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# INTERNATIONAL JOBS REPORT IJR

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## Summary

The IMF recently revised down its growth forecasts, making large changes in the forecasts for some emerging markets, in particular Brazil and oil-producing countries (such as Nigeria and Saudi Arabia). This report presents a snapshot of the global unemployment outlook and discusses what the recent revisions could mean for the unemployment outlook for these countries based on past relationships between growth and unemployment. We conclude with a look at the growth-unemployment link for 101 countries around the globe.

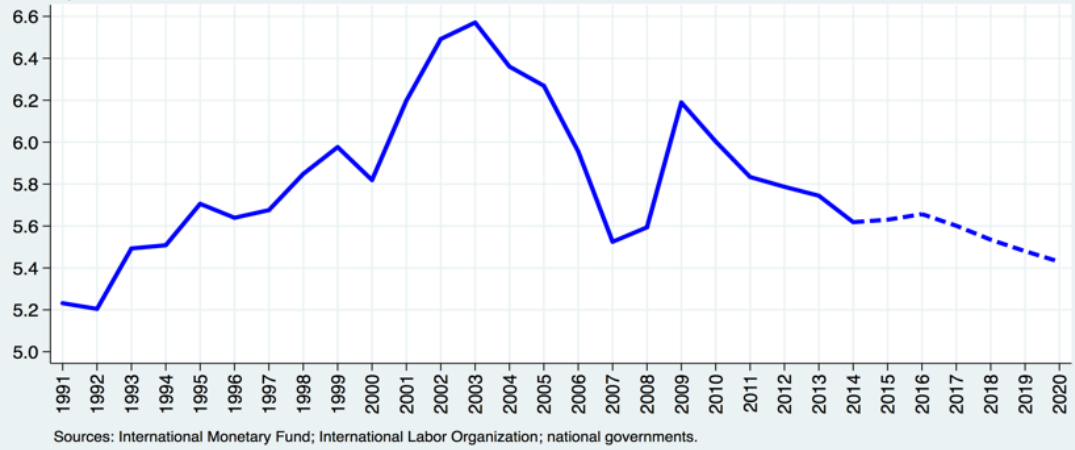

Global growth in 2016 is now projected to be a bit lower than previously expected, according to the IMF's January 2016 World Economic Outlook (WEO) Update. This report provides a snapshot of the global unemployment picture and then discusses how the recent revisions to growth could affect unemployment. This requires understanding the link between growth and unemployment in the short run, which varies considerably by country, as discussed in the report.

## The unemployment picture in 2016

Figure 1 provides a measure of the global unemployment rate based on data for 116 countries, of which 37 countries are classified as 'advanced' (i.e. high-income) countries and the remaining 79 as 'emerging market and developing economies.' (We refer to the second group using the acronym 'EMDE.')

**Figure 1. Global unemployment rate**

%, 116 countries

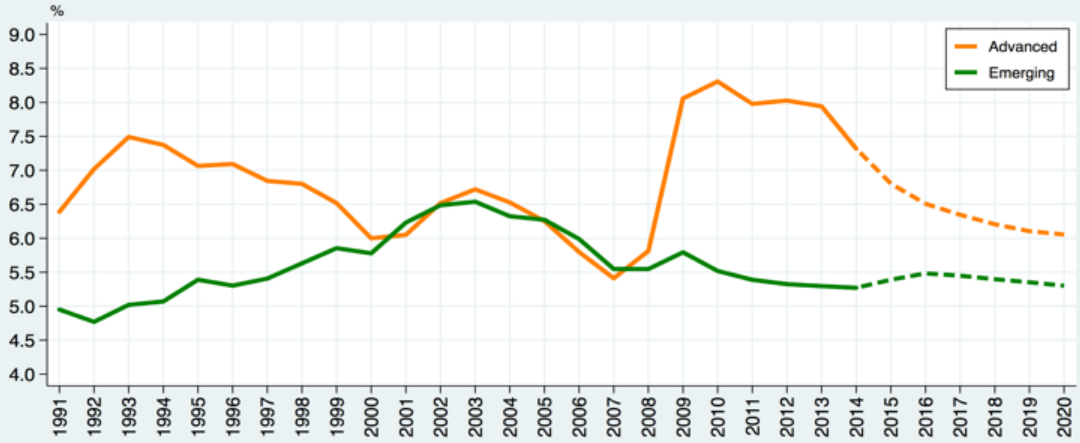



Sources: International Monetary Fund; International Labor Organization; national governments.

Let's begin with how the global unemployment picture looked before the IMF's January 2016 WEO Update. Figure 1 provides a measure of the global unemployment rate based on data for 116 countries, of which 37 countries are classified as 'advanced' (i.e. high-income) countries and the remaining 79 as 'emerging market and developing economies.' (We refer to the second group using the acronym 'EMDE'.) Focusing on the recent cycle, global unemployment rate peaked in 6.2 percent in 2009 and has since been returning slowly to its pre-crisis level. Over the coming year, the global unemployment rate is expected to go up slightly.

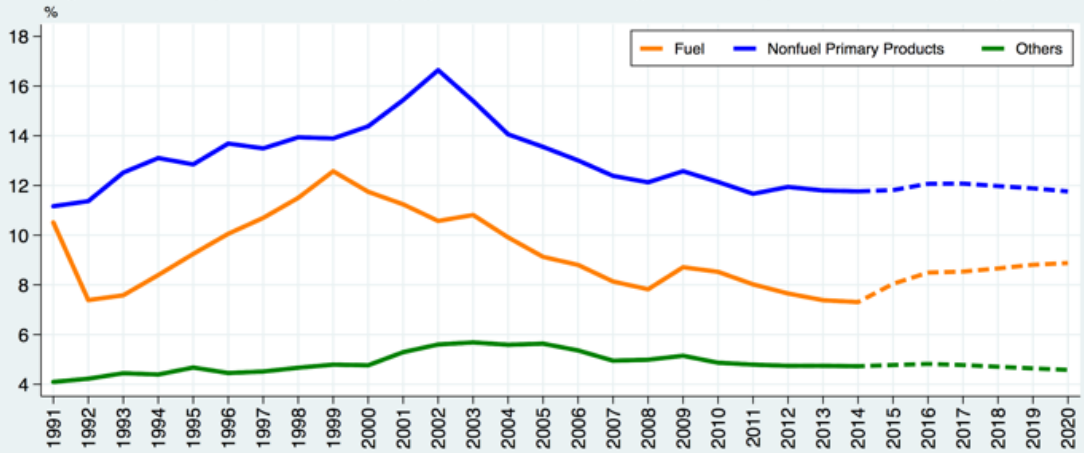
To understand where this increase is coming from, Figure 2 shows the unemployment rate for the two main groups of countries separately. This reveals that the increase comes from the emerging markets and developing countries (EMDE) group. Moreover, the increase in unemployment among this group occurs because of the expected increase in unemployment among fuel-exporting countries (Figure 3).

**Figure 2. Unemployment rates in advanced economies and emerging market and developing economies**




Sources: International Monetary Fund; International Labor Organization; national governments.

**Figure 3. Unemployment rates in emerging market and developing economies by source of export earnings**



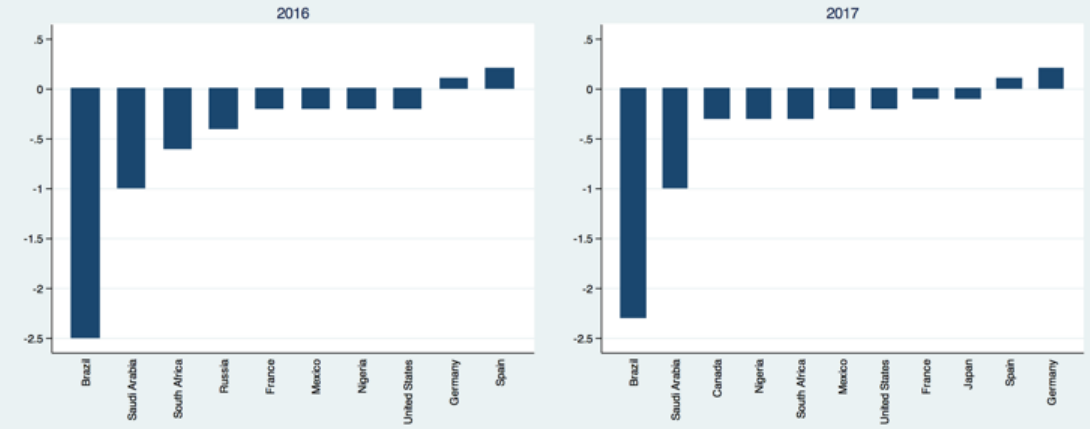

Sources: International Monetary Fund; International Labor Organization; national governments.

## How will the growth revisions affect the unemployment picture?

Now let's consider how the revisions to the growth forecasts that the IMF announced in the January 2016 WEO Update could change the unemployment picture. At the global level, the forecast for GDP growth in 2016 was revised down by 0.2 percent, which would in turn increase the global unemployment rate only a little bit above the path projected in Figure 1. However, for some countries the revisions in growth forecasts are larger, as shown in Figure 4 below. The biggest change is in Brazil, followed by Saudi Arabia, South Africa and Russia.

**Figure 4. Revisions in IMF's Growth Forecasts for 2016 and 2017**

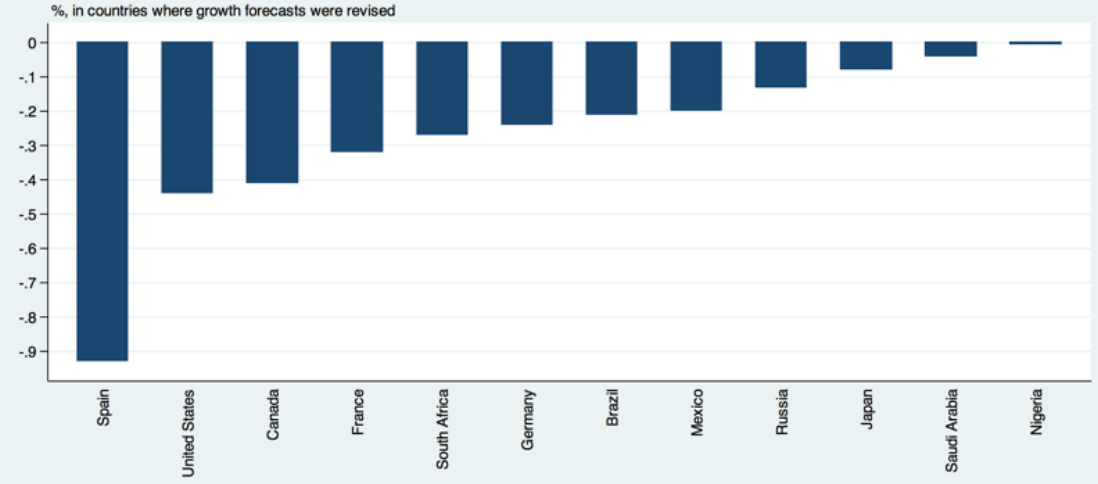
%




Sources: January 2016 World Economic Outlook.

**Figure 5. Short-run responsiveness of unemployment to growth**

%, in countries where growth forecasts were revised



What is the likely impact of these growth revisions on unemployment in these countries? To answer this question, Figure 5 first shows how responsive unemployment in the short run (over a year) has been to changes in growth for each of these countries. The responses show a wide variation. At one extreme, unemployment in Spain has been very responsive to growth; at the other extreme, the reported unemployment rate in Nigeria bears essentially no correlation with growth. Other countries are clustered in between.

Consider the case of Brazil, which has the biggest revision in growth forecasts. Using the historical estimate of -0.2, the unemployment rate for 2016 would be predicted to be about 0.5 percentage points (2.5 x 0.2) higher than the previous forecast. A similar calculation can be done for other countries and is shown in Table 1.

It is very important to emphasize that these changes do not represent IMF forecasts of unemployment in these countries. What we have done is to take the official revisions in the IMF's growth forecasts and use estimates of the historical link between growth and jobs to provide some indication of how unemployment forecasts might be affected. Past is not always prologue, but neither can the past be ignored. Hence, the analysis here is likely to be useful to country analysts as they revise their unemployment forecasts over the course of the year.

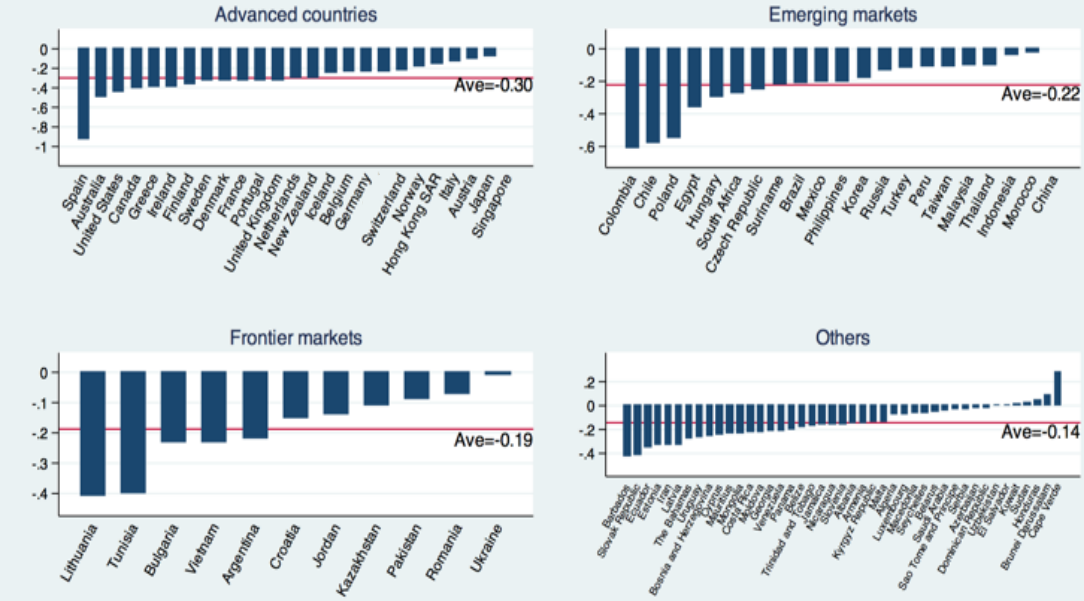
**Table 1: GDP growth forecast revisions and implied unemployment forecast revisions**

| | | Forecasts for 2016 | | | Forecasts for 2017 | | |
|---|---|---|---|---|---|---|---|
| Country | Okun's coeff. | GDP growth forecast revision | Implied unemp. rate forecast revision | Original unemp. rate forecast | GDP growth forecast revision | Implied unemp. rate forecast revision | Original unemp. rate forecast |
| Brazil | -0.21 | -2.5 | 0.525 | 8.57 | -2.3 | 0.483 | 8.942 |
| Canada | -0.41 | | | | -0.3 | 0.123 | 6.641 |
| France | -0.32 | -0.2 | 0.064 | 9.89 | -0.1 | 0.032 | 9.681 |
| Japan | -0.08 | | | | -0.1 | 0.008 | 3.607 |
| Mexico | -0.2 | -0.2 | 0.04 | 4 | -0.2 | 0.04 | 3.875 |
| Nigeria | -0.004 | -0.2 | 0.0008 | 7.5 | -0.3 | 0.0012 | 7.5 |
| Russia | -0.13 | -0.4 | 0.052 | 6.5 | | | |
| Saudi Arabia | -0.04 | -1 | 0.04 | 5.548 | -1 | 0.04 | 5.548 |
| South Africa | -0.27 | -0.6 | 0.162 | 25.75 | -0.3 | 0.081 | 25.604 |
| United States | -0.44 | -0.2 | 0.088 | 4.863 | -0.2 | 0.088 | 4.812 |
| Germany | -0.24 | 0.1 | -0.024 | 4.684 | 0.2 | -0.048 | 4.67 |
| Spain | -0.93 | 0.2 | -0.186 | 19.949 | 0.1 | -0.093 | 18.65 |

## The jobs-growth link

We conclude this update of IJR with evidence on the jobs-growth link for a broad group of countries. This expands the analysis in Loungani and Mishra (Policy Brief 15/22), which was for the G-20 countries only. Figure 6 shows the extent to which unemployment falls in different country groups when growth picks up.

**Figure 6. Short-run responsiveness of unemployment to growth**
By country group




In short, there are large variations across countries in the jobs-growth link—known in economic jargon as the 'Okun coefficient'—and in the extent to which growth accounts for labor market movements—the 'R-square statistic' in the jargon. Table 2 summarizes this evidence by combining the information on the Okun coefficient and the R-square statistic to classify countries into four quadrants.

- For the 39 countries listed in the southeast quadrant (e.g. Argentina, Australia, Brazil and Tunisia), the unemployment-growth link is strong: unemployment is fairly responsive to growth and fluctuations in growth account for a large chunk of fluctuations in unemployment. In these cases, paying attention to growth forecasts is likely to be quite important in making forecasts for unemployment.

- For the 36 countries listed in the northwest quadrant (Austria, China and Morocco, among them), one could say that the short-run unemployment-growth link is weak: unemployment does not respond to growth and fluctuations in growth do not account for much of unemployment fluctuations.

**Table 2: The strength of the jobs-growth link**

| | Okun coefficient (abs) <= average | Okun coefficient (abs) > average |
|---|---|---|
| **R2 <= average** | **Advanced (4)**<br>Austria, Italy, Norway, Singapore<br><br>**Emerging (6)**<br>China, Indonesia, Morocco, Peru, Philippines, Turkey<br><br>**Frontier (5)**<br>Croatia, Jordan, Pakistan, Romania, Ukraine<br><br>**Other Developing (21)**<br>Albania, Algeria, Armenia, Azerbaijan, Belize, Brunei Darussalam, Dominican Republic, El Salvador, Honduras, Jamaica, Kuwait, Kyrgyz Republic, Macedonia, Myanmar, Nicaragua, Saudi Arabia, Sao Tome and Principe, Serbia, Seychelles, Sudan, Uzbekistan | **Advanced (3)**<br>Belgium, New Zealand<br><br>**Emerging (2)**<br>South Africa, Suriname<br><br>**Frontier (1)**<br>Vietnam<br><br>**Other Developing (5)**<br>Bosnia and Herzegovina, Cape Verde, Ecuador, Georgia, Mauritius |
| **R2 > average** | **Advanced (2)**<br>Hong Kong SAR, Japan<br><br>**Emerging (6)**<br>Korea, Malaysia, Mexico, Russia, Taiwan Province of China, Thailand<br><br>**Frontier (1)**<br>Kazakhstan<br><br>**Other Developing (6)**<br>Belarus, Luxembourg, Malta, Panama, Slovenia, Trinidad and Tobago | **Advanced (16)**<br>Australia, Canada, Denmark, Finland, France, Germany, Greece, Iceland, Ireland, Netherlands, Portugal, Spain, Sweden, Switzerland, United Kingdom, United States<br><br>**Emerging (7)**<br>Brazil, Chile, Colombia, Czech Republic, Egypt, Hungary, Poland<br><br>**Frontier (4)**<br>Argentina, Bulgaria, Lithuania, Tunisia<br><br>**Other Developing (12)**<br>Barbados, Costa Rica, Cyprus, Estonia, Iran, Latvia, Moldova, Mongolia, Slovak Republic, The Bahamas, Uruguay, Venezuela |

What about the two remaining quadrants?

- In the 11 countries in the northeast quadrant—such as South Africa and Vietnam—the short-run unemployment rate is responsive to growth. Hence when there are revisions to the forecasts for growth, it is likely that revisions to unemployment forecasts will be needed. At the same, since variations in growth do not appear to be the predominant drivers of unemployment fluctuations, one would have to pay attention to forces other than growth as well.

- In the 15 countries in the southeast quadrant—Korea, Mexico and Russia, for example—the unemployment rate moves by only a little in response to growth. At the same time, factors other than growth do not seem to be driving unemployment.

To summarize, for the majority of countries around the globe, taking account of growth is an important part of understanding short-run unemployment fluctuations. In the case of other countries (particularly those in the northwest quadrant), there are several possible explanations for the weakness of the jobs-growth link:

- In some cases, reported unemployment rates may not fully reflect the true unemployment rate.

- Some countries are going through rapid structural change and unemployment may be driven by this longer-run trend rather than short-run fluctuations. This is likely to be case in Morocco, where the unemployment rate has fallen sharply over the past 20 years with the increase in trend GDP but the short-run responsiveness of unemployment to GDP growth is essentially zero.

- In countries with large rural sectors and large degree of informality, the measured unemployment rate (which is more likely to reflect urban and formal sectors) may not be very responsive to growth.

## Plans for IJR the rest of 2016

The April 2016 and October 2016 updates will feature a full revision of unemployment forecasts drawing on the IMF's World Economic Outlook reports. The interim update of July 2016 will report on growth revisions and their implications for unemployment and feature a special section on labor markets in Africa.

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