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Paul Krugman

Wonking Out: How Super Is Your Superpower?

Aug. 11, 2023

**By Paul Krugman**
Opinion Columnist

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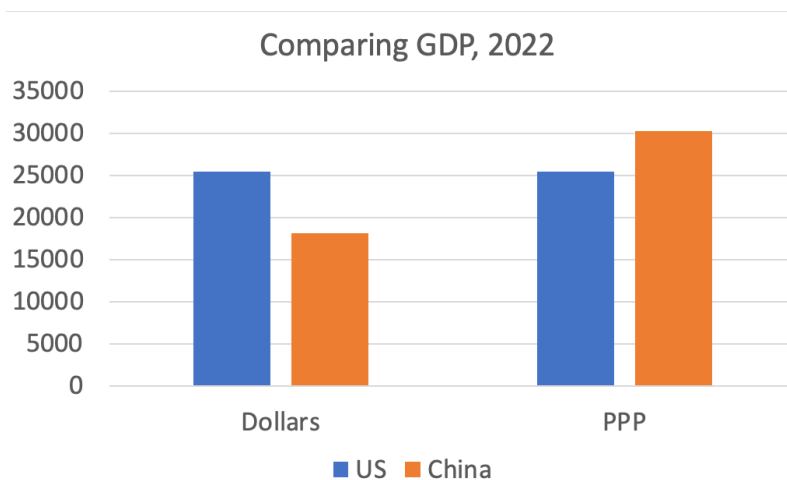
My most recent column was about the troubles facing the Chinese economy, which appear to be serious. However, I was careful to acknowledge that China's three-decade economic miracle has made it a bona fide economic superpower and that its current problems aren't likely to change that fact.

But how super is China's power, anyway? Is it now the world's biggest economy, or does it still lag behind the United States?

Yes.

You see, it depends on what measure you use. And there is no single measure that is clearly right. Instead, the measure you should choose depends on what question you're trying to answer.

The simplest way to measure the relative sizes of the U.S. and Chinese economies is to take each country's gross domestic product, which is measured in national currency, and convert them to a common currency at market exchange rates — which usually involves converting yuan to dollars, although it wouldn't make a difference if you did it the other way around. When you do that, China comes in second, with a 2022 G.D.P. of \$18.1 trillion compared with America's \$25.5 trillion:



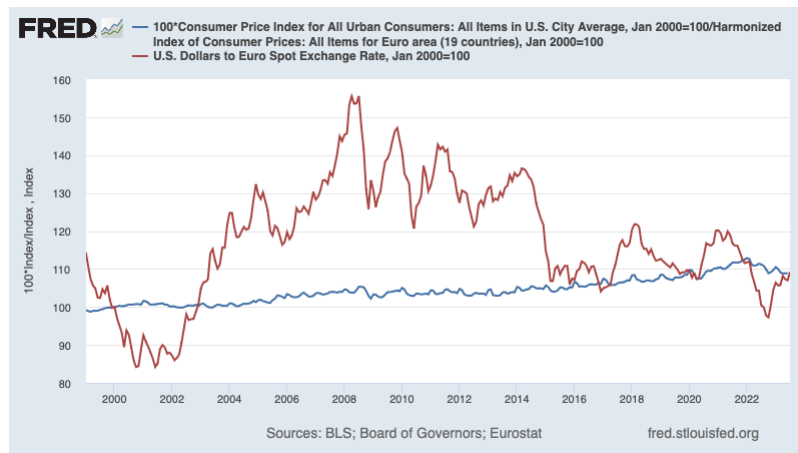
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But that comparison doesn't adjust for prices in the two countries. If you adjust for differences in the cost of living — the bars labeled PPP, for "purchasing power parity" — China is already well ahead.

Why might we want to adjust for prices? One answer is that when you're looking at changes over time, dollar comparisons of national G.D.P.s can be greatly affected by movements in foreign exchange rates, which can be highly volatile.

A few weeks ago I ragged on The Wall Street Journal for a deeply misleading dollar comparison between the United States and the euro area stating that while the two economies were the same size in 2008, the U.S. economy was now almost double the size of Europe's. Our economy has in fact grown faster than Europe's, but most of the change The Journal cited was a result not of weak European real growth

but of a decline in the foreign exchange value of the euro:



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In this chart, by the way, I include relative inflation over time to show that it wasn't a major factor; this was just currency markets doing what they usually do, namely fluctuate.

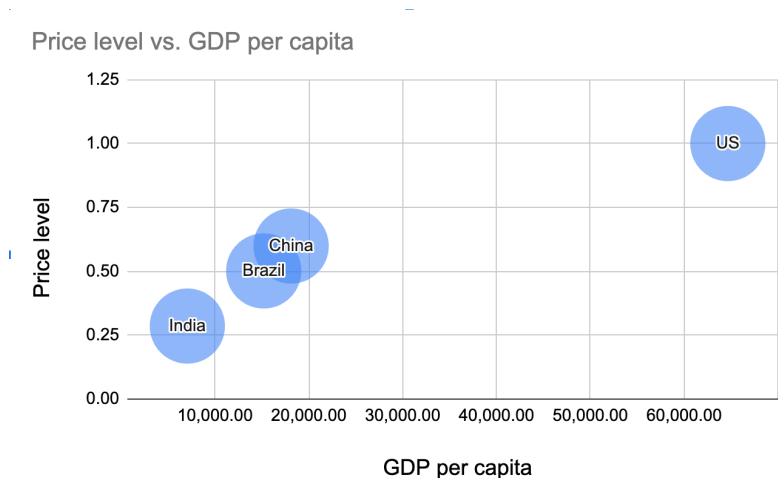
But there's another reason to adjust for prices. If you want to compare either the real sizes of two economies — the total amount of stuff each produces — or their standards of living, you want to know if goods and services are cheaper in one economy than in the other and to take that into account.

This is especially true if you're comparing a high-income economy like the United States with a middle-income nation like China or, even more so, with a low-income country like India. That's because there is a systemic tendency for prices to be lower in poorer nations, because of the Balassa-Samuelson effect (discovered and analyzed simultaneously and independently by Bela Balassa and Paul Samuelson in 1964).

To understand this effect, imagine a simplified world in which labor is the only input into production, and production can be divided between goods like steel or airplanes that can be traded on world markets and goods or services like haircuts that must be supplied close to the consumer. In such a world, countries would have to be competitive in the production of traded goods, so their wage rates in dollars would reflect their productivity in tradable goods (like the airplanes), not nontradable goods (like the haircuts).

But it turns out that technologically advanced countries, while they're generally more productive than less advanced countries across the board, tend to have a bigger advantage in tradables than in nontradables. Such countries have high wages, but these wages are reflected in higher prices for nontradables and hence in an overall higher price level than in poorer countries.

You can see this effect clearly in the data. I won't try to do a rigorous or comprehensive test, just provide an illustrative figure with a few important economies. Here's the price level in several countries, as measured by the ratio of dollar G.D.P. to purchasing power parity G.D.P., compared with per capita income, measured at PPP:



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So there's a systemic reason China's G.D.P. is bigger than America's when you adjust for price differences; China really does produce more stuff than we do.

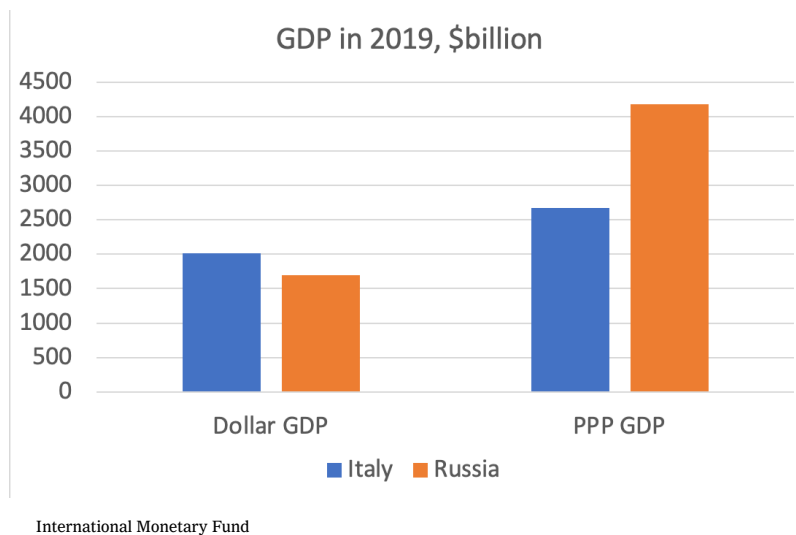
But does that make China the more super superpower? Not necessarily.

After all, what question are we trying to answer? If we're comparing geopolitical influence, that comes from things like the value of access to a nation's markets and the amount of aid it can give. These depend mainly on dollar G.D.P.; why should the rest of the world care whether haircuts are cheaper in China than in the United States?

And to mention an issue I don't take seriously but many people (wrongly) do, cheaper haircuts in China aren't going to have any bearing on the role of the dollar as an international currency.

The one place where the purchasing power of G.D.P. might matter for geopolitical influence is the extent to which it might affect a nation's ability to wage war. A few years ago I probably wouldn't even have mentioned that issue. Who was going to wage old-fashioned wars of conquest in the 21st century? But the bad old days have come back, so the relationship between G.D.P. and military strength is relevant again.

Which measure is a better gauge of military potential? This matters. To take a not at all random example, Russia is a quite small economy in dollar terms. In 2019, before the madness began, its economy in dollar terms was smaller than Italy's. But in purchasing power, it was considerably larger, although still small compared with the West as a whole:



So the answer to this question is that I'm not sure. Modern wars, even the grueling battle being fought in Ukraine, are high-tech affairs, so waging them may be more like producing tradable goods for world markets than like overall production. But maybe not. A U.S.-China war over Taiwan might provide a test, but I hope to God it's a test we never run.

In any case, if America and China want to get into a boasting contest over whose economy is bigger, the answer is that both can win if they get to choose the measure.

Paul Krugman has been an Opinion columnist since 2000 and is also a distinguished professor at the City University of New York Graduate Center. He won the 2008 Nobel Memorial Prize in Economic Sciences for his work on international trade and economic geography. @PaulKrugman