



Honey, I Blew Up a Few Economies

New calculations of purchasing power have put China on course to overtake the US as the world's biggest economy this year. The changes in PPP also alter our reading of living standards for many countries.

The International Comparison Programme (hosted at the World Bank) just released its new estimates of Purchasing Power Parity (PPP) that are used to compare GDP across countries. These estimates are released about every five years and they serve as the basis for the PPP-adjusted statistics used by most international organisations or statistical sources. These estimates get updated on an annual basis using inflation rates but it is the five year survey that produces the complete data that allows us to compare purchasing power across countries.

The release was picked up by all news outlets which emphasised the fact that China looks bigger than we thought before and it is likely to become the number one economy by the end of 2014 (e.g. Financial Times). The news on China makes for great headlines but the reality is that many countries saw significant changes in their PPP estimates, let's look at some of the magnitudes.

Before looking at magnitudes, a clarification on methodology is needed. PPP estimates are done for a particular year (2011 in this case). The PPP adjusted figures released this week take the same GDP data that we were already using for that year and they publish a new set of PPP estimates that allows for a conversion of GDP to a purchasing-power basis just for that year (2011).

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Soon most databases will start using those PPP estimates (from 2011) to extrapolate and calculate the recent annual GDPs (2013). But this calculation will be done by adjusting 2011 PPP estimates with domestic inflation rates. To understand what has really changed with these new estimates and avoid the possible distortions that using inflation rates could cause, let me do a simpler calculation: let's stick to 2011 GDP and ask the following question: How different is the size of economies as calculated using 2011 PPP compared to what we thought before these estimates were released? Before these estimates were released we were using PPP estimates calculated in 2005 and updated using domestic inflation rates.

If you do that calculation, China's economy increased in size by about 21 percent. But China is not alone. In fact there are 65 countries whose size increased even more than that. And there are about 30 countries where the increase was larger than 50 percent. Below are some examples:

Country	Increase in 2011 GDP PPP
UAE	109%
Myanmar	103%
Indonesia	85%

Saudi Arabia	65%
Egypt	64%
Pakistan	53%
Thailand	51%
Philippines	41%
Russia	36%
Iran	33%
Malaysia	32%
Romania	30%
India	28%
Nigeria	25%
Brazil	24%
Turkey	23%
China	21%

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The UAE doubled its size and now becomes a \$500+ billion economy (larger than Belgium). Indonesia increased by 85 percent to pass \$2 trillion and becomes the 10th largest economy in the world (larger than Italy and very close to the UK). All these are very large changes that clearly show that the most recent PPPs have introduced a completely different lens to compare price levels and living standards across countries. The pattern is that emerging markets tend to look a lot cheaper than we thought earlier and therefore their GDP measured in purchasing power parity looks much larger.

What is interesting is that this has not always been the case. The previous release of PPP estimates (2005) caused a lot of controversy because they reduced the size of the Chinese economy by about 15 percent.

One can argue that changes in the PPP-adjusted size of countries have very little practical impact, GDP has not really changed. It does have an impact on those who care about size and rankings of countries and think that PPP-adjusted series are better at capturing size (which is probably not correct, but I will leave this for another post). But it also has a large impact for those who care about comparisons of living standards (for which PPP correction is a must): these large movements in PPP estimates completely change our reading of living standards for many countries. If you are a researcher, get ready to update all your regressions!

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