

BRIC Layers

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Tech, Happiness & Infrastructure

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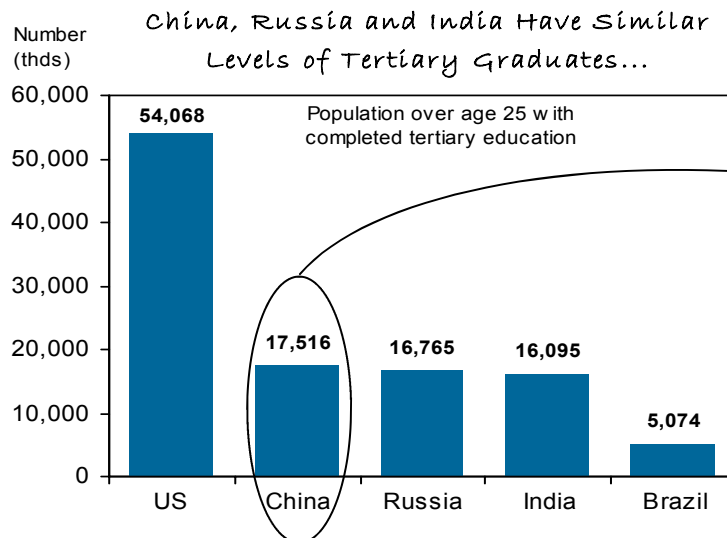
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There has been considerable focus on the extent to which the BRICs—and China in particular—are taking over global manufacturing. One aspect of this that is starting to attract attention is the absolute number of engineers and other technically qualified workers in China. We look more at this issue below, before turning to a lighter-hearted look at happiness across the world and finishing with a look at infrastructure spending.

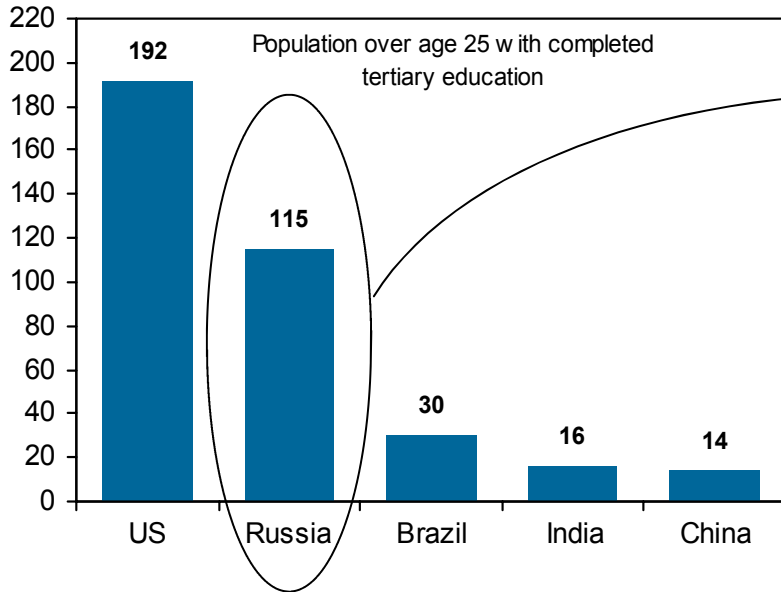
Technical and R&D workers



China has only marginally more tertiary graduates than Russia and India, despite its larger population, and has less than a third of the number of the US. On this measure, it hardly looks like the colossus described in the press.



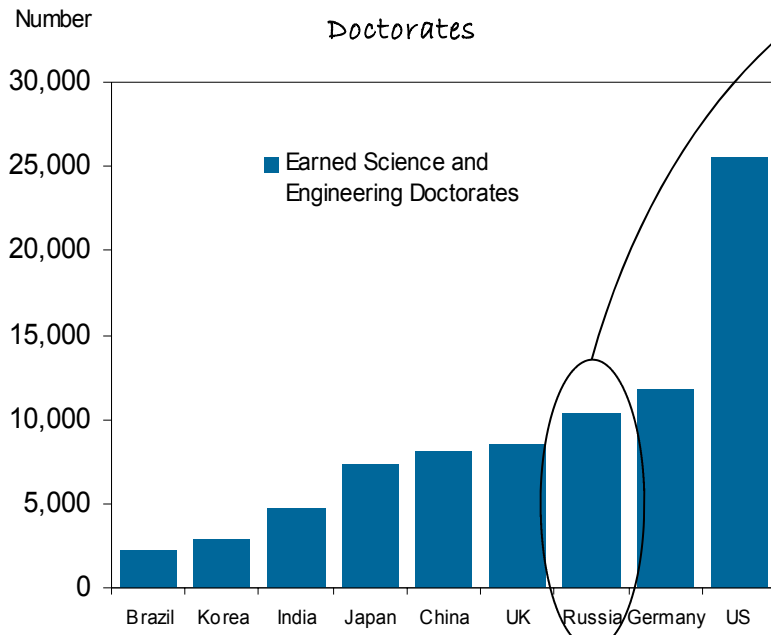
Graduates per thousand people ...But the Distribution is Different in Per Capital Terms



Russia has by far the most tertiary graduates per capita amongst the BRICs, with China last.

On a per capita basis, China is at the bottom of the pack with only 7% as many graduates as the US—again not looking too threatening. Russia's generally solid provision of education stands out more obviously here at 60% of US levels—not bad given much lower incomes.

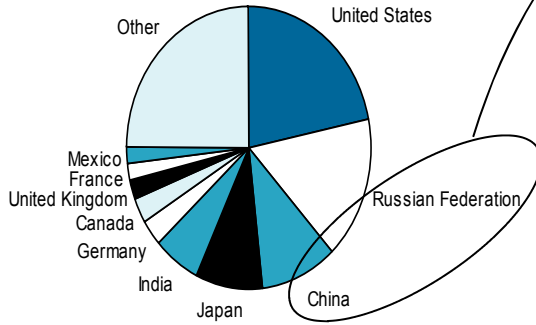
Earned Science and Engineering Doctorates



Russia tops the BRICS pile for technical PhDs even in absolute terms.

Russia has almost as many science and engineering PhDs as Germany, and more than any of the other BRICS even in absolute terms—still no sign of the China threat.

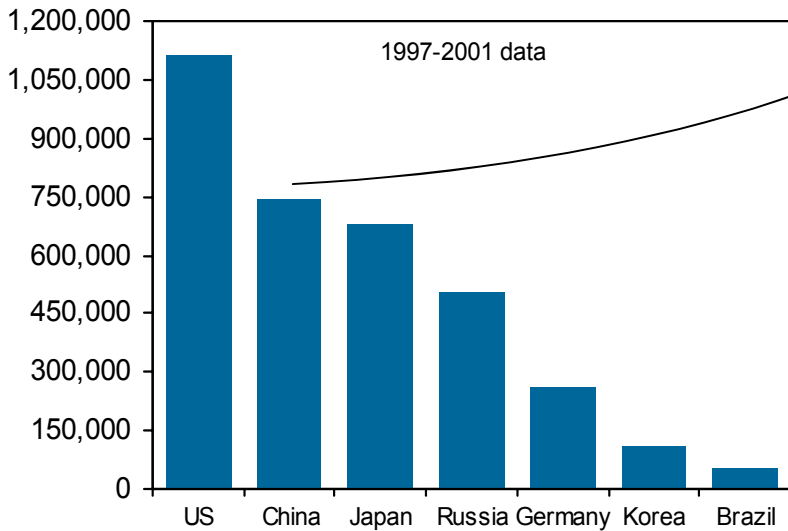
Global Distribution of Science and Engineering Workers with Tertiary Education: 1990-1998



Russia and China have almost as many workers with technical tertiary qualifications as the U.S.

Russia and China have almost as many workers with tertiary qualifications in science and engineering as the U.S., and more than Japan and Germany (while this data is available only occasionally and so is rather dated, we think the general comparison remains valid).

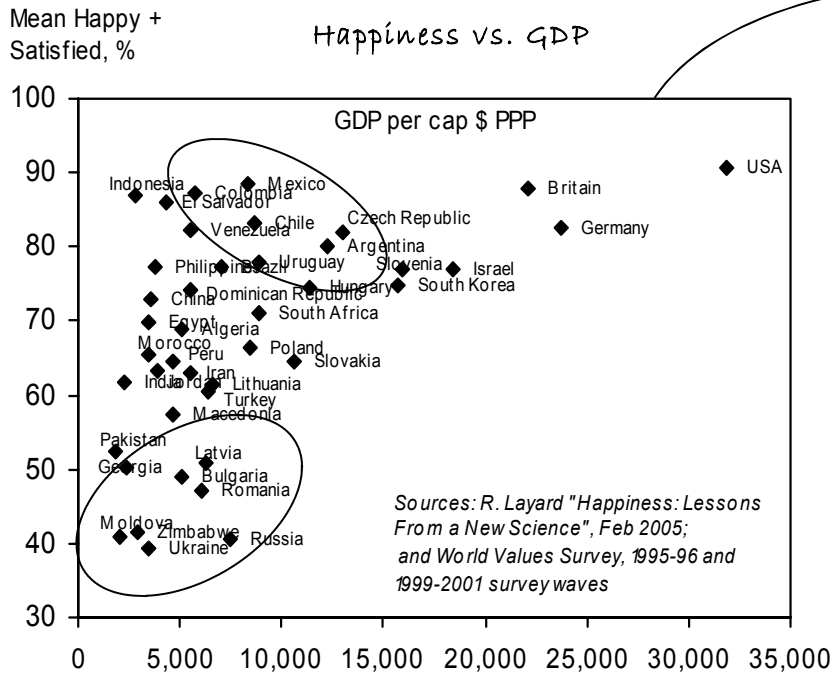
Number of People US and China Take the Lead in Numbers of R&D Professionals



China has the most R&D workers (excluding U.S.).

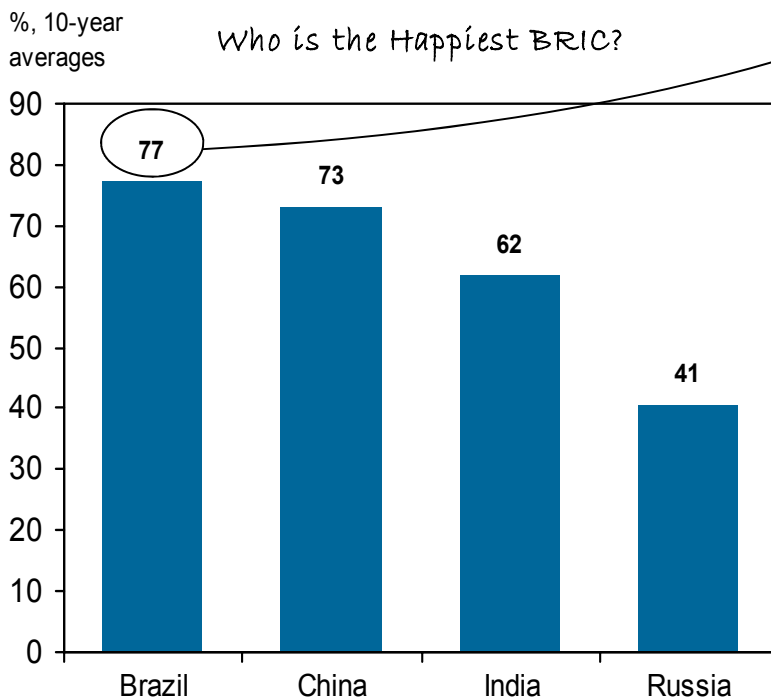
Although the U.S. has the more R&D workers, China has more than Japan, and almost three times as many as Germany. This should help China move up the value-added curve and perhaps helps explain the recent media interest.

Money Buys Happiness?

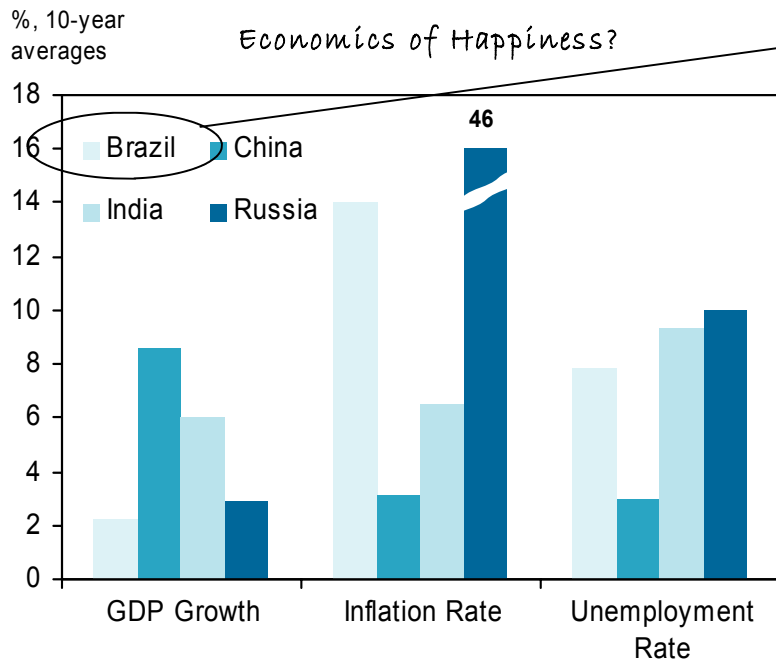


Latin America is "surprisingly" happy given its income level, while the former Soviet states seem less thrilled with life.

With the northern winter hitting hard this week, we take a lighter tack by looking at reported levels of happiness in the developed and developing world. It seems money can at least help buy happiness—but it goes further in Latin America and Asia than it does in former Soviet republics! Indonesia and China are poorer than Russia but happier.

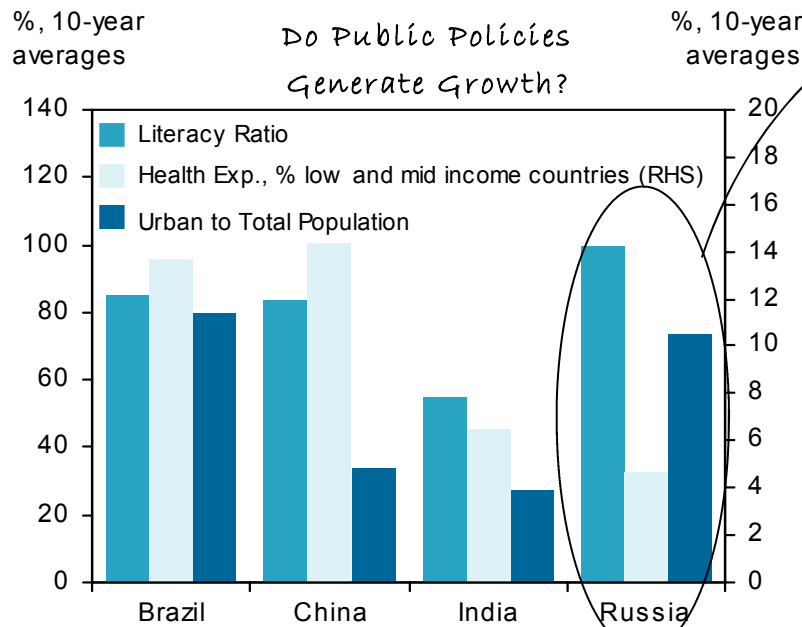


Amongst the BRICs, Brazil stands out, and richer Russia clearly lags.



Despite being happier, Brazil has grown more slowly with higher inflation and unemployment.

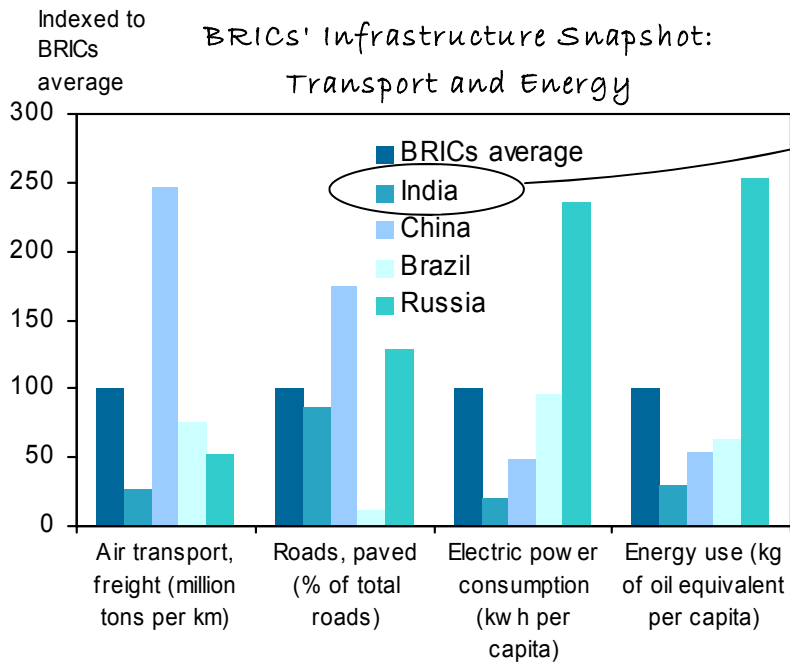
While it seems plausible that happiness would be effected by growth, inflation and unemployment, Brazilians don't seem to care too much about their country's relatively poor macro performance over the last decade—perhaps we should look at football results instead!



Russia's health spending is comparatively low.

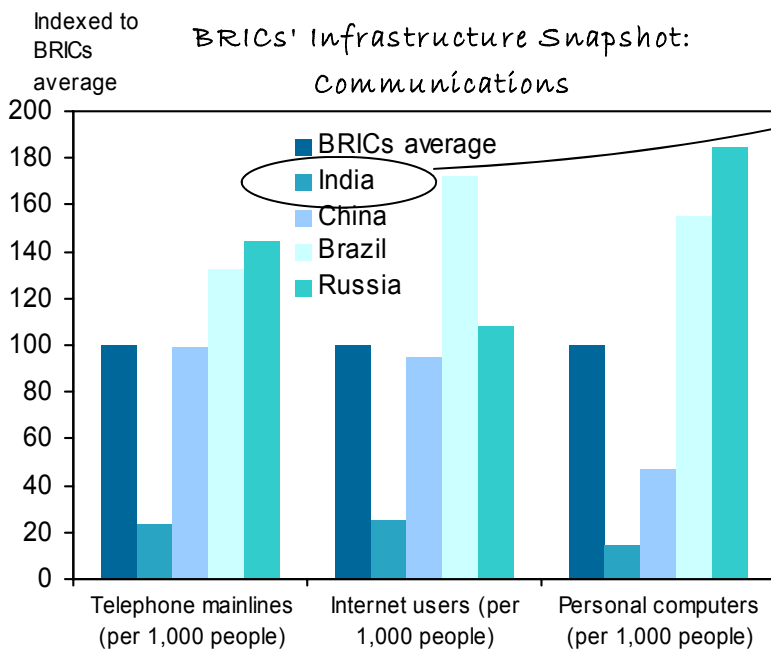
Russia performs relatively well on literacy but now has a relatively low level of health expenditure—perhaps this (along with other effects of post-Soviet adjustment) explain the low levels of happiness?

Infrastructure—India Lags



Indian transport and energy infrastructure lags the other BRICs...

Indian transport infrastructure remains below the BRICs average and energy infrastructure is well below average (even ignoring energy-rich Russia).



...as does Indian ICT infrastructure.

India's lack of infrastructure is even more glaring in the telecoms and computing sectors, notwithstanding the focus on India's call centres and software development.

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