China might NEVER become the biggest economy in the world

It is often assumed that given China's remarkable growth rates over the past three decades – around 10% real GDP per year – China is on the way to soon becoming the largest economy in the world. In fact earlier this year it got a lot of media attention that when the *World Bank* argued that China already had overtaken the US as the largest in economy in the world. However, the argument was completely bogus as it was based on *Purchasing Power Parity (PPP)* rather than on actual exchange rates (To be fair we should blame the media rather than the World Bank for this interpretation of the data).
PPP based measures of GDP (per capita) might make sense if we want to measure how much an average citizen can buy for given an average income, however, it does not make sense when we want to measure the *size* of the economy. There we have to use measures based on actual exchange rates and if we do that then it turns out that the Chinese economy is still significantly smaller than the US economy. Hence, total Chinese GDP today is around 10 trillion USD, while US GDP is around bn 17-18 trillion USD. Said in another way the US economy is still nearly double the size of the Chinese economy.
And what I will argue in this post is that *China might never overtake the US as the biggest economy in the world*.
Chinese growth set to slow dramatically in the coming decades
There is a broad consensus among long-term macroeconomic forecasters that the Chinese economy is likely to slow significantly in the coming quarters – starting today!

There are overall three reasons why this is the case:

1) ***The catching-up process means less and less:*** A very large part of China fantastic growth performance over the past three decades is due to a "natural" catching up process. When poor economies – like the Chinese economy three decades ago – is freed up a catching up process is started. This means a lot for low-income economies, but as income levels increase the catching up process slows down. This is already the case for China.
2) ***Investment growth is likely to slow significantly:*** Fixed investments as share of GDP in China is extremely high – well above 40% of GDP. This is at least 10-15 %-point more than in other countries with a similar GDP/capita level. This to some extent reflect capital misallocation in the Chinese economy as investment decision in the Chinese

economy to a large extent still is a result of quasi-central planning. It is therefore natural to expect investment growth to slow quite significantly in the coming decades.

3) ***China is facing serious demographic challenges:*** You can blame the Communist Party's one-child policy or come up with other explanations but the fact is that the Chinese labour force is now already in decline and the decline will continue in the coming decades and soon the Chinese population will be in outright decline.

So from a growth-accounting perspective we have it all – less *Total Factor Productivity growth* – as the catch-up process slows, a slower increase in the capital stock and finally a declining labour force.

It is therefore hardly surprising that most long-term forecasts made for the Chinese economy forecast a rather significant slowdown in Chinese growth in the coming decades

Closing in on the US, but China might never make it

It is commonly argued that trend growth presently is around 7-7.5% in China, however, it is equally common to argue that we will see a slowdown in real GDP growth to an average of around 5-6% in the coming 10-15 years. But the real slowdown comes after 2030 where the Chinese economy is expected by most long-term forecasters to start to approaching Japanese style growth rates and outright *negative* trend-growth should not be ruled out in the 2050s based on reasonable expectations about demographics, the investment ratio and the catching-up process.

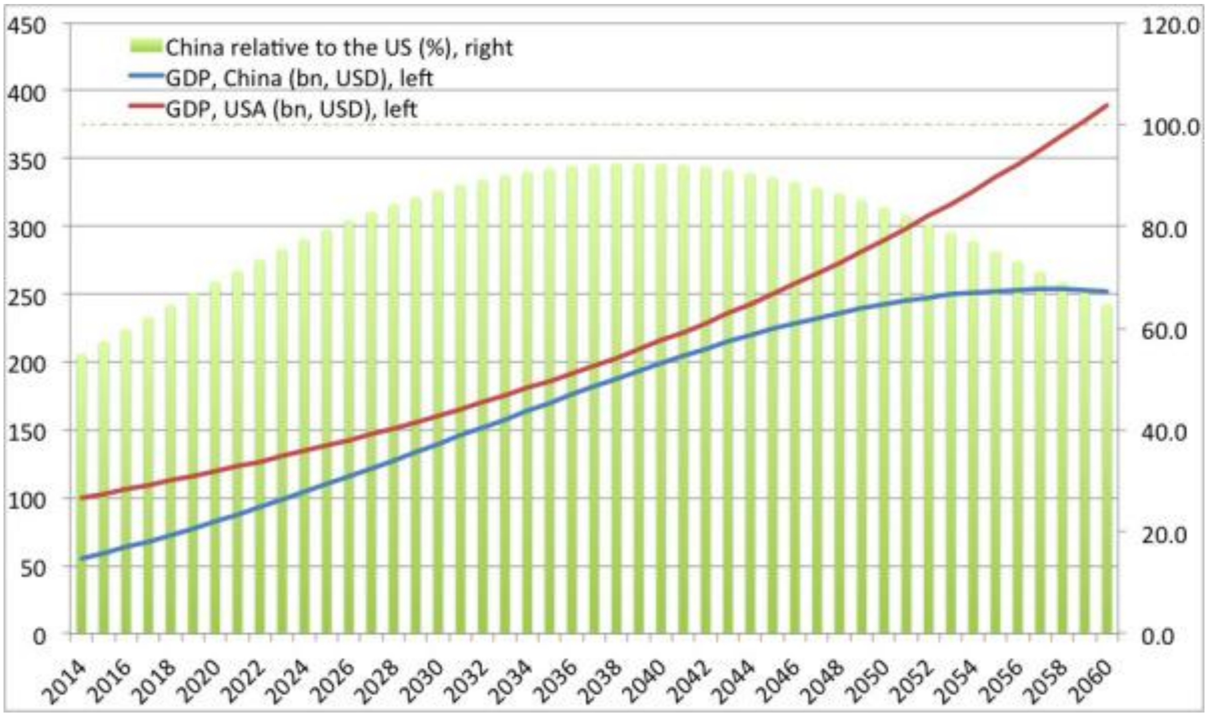
Obviously it is difficult to make any macroeconomic forecasts. However, I would actually argue that it in many ways it is easier to make forecast 10-20 years ahead than 1-2 years ahead. When we do short-term forecast the shocks will always mess up our forecasts, but over a 10-20 years horizon the positive and negative shocks tend to even out. Furthermore, in the long-run it is all about supply side factors and with the growth rate of the labour force being a major factor we already know quite a bit. Hence, we have a pretty good idea about the growth of the Chinese labour force in 15-20 years as the people entering the labour force as young adults in 15 or 20 years already have been born.

I have gone through a number of studies of the long-term growth perspectives for the Chinese economy and based on that we can make a simple "simulation" of how the level of Chinese real GDP will develop from now and until 2060. I should stress it is not a forecast as such and lets therefore just stick with the term "simulation" of future Chinese real GDP under reasonable assumptions about the development in technology and in productions factors.

The graph below illustrates my argument that China might never overtake the US as the largest economy in the world. Here is my assumptions (and they can certainly debate, but they are not much different from the "consensus" forecasts for long-term growth in China and the US). I assume that trend real GDP growth in China over the next 15 years will be 6% – slowing from presently 7.5% to 4.5% in 2030. Hereafter the negative demographics in China really kick in and as a result trend growth drops to an average of just 2% for the period 2030-2060.

I have indexed Chinese real GDP at 55 in 2014 – reflecting that Chinese GDP (in USD) is around 55% of US GDP. In my simulation I have assumed that US trend real GDP growth is 3%. This is probably slightly optimistic compared to the "consensus" among long-term forecasters, but it is basically the growth rate we rather consistently have seen in the US economy since the early 1960s. The American demographic challenges are somewhat smaller than is the case for China and I find it rather likely that the US gradually will adjust immigration policies so meet these challenges (I certainly hope so…)

It is important to stress that I here assume that the there is no real appreciation or depreciation in the USD/RMB exchange rate (no *Balassa-Samuelson effect*). Hence, the exchange rate development is determined by relative inflation in the US and China. This might twist the results slightly against China. On the other hand I have also assumed that the output gap is zero in both countries. In fact the output gap in the US is still negative, while the output gap in China likely is close to zero or even positive. This twists the results against the US. Let's just (completely unreasonably) say that these factors even out each other.



So there you go. You see under these – simplistic – assumptions the Chinese economy will continue to gain on the US economy over the next two decades. However, under these assumptions (and I again stress it is assumptions) it will be close (around 90%), but no cigar for the Chinese economy – the Chinese economy will *never* be the largest economy in the world – or at least not in my life time and I do plan to live to at least 2060.

Furthermore, starting around 2040 China will stop catching up and instead see its economy decline *relative* to the US and in 2060 we will be more or less back where we started with Chinese GDP being around 60% of US GDP.

Now you might say that these results are too negative in terms of China or too positive in terms of the US and that might very well be the case. However, I do think that my simulations *illustrate* that China is not automatically set for global economic and financial domination. So while China – for a period – might become a bigger economy than the US – if we for example assumption 2.5% US trend growth rather than 3% – the negative demographics will start to kick in soon and that will ensure that the US economy will remain the biggest economy in the world – also in 50 years. This also means that it is quite hard to imagine in my view that the "financial centre" of the world will move to China and I find it extremely hard to imagine that the Chinese renminbi will take over of the role as the leading reserve currency of the world from the US dollar.

But there is no reason to cry for the Chinese

So China might never become the biggest economy in the world. However, that should really *not* be important for the Chinese. It might be for Chinese policy makers, but the average Chinese should instead celebrate the fact that outlook for his/her income level remains very bright and income growth for the individual Chinese is likely to remain very high in the coming decades. So the discussion above should not really be seen as being "bearish" on China. In fact I am rather optimistic about the Chinese "miracle" continuing in the coming decades. We should celebrate that, but we might never be able to celebrate the day the Chinese economy overtakes the US in absolute size.

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