China – Increasing intangible investment not yielding commensurate increases in output

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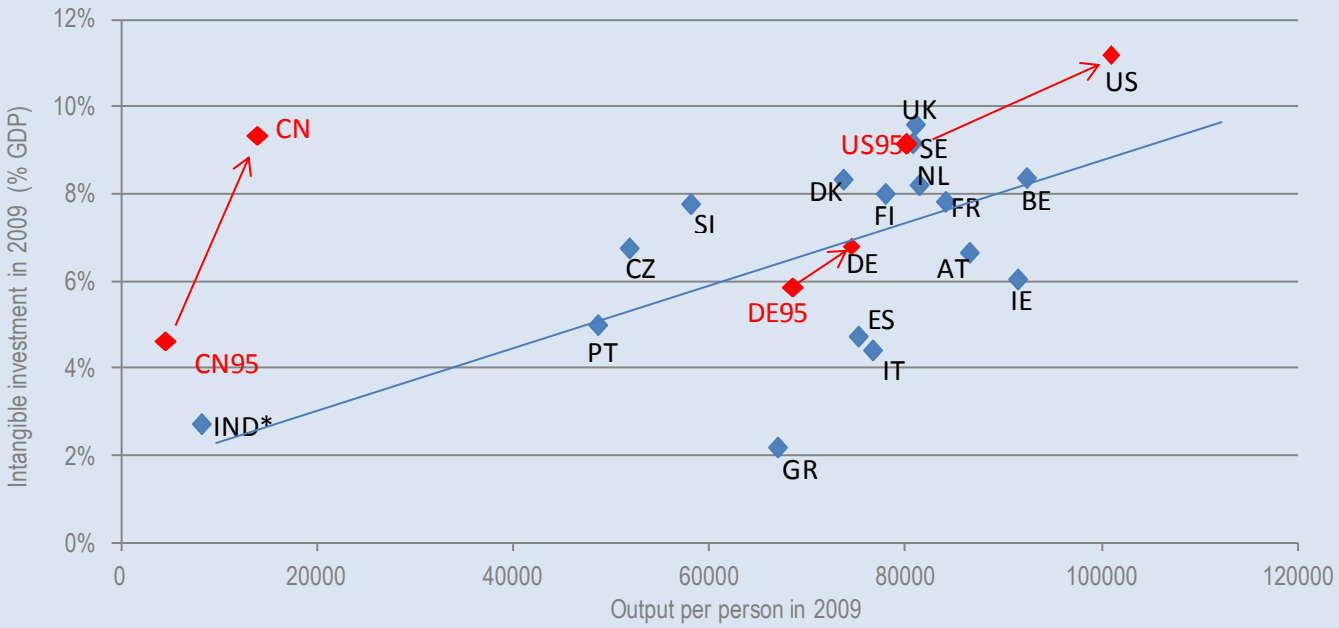

Sources: The Conference Board Total Economy Database, www.conference-board.org/data/economydatabase/, www.conference-board.org/data/intangibles/, Corrado, Carol et al (2012), "Intangible Capital and Growth in Advanced Economies: Measurement Methods and Comparative Results," at www.intan-invest.net
Note: output per person is in $ and PPP-converted

- The chart above shows the relationship between output per person (or GDP per capita) and intangible investment[1] for the countries shown in 2009. The blue line represents the overall trend for the countries in 2009, excluding China. 1995 versus 2009 levels are shown in red for China, the United States and Germany, and show that the latter two countries have largely moved diagonally along the trend line over the fifteen year time span, while China has moved mostly upward. In other words, the US and Germany have generated increasing output per capita from their intangible investment, whereas China has not.
- As our previous charts of the week on intangible investment have highlighted, about half of China's spending on intangible assets has been driven by policy – mostly software investment by State Owned Enterprises, government enterprises and centrally funded R&D programs –and by architectural and engineering design-related investments, part and parcel of the booming fixed asset investment in real estate and infrastructure development over the last 10+ years[2]. China's largely upward trajectory from 1995 to 2009 highlights two noteworthy points. First, policy induced intangible investment may be causing a misallocation of resources (whereby the investment is not yielding commensurate returns in economic output). And secondly, Chinese companies are not yet exhibiting the technological innovation needed to capture value in global value chains through intangibles like branding, product development, and IP.
- R&D spending is part of the problem. China invests mostly in "Experimental Development" – primarily incremental feature/function improvement. China invested nearly 1.27 percent of GDP in this area in 2008. Meanwhile, its investment in applied research and basic research stood at only 0.19 percent and 0.07 percent of GDP, respectively, for the same year – both much lower than in OECD countries[3].
- Another plausible explanation for China's unusual upward trajectory is that a significant portion of State allocated R&D funding, and the touted large-scale R&D investment by many State Owned Enterprises, "leaks" into other uses, or is done primarily for Government Relations purposes, and not for market-driven reasons. Such spending on intangibles would obviously not yield a commensurate return in terms of output per capita.
- China's stated intention to become one of the world's leading "innovative economies" will necessarily remain unfulfilled if the country is unable to turn its investment in intangible assets into either genuine technological leadership or some other form of competitive advantage.

[1] Intangible investment refers mostly to capital expenditure beyond physical business capex (e.g. plants, machinery, etc.) in things like research, product design and marketing, software-enabled organizational capabilities, and human capital development. For a definition of intangible investment, see the China Center Chart of the Week No. 64.
[2] Software and architectural and engineering designs amounted to over half of total intangible investment in 2010. Please see China Center Chart of the Week No. 64 for more information about the drivers of investment in those assets.
[3] Schaaper (2009)). Measuring China's innovation system: national specificities and international comparisons. OECD STI working paper 2009/1, Statistics Analysis of Science, Technology and Industry. Available at http://www.oecd.org/dataoecd/15/55/42003188.pdf

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