# Market turbulence, employment and social unrest: Trends and outlook[1]

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## Main findings

- The global economic outlook has deteriorated significantly since 2010. The latest indicators suggest that employment growth has already begun to slow. This is the case in nearly two-thirds of advanced economies and half of the emerging and developing economies for which recent information exists. The Report shows that almost 80 million jobs need to be created over the next two years to reach pre-crisis employment rates. But the recent slowdown in economic activity suggests that the world economy is likely to only create half the number of jobs needed. As a result, on current trends, employment in advanced economies will not return to the pre-crisis situation before 2016, which is one year later than predicted in *World of Work Report 2010*.

- The slowdown in economic activity comes at a critical point for labour markets. Three years into the crisis, and despite some encouraging signs of recovery in 2010, many jobseekers are becoming demoralized and are deciding to leave the labour market altogether. In most regions, in particular in advanced economies and a number of Arab countries, it is increasingly difficult to obtain stable employment with decent career prospects – many new jobs are insecure and precarious, reflecting the uncertain economic prospects facing enterprises. The job situation among youth is especially problematic.

- According to new survey data presented in the Report, the inability to address the jobs crisis has led to rising social discontent. It is estimated that 40 per cent of the 119 countries with available information face the prospect of increased social unrest. The estimated risk of increased social unrest is especially high in advanced economies, the Middle East and North Africa and, to a lesser extent, Asia. By contrast the estimated risk of social unrest may have stabilized in

1. Excellent research assistance was provided by Elodie Dessors.

sub-Saharan Africa and has declined in Latin America. Moreover, in 50 out of 99 countries with available data, survey respondents indicate that their confidence in national governments is declining. Lack of good jobs is at the heart of these developments as the Report shows that these trends are strongly linked to the employment situation and perceptions that the burden of the crisis is shared unevenly.

- Further deterioration in labour market conditions and subsequent erosion of the social climate threatens to derail the recovery. Such a scenario can be avoided if job creation is put at the top of the policy agenda – and urgently. Some countries are showing the way and have been rewarded with good employment outcomes. Chapters 2 to 6 are dedicated to showing how employment and income measures can be drivers of the recovery process.

## Introduction

By the end of 2009 the global economy – with considerable variation in both pace and breadth – started to recover from the global financial and economic crisis. At that time, world GDP growth was expected to be near 5 per cent for 2012. Yet, throughout 2009 and 2010, quality employment growth remained weak, especially in advanced economies.[2] Indeed, temporary jobs dominated employment growth in many advanced economies in 2010 and informal employment rose in a number of emerging economies (ILO, 2010a).

However, the global crisis has entered yet another new phase and growth projections have been downgraded significantly. Already by late 2010, GDP growth had begun to weaken, with the slowdown being particularly acute in advanced economies, adversely affecting demand in other regions. This poses severe downside risks to an already fragile employment situation – exacerbated by rising food prices (see Chapter 4).

The purpose of this chapter is to examine in more detail recent labour market and social developments and to assess the risk of a double dip in employment. In particular, section A documents recent macroeconomic and employment trends with a view to assessing the extent to which labour market conditions have already deteriorated. Given that employment changes often occur with some delay to changes in GDP, section B estimates the impact of the recent downward revisions on growth on the employment outlook. Section C assesses the overall social climate and examines the role of jobs, or lack thereof, in social unrest. The final section (section D) introduces the rest of the Report, highlighting key areas that must be addressed to avert a double dip in employment and further social tensions.

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2. "Advanced" economies refers to countries with a gross national income (GNI) per capita of US$12,276 or more. "Emerging" refers to upper-middle income countries (GNI between US$3,976 and 12,275) and "developing" to low- and lower-middle income countries (GNI of US$3,975 or less). See Appendix A for more details regarding country groupings.

**Table 1.1 Economic growth projections for 2012, by date of forecast**

| | | World | Advanced economies | Emerging economies | Developing economies |
|---|---|---|---|---|---|
| Date of the forecast | October 2010 | 4.5 | 2.7 | 6.6 | 6.6 |
| | April 2011 | 4.5 | 2.7 | 6.7 | 6.5 |
| | September 2011 | 4.0 | 1.9 | 6.2 | 6.2 |

Note: Figures are rounded to the nearest decimal. See Appendix A for the detailed list of countries for each income grouping.

Source: IILS based on IMF World Economic Outlook.

## A. Labour market conditions have weakened

### The macroeconomic climate has deteriorated and remains volatile …

The current economic environment is characterized by significant market volatility and deterioration in the economic outlook. Recently, the IMF revised downward its forecast for 2012 significantly, especially for advanced economies (table 1.1). Compared with forecasts made in October of 2010, world GDP is expected to slow by 0.5 percentage points, i.e. a fall from roughly 4.5 per cent to the now estimated 4 per cent. The downward revision in growth was particularly strong in advanced economies: GDP growth in 2012 is now expected to be 1.9 per cent compared with estimates of 2.7 a year ago. Growth is also slowing in emerging and developing countries, albeit to a lesser extent.

A number of factors are at play. The re-emergence of a fiscal crisis in Europe and continued concerns over Greek debt are destabilizing financial markets (see also Box 1.1). At the height of the crisis, the balance sheet of major central banks – the US Federal Reserve, the Bank of Japan and the European Central Bank – expanded threefold in an attempt to provide liquidity to the banking sector and prevent a global collapse of intermediated finance. A new agreement on banking supervision and regulation – the Basel III accords – has attempted to address a number of structural issues, including raising capital adequacy ratios.[3] Yet, financial reforms have not met expectations – banks are still considered to be too weak and risk-averse to sustain a recovery in credit growth. Small firms – engines of job creation – continue to face tight credit conditions in many advanced economies (see Chapter 2).[4]

Large amounts of household debt accumulated in the run-up to the crisis are weighing heavily on private consumption in the recovery. Indeed, as consumers attempt to reduce their leverage ratios in order to return to more sustainable levels of indebtedness, private consumption around the globe is being depressed – which is adversely affecting the inclination of companies to expand their productive capacity.

Emerging economies have been affected by the volatility of capital flows. The sluggish recovery in the real economy in advanced economies, banks' continuing risk aversion and prevailing monetary conditions have triggered a new "search for yield" among financial investors, which has led to an upsurge in international

3. Some countries have adopted further reform measures; see Ernst (2011a).
4. See also IMF (2011a).

### Box 1.1 European financial safety measures and recovery prospects

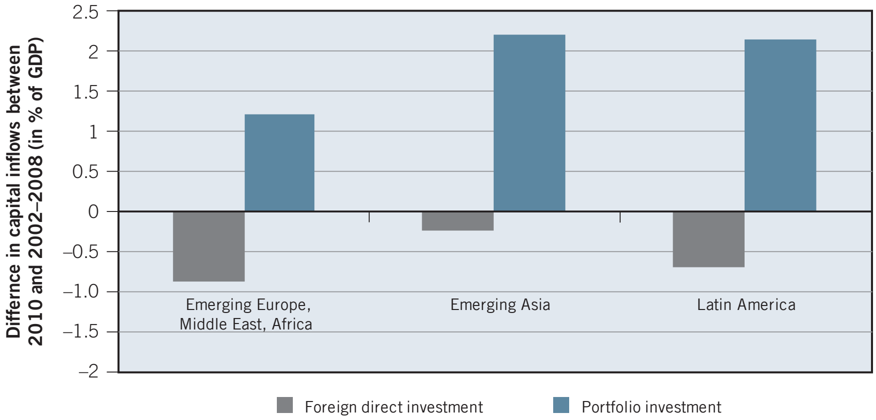
In order to prevent a sovereign default of one of their member countries, EcoFin – the Council of European Economics and Finance Ministers – together with the IMF undertook some short-term support measures to maintain sovereign solvency and to prevent high long-term interest rates from choking off the recovery underway in the euro area:

- Two temporary funding facilities have been set up, the *European Financial Stability Facility* (EFSF) and the *European Financial Stabilisation Mechanism* (EFSM), which will together provide a financial safety net of up to €750 billion. By mid-2013, these temporary facilities are planned to be replaced by the *European Stability Mechanism* (ESM).
- The *Competitiveness Pact – or 'Euro-Plus' Pact* – intends to accelerate convergence among member countries in order to avoid a further divergence of economic fundamentals that may threaten the cohesion of the entire currency area.

On top of that, In September 2011 the European Parliament approved a bundle of six laws – the so-called *'six pack' reforms* – designed to avert future debt crises by tightening European Union scrutiny on national budgets by introducing swift penalties for states that do not comply with rules. Three of the six texts in the package focus on budgets, two set up a new alert and sanctions system for economic imbalances, and the sixth sets out common standards for national accounts:

- Under the *amendments of regulation 1466/97 on budgetary and economic surveillance*, and as part of the *'European Semester'* (a revamped timetable for budget-making introduced in 2011), national budget plans will now be sent first to the European Commission in April, and then to the European Council in June and July, before they can be finalized for the following year. Also, from 2012 onwards, countries will not be allowed to increase their spending by more than their average GDP growth over a given period. If countries fail to meet these requirements and take action seven months after the Commission's warning, the latter will be able to levy a financial penalty of at least 0.2% of GDP on the government.
- *Under the amendments of regulation 1467/97 on the excessive deficit procedure*, from now on, countries that are in breach of the 60 per cent debt limit will have to reduce their excess debt by at least 0.5 per cent of GDP on average over three years. Countries can nevertheless avoid the excessive deficit procedure and sanctions if their excess debt is racked up because of pension costs or other essential economic reforms.
- Under the *new Regulation on fines for deficit countries*, countries that flout their medium-term objectives, or the European Union's debt and deficit limits, can be fined between 0.2 per cent and 0.5 per cent of the previous year's GDP (as it was the case with Greece).
- *New regulation setting up a monitoring system for "imbalances"*, with the European Commission entitled to conduct in-depth reviews of countries that cross the thresholds for public and private indebtedness, house prices, unemployment, current account balance, real effective exchange rates etc. If "excessive" imbalances exist, the Commission will ask the government to submit a corrective action plan. If after six months and two warnings no progress has been made, the country can be fined 0.1 per cent of its GDP.
- *Regulation on sanctions for excessive imbalances:* after two warnings, countries that fail to abide by the Commission's recommendations will be subject of a fine of 0.1 per cent of their GDP.
- *New directive setting statistical and budgetary standards:* state accounts should be published monthly, regional accounts quarterly; debt and deficit limits should be written into law (except in the UK); budget planning should be done over three years; independent auditors should check all government accounts. This will be applied from 2014 onwards.

**Figure 1.1 Composition of capital inflows to emerging markets (2002-08 versus 2010)**




Note: The chart shows the difference between capital inflows in 2010 and average yearly capital inflows during the pre-crisis period 2002 to 2008. Emerging Europe, Middle East and Africa: Egypt, Hungary, Israel, Poland, Russian Federation, South Africa and Turkey; Emerging Asia: India, Indonesia, Republic of Korea, Malaysia, Philippines, Taiwan, China and Thailand; Latin America: Argentina, Brazil, Chile, Colombia, Mexico, Peru.

Source: IILS based on IMF (2011a).

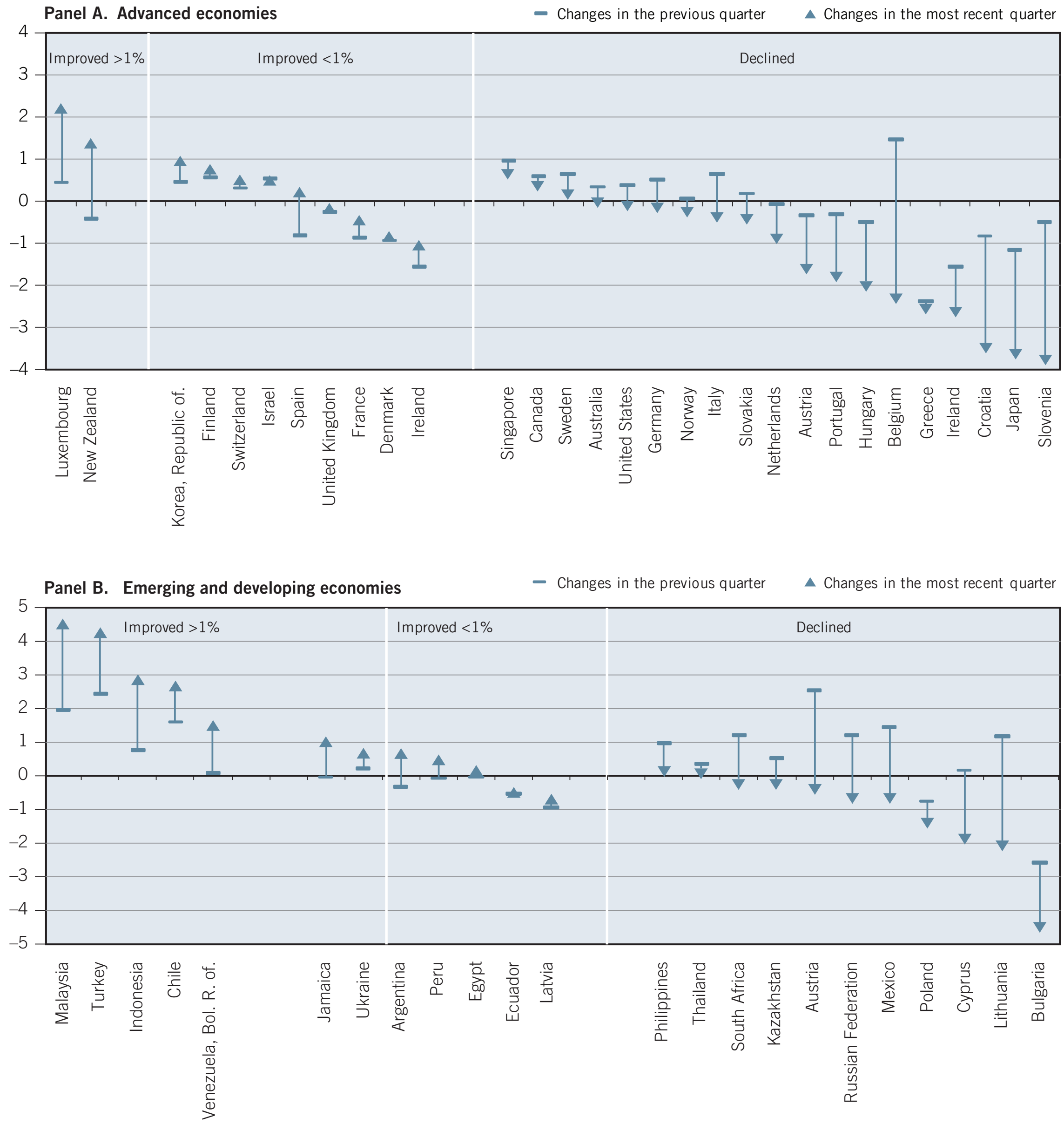
capital flows into emerging countries, where new investment opportunities seemed to be more widespread (figure 1.1). The dramatic increase in capital flows has had a negative impact on wage share developments (see Chapter 3). Importantly, the composition of capital inflows has changed dramatically, privileging short-term portfolio flows ("hot money"), instead of longer term commitments that would boost potential growth, such as foreign direct investment (see also Chapter 2). Indeed, none of the emerging market regions have seen a substantial recovery of foreign direct investment inflows into their economies. Rather, international investors prefer short-term debt or equity investments which can be withdrawn more rapidly in case the outlook worsens.

### … and employment growth has already begun to slow as a result …

The slowdown in economic activity is already having an adverse effect on employment. More than half of the countries with available information have experienced negative job creation in the most recent period and only seven countries experienced positive job creation greater than 1 per cent in the most recent quarter (figure 1.2). In nearly two-thirds of advanced economies, employment growth has slowed, i.e. the most recent quarterly gains are lower than in the previous quarters. The trend decline in job creation is especially strong in European countries. In emerging and developing economies with available information, close to half have experienced a slowdown in job creation, with a similar amount even experiencing job declines – notably Mexico and the Russian Federation.

Moreover, job creation started to weaken before any substantial progress had been made in terms of employment recovery, and nearly two-thirds of advanced economies are continuing to struggle to reach to their pre-crisis employment levels (figure 1.3, panel A). Among these countries, more than 13 million jobs are needed to recover employment to the levels achieved in 2007. The challenge is particularly acute in European economies, where employment levels remain 4.5 million jobs below the pre-crisis peaks. Moreover, Spain and the United States together account for roughly half of the missing 13 million jobs. Other countries, notably

## Figure 1.2 Employment growth developments in the most recent period (seasonally adjusted)



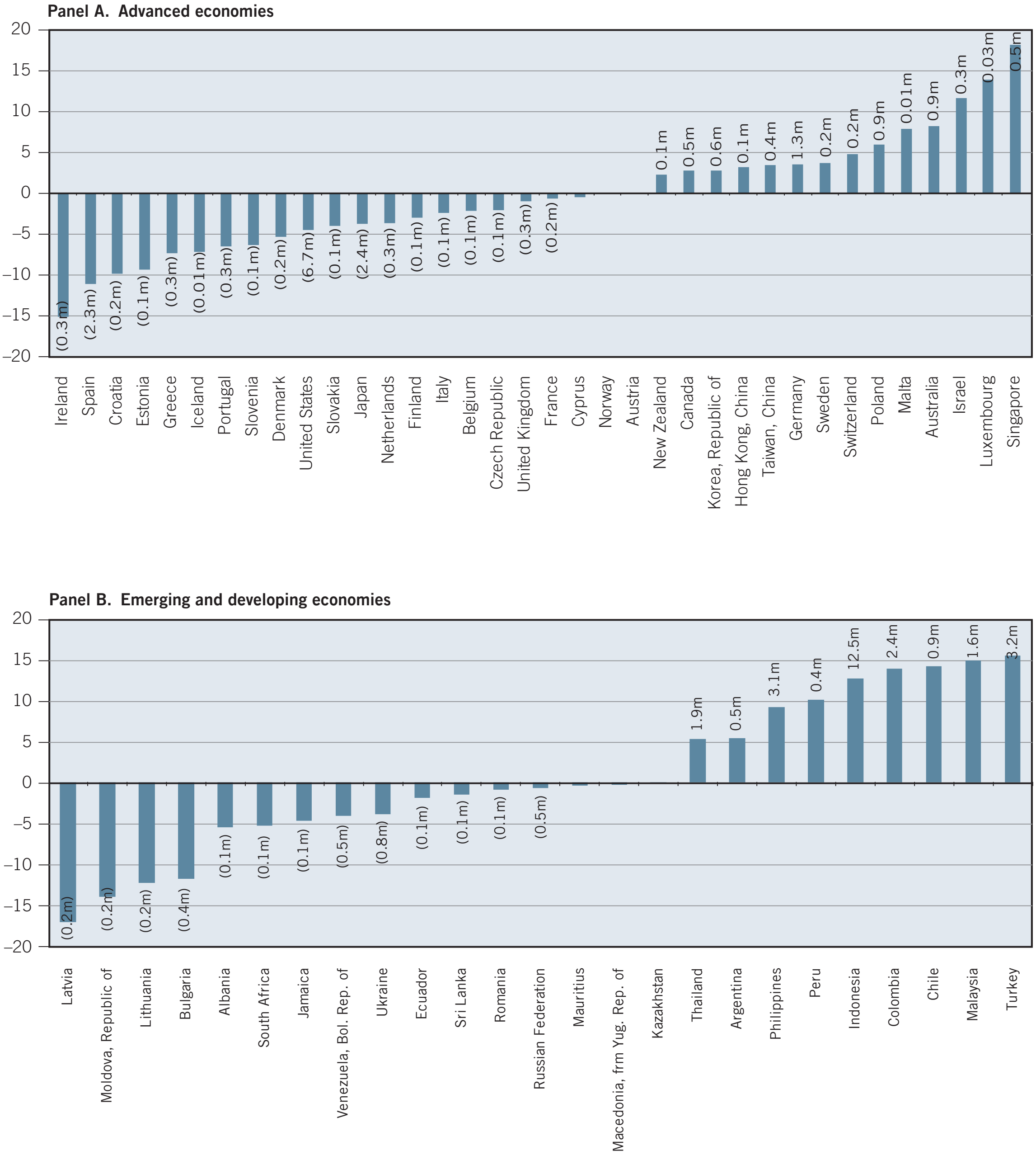

Note: The first quarter of 2011 is used as the most recent quarter, except for Australia, Belgium, Chile, Finland, Japan, Republic of Korea, Russian Federation, Spain, Sweden, and United States (second quarter of 2011); Egypt, Thailand, Ukraine (fourth quarter of 2010); Mexico (third quarter of 2010); and Indonesia (first half of 2011).

Source: IILS based on ILO, Short term indicators of the labour market; EUROSTAT, LFS.

Australia, Israel, Luxembourg and Singapore, have fared well in comparison, with employment higher by 8 per cent or more compared with the pre-crisis peaks.

In emerging and developing economies, employment has generally recovered much faster (figure 1.3, panel B). However, among 25 countries with available information, 16 still have employment levels below the pre-crisis peaks. Among these countries the job shortfall is roughly 4.4 million. Among major emerging economies, South Africa and the Russian Federation – despite strong job creation in the early phases of the recovery – are struggling to match previous peaks. Indeed, recent employment growth in these two countries was negative (see figure 1.2).

Figure 1.3 Current employment levels compared to pre-crisis peaks (percentages)




Note: The chart shows current employment levels as a share of pre-crisis peak levels. Figures in parentheses refer to millions of job above (or below) pre-crisis levels.

Source: IILS calculations based on Laborsta.

### ... with youth unemployment, low-quality jobs and labour market exclusion becoming commonplace.

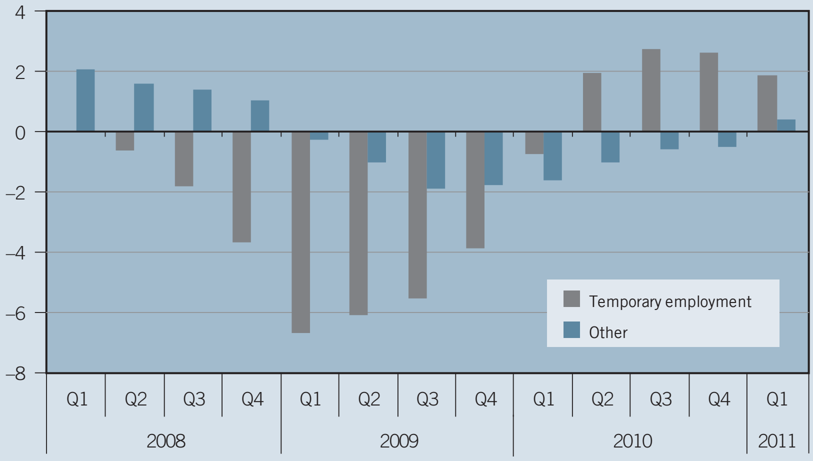
Poor job prospects continue to take their toll on youth aged 15 to 24. Among countries with recently available data, more than one in five youth, i.e. 20 per cent, were unemployed as of the first quarter of 2011 – against total unemployment of 9.6 per cent.[5] And given that youth unemployment rates have remained above 20 per cent

5. These numbers refer to weighted averages for 48 countries with recent information available. See also ILO (2011a) for more information regarding the challenge of youth unemployment.

## Box 1.2 The decline in employment quality: The case of the European Union

Growth in temporary employment has offset other job losses in Europe in 2010 (figure 1.4).[6] Indeed, other forms of employment actually fell in each quarter of 2010, increasing only modestly in the first quarter of 2011. However, temporary forms of employment are typically cyclical in nature and are generally less well remunerated than standard jobs; moreover, given the labour market uncertainty associated with atypical employment, higher precautionary saving among this group is also likely to have contributed to lower consumption levels.[7]

**Figure 1.4 Employment developments in the EU-27 by job type, 2008 to 2011**




Source: IILS based on OECD Employment database.

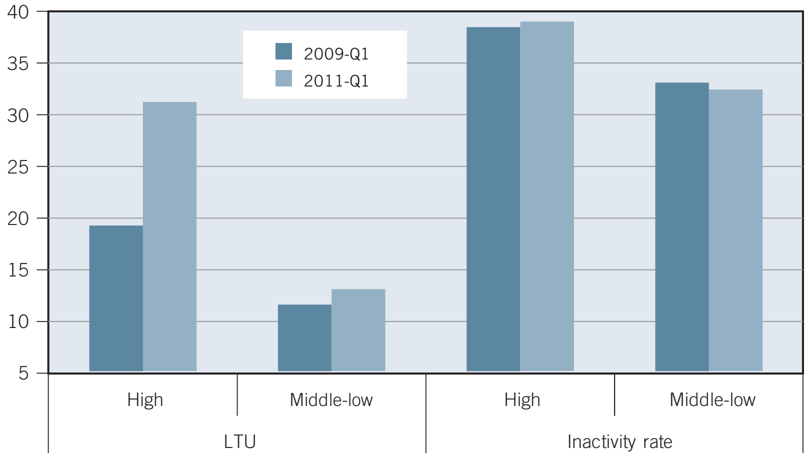
per cent since the second quarter of 2009, this does not bode well for future labour market success in terms of skills acquisition and earnings capacity over the long term. Quality jobs have been scarce, notably in the European Union, where only temporary jobs have shown an increase (box 1.2).

In addition, the prolonged labour market recession is having longer term consequences. With unemployment high and persistent, long-term unemployment rates, i.e. the share of unemployed persons out of work for 12 months or more, have increased in both advanced and emerging economies (figure 1.5). The increase – more than 10 percentage points (or 6 million people) since the first quarter of 2009 – has been particularly acute in advanced economies.

Moreover, many unemployed have become discouraged and have started to leave the labour market entirely – more than 8 million individuals in advanced economies have left the labour market since the first quarter of 2009 (inactivity rate increased by half a percentage point). Such developments run the risk of permanently reducing the level of potential employment, thereby reducing future development opportunities. Falling participation rates and increasing structural

6. IILS estimates indicate that unemployment rates have increased more in countries where temporary employment was higher initially. For example, among countries with available information, each percentage point of temporary employment is associated with an increase of 1.7 percentage points in unemployment.
7. See for example ILO (2009) and Guiso et al. (1992).

**Figure 1.5 Long-term unemployment and inactivity rates (percentages)**




Source: IILS calculations based upon LaborStat.

**Table 1.2 Estimated employment shortages over 2012 to 2013**

| Region | Employment required over next two years to reach 2007 employment rate (millions) | Projected employment over 2012-13 (millions) | Job shortage (millions) |
|---|---|---|---|
| Advanced economies | 27.2 | 2.5 | –24.7 |
| Emerging and developing economies | 52.8 | 37.7 | –15.1 |
| World | 80.0 | 40.1 | –39.9 |

Note: Employment and working-age population refer to people aged 15 and over.
Source: IILS calculations based on Laborsta and KILM (see also Appendix B).

unemployment rates – which were evident in Europe in the early 1990s – can lead to inflationary pressures and a sharp readjustment of monetary and fiscal policies, with adverse consequences for longer term employment and income expansion.

## B. Employment outlook: Insufficient job creation

### The short-term outlook has deteriorated significantly, creating a large jobs gap ...

The sharp and widespread economic slowdown described above will have a significant impact on employment creation over the near term.[8] Job creation at the aggregate level is expected to remain positive, but when the strong growth in the working-age population – many of whom are youth – is taken into account,

8. The projections presented in this section draw on employment–output elasticities estimated by way of an econometric analysis of the impact of economic growth on employment during past-crises; see Appendix B for methodological considerations.

80 million jobs need to be created over the next two years, i.e. 2012 and 2013, to return to 2007 employment rates (table 1.2).[9] However, the recent slowdown in economic activity suggests that the world economy is likely to create a little over half of the jobs needed. As such, the jobs shortage created over the next two years will be close to 40 million. The problem is particularly acute in advanced economies, which account for more than half of the global jobs shortage.

### … delaying further the recovery in advanced economies …

Under current growth estimates, employment growth in advanced economies is not expected to recover to pre-crisis levels before at least 2016 (figure 1.6, panel A). Once the growth in the working-age population is taken into account, the employment rate does not recover in the medium term (figure 1.6, panel B). Given the recent market turbulence and volatility, under a more pessimistic growth scenario – i.e. a further slowdown of one percentage point – employment takes even longer to return to the pre-crisis levels and creates an employment gap relative to the baseline of roughly 2 per cent. Similarly, the employment-to-population ratio will remain below 69 per cent in the pessimistic scenario, and far below the 71 per cent attained at the peak before the crisis.

### … and slowing the pace of employment growth in emerging economies …

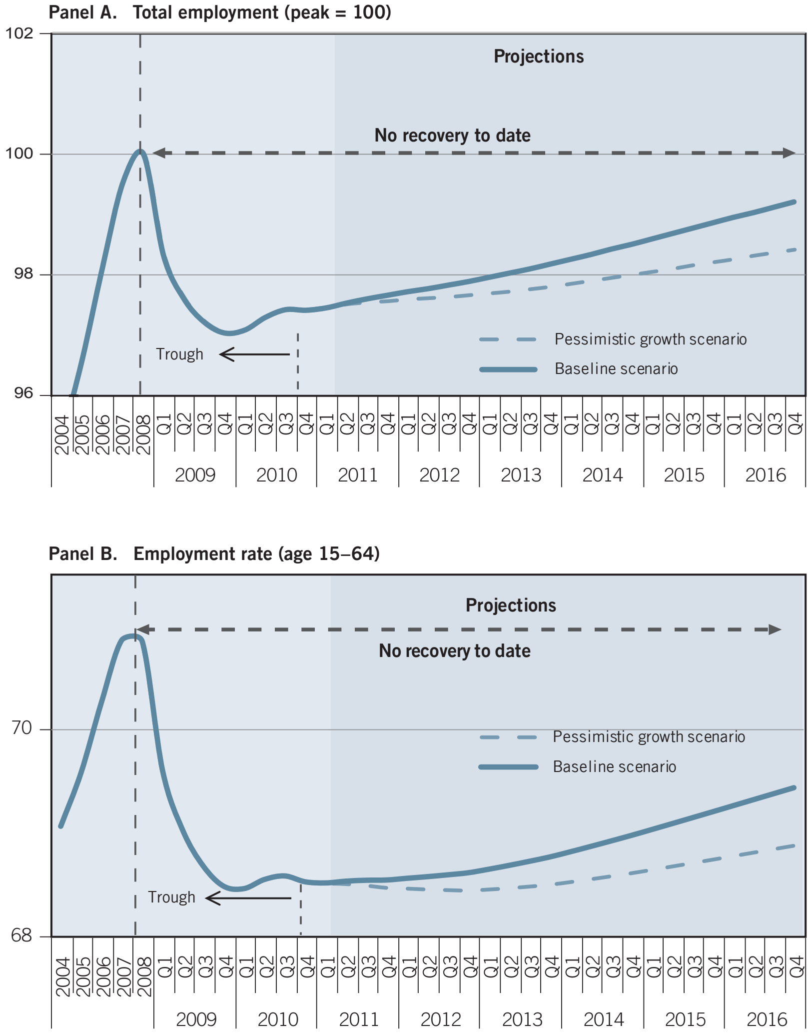
The recovery strongly benefited emerging economies: the positive growth in the terms of trade and the additional boost from increased investments helped emerging economies to stimulate job creation quickly (figure 1.7, panel A). As a result, this group of countries managed to recover pre-crisis levels of employment in less than two years following the onset of the crisis. Going forward, economic growth is expected to be lower than previously expected, due in part to spillover effects from advanced economies and given that higher inflation is eroding growth prospects. As such, while job creation will remain robust, employment will now grow at a slower pace. Employment rates are expected to return to pre-crisis levels in 2012 – or 2014 if growth slows by 1 percentage point (figure 1.7, panel B).

### … and developing economies.

Employment in developing economies continues to grow and – like emerging economies – has only suffered a temporary slowdown in job creation (figure 1.8, panel A). However, against the backdrop of a rapidly expanding working-age population, employment rates are expected to be relatively stagnant until roughly 2013, recovering thereafter (figure 1.8, panel B). If, however, the economic outlook deteriorates further (pessimistic scenario), the employment rate would actually decline for two years and begin to grow once again in 2014.

9. Employment rate is the ratio of employment to working-age population.

## Figure 1.6 Employment projections: Advanced economies




Note: See Appendix B for methodological considerations.

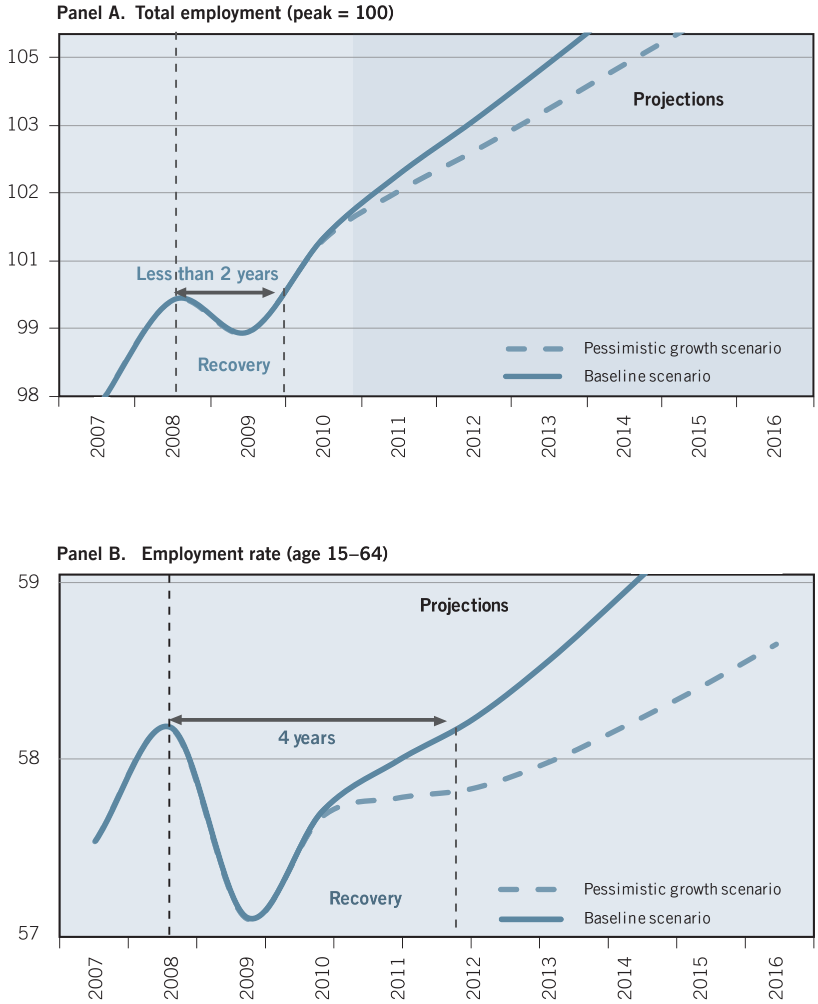
Source: IILS estimates based on ILO Laborsta and IMF (2011b).

## C. Recent trends in social well-being and unrest[10]

Against the backdrop of deteriorating labour market conditions, the global social climate continues to worsen. Following on the heels of unrest in the Middle East and North Africa, there has been a significant increase in the number of street demonstrations and protests in advanced countries. Indeed, a global survey of over 150 countries and territories in 2010 shows heightened socio-economic insecurity around the world.

10. Analysis in this section is based on the most recent global survey data from Gallup World Poll. In this section, data are presented by ILO region and, therefore, Hungary and Poland are included in the Central and South Eastern Europe and Commonwealth of Independent States group rather than advanced economies.

**Figure 1.7 Employment projections: Emerging economies**




Note: See Appendix B for methodological considerations.

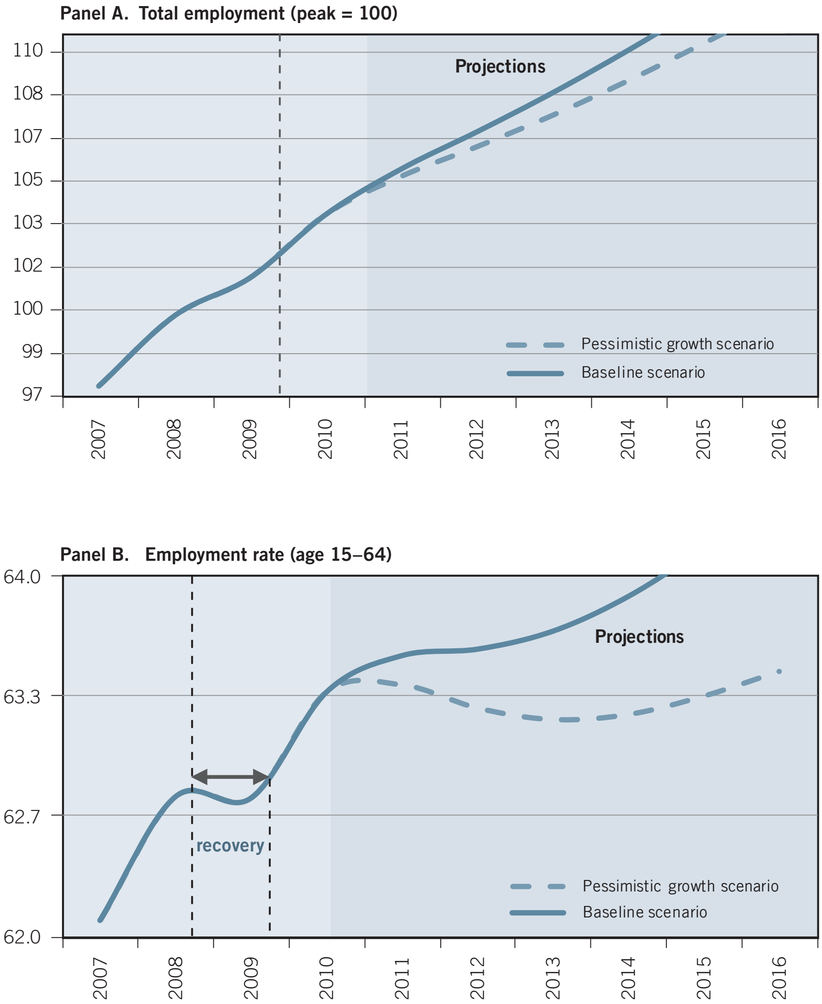
Source: IILS estimates based on ILO Laborsta and IMF (2011b).

### Social unrest is on the rise, especially in advanced economies ...

Out of the 119 countries for which 2009 and 2010 Gallup survey data are available, 40 per cent of the countries show an increase in the scores for the social unrest index (the higher the score, the higher the estimated unrest).[11] Importantly, caution should be taken in comparing levels of unrest across countries and regions because people's perception of, for example, what constitutes satisfaction or dissatisfaction with the state of freedom and democracy tends to vary widely. Nevertheless, the changes within regions and countries can prove insightful for assessing changes over time.

11. The social unrest index was constructed using the following variables and corresponding weights: percentage of respondents reporting lack of confidence in their national government (0.3); percentage of respondents reporting that their standard of living was getting worse (0.2); percentage of respondents reporting dissatisfaction with freedom in their country (0.2); percentage of respondents reporting that their national economy was getting worse (0.2); and percentage of respondents with access to the Internet (0.1). The weights were based on other indexes for social and political unrest (see Appendix C).

Figure 1.8 Employment projections: Developing economies




Note: See Appendix B for methodological considerations.

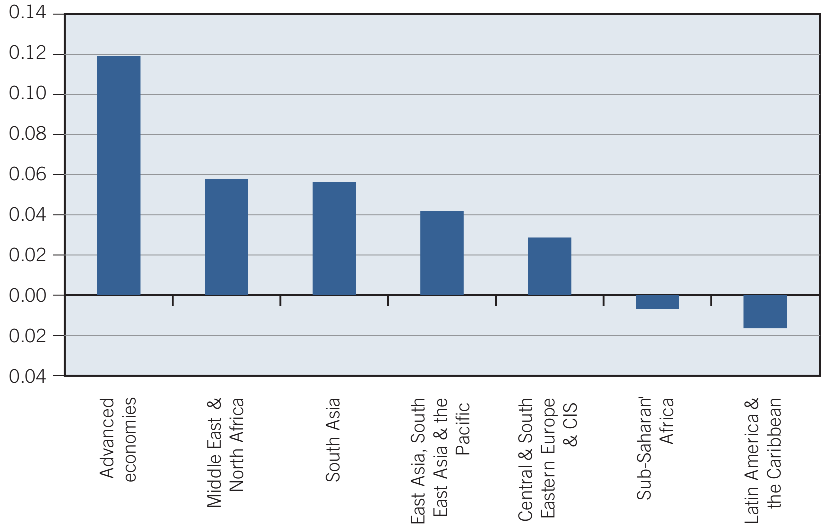
Source: IILS estimates based on ILO Laborsta and IMF (2011b).

With this in mind, in 2010, the social unrest index increased for all regions of the world except Latin America and the Caribbean and sub-Saharan Africa (figure 1.9). The largest increases took place in advanced economies, with sizeable increases occurring also in Middle East and North Africa and South Asia.

### … with dissatisfaction in employment prospects particularly high.

In nearly all regions, the vast majority of people are not satisfied with the availability of quality jobs (table 1.3). Dissatisfaction is highest in Central and Eastern Europe and CIS and sub-Saharan Africa, where dissatisfaction reaches over 70 per cent and 80 per cent, respectively. In the case of Middle East and North Africa – the epicentre of recent social and political upheavals – job dissatisfaction is slightly lower, at 60 per cent. Of course, within this region there is considerable inter-country variation, with Egypt, Jordan and Lebanon reporting that in 2010 more than three-quarters of people were unsatisfied with the availability of good jobs. In advanced economies, the problem is particularly acute in Greece, Italy, Portugal,

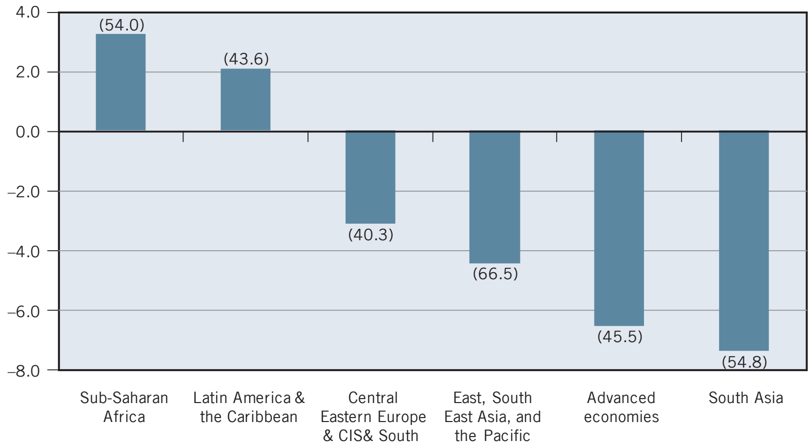
**Figure 1.9 Change in the risk of social unrest between 2006 and 2010 (scale of 0 to 1)**




Note: A positive value means a higher estimated risk of social unrest (see Appendix C).

Source: IILS estimates based on Gallup World Poll Data, 2011.

**Figure 1.10 People reporting confidence in their national government, 2006 to 2010 (percentage point change)**




Note: The number in parentheses refers to the percentage of survey respondents that said they have confidence in their government in 2010. The graph includes percentage of respondents reporting "Yes" to the following question: "In this country, do you have confidence in each of the following, or not? How about national government?" For Middle East and North Africa, the data refer to 2008 and 2009 due to low response rates in 2006 and 2010.

Source: IILS estimates based on Gallup World Poll Data, 2011.

Slovakia, Slovenia and Spain, where more than 70 per cent of survey respondents reported dissatisfaction with the job market.

In regions that have fared relatively well since the onset of the crisis, such as East and South East Asia and Latin America, dissatisfaction tends to be much lower. However there are exceptions: for example, in China more than 50 per cent report dissatisfaction. Similarly, Latin America and the Caribbean countries, such

**Table 1.3 Dissatisfaction with the availability of good jobs, by age group, 2010 (percentage dissatisfied)**

| | Age group | | | | |
|---|---|---|---|---|---|
| | 15–24 | 25–34 | 35–49 | 50 and over | Total |
| **East Asia, South East Asia and the Pacific** | 42 | 45 | 46 | 45 | 44 |
| *Most dissatisfied in: China, Indonesia and Mongolia (above 50%).* | | | | | |
| **Advanced Economies** | 52 | 56 | 59 | 55 | 55 |
| *Most dissatisfied in: Greece, Italy, Portugal, Slovakia, Slovenia and Spain (above 70%).* | | | | | |
| **Latin America and the Caribbean** | 53 | 58 | 56 | 55 | 55 |
| *Most dissatisfied in: Dominican Republic, Ecuador, Haiti, Nicaragua and Uruguay (above 60%).* | | | | | |
| **Middle East and North Africa** | 58 | 61 | 60 | 61 | 59 |
| *Most dissatisfied in: Egypt, Jordan, Lebanon, Sudan and Yemen (above 75%).* | | | | | |
| **South Asia** | 63 | 62 | 64 | 62 | 63 |
| *Most dissatisfied in: Bangladesh, Pakistan and Nepal (above 60%).* | | | | | |
| **Central and South Eastern Europe and CIS** | 69 | 73 | 74 | 71 | 71 |
| *Most dissatisfied in: Armenia, Bulgaria, Georgia, Lithuania, Moldova and Romania (above 80%).* | | | | | |
| **Sub-Saharan Africa** | 79 | 79 | 79 | 80 | 79 |
| *Most dissatisfied in: Burkina Faso, Liberia, Senegal, Sierra Leone and Tanzania (above 85%).* | | | | | |

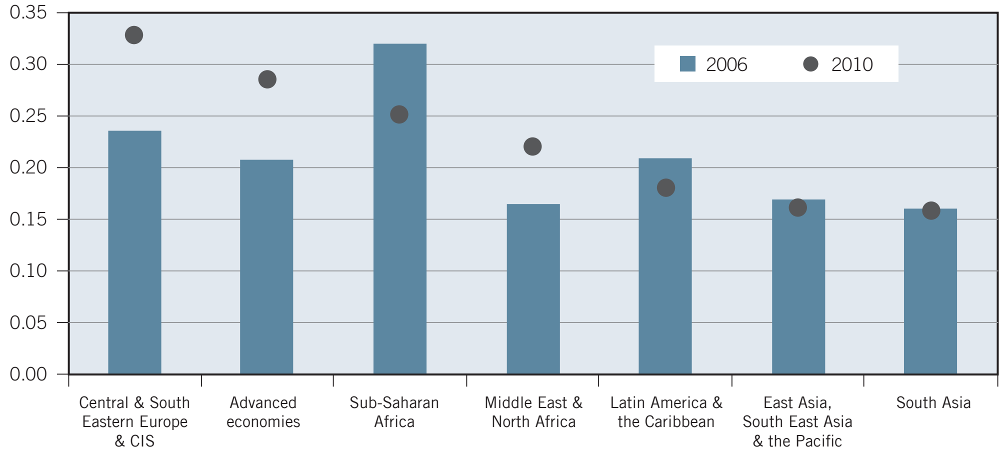
Note: The question that was asked was: "In the city or area where you live, are you satisfied or dissatisfied with the availability of good job opportunities?" The percentages of respondents that answered "dissatisfied" are reported in this table.
Source: IILS estimates based on Gallup World Poll Data, 2011.

as the Dominican Republic, Ecuador, Haiti, Nicaragua and Uruguay, more than 60 per cent are dissatisfied with the job market.

### Confidence in government has deteriorated considerably since the onset of the crisis …

Recent data show that confidence in government continues to remain low and has fallen since the start of the crisis. With the exception of Latin America and the Caribbean and sub-Saharan Africa, confidence has fallen across all regions (figure 1.10). In fact, among 99 countries with available information, 50 per cent report lower confidence in government in 2010 than in 2006. In terms of overall levels, the shares vary across groups. Confidence is lowest in Central and Eastern Europe and CIS, advanced economies and Latin America and the Caribbean, with more than one in two respondents reporting that they did not have confidence in their government in 2010.

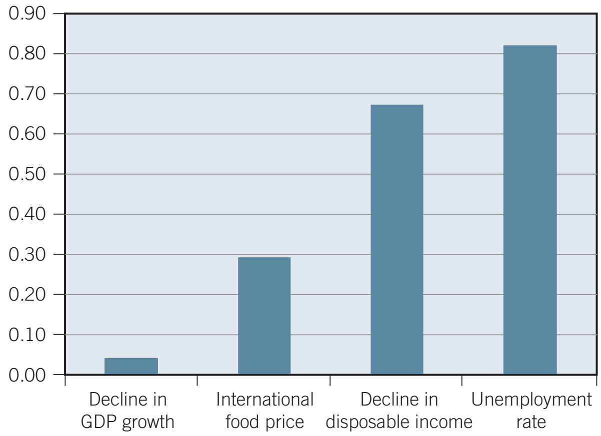
**Figure 1.11 Change in perception of standard of living getting worse, 2006 to 2010 (percentages)**




Note: The question that was asked was: "Right now, do you feel your standard of living is getting better or getting worse?" The data above refer to the percentage of survey respondents that answered that their standard of living was getting worse.

Source: IILS estimates based on Gallup World Poll Data, 2011.

**Figure 1.12 Determinants of social unrest, 2010**




Note: Y-axis units refer to the magnitude of the standardized coefficient estimated. Unemployment rate and international food price are statistically significant at the 1 per cent level. Recent data on measures of income inequality are only available for few countries and were thus excluded from the regressions to preserve the degrees of freedom. See Appendix C for methodological details.

Source: IILS estimates based on data from Gallup World Poll, ILO, IMF, OECD and the World Bank.

### … and so too has the perception of standard of living.

Out of 118 countries with available data, 58 per cent of countries in 2010 show a larger fraction of people reporting a worsening of living standards than in 2006. The increase was particularly notable in Central and South Eastern Europe and CIS, where the percentage of people reporting a worsening of living standards increased from 23 per cent in 2006 to 33 per cent in 2010 (figure 1.11). Similar increases were present among advanced economies (from one-fifth to close to one-third) and Middle East and North Africa (from 16 per cent to 22 per cent). Only in Latin America and the Caribbean and sub-Saharan Africa did perceptions improve considerably (in South Asia and East and South East Asia the figures remained unchanged at roughly 16 per cent).

### Box 1.3 Determinants of social unrest

In the past, understanding social unrest centred primarily on examining the role of civil wars and their cause, but recently, the focus has shifted to other forms of social unrest, such as anti-government demonstrations and riots (Arezki and Bruckner, 2011). Several factors emerge from the literature as being central to determining unrest:

- *Income inequality and perception of injustice:* Perception of economic and social disparities, and increasing social exclusion, is said to have a negative impact on social cohesion and tends to lead to social unrest (Easterly and Levine, 1997).
- *Fiscal consolidation and budget cuts:* Austerity measures have led to politically motivated protests and social instability. This has been the case in Europe for many years, from the end of the Weimar Republic in the 1930s to today's anti-government demonstrations in Greece (Ponticelli and Voth, 2011), but has also been a feature in developing countries, especially in over-urbanized zones, where protests have arisen following the implementation of austerity programmes imposed by the International Monetary Fund or the World Bank (Walton and Ragin, 1990). Meanwhile, societies that are more indebted tend to have higher levels of social unrest (Woo, 2003).
- *Higher food prices:* In addition to collective frustrations regarding the democratic process, rising food prices were also central to the developments associated with the Arab Spring (Bellemare, 2011).
- *Heavy-handedness of the State:* In countries where the State has resorted to excessive use of force (police and military) to tackle social upheavals instead of focusing on the actual causes of unrest, such actions have often exacerbated the situation (Justino, 2007).
- *Presence of educated but dissatisfied populace:* Countries with large populations of young, educated people with limited employment prospects tend to experience unrest in the form protests (Jenkins, 1983; Jenkins and Wallace, 1996). This has been the case recently in many southern European countries, such Greece and Spain.
- *Prevalence of mass media:* Past studies have highlighted the impact of radio on the organization of demonstrations, and clearly the use of the Internet (e.g. through the use of Facebook and Twitter) have played a role in recent incidences of unrest.

**Employment, rather than growth, is a key determinant of social unrest.**

Clearly, a number of factors are underlying social unrest (see box 1.3 for a brief overview of literature on the determinants of social unrest). For instance, in the Middle East and North Africa region, it is said that the absence of more democratic channels to express collective frustrations was one of the driving factors behind recent upheavals. Meanwhile, in other parts of the world, mainly advanced economies, lack of employment opportunities and inequality appear to be driving the numerous protests. With this in mind, the empirical assessment of the determinants undertaken reveals that unemployment is most strongly associated with the estimated risks of social unrest, along with disposable income (figure 1.12). Rising food prices are also associated with an increase in social unrest. Economic growth, on the other hand, matters much less.

## D. Making markets work for jobs: The way forward

It is not too late to put the global economy back onto a recovery path; but first, the underlying structural issues that led to the crisis need to be addressed once and for all. At the same time, however, labour markets need immediate support, otherwise the vicious circle of unemployment, weak demand and slow growth will persist.

### Placing emphasis on investment for job creation

Given the important role that the private sector will need to play for a sustainable recovery process, Chapter 2 examines the evolution of corporate profits – both financial and non-financial – leading up to and during the financial crisis. In particular, the chapter focuses on the developments of non-financial-sector capital shares with a view to finding the underlying factors explaining the trend decline in investment, especially in advanced economies. More importantly, the chapter explores the implications these trends have had for employment creation. In particular, a number of scenarios are developed in the chapter to simulate the effects that different policies may have in unlocking the investment potential so as to encourage job creation.

### Efficient and fair wage policies to support recovery

Chapter 3 analyses the trend decline in labour's share of income over time and across regions, taking into consideration changes in skill and sectoral compositions. Against the backdrop of this analysis, the aim of this chapter is then to identify the factors behind this decline, paying particular attention to the roles of economic integration, labour institutions and labour market reforms in shaping overall income distribution. The chapter then indentifies ways that an effective wage policy can help put the recovery from the global economic crisis onto a sustainable path, taking in to account country circumstances.

### Food security and decent work

Rising food prices are leading to social unrest, as demonstrated in section C above. And although food crises are not new, rapidly growing populations in developing economies are increasingly putting more pressure on limited food supplies – with adverse consequences for poverty and development prospects more broadly. Higher food prices also put a strain on public finances (in the form of increased subsidies) and allow less space for policies directed towards social protection, employment creation and rural development. The challenge for policy is to improve food security, by providing immediate assistance for those most in need while also targeting medium- to long-term measures to impose price stability. Chapter 4 examines the macroeconomic, labour market and social impacts of higher food prices; analyses the factors contributing to the food price increases; and discusses he key policy challenges.

### Tax reforms

Global fiscal deficits have deteriorated since the financial crisis of 2008, as government tax revenues have declined and expenditures have dramatically increased. Chapter 5 analyses the extent to which employers and capital owners have been able to shift the tax burden towards workers (through a decrease in net wages) and consumers (who bear the burden of value added tax increases). The chapter also highlights key areas of tax reform that can: (i) expand revenue through increased reliance on other forms of taxation, such as unearned income; and, (ii) improve compliance and reduce tax evasion.

### Reconciling employment objectives and fiscal constraints

Against the backdrop of fiscal constraints and the urgent need to stimulate investment and employment, Chapter 6 seeks to determine the extent to which these two – seemingly conflicting – objectives can be achieved simultaneously. In the first instance, the chapter sets out to illustrate the extent to which budget cuts can be counterproductive, from both employment and fiscal perspectives. It then assesses how well-designed labour market policies can maximize the employment impact within limited fiscal space.

## Appendix A

# Country groupings by income level

| Country | Income-level group [1] | Country | Income-level group [1] |
|---|---|---|---|
| Australia (AUS) | High | Kazakhstan (KAZ) | Upper middle |
| Armenia (ARM) | Lower middle | Korea, Republic of (KOR) | High |
| Austria (AUT) | High | Kyrgyzstan (KGZ) | Low |
| Azerbaijan (AZE) | Upper middle | Latvia (LVA) | Upper middle |
| Belarus (BLR) | Upper middle | Lithuania (LTU) | Upper middle |
| Belgium (BEL) | High | Luxembourg( LUX) | High |
| Bolivia (BOL) | Lower middle | Malta (MLT) | High |
| Brazil (BRA) | Upper middle | Mexico (MEX) | Upper middle |
| Canada (CAN) | High | Mongolia (MNG) | Lower middle |
| Chile (CHL) | Upper middle | Morocco (MAR) | Lower middle |
| China (CHN) | Upper middle | Netherlands (NLD) | High |
| Colombia (COL) | Upper middle | Niger (NER) | Low |
| Cyprus (CYP) | High | Norway (NOR) | High |
| Czech Republic (CZE) | High | Poland (POL) | High |
| Denmark (DNK) | High | Portugal (PRT) | High |
| Egypt (EGY) | Lower middle | Romania (ROU) | Upper middle |
| Estonia (EST) | High | Russian Federation (RUS) | Upper middle |
| Finland (FIN) | High | Serbia (SCG) | Upper middle |
| France (FRA) | High | Slovak Republic (SVK) | High |
| Guatemala (GTM) | Lower middle | Slovenia (SVN) | High |
| Germany (DEU) | High | South Africa (ZAF) | Upper middle |
| Greece (GRC) | High | Spain (ESP) | High |
| Hungary (HUN) | High | Sweden (SWE) | High |
| India (IND) | Lower middle | Switzerland (CHE) | High |
| Iran (IRN) | Upper middle | Tunisia (TUN) | Upper middle |
| Ireland (IRL) | High | United Kingdom (GBR) | High |
| Italy (ITA) | High | United States (USA) | High |
| Japan (JPN) | High | Venezuela (VEN) | Upper middle |

[1] Income groups are based on GNI per capita according to the World Bank country classification, available at: http://go.worldbank.org/K2CKM78CC0. High-income countries are countries with a GNI per capita of US$12,276 or more; upper-middle-income countries are countries with a GNI per capita of US$3,976 to US$12,275; lower-middle-income countries are countries with a GNI per capita of US$1,006 to US$3,975; and low-income countries are countries with a GNI per capita of US$1,005 or less.

## Appendix B

# The impact of financial crises on employment: An empirical analysis

Section B of this chapter provided employment projections from 2011 to 2016 that are based on the following countries, which experienced a crisis in the past and for which there are sufficient historical time series data:

- *Advanced economies or high-income countries:* Econometric analysis for this group is based on 22 countries, 26 crises[12] and 737 observations. The countries in this group are: Australia, Canada, Czech Republic, Denmark, Estonia, Finland, France, Germany, Hungary, Iceland, Israel, Italy, Japan, Republic of Korea, New Zealand, Norway, Portugal, Slovakia, Spain, Sweden, the United Kingdom and the United States.[13]

- *Emerging economies or upper-middle-income countries:* Based on 26 countries and 33 crises: 211 observations were taken into account in the analysis, for Algeria, Argentina, Belarus, Brazil, Bulgaria, Chile, Colombia, Costa Rica, Dominican Republic, Jamaica, Kazakhstan, Latvia, Lithuania, Macedonia, Malaysia, Mauritius, Mexico, Panama, Poland, Romania, Russian Federation, Serbia, Suriname, Turkey, Uruguay and Venezuela.[14]

- *Developing economies or lower-middle-income countries:* Based on 17 countries and 21 crises: 115 observations were taken into account in the analysis, for Albania, Armenia, Bolivia, China, Ecuador, Egypt, El Salvador, Georgia, Honduras, India, Indonesia, Moldova, Nicaragua, Paraguay, Philippines, Sri Lanka and Thailand.[15]

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12. The following crises were taken into account in the analysis of this group: Australia, 1989–92; Canada, 1983–85; Czech Republic, 1996–2000; Denmark, 1987–92; Estonia, 1998; Finland, 1991–95; France, 1994–95; Germany, late 1970s; Hungary, 1991–95; Iceland, 1975; Iceland, 1989; Israel, 1977; Israel, 1985; Italy, 1981; Italy, 1990–95; Japan, 1997–2001; Republic of Korea, 1997–98; New Zealand, 1987–90; Norway, 1991–93; Portugal, 1983; Slovakia, 1998–2000; Spain, 1977–81; Sweden, 1991; United Kingdom, 1974–76; United Kingdom, 1980s–1990s; and the United States, 1988. The crises of all groups have been identified on the basis of Laeven and Valencia (2008, 2010).
13. Note that the high-income group contains more observations than the other groups because the analysis of the former is based on quarterly information rather than annual information.
14. The following crises were taken into account in the analysis of this group: Algeria, 1990–94; Argentina, 1989–91; Argentina, 1995; Argentina, 2001–03; Belarus, 1995; Brazil, 1994–98; Bulgaria, 1996–97; Chile, 1981–85; Colombia, 1982; Colombia, 1998–2000; Costa Rica, 1987–91; Costa Rica, 1994–95; Dominican Republic, 2003–04; Jamaica, 1996–98; Kazakhstan, 1999; Latvia, 1995–96; Lithuania, 1995–96; Macedonia, 1993–95; Malaysia, 1997–99; Mauritius, 1996; Mexico, 1994–96; Panama, 1988–89; Poland, 1992–94; Romania, 1990–92; Russian Federation, 1998; Serbia, 2000; Suriname, 1990; Turkey, 1982–84; Turkey, 2000; Uruguay, 1981–85; Uruguay, 2002–05; Venezuela, 1994–98; and Venezuela, 2002.
15. The following crises were taken into account in the analysis of this group: Albania, 1994; Armenia, 1994; Bolivia, 1986; Bolivia, 1994; China, 1998; Ecuador, 1982–86; Egypt, 1990; El Salvador, 1989–90; Georgia, 1999; Honduras, 1990; India, 1993; Indonesia, 1997–2001; Moldova, 1999; Nicaragua, 1990–93; Nicaragua, 2000–01; Paraguay, 2002; Philippines,1983–86; Philippines, 1997–2000; Sri Lanka, 1989–91; Thailand, 1983; Thailand, 1997–2000.

These projections draw on output–employment elasticities, which have been estimated by way of the econometric analysis of the employment impact of the recovery phase during past financial crises. The projections are constructed by applying the employment elasticity of each group to the GDP growth projections from the *IMF World Economic Outlook,* September 2011 (IMF, 2011a) (projections from 2011 on), at a country level.[16] In this sense, all statistically significant partial elasticities emerging from the inclusion of lagged GDP growth rates were taken into account by applying them to the GDP growth rate of their corresponding period by country.

The elasticities of employment growth ( $e^L_{it}$ ) to GDP changes are calculated by means of Okun law panel regressions (following the methodology developed in Escudero, 2009) for the three groups of countries listed above. The following equation was estimated independently for each of the three country groups:

$$e^L_{it} = \beta_1 \Delta Y_{it} + \beta_2 \Delta Y_{it-n} + \varepsilon_{it} \qquad (1)$$

where $L_{it}$ corresponds to the annual (or quarterly for high-income countries) growth rate of employment and $\Delta Y_{it}$ is the explanatory variable, measured by the annual (or quarterly for high-income countries) growth rate of GDP of the countries analysed. One or more lags of the growth rate of GDP are included in the estimations, depending on which group of countries is analysed. An overview of the different variables used and their sources and definitions is given in table 1B.1.

To construct the panel, data on employment growth around the years of crises were collected and centred in *t*0. This crisis-specific central time period corresponds to the year when the country experienced the lowest GDP annual/quarterly growth rate. In this way, a panel was constructed with an average of 26 observations for employment growth around the recovery phase of past crises (*t* – 8 to *t* + 25) for high-income countries and nine observations for employment growth around the recovery phase of past crises (*t* – 2 to *t* + 6) for upper-middle- and lower-middle-income countries. table 1B.2 gives a synthetic review of the econometric estimates reporting these elasticities.

Notes: Estimated based on ordinary least squares. All regressions are controlled for country-fixed effects. Absolute value of *t*-statistics in parentheses. Significance levels: * significant at 5 per cent; ** significant at 1 per cent. For details of the countries included in each group see Appendix A.

To take into account the peculiarities of the data set, regressions have been re-run to account for heteroscedasticity. To ensure that one or some of the countries did not influence the results, reduced regressions were also estimated by excluding the countries analysed one at a time. Moreover, table 1B.3 presents Generalized Least Squares (GLS) estimates and controls for autocorrelated error terms. As can be seen in all panels of table 1B.3, all coefficients remain highly significant, and the absolute sizes of the estimated effects change relatively little between different estimation methods, giving some confidence in the estimated effects.

16. Country-specific annual forecasts from IMF were converted into quarterly rates using the "effective periodic rate" calculation and were then used to establish future quarterly growth rates of employment for the high-income countries group.

### Table 1B.1 Definitions and sources of variables used in the regression analysis

| Variable | Definition | Source |
|---|---|---|
| GDP annual growth rate | Annual growth rate of real GDP, in national currency | IILS calculations based on the IMF *World Economic Outlook* (WEO), April 2010 |
| GDP quarterly growth rate | Quarterly growth rate of real GDP, in national currency | IMF, IFS database and OECD, *Economic Outlook No. 87* |
| Employment growth for high-income countries | Quarterly growth rate of total employment | OECD, *Economic Outlook No. 87* |
| Employment growth for upper-middle-income countries | Annual growth rate of total employment | ILO, Laborsta database |
| Employment growth for lower-middle-income countries | Annual growth rate of total employment | IMF, IFS database |
| Frequency of financial crises | Time frames of financial crises in the countries analysed | Authors' estimates based on Laeven and Valencia, 2008 and 2010. |

### Table 1B.2 Regression results

| | Advanced economies | Emerging economies | Developing economies |
|---|---|---|---|
| GDP (annual growth rate) | 0.0238<br>(3.39)** | 0.2785<br>(5.69)** | 0.0481<br>(0.61) |
| Lag 1 of GDP | 0.0311<br>(4.16)** | | 0.2624<br>(3.45)** |
| Lag 2 of GDP | 0.0347<br>(4.52)** | | |
| Lag 3 of GDP | 0.0289<br>(3.75)** | | |
| Lag 4 of GDP | 0.0124<br>(1.68)* | | |
| Lag 5 of GDP | 0.0126<br>(1.88)* | | |
| Constant | 0.0123<br>(0.37) | 0.4126<br>(1.51) | 0.3731<br>(0.81) |
| Fixed effects | Yes | Yes | Yes |
| Observations | 737 | 211 | 115 |
| Number of crisis episodes | 26 | 33 | 21 |

Notes: All regressions are controlled for country-fixed effects. Absolute value of t-statistics (z-statistics in the tests for autocorrelation) in parentheses. Significance levels: * significant at 5 per cent; ** significant at 1 per cent. For detail of the countries included in each group see appendix A.

## Table 1B.3 Alternative estimators

**Panel A. Advanced economies**

| | Baseline equation | GLS | GLS (heteroscedasticity) | GLS (autocorrelated errors) |
|---|---|---|---|---|
| GDP (annual growth rate) | 0.0238<br>(3.39)** | 0.0291<br>(4.05)** | 0.0658<br>(6.31)** | 0.0571<br>(6.17)** |
| Lag 1 of GDP | 0.0311<br>(4.16)** | 0.0397<br>(5.27)** | 0.0839<br>(8.29)** | 0.0840<br>(8.28)** |
| Lag 2 of GDP | 0.0347<br>(4.52)** | 0.0455<br>(5.98)** | 0.0724<br>(7.21)** | 0.0756<br>(7.26)** |
| Lag 3 of GDP | 0.0289<br>(3.75)** | 0.0399<br>(5.28)** | 0.0669<br>(6.72)** | 0.0673<br>(6.48)** |
| Lag 4 of GDP | 0.0124<br>(1.68)* | 0.0207<br>(2.82)** | 0.0407<br>(4.09)** | 0.0427<br>(4.19)** |
| Lag 5 of GDP | 0.0126<br>(1.88)* | 0.0167<br>(2.42)* | 0.0223<br>(2.21)** | 0.0235<br>(2.56)** |
| Constant | 0.0123<br>(0.37) | -0.0233<br>(-0.69) | -0.1517<br>(-6.96) | -0.1529<br>(-4.99) |
| Observations | 737 | 737 | 737 | 737 |
| Number of crisis episodes | 26 | 26 | 26 | 26 |

**Panel B. Emerging economies**

| | Baseline equation (heteroscedasticity) | GLS | GLS (heteroscedasticity) | GLS (autocorrelated errors) |
|---|---|---|---|---|
| GDP (annual growth rate) | 0.2785<br>(5.69)** | 0.3140<br>(6.70)** | 0.3063<br>(9.21)** | 0.3025<br>(8.95)** |
| Constant | 0.4126<br>(1.51) | 0.3165<br>(1.11) | 0.4423<br>(2.24)* | 0.4303<br>(1.98)* |
| Observations | 211 | 211 | 211 | 211 |
| Number of crisis episodes | 33 | 33 | 33 | 33 |

**Panel C. Developing economies**

| | Baseline equation (hetoroscedasticity) | GLS |
|---|---|---|
| GDP (annual growth rate) | 0.0481<br>(0.61) | 0.0138<br>(0.18) |
| Lag 1 of GDP | 0.2624<br>(3.45)** | 0.2536<br>(3.20)** |
| Constant | 0.3731<br>(0.81) | 0.2829<br>(0.60) |
| Observations | 115 | 115 |
| Number of crisis episodes | 21 | 21 |
| Observations | 115 | 115 |
| Number of crisis episodes | 21 | 21 |

Note: All regressions are controlled for country-fixed effects. Absolute value of t-statistics (z-statistics in the tests for autocorrelation) in parentheses. Significance levels: * significant at 5 per cent; ** significant at 1 per cent. For detail of the countries included in each group see appendix A.

## Appendix C

# Determinants of social unrest: An empirical analysis

Section C of this chapter looks at the determinants of social unrest for the period 2006 to 2010, using data from 56 countries (Algeria, Argentina, Australia, Austria, Azerbaijan, Belgium, Brazil, Bulgaria, Canada, Chile, China, Colombia, Croatia, Czech Republic, Denmark, Ecuador, Egypt, Estonia, Finland, France, Germany, Greece, Hong Kong SAR, Hungary, Indonesia, Ireland, Israel, Italy, Japan, Kazakhstan, Korea, Malaysia, Mexico, Netherlands, New Zealand, Nigeria, Peru, Philippines, Poland, Portugal, Romania, Russian Federation, Singapore, Slovak Republic, South Africa, Spain, Sweden, Switzerland, Taiwan, China, Thailand, Turkey, Ukraine, United Kingdom, United States, Venezuela, Viet Nam). The variables included in the analysis are listed in table 1C.1.

The dependent variable used in this econometric exercise is the social unrest score. This indicator has been computed using several variables from Gallup World Poll Data and applying to them different weights. The variables and weights used are listed in table 1C.2.

Because of a problem of multicollinearity between total and youth unemployment rates, we separated those variables and estimated the following panel models:

$$SUit = \alpha I + lt + b1URT1564\ it + b2GDPit + b3GINIit + \beta 4INCit + \beta 5IFPit + eit \quad (1)$$

$$SUit = \alpha I + lt + b1URT1524\ it + b2GDPit + b3GINIit + \beta 4INCit + \beta 5IFPit + eit \quad (2)$$

where *i* and *t* are the cross-section and time suffixes; *SU* is the social unrest score; *URT* is the unemployment rate (where 1564 refers to total and 1524 to youth unemployment); *GDP* is the real GDP growth rate; *GINI* is the Gini coefficient; *INC* is the real disposable income; *IFP* is the international food price; *ai* and *lt* are the country and time fixed effects; and *eit* is the error term normally distributed. We estimate the models using fixed effects estimation methods.

The results of the estimations are displayed in table 1C.3. Due to strong data limitations regarding the Gini coefficient, we also estimated the model omitting this variable, in order to have the largest balanced sample of countries possible. Moreover, in order to derive some possible conclusions about the relative importance of the different estimated coefficients, we ran the same regressions using standardized variables (see table 1C.4).

### Table 1C.1 Definitions and sources of variables used in the regression analysis

| Variable | Definition | Source |
|---|---|---|
| Social unrest score | Based on lack of confidence in national government, perception of standard of living getting worse, dissatisfaction with the state of freedom and democracy, perception of national economy getting worse, and access to communication channels. As the score moves from 0 to 1, the incidence and likelihood of social unrest is higher. | Gallup World Poll Data |
| Unemployment rate (15–64) | Number of unemployed aged 15 to 64 as a percentage of the total labour force. | IMF *World Economic Outlook* April 2011 |
| Real GDP growth | Growth rate of GDP at constant prices in US$. | IMF *World Economic Outlook* April 2011 |
| Gini coefficient | Measures the extent to which the distribution of income among individuals or households within an economy deviates from a perfectly equal distribution. A Gini index of zero represents perfect equality and 1, perfect inequality. | World Bank *World Development Indicators* |
| Real disposable income | Income of households after taking into consideration the effects of inflation on purchasing power. | Economist Intelligence Unit |
| Youth unemployment rate | Number of unemployed aged 15 to 24 as a percentage of the total labour force. | ILO KILM |
| International food price | International price of food commodities, in US$ (2000 = 100) | UNCTAD |

### Table 1C.2 Weights of the variables used for the social unrest score

| Variable | Question and answer | Weight |
|---|---|---|
| Confidence in government | In this country, do you have confidence in each of the following, or not? How about national government? Answer: NO | 0.3 |
| Living standards | Right now, do you feel your standard of living is getting better or getting worse? Answer: WORSE | 0.2 |
| Freedom | In this country, are you satisfied or dissatisfied with your freedom to choose what you do with your life? Answer: DISSATISFIED | 0.2 |
| Access to Internet | Does your home have access to the Internet? Answer: YES | 0.2 |
| Economic conditions | Right now, do you think that economic conditions in this country, as a whole, are getting better or getting worse? Answer: GETTING WORSE | 0.1 |

## Table 1C.3 Estimations of the social unrest score, unstandardized variables

| | (1) | (2) | (3) | (4) |
|---|---|---|---|---|
| **Variable** | **Social unrest score** | **Social unrest score** | **Social unrest score** | **Social unrest score** |
| Unemployment rate | 0.0195***<br>(0.00451) | 0.0150***<br>(0.00243) | | |
| Real GDP growth | –0.00106<br>(0.00222) | –0.00305***<br>(0.000804) | –0.000617<br>(0.00226) | 0.00139<br>(0.00172) |
| Gini coefficient | –0.00355<br>(0.00647) | | –0.00716<br>(0.00607) | |
| International food price | 0.00107***<br>(0.000278) | 0.000650***<br>(0.000122) | 0.00112***<br>(0.000265) | 0.00113***<br>(0.000179) |
| Real disposable income | –6.37e-08<br>(8.64e-08) | 6.76e-09<br>(4.81e-08) | –4.34e–08<br>(8.36e–08) | –5.41e-08<br>(6.49e-08) |
| Youth unemployment | | | 0.00914***<br>(0.00241) | 0.00978***<br>(0.00216) |
| Constant | 0.181<br>(0.227) | 0.109***<br>(0.0290) | 0.280<br>(0.215) | 0.00901<br>(0.0566) |
| Observations | 122 | 261 | 110 | 171 |
| R-squared | 0.529 | 0.388 | 0.566 | 0.466 |
| Number of countrycode | 45 | 56 | 41 | 52 |

Note: Robust standard errors in parentheses; Significance levels: *** significant at 1 per cent; ** significant at 5 per cent: * significant at 10 per cent.

## Table 1C.4 Estimations of the social unrest score, standardized variables

| | (5) | (6) | (7) | (8) |
|---|---|---|---|---|
| **Variable** | **Social unrest score** | **Social unrest score** | **Social unrest score** | **Social unrest score** |
| Unemployment rate | 0.819***<br>(0.189) | 0.631***<br>(0.102) | | |
| Real GDP growth | –0.0401<br>(0.0835) | –0.115***<br>(0.0303) | –0.0232<br>(0.0850) | 0.0524<br>(0.0648) |
| Gini coefficient | –0.269<br>(0.491) | | –0.544<br>(0.460) | |
| International food price | 0.292***<br>(0.0757) | 0.177***<br>(0.0332) | 0.304***<br>(0.0722) | 0.309***<br>(0.0487) |
| Real disposable income | –0.670<br>(0.908) | 0.0711<br>(0.506) | –0.456<br>(0.879) | –0.568<br>(0.682) |
| Youth unemployment | | | 0.775***<br>(0.205) | 0.829***<br>(0.183) |
| Constant | 0.536***<br>(0.160) | 0.247***<br>(0.0239) | 0.488**<br>(0.196) | 0.513***<br>(0.0807) |
| Observations | 122 | 261 | 110 | 171 |
| R-squared | 0.529 | 0.388 | 0.566 | 0.466 |
| Number of countrycode | 45 | 56 | 41 | 52 |

Note: Robust standard errors in parentheses; Significance levels: *** significant at 1 per cent; ** significant at 5 per cent: * significant at 10 per cent.

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