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# *Global wage projections to 2030*

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# *Summary: Wage gap between emerging and advanced economies will shrink significantly by 2030*

- By 2030, our projections in this report suggest that wage levels in the emerging economies will show a significant degree of catch up with those in the developed economies. This reflects both higher labour productivity growth in emerging economies and expected long-term appreciation of their currencies over the period to 2030. It also reflects the marked tendency since the late 1990s for real wages in advanced economies to rise more slowly than productivity growth, which we expect to continue at least in the short term, although it may fade in the longer run.
- As its relative wage levels rise, China will become more attractive as a consumer market and less important as a low cost production location. This will also apply to other middle income emerging economies such as Poland, Turkey, Mexico and South Africa.
- Countries such as India and the Philippines could become more attractive manufacturing locations due to their continued relatively low wage levels compared to China, but only if they can provide the right institutional environments and improve their transport and energy infrastructure. Current economic problems in India may also impact upon firms' willingness to expand there in the short term, but the country still has great long-term potential.
- UK firms must decide if they want to locate in the lowest cost areas such as Asia, or if they would prefer to locate in areas such as Eastern Europe where wages are not as low, but they are closer to the UK in terms of both distance and institutions. 'Onshoring' may become a more attractive option for UK businesses as it has for some US companies in recent years.

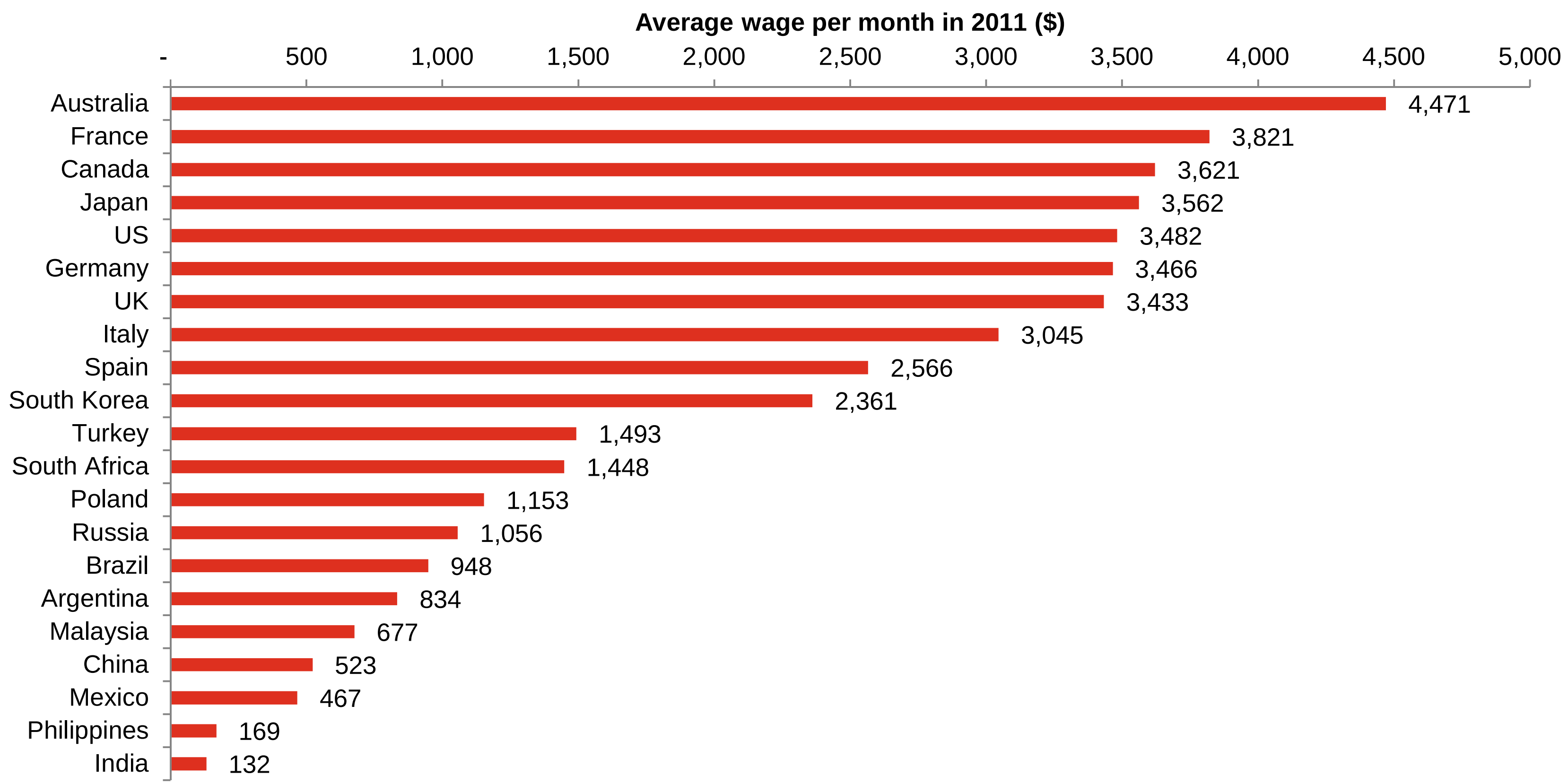
# *Our methodology for projecting relative wage levels*

- We began by taking estimates for average wages per month in 2011 (in US dollars at market exchange rates). These estimates were calculated for a previous piece of PwC analysis (How big is the global pay gap?) using 2009 raw wage data from the International Labour Organisation (ILO) and some supplementary data for 2010-11 from the IMF World Economic Outlook database.
- We projected real wages in domestic currency terms forward to 2030 using annual labour productivity growth estimates from our latest 'World in 2050' study, which is available from http://www.pwc.com/en_GX/gx/world-2050/the-brics-and-beyond-prospects-challenges-and-opportunities.jhtml
- However, we made a downward adjustment to these projected wage growth rates for developed economies as evidence shows that real wages grow on average by less then labour productivity in advanced countries (by around 0.7 percentage points per annum in 1999-2012 according to ILO estimates – we assume this effect gradually tapers away to zero by 2030).
- No such downward adjustment was made for emerging economies since, on average, ILO data suggests that real wages in such economies do grow broadly in line with labour productivity growth.

## *Our methodology for projecting relative wage levels (cont'd)*

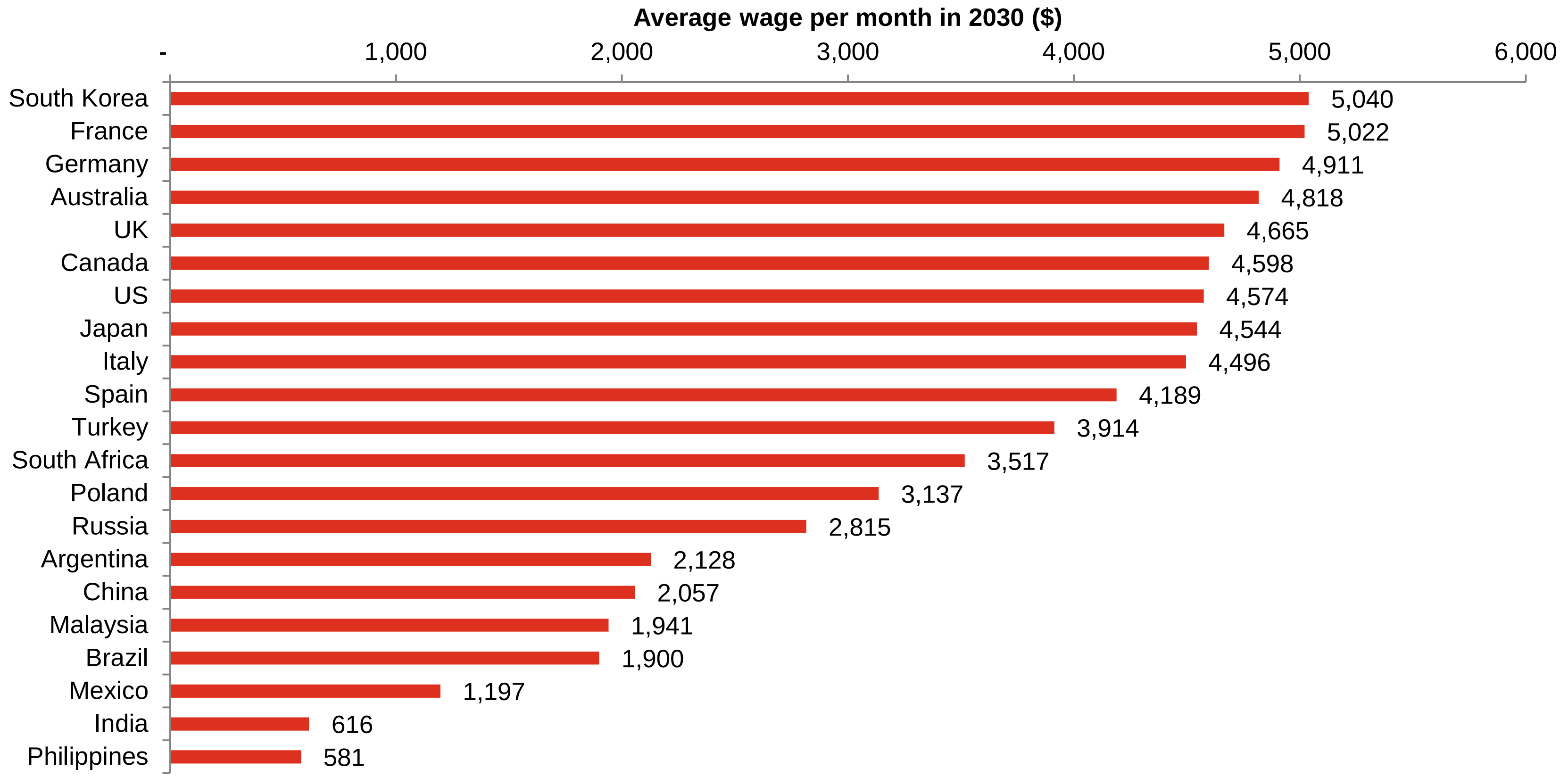
- We also included the effects of long-term trends in the real exchange rate for each country based on projections from our World in 2050 study. Economic theory suggests that, in the long run, market exchange rates move gradually towards purchasing power parity rates as a country develops. Purchasing power parity (PPP) refers to the exchange rate at which a representative basket of goods and services would cost the same amount in different countries. For example, the current price of a haircut is higher in London than in Beijing, but as China continues to develop, the price in Beijing can be expected to move closer to the price in London.
- The precise rate of real exchange rate appreciation is uncertain, however, and this should be taken into account by interpreting our projections as indications of likely broad trends, rather than being precise point forecasts. The precise projections presented below for 2030 are inevitably subject to significant margins of error.
- We chose to end our analysis at 2030 as relatively few businesses will look beyond this time horizon in making location decisions given the ever widening margins of uncertainty in later decades.

# *In 2011, Australia led the way (due to its relatively high exchange rate compared to PPP levels) with emerging economies some distance behind developed countries*



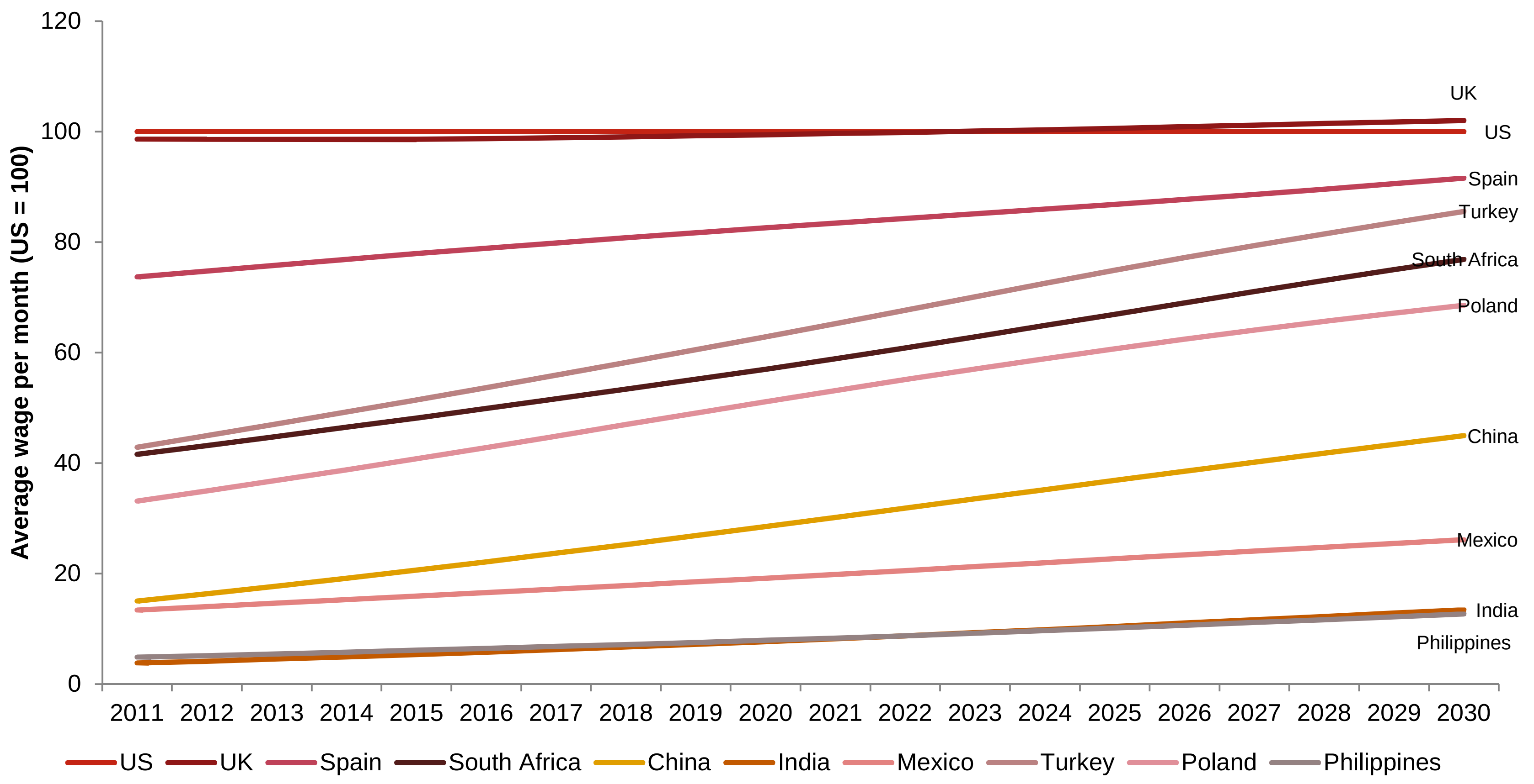

*Sources: ILO, IMF, PwC Analysis*

# *By 2030, South Korea, France and Germany could have the highest average wages while countries such as Turkey and Poland begin to catch up with the major developed economies*




*Sources: ILO, IMF, PwC Analysis*

# *Relative to the US and the UK, the emerging economies are all projected to show significant convergence in wage levels by 2030 – even if precise speed of convergence is uncertain*



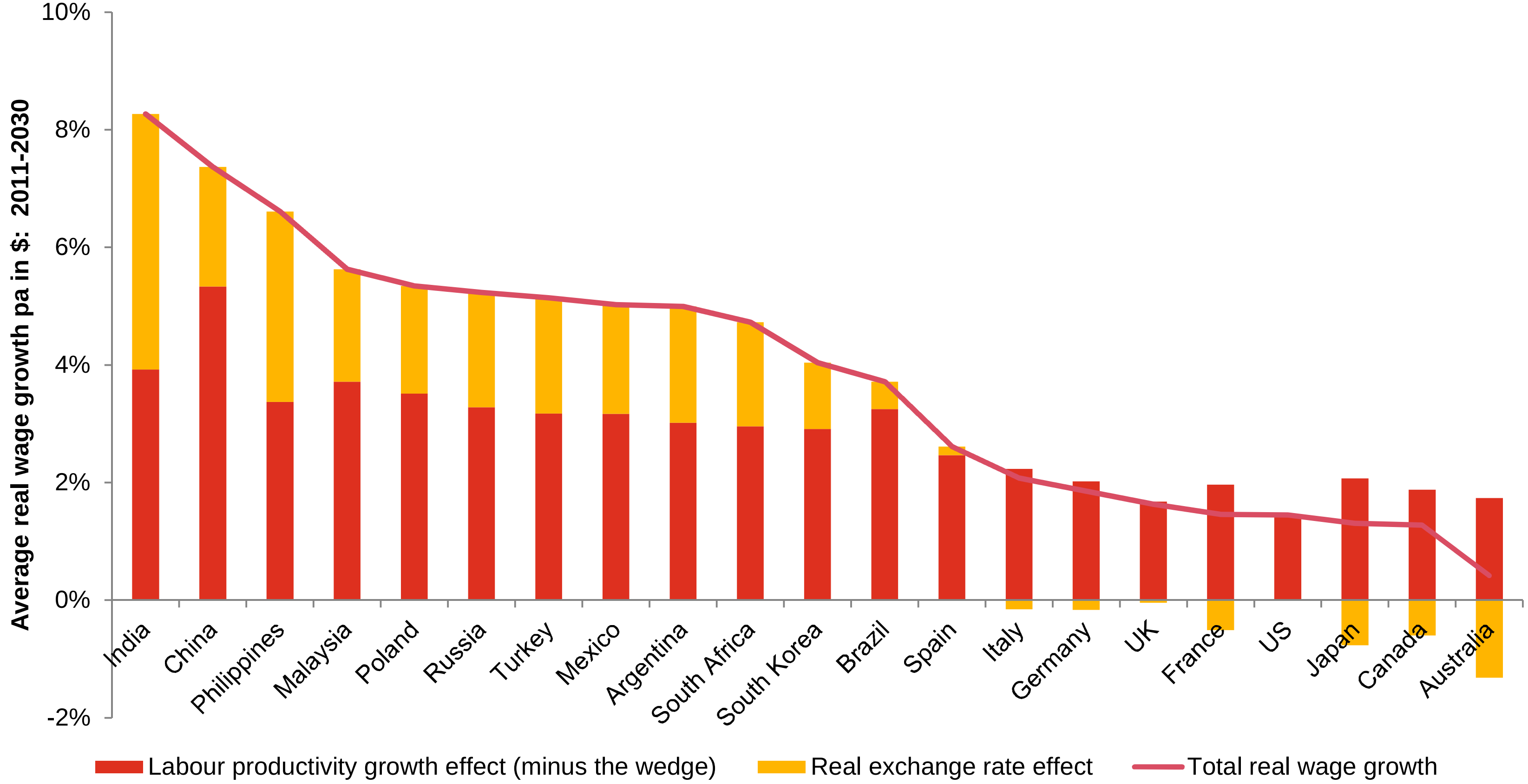

*Sources: ILO, IMF, PwC Analysis*

## *Relative to the US and UK, the emerging economies show significant growth in average wages (index with US = 100)*

| Country | 2011 | 2020 | 2030 |
|---|---|---|---|
| US | 100 | 100 | 100 |
| UK | 99 | 99 | 102 |
| Spain | 74 | 83 | 92 |
| Turkey | 43 | 63 | 86 |
| South Africa | 42 | 57 | 77 |
| Poland | 33 | 51 | 69 |
| China | 15 | 29 | 45 |
| Mexico | 13 | 19 | 26 |
| India | 4 | 8 | 13 |
| Philippines | 5 | 8 | 13 |

*Sources: ILO, IMF, PwC Analysis*

# *The emerging economies outperform the developed economies when looking at projected average growth of real wages over 2011-2030, including real exchange rate changes*




*Sources: ILO, IMF, PwC Analysis*

# *Alternative wage data sources: ILO vs BLS*

In the analysis above, we use 2011 estimates for the average wage per month based on data from the ILO. However, the U.S. Bureau of Labour Statistics (BLS) also provides relative wage data that could be used in this analysis. There are two main reasons why we chose to focus on the ILO data:

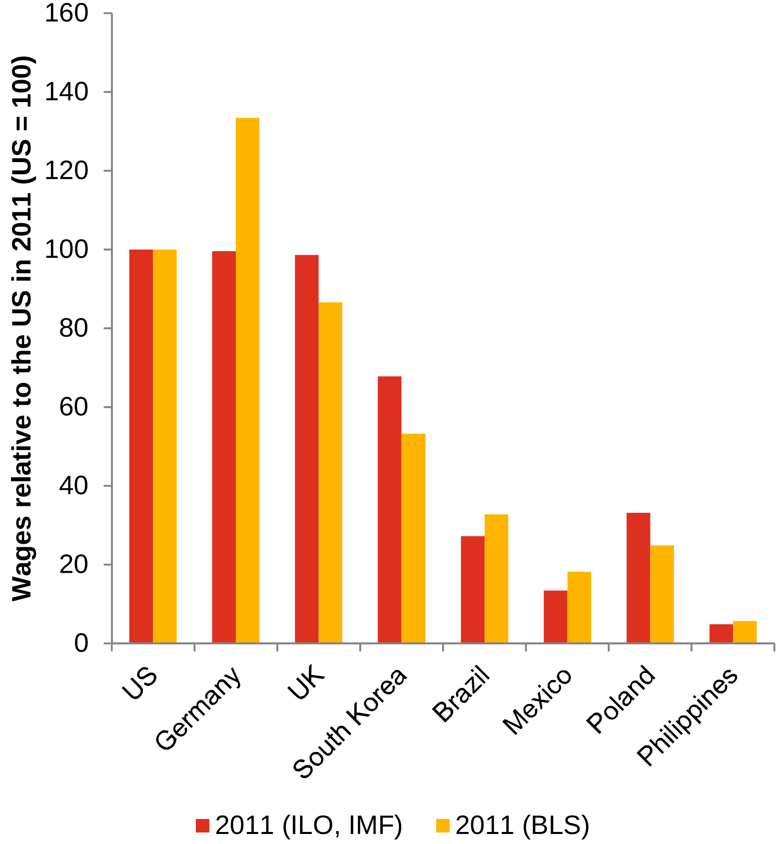
1. The ILO data, in most cases, is based on the whole economy whereas the BLS data only relates to the manufacturing sector. Since our labour productivity growth estimates cover the whole economy, using the ILO data is more consistent.
2. The ILO data covers a larger range of emerging countries than the BLS data, which for example, does not include China or India in a consistent manner.

However, the BLS data also has its advantages:

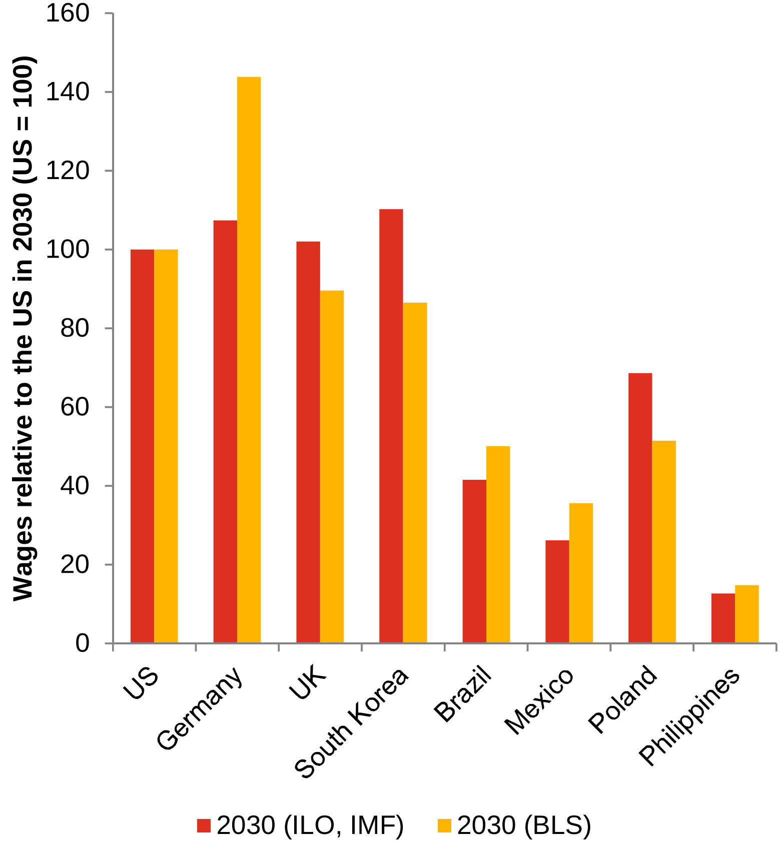
1. The BLS data more accurately reflects total labour costs for employers because payroll taxes are included, whereas the ILO data just reflects the average wage received by employees.
2. Although the BLS data only covers manufacturing, these estimates may be somewhat more reliable than for the economy as a whole. They also have a longer track record than the ILO data.

We therefore repeated our analysis using the BLS data where this was available. While the general story of the emerging economies catching up with the advanced economies over time remains the same, there are some differences that arise when using the BLS data due to different starting points for relative wages in 2011 (see next slide for details). This emphasises that more attention should be paid to the general trends indicated in relative wages, rather than precise point estimates that are inevitably subject to significant uncertainties.

## *Looking at different data sources for 2011 changes the results somewhat with BLS data suggesting wage levels in South Korea may not be as high as ILO data implies*




*Sources: ILO, IMF, BLS, PwC Analysis*




*Sources: ILO, IMF, BLS, PwC Analysis*

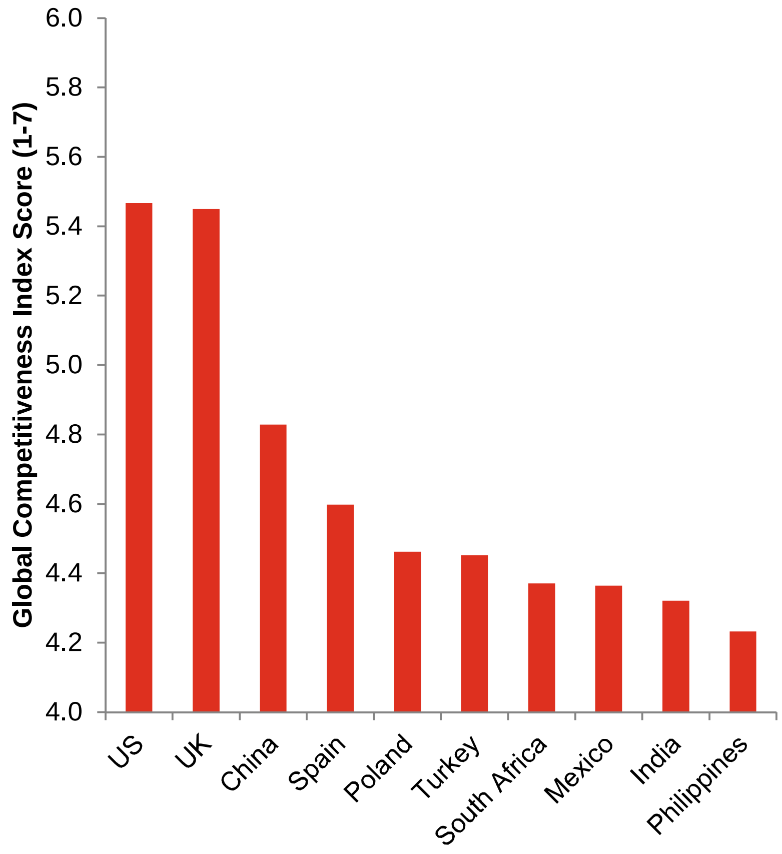
# *Business implications of shrinking wage gaps*

- China will become more significant as a consumer market and less important as a low wage production location. This will also apply to other middle income emerging economies in the Middle East, Latin America and Eastern Europe.
- Countries such as India and the Philippines could become more attractive manufacturing locations due to their continued relatively low wage levels, but only if they can provide the right institutional environments and improve their transport and energy infrastructure.
- Current economic problems in India may impact upon firms' willingness to expand there in the short-term, but it still has great long-term potential. The Philippines could be one of the most attractive South East Asian locations (alongside countries such as Malaysia, Thailand, Indonesia and Vietnam) taking over from China as a key low cost production hub.
- UK firms must decide if they want to locate in the lowest cost areas in SE Asia, or if they would prefer to locate in EU countries such as Poland where wages are not as low, but they are closer to the UK in terms of both distance and institutions. One advantage of countries like Poland is that it may be easier to control the quality of the goods being produced.
- 'Onshoring' may also become a more attractive option for the UK as it has for some US companies recently. This may be particularly true if the UK follows the US in developing low cost local energy reserves from shale gas and shale oil that can offset higher domestic wage costs.

# *However, while wages are important when deciding on locations, companies should also consider ease of doing business and wider measures of country competitiveness*

| Country | Ease of Doing Business Rank (1=most business-friendly regulations) |
|---|---|
| US | 4 |
| UK | 7 |
| South Africa | 39 |
| Spain | 44 |
| Mexico | 48 |
| Poland | 55 |
| Turkey | 71 |
| China | 91 |
| India | 132 |
| Philippines | 138 |

*Source: World Bank Ease of Doing Business Index*




*Source: World Economic Forum Global Competitiveness Index*

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