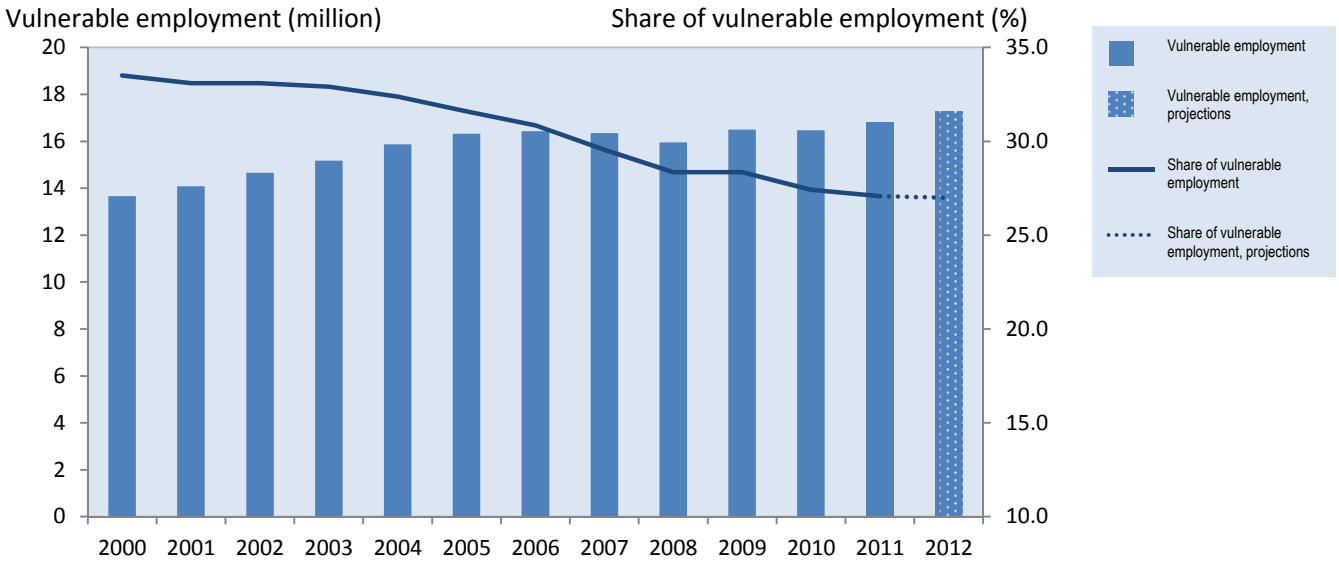

Total unemployment (million)
12
10
8
6
4
2
0
2000 2001 2002 2003 2004 2005 2006 2007 2008 2009 2010 2011 2012 2013 2014 2015 2016 2017
Total unemployment
Total unemployment, projections – Lower bound
Total unemployment, projections – Point projection
Total unemployment, projections – Upper bound

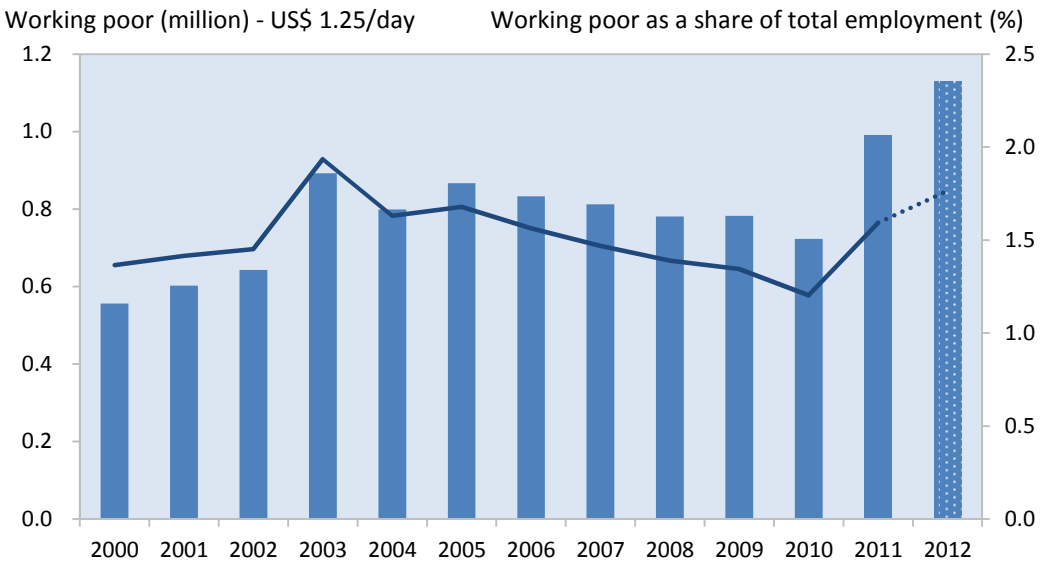

Total unemployment rate (%)
14.0
12.0
10.0
8.0
6.0
4.0
2.0
0.0
2000 2001 2002 2003 2004 2005 2006 2007 2008 2009 2010 2011 2012 2013 2014 2015 2016 2017
Total unemployment rate
Total unemployment, projections – Point projection
Total unemployment, projections – Lower and upper bound

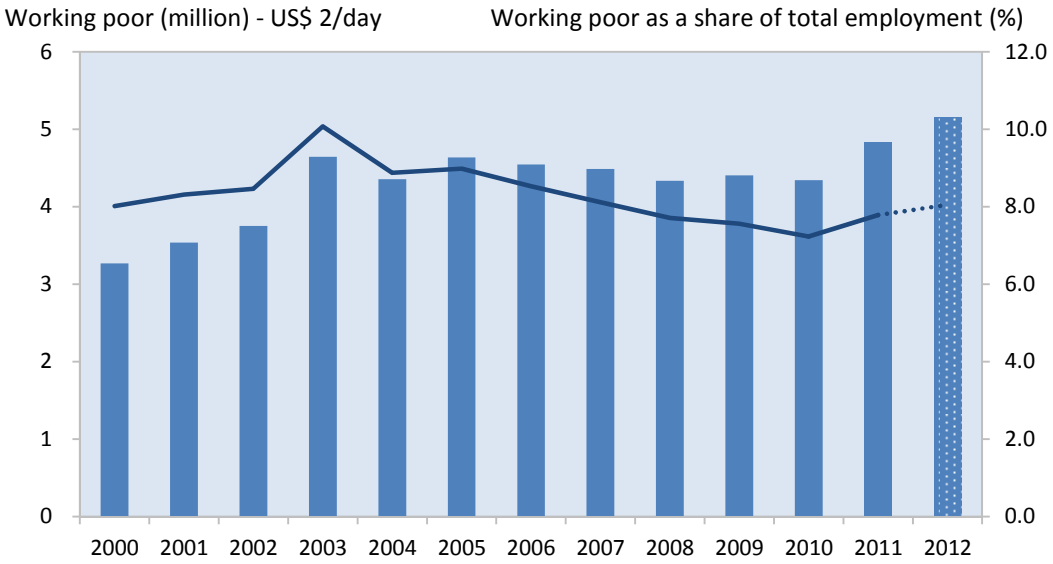

Total employment (million)
80
70
60
50
40
30
20
10
0
2000 2001 2002 2003 2004 2005 2006 2007 2008 2009 2010 2011 2012 2013 2014 2015 2016 2017
Total employment
Total employment, projections – Lower bound
Total employment, projections – Point projection
Total employment, projections – Upper bound


Total employment-to-population ratio (%)
44.5
44.0
43.5
43.0
42.5
42.0
41.5
41.0
40.5
40.0
39.5
39.0
2000 2001 2002 2003 2004 2005 2006 2007 2008 2009 2010 2011 2012 2013 2014 2015 2016 2017
Total employment-to-population ratio
Total employment-to-population ratio, projections – Point projection
Total employment-to-population ratio, projections – Lower and upper bound

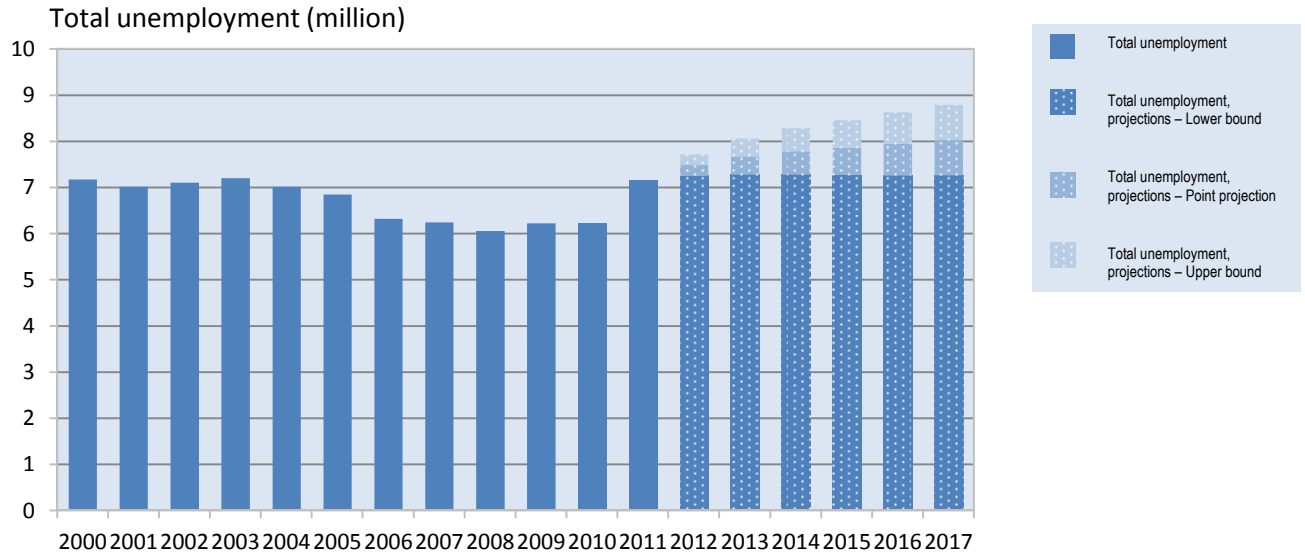

Share in total employment (%)
70.0
60.0
50.0
40.0
30.0
20.0
10.0
0.0
Services
Industry
Agriculture
2000
2001
2002
2003
2004
2005
2006
2007
2008
2009
2010
2011
2012

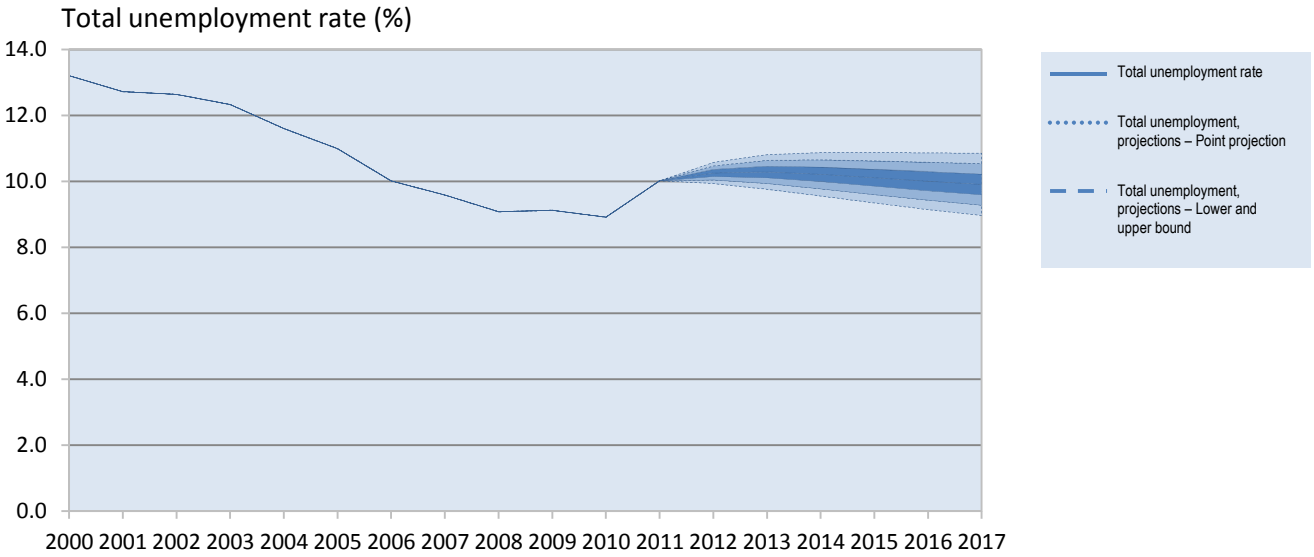

Vulnerable employment (million)
Share of vulnerable employment (%)
20
18
16
14
12
10
8
6
4
2
0
35.0
30.0
25.0
20.0
15.0
10.0
2000
2001
2002
2003
2004
2005
2006
2007
2008
2009
2010
2011
2012
Vulnerable employment
Vulnerable employment, projections
Share of vulnerable employment
Share of vulnerable employment, projections

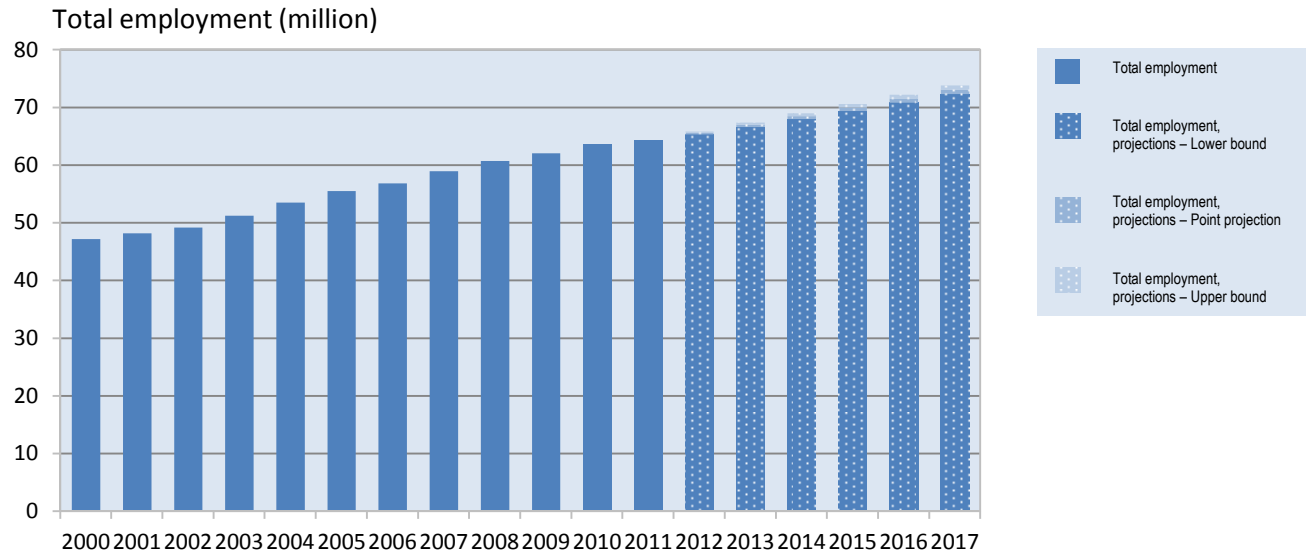

Working poor (million) - US$ 1.25/day
Working poor as a share of total employment (%)
1.2
1.0
0.8
0.6
0.4
0.2
0.0
2.5
2.0
1.5
1.0
0.5
0.0
2000 2001 2002 2003 2004 2005 2006 2007 2008 2009 2010 2011 2012
Working poor US$ 1.25/day
Working poor US$ 1.25/day, projections
Working poor as a share of total employment
Working poor as a share of total employment, projections

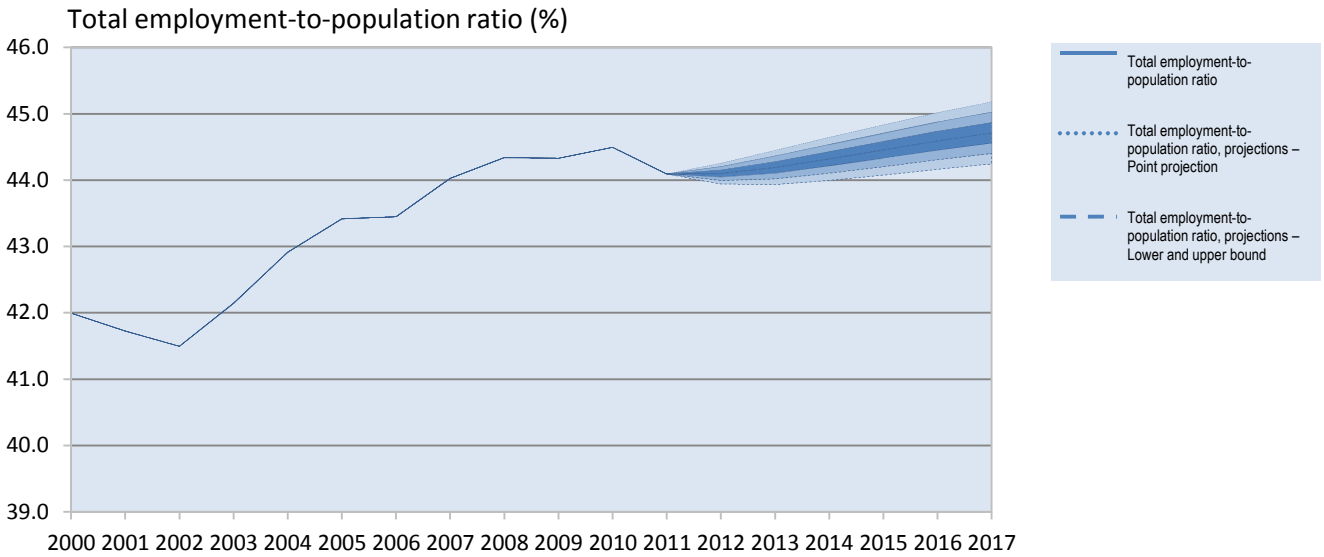

Working poor (million) - US$ 2/day
Working poor as a share of total employment (%)
6
5
4
3
2
1
0
12.0
10.0
8.0
6.0
4.0
2.0
0.0
2000 2001 2002 2003 2004 2005 2006 2007 2008 2009 2010 2011 2012
Working poor US$ 2/day
Working poor US$ 2/day, projections
Working poor as a share of total employment
Working poor as a share of total employment, projections

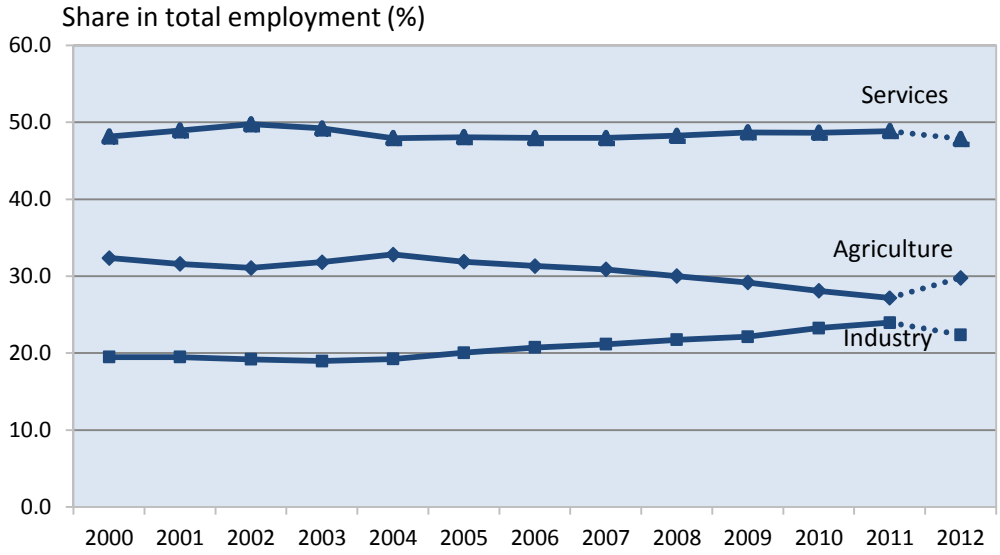
North Africa

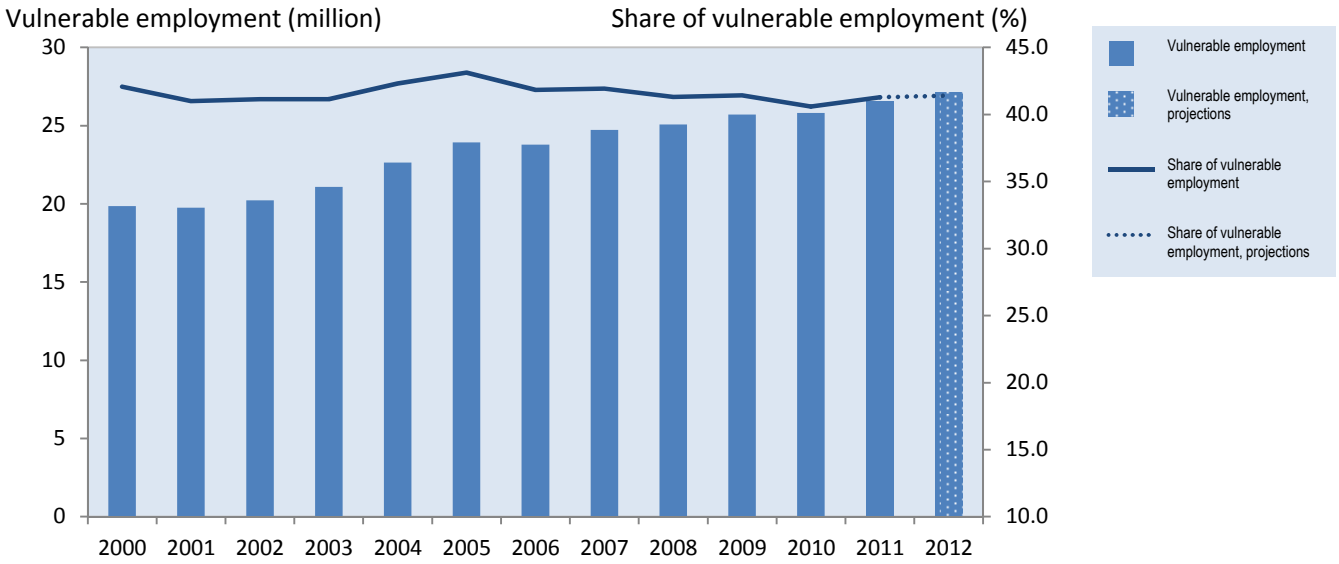


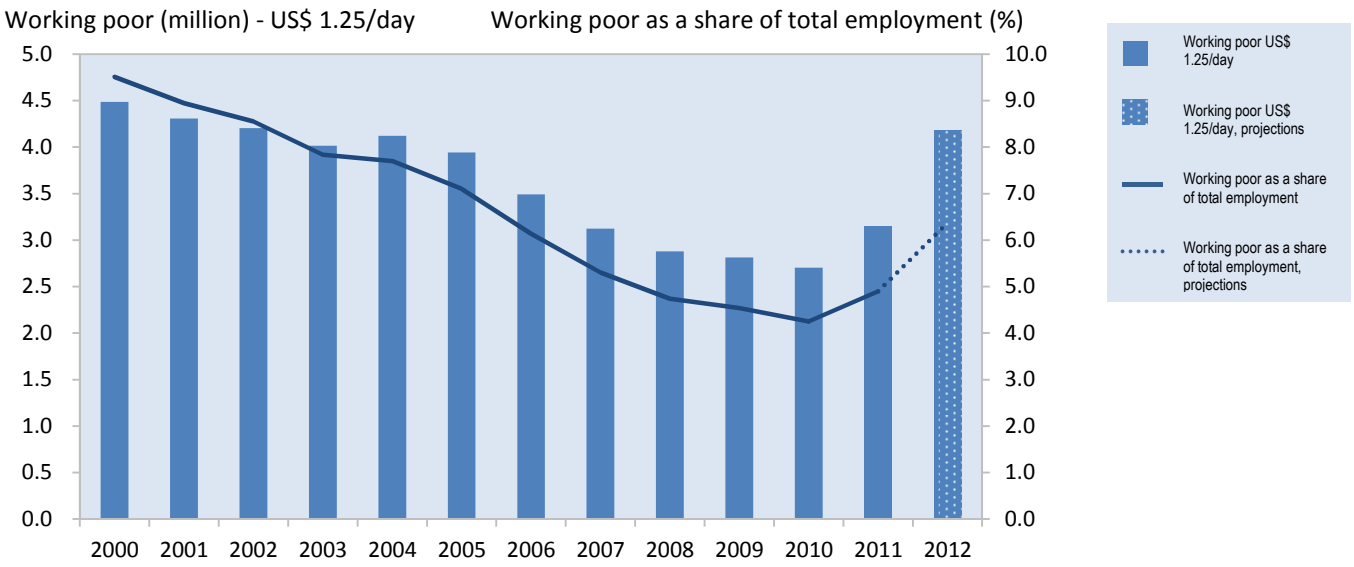



Total employment (million)
80
70
60
50
40
30
20
10
0
2000 2001 2002 2003 2004 2005 2006 2007 2008 2009 2010 2011 2012 2013 2014 2015 2016 2017
Total employment
Total employment, projections – Lower bound
Total employment, projections – Point projection
Total employment, projections – Upper bound


Total employment-to-population ratio (%)
46.0
45.0
44.0
43.0
42.0
41.0
40.0
39.0
2000 2001 2002 2003 2004 2005 2006 2007 2008 2009 2010 2011 2012 2013 2014 2015 2016 2017
Total employment-to-population ratio
Total employment-to-population ratio, projections – Point projection
Total employment-to-population ratio, projections – Lower and upper bound

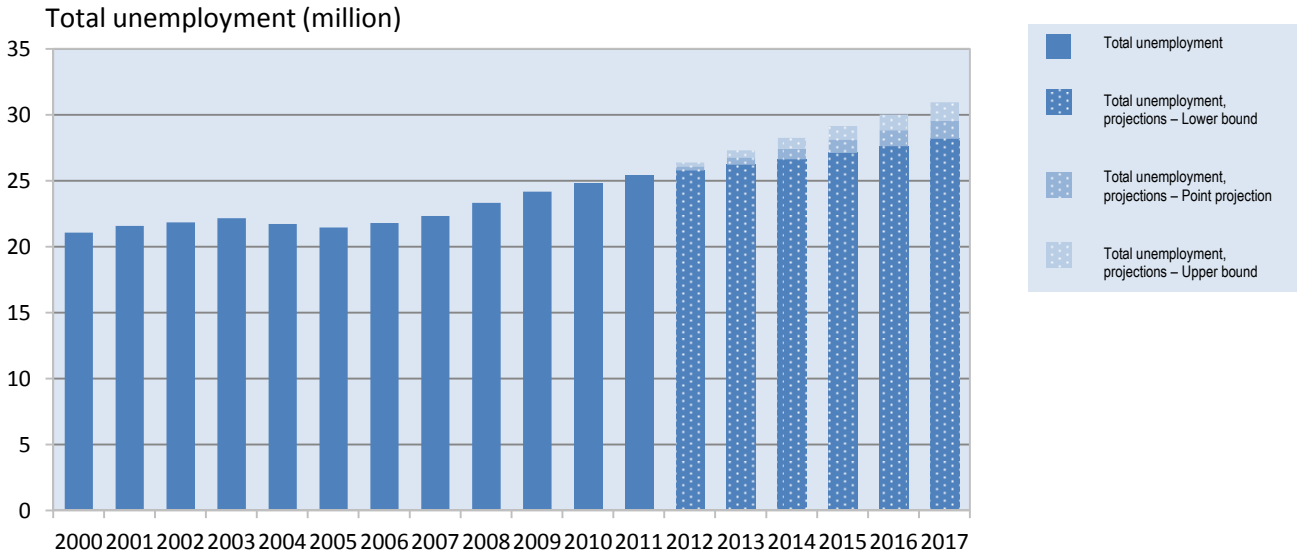

Share in total employment (%)
60.0
50.0
40.0
30.0
20.0
10.0
0.0
Services
Agriculture
Industry
2000 2001 2002 2003 2004 2005 2006 2007 2008 2009 2010 2011 2012

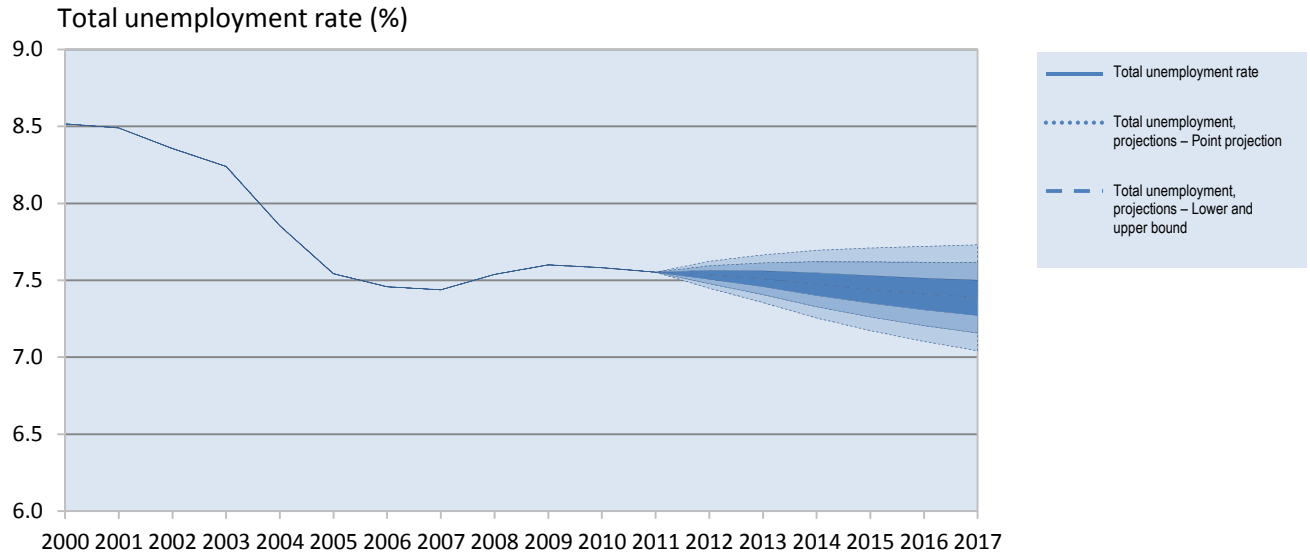

Vulnerable employment (million)
Share of vulnerable employment (%)
30
25
20
15
10
5
0
45.0
40.0
35.0
30.0
25.0
20.0
15.0
10.0
2000 2001 2002 2003 2004 2005 2006 2007 2008 2009 2010 2011 2012
Vulnerable employment
Vulnerable employment, projections
Share of vulnerable employment
Share of vulnerable employment, projections

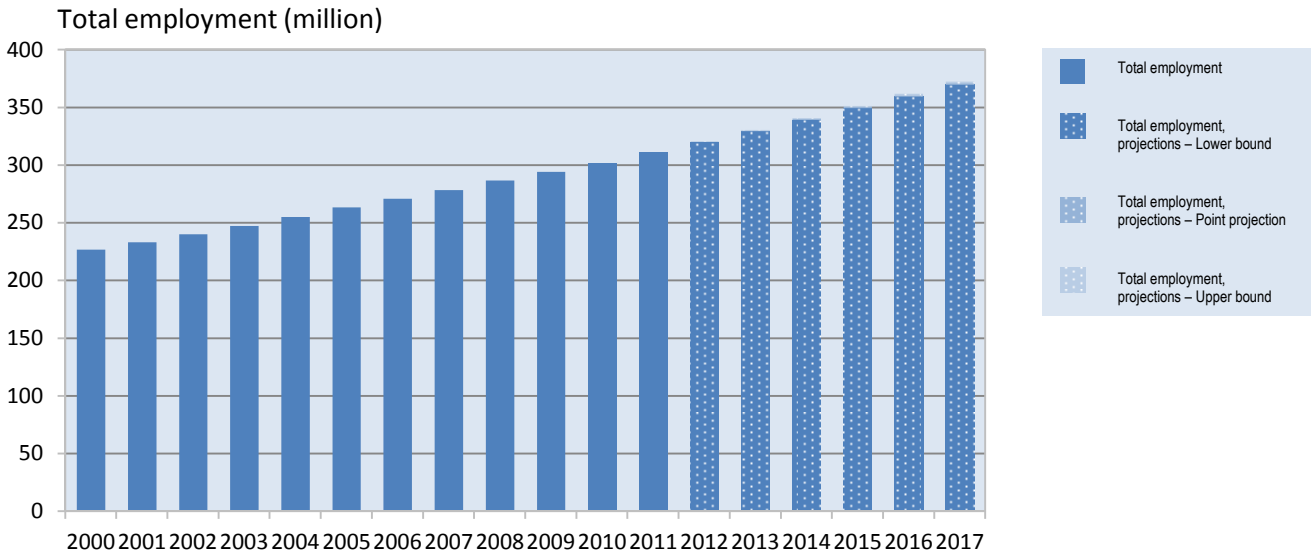

Working poor (million) - US$ 1.25/day
Working poor as a share of total employment (%)
5.0
4.5
4.0
3.5
3.0
2.5
2.0
1.5
1.0
0.5
0.0
10.0
9.0
8.0
7.0
6.0
5.0
4.0
3.0
2.0
1.0
0.0
2000 2001 2002 2003 2004 2005 2006 2007 2008 2009 2010 2011 2012
Working poor US$ 1.25/day
Working poor US$ 1.25/day, projections
Working poor as a share of total employment
Working poor as a share of total employment, projections

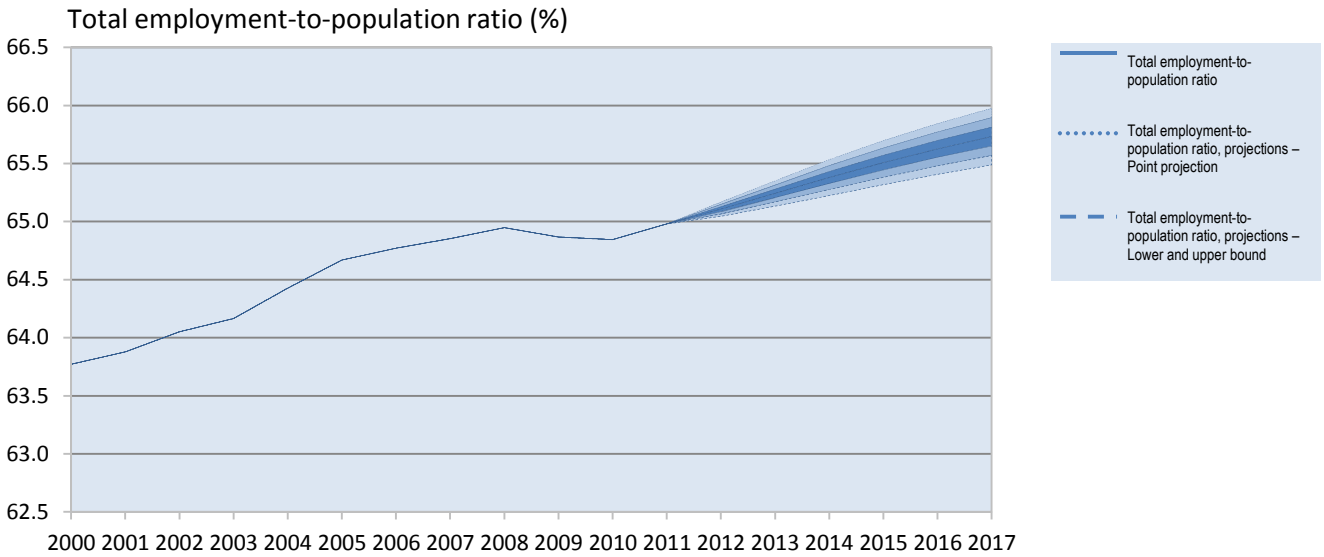

Working poor (million) - US$ 2/day
Working poor as a share of total employment (%)
14
12
10
8
6
4
2
0
30.0
25.0
20.0
15.0
10.0
5.0
0.0
2000 2001 2002 2003 2004 2005 2006 2007 2008 2009 2010 2011 2012
Working poor US$ 2/day
Working poor US$ 2/day, projections
Working poor as a share of total employment
Working poor as a share of total employment, projections

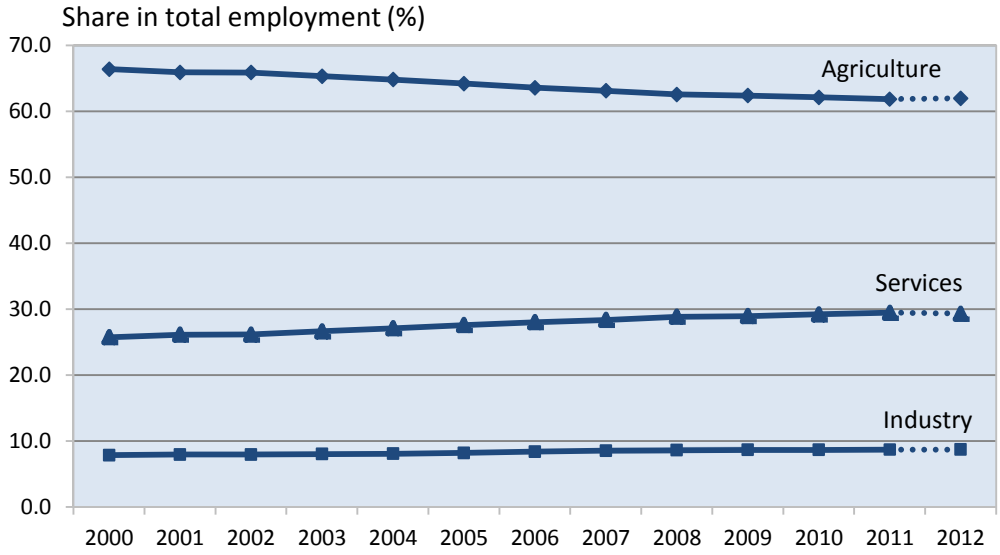
Sub-Saharan Africa

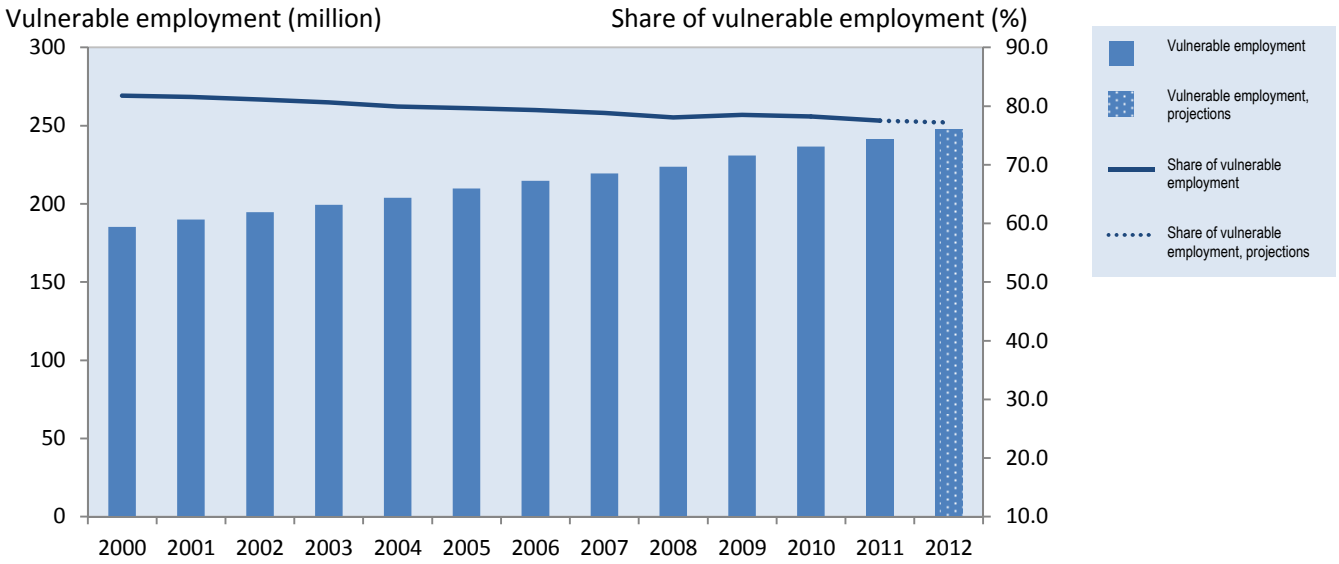


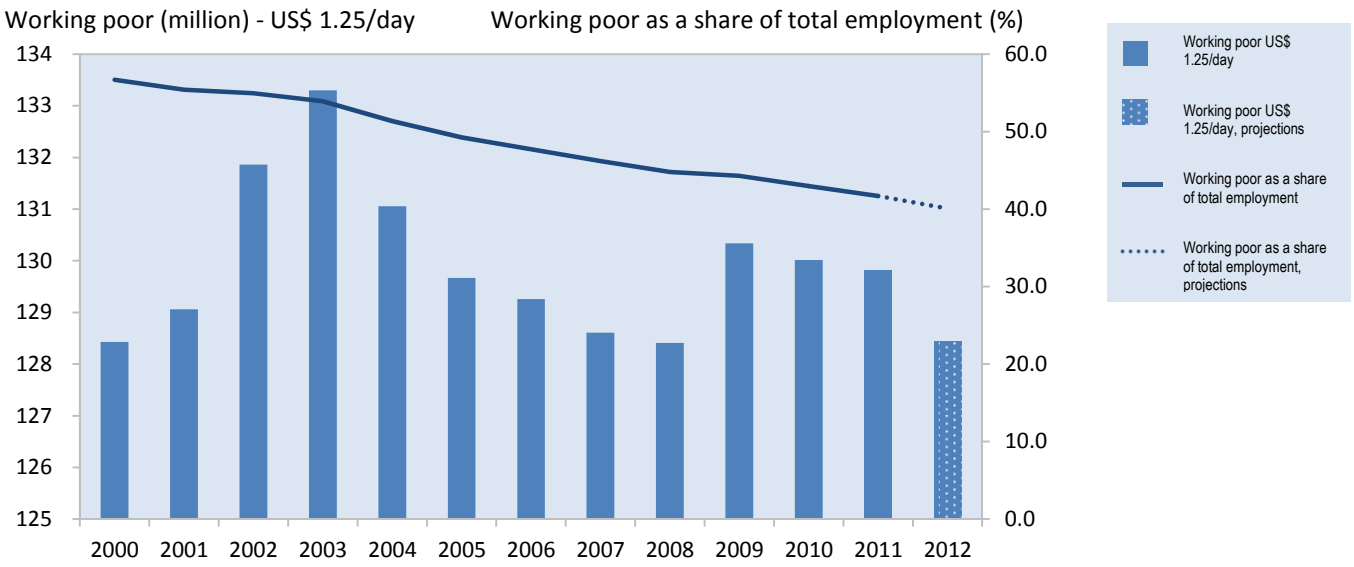



Total employment (million)
400
350
300
250
200
150
100
50
0
2000 2001 2002 2003 2004 2005 2006 2007 2008 2009 2010 2011 2012 2013 2014 2015 2016 2017
Total employment
Total employment, projections – Lower bound
Total employment, projections – Point projection
Total employment, projections – Upper bound


Total employment-to-population ratio (%)
66.5
66.0
65.5
65.0
64.5
64.0
63.5
63.0
62.5
2000 2001 2002 2003 2004 2005 2006 2007 2008 2009 2010 2011 2012 2013 2014 2015 2016 2017
Total employment-to-population ratio
Total employment-to-population ratio, projections – Point projection
Total employment-to-population ratio, projections – Lower and upper bound


Share in total employment (%)
70.0
60.0
50.0
40.0
30.0
20.0
10.0
0.0
Agriculture
Services
Industry
2000
2001
2002
2003
2004
2005
2006
2007
2008
2009
2010
2011
2012


Vulnerable employment (million)
Share of vulnerable employment (%)
300
250
200
150
100
50
0
90.0
80.0
70.0
60.0
50.0
40.0
30.0
20.0
10.0
2000
2001
2002
2003
2004
2005
2006
2007
2008
2009
2010
2011
2012
Vulnerable employment
Vulnerable employment, projections
Share of vulnerable employment
Share of vulnerable employment, projections


Working poor (million) - US$ 1.25/day
Working poor as a share of total employment (%)
134
133
132
131
130
129
128
127
126
125
60.0
50.0
40.0
30.0
20.0
10.0
0.0
2000
2001
2002
2003
2004
2005
2006
2007
2008
2009
2010
2011
2012
Working poor US$ 1.25/day
Working poor US$ 1.25/day, projections
Working poor as a share of total employment
Working poor as a share of total employment, projections


Working poor (million) - US$ 2/day
Working poor as a share of total employment (%)
210
200
190
180
170
160
150
78.0
76.0
74.0
72.0
70.0
68.0
66.0
64.0
62.0
60.0
58.0
56.0
2000
2001
2002
2003
2004
2005
2006
2007
2008
2009
2010
2011
2012
Working poor US$ 2/day
Working poor US$ 2/day, projections
Working poor as a share of total employment
Working poor as a share of total employment, projections

Annex 4. Note on global and regional estimates

The source of all global and regional labour market estimates in this *Global Employment Trends* report is ILO, *Trends Econometric Models*, October 2012. The ILO Employment Trends Unit has designed and actively maintains econometric models which are used to produce estimates of labour market indicators in the countries and years for which country-reported data are unavailable. These give the ILO the ability to produce and analyse global and regional estimates of key labour market indicators and the related trends.

The Global Employment Trends Model (GET Model) is used to produce estimates – disaggregated by age and sex as appropriate – of unemployment, employment, status in employment and employment by sector. The output of the model is a complete matrix of data for 178 countries. The country-level data can then be aggregated to produce regional and global estimates of labour market indicators such as the unemployment rate, the employment-to-population ratio, sector-level employment shares, status in employment shares and vulnerable employment.

Prior to running the GET Model, labour market information specialists in the Employment Trends Unit, in cooperation with specialists in ILO field offices, evaluate existing country-reported data and select only those observations deemed sufficiently comparable across countries – with criteria including: (1) type of data source; (2) geographic coverage; and (3) age group coverage.

- With regard to the first criterion, in order for data to be included in the model, they must be derived from either a labour force survey or population census. National labour force surveys are typically similar across countries, and the data derived from these surveys are more comparable than data obtained from other sources. A strict preference is therefore given to labour force survey-based data in the selection process. Yet many developing countries without adequate resources to carry out a labour force survey do report labour market information based on population censuses. Consequently, due to the need to balance the competing goals of data comparability and data coverage, some population census-based data are included in the model.

- The second criterion is that only nationally representative (i.e. not prohibitively geographically limited) labour market indicators are included. Observations corresponding to only urban or only rural areas are not included, as large differences typically exist between rural and urban labour markets, and using only rural or urban data would not be consistent with benchmark indicators such as GDP.

- The third criterion is that the age groups covered by the observed data must be sufficiently comparable across countries. Countries report labour market information for a variety of age groups and the age group selected can have an influence on the observed value of a given labour market indicator.

Apart from country-reported labour market information, the GET Model uses the following benchmark files:

- United Nations World Population Prospects, 2010 revision, for population estimates and projections.

- ILO Economically Active Population, Estimates and Projections (6th edition, July update) for labour force estimates and projections.

- IMF/World Bank data on GDP (PPP, per capita GDP and GDP growth rates) from the *World Development Indicators* and the *World Economic Outlook* October 2012 database.

- World Bank poverty estimates from the PovcalNet database.

The first phase of the GET Model produces estimates of unemployment rates, which also allows for the calculation of total employment and unemployment and employment-to-population ratios. After all comparable unemployment rates are compiled, multivariate regressions are run separately for different regions in the world, in which unemployment rates broken down by age and sex (youth male, youth female, adult male, adult female) are regressed on GDP growth rates. Weights are used in the regressions to correct for biases that may result from the fact that countries that report unemployment rates tend to be different (in statistically important respects) than countries that do not report unemployment rates.[68] The regressions, together with considerations based on regional proximity, are used to fill in missing values in the countries and years for which country-reported data are unavailable.

During subsequent phases, employment by sector and status in employment are estimated. Additional econometric models are used to produce global and regional estimates of labour force participation, working poverty and employment elasticities. The models use similar techniques to the GET Model to impute missing values at the country level.

For more information on the methodology of producing world and regional estimates, see www.ilo.org/trends.

[68] For instance, if simple averages of unemployment rates in reporting countries in a given region were used to estimate the unemployment rate in that region, and the countries that do not report unemployment rates are different with respect to unemployment rates than reporting countries, without such a correction mechanism, the resulting estimated regional unemployment rate would be biased. The "weighted least squares" approach taken up in the GET Model serves to correct for this potential problem.

Annex 5. Note on global and regional projections

Unemployment rate projections are obtained using the historical relationship between unemployment rates and GDP growth during the worst crisis/downturn period for each country between 1991 and 2005 and during the corresponding recovery period.[69] This was done through the inclusion of interaction terms of crisis and recovery dummy variables with GDP growth in fixed effects panel regressions.[70] Specifically, the logistically transformed unemployment rate was regressed on a set of covariates, including the lagged unemployment rate, the GDP growth rate, the lagged GDP growth rate and a set of covariates consisting of the interaction of the crisis dummy, and of the interaction of the recovery dummy with each of the other variables.

Separate panel regressions were run across three different groupings of countries, based on:

(1) geographic proximity and economic/institutional similarities;

(2) income levels;[71]

(3) level of export dependence (measured as exports as a percentage of GDP).[72]

The rationale behind these groupings is the following. Countries within the same geographic area or with similar economic/institutional characteristics are likely to be similarly affected by the crisis and have similar mechanisms to attenuate the crisis impact on their labour markets. Furthermore, because countries within geographic areas often have strong trade and financial linkages, the crisis is likely to spill over from one economy to its neighbour (e.g. Canada's economy and labour market developments are intricately linked to developments in the United States). Countries with similar income levels are also likely to have more similar labour market institutions (e.g. social protection measures) and similar capacities to implement fiscal stimulus and other policies to counter the crisis impact. Finally, as the decline in exports was the primary crisis transmission channel from developed to developing economies, countries were grouped according to their level of exposure to this

[69] The crisis period comprises the span between the year in which a country experienced the largest drop in GDP growth, and the "turning point year", when growth reached its lowest level following the crisis, before starting to climb back to its pre-crisis level. The recovery period comprises the years between the "turning point year" and the year when growth has returned to its pre-crisis level.

[70] In order to project unemployment during the current recovery period, the crisis-year and recovery-year dummies were adjusted based on the following definition: a country was considered "currently in crisis" if the drop in GDP growth after 2007 was larger than 75 per cent of the absolute value of the standard deviation of GDP growth over the 1991–2008 period and/or larger than 3 percentage points.

[71] The income groups correspond to the World Bank income group classification of four income categories, based on countries' 2008 GNI per capita (calculated using the Atlas method): low-income countries, US$ 975 or less; lower middle-income countries, US$ 976–3,855; upper middle-income countries, US$ 3,856–11,905; and high-income countries, US$ 11,906 or more.

[72] The export dependence-based groups are: highest exports (exports ≥70 per cent of GDP); high exports (exports <70 per cent but ≥50 per cent of GDP); medium exports (exports <50 per cent but ≥20 per cent of GDP); and low exports (exports <20 per cent of GDP).

channel, as measured by their exports as a percentage of GDP. The impact of the crisis on labour markets through the export channel also depends on the type of exports (the affected sectors of the economy), the share of domestic value added in exports and the relative importance of domestic consumption (for instance, countries such as India or Indonesia with a large domestic market were less vulnerable than countries such as Singapore and Thailand). These characteristics are controlled for by using fixed effects in the regressions.

In addition to the panel regressions, country-level regressions were run for countries with sufficient data. The ordinary least-squares country-level regressions included the same variables as the panel regressions. The final projection was generated as a simple average of the estimates obtained from the three group panel regressions and, for countries with sufficient data, the country-level regressions as well.

Refinement of the global and regional projections

In the beginning of Q4 2012, at the time of production of this *Global Employment Trends* report, 60 out of a total sample of 178 countries had released monthly or quarterly unemployment estimates for a portion of 2012. In five countries, estimates were available through September; in 17 countries, estimates were available through August; in six countries estimates were available through July; in 27 countries, estimates were available through June (Q2); and in 5 countries, estimates were available through March (Q1). These monthly/quarterly data are utilized in order to generate an estimate of the 2012 annual unemployment rate. The 2012 projection for the rest of the sample (countries without any data for 2012), as well as projections for 2013 onwards are produced by the extension of the GET Model using the relationship between economic growth and unemployment during countries' previous recovery periods, as described above.

In generating the 2012 point estimate for the 60 countries for which partial 2012 data are available, the first step is to take an unweighted average of the (seasonally adjusted) unemployment rate over the available months or quarters of 2012, which is defined as the point estimate. Around this point estimate a confidence interval is generated, based on the standard deviation of the monthly or quarterly unemployment rate since the beginning of 2008, multiplied by the ratio of the remaining months or quarters to 12 (for monthly estimates) or four (for quarterly estimates).[73] Thus, all else being equal, the more months of data that are available for a country, the more certain is the estimate of the annual unemployment rate, with uncertainty declining in proportion to the months of available data.

[73] In cases where the ratio of the point estimate and the standard deviation is less than or equal to 5, the standard deviation is instead constructed since the beginning of 2009. The rationale is that the exceptionally high volatility of unemployment rates during the early period of the global financial crisis is unlikely to persist over the short-to-medium term. Rather, the most recent level of volatility can be expected to persist.

In order to integrate the short term and medium-term trends in the movement of unemployment rates, the above point estimate is adjusted according to whether the two trends are in agreement.[74] Specifically,

- if both trends are positive (negative), then the above point estimate is recalculated as a weighted average of 60 (40) per cent of the upper bound and 40 (60) per cent of the lower bound;

- if the two trends are in opposite directions, the unemployment rate of the latest month or quarter available is assigned to the remaining months or quarters of 2012, and the above point estimate is recalculated as an unweighted average over the 12 months or four quarters of 2012.

The underlying assumption is that in cases where there is a clear upward (downward) trend over two consecutive periods, the tendency for the 2012 point estimate will be for somewhat higher (lower) unemployment rates than in the latest month of available data. In cases in which there is no discernible trend over the past two periods, unemployment is expected to remain at the most recent rate, and therefore more weight is given to the latest information available. The final 2012 unemployment rate estimate for these countries is equal to the adjusted point estimate.

The same procedure is followed for the unemployment rate of the youth sub-components for the countries with at least two quarters available in 2012 (41 out of 60 countries). The projections for the unemployment rate of the rest of the sub-components for 2012 onwards are produced with the extension of the GET Model, using separately for each sub-component the same model specifications as for the total unemployment rate. The nominal unemployment for the various sub-components estimated with the extension of the GET Model is aggregated to produce a nominal unadjusted total unemployment level, which may differ from what the above procedure yields for total nominal unemployment. The difference between the total nominal unemployment produced as the sum of the sub-components and the total nominal unemployment estimated separately is distributed among the sub-components in proportion to each sub-component's share of total unemployment.[75] These adjusted point estimates are the final point estimates for the sub-components.

For the 60 countries for which partial 2012 data are available, the confidence interval remains as described above. For the rest of the countries and for the projections for 2013 onwards, the confidence intervals around the projections are generated with one standard deviation across the projections of the various models' projections, as described above. In order to construct the confidence interval for each sub-component, the ratio of the sub-component unemployment rate to

[74] The short-term and the longer-term trend are defined, respectively, as the percentage point differences between the unemployment rate of the latest month M (or quarter Q) available and the unemployment rate of the month M–3 (or quarter Q–1), and of the month M–6 (or quarter Q–2), respectively.

[75] The underlying assumption is that the relationship between the total unemployment rate and GDP growth is better understood than the relationship between unemployment rates of sub-groups of workers and GDP growth.

total unemployment rate is applied to the upper- and lower-bound estimates of the total unemployment rate.

Projections based on the downside scenario

In its latest *World Economic Outlook* (WEO),[76] the International Monetary Fund (IMF) takes into account that high uncertainty around the global economy and produces a downside scenario. This scenario is based on a version of the Global Integrated Monetary and Fiscal (GIMF) Model calibrated to represent the United States, Japan, the Euro area (core and peripheral), emerging Asia, Latin America, and the rest of the world. The downside scenario assumes a rise in financial stress that policy-makers fail to avert; a sharp credit contraction in the periphery Euro area and to a lesser extent in the remaining area caused by Euro area banks' deleveraging with risk concerns overflowing around the globe. In this scenario, GDP in the core Euro area would fall by 1.7 per cent in 2013 in relation to the baseline projection and by 5.9 per cent in the peripheral Euro area. The ILO has produced a downside scenario for global unemployment based on GDP growth estimates from the IMF downside scenario. This scenario is incorporated in the GET Model by introducing the corresponding changes to the annual GDP growth rates, and running the extension of the GET Model as described above.

[76] See IMF, *World Economic Outlook: Coping with High Debt and Sluggish Growth* (2012b).

Annex 6. Global Employment Trends – Regional groupings

Developed Economies and European Union

European Union

- Austria
- Belgium
- Bulgaria
- Cyprus
- Czech Republic
- Denmark
- Estonia
- Finland
- France
- Germany
- Greece
- Hungary
- Ireland
- Italy
- Latvia
- Lithuania
- Luxembourg
- Malta
- Netherlands
- Poland
- Portugal
- Romania
- Slovakia
- Slovenia
- Spain
- Sweden
- United Kingdom

North America

- Canada
- United States

Other Developed Economies

- Australia
- Israel
- Japan
- New Zealand

Western Europe (non-EU)

- Iceland
- Norway
- Switzerland

Central and South-Eastern Europe (non-EU) and CIS

Central and South-Eastern Europe (non-EU)

- Albania
- Bosnia and Herzegovina
- Croatia
- Serbia and Montenegro
- The former Yugoslav Republic of Macedonia
- Turkey

Commonwealth of Independent States

- Armenia
- Azerbaijan
- Belarus
- Georgia
- Kazakhstan
- Kyrgyzstan
- Republic of Moldova
- Russian Federation
- Tajikistan
- Turkmenistan
- Ukraine
- Uzbekistan

South Asia

- Afghanistan
- Bangladesh
- Bhutan
- India
- Maldives
- Nepal
- Pakistan
- Sri Lanka

South-East Asia and the Pacific

South-East Asia

- Brunei Darussalam
- Cambodia
- East Timor
- Indonesia
- Lao People's Democratic Republic
- Malaysia
- Myanmar
- Philippines
- Singapore
- Thailand
- Viet Nam

Pacific Islands

- Fiji
- Papua New Guinea
- Solomon Islands

East Asia

- China
- Hong Kong, China
- Korea, Democratic People's Republic of
- Korea, Republic of
- Macau, China
- Mongolia
- Taiwan, China

Latin America and the Caribbean

Caribbean

- Bahamas
- Barbados
- Cuba
- Dominican Republic
- Guadeloupe
- Guyana
- Haiti
- Jamaica
- Martinique
- Netherlands Antilles
- Puerto Rico
- Suriname
- Trinidad and Tobago

Central America

- Belize
- Costa Rica
- El Salvador
- Guatemala
- Honduras
- Mexico
- Nicaragua
- Panama

South America

- Argentina
- Bolivia
- Brazil
- Chile
- Colombia
- Ecuador
- Paraguay
- Peru
- Uruguay
- Venezuela, Bolivarian Republic of

Middle East

- Bahrain
- Iran, Islamic Republic of
- Iraq
- Jordan
- Kuwait
- Lebanon
- Oman
- Qatar
- Saudi Arabia
- Syrian Arab Republic
- United Arab Emirates
- Occupied Palestinian Territory
- Yemen

North Africa

- Algeria
- Egypt
- Libya
- Morocco
- Sudan
- Tunisia

Sub-Saharan Africa

Eastern Africa

- Burundi
- Comoros
- Eritrea
- Ethiopia
- Kenya
- Madagascar
- Malawi
- Mauritius
- Mozambique
- Réunion
- Rwanda
- Somalia
- Tanzania, United Republic of
- Uganda
- Zambia
- Zimbabwe

Middle Africa

- Angola
- Cameroon
- Central African Republic
- Chad
- Congo
- Congo, Democratic Republic of
- Equatorial Guinea
- Gabon

Southern Africa

- Botswana
- Lesotho
- Namibia
- South Africa
- Swaziland

Western Africa

- Benin
- Burkina Faso
- Cape Verde
- Côte d'Ivoire
- Gambia
- Ghana
- Guinea
- Guinea-Bissau
- Liberia
- Mali
- Mauritania
- Niger
- Nigeria
- Senegal
- Sierra Leone
- Togo

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