China's intangible investment: high in absolute amount, small relative to conventional capex

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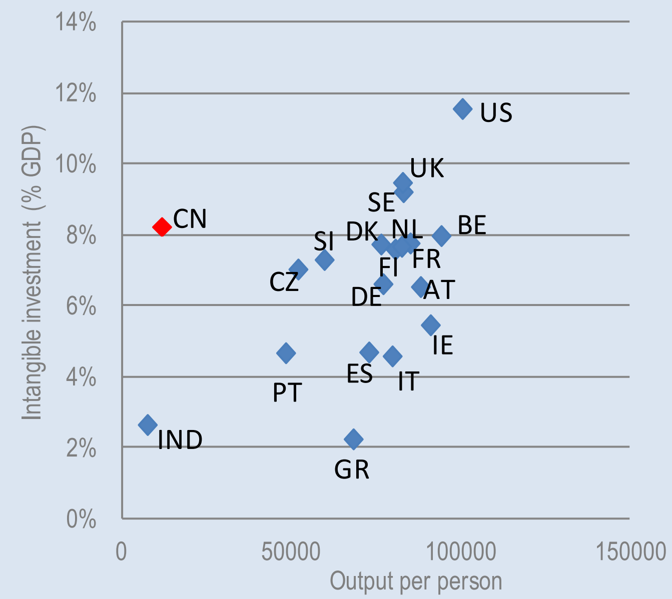
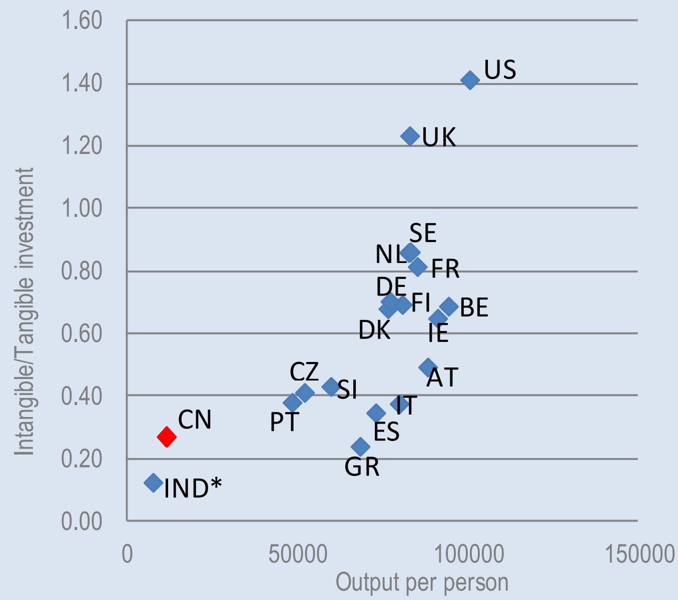


Note: output per person is in $ and PPP-converted



Sources: The Conference Board Total Economy Database, https://www.conference-board.org/data/economydatabase/, https://www.conference-board.org/data/intangibles/

- The chart on the left shows the relationship between a country's intangible investment[1] and its per capita GDP (output per person), using averaged data from 2005-2009.[2] The distribution of countries in the chart indicates that intangible investment is positively correlated to output per person and that more developed countries tend to invest more on intangible assets. The chart on the right shows a similar relationship between output per person and the ratio of intangible to tangible investment (i.e. "capex"). This chart demonstrates a similar correlation, indicating that more developed countries spend more on intangible investment relative to tangible investment. In 2010, the U.S., for example, spent about 141 dollars on intangible investment for every 100 dollars spent on tangible investment[3].

- China is a significant outlier as regards intangible investment. China has spent a much larger amount on intangible investment, as a percentage of GDP, than other countries at similar, or higher, levels of development.[4] The left chart shows that China invested more than most European countries (as a percent of GDP) on intangible assets. It also spent much more than India, but still far less than some of the wealthiest countries. However, the chart on the right shows that despite its large absolute investment in intangibles, China's overall spending pattern still looks like that of a developing country. Here, China is relatively in line with comparables, suggesting that while its overall intangible investment may be high for its level of development, China still relies mostly on conventional fixed asset investment.

- We observe that the four European countries at the bottom of the first chart (Spain, Italy, Portugal and Greece) invested a relatively low share of GDP on intangible assets over the period shown. These countries are four of the most beleaguered economies in the current European debt crisis and much of their inability to pay down their overwhelming debt loads has arguably emanated from an overall lack of competitiveness and an incapacity to grow their way out of the debt cycle. This observation supports the notion that intangible assets are closely related to sustainable economic competitiveness. Adding more support to that notion, on average, India only invested 2.7 percent of GDP on intangible assets from 2004 to 2008, roughly one third that of China over the same period. This may in part be due to the dual nature of the Indian economy: a massive informal sector of unsophisticated, grass-roots SMEs; and a small, but technologically very advanced, formal sector boasting some of the world's most advanced firms.

- Monitoring the growth and nature of China's intangible investment provides a unique gauge of the country's progress in shifting toward a higher value-added, more knowledge intensive economy.

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[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 previous China Center Chart of the Week #64, "Intangible Investment in China," August 24, 2012, https://www.conference-board.org/chinacenter/index.cfm?id=7885

[2] 2004-2008 data is used for India

[3] Data for tangible investment is from www.intan-invest.net for the U.S. and European Countries (market sector), and national statistics for China and India (market and public sector). Tangible investment excludes investment in residential structures.

[4] Intangible investment (II) here was the investment of non-farm business sector of the U.S., of the market sector of European countries, and was of the market sector and the public sector of China and India. We have insufficient information to separate II of the public sector from that of the market sector for the other years for China and for all years in India. The public sector (health, education and public administration) accounts for a negligible share of II in China in 2006.

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