



Pushing the boundaries: innovation or imitation.

How do Asia's emerging giants measure on the innovation scale and can they shake off their reputation for imitation rather than innovation?

If you measure innovation by the number of patents granted in the US, you'd get the sense that India and China are not just lagging in terms of innovation – they're barely off the starting blocks. China only has some 1,700 patents granted annually compared with some 80,000 in the US. Indeed, around half of the patents granted to China were submitted by multinationals anyway.

But that doesn't reflect the whole picture as INSEAD professors [Hellmut Schütte](#) and Anil Gupta have been telling INSEAD Knowledge.

Think back to Japan in its early phase of development after the Second World War and imitation rather than innovation springs to mind. But as the country progressed, companies looked to introduce technological innovation to give their products an edge.

Gupta, a professor of strategy, says imitation in India and China is “clearly a huge part of the story,” a first step towards becoming innovative as “one has to know the basics and be able to digest or absorb ideas and technology from other countries.”

China and India are still developing economies and relatively poor, despite their rapid growth. But as they progress, they “are pushing quite aggressively now in terms of creating their own innovations and

not just relying on imitation,” says Gupta.

Schütte, an emeritus professor of international management, argues that the notion of Chinese companies imitating rather than innovating has become “something of an outdated view,” even though much of their success is currently based on ‘low-cost’ products and services. [See related [article](#) : Cost innovation and the dragons]

“I think we have to see this in a very dynamic perspective that many companies in China are going away from that (low-cost production), upgrading their technologies, partly by benefiting from the fact that foreign firms are (operating) in their countries. And they're upgrading their technologies quite significantly.”

He cites the example of the largest supercomputer in the world being in China and that of the 100 largest supercomputers in the world, 25 are in China.

Also, China is trying to develop technologically more advanced industries, such as aviation, high-speed rail and nuclear power. “That is very different from talking about T-shirts, bicycles and cheap cars.”

Both Schütte and Gupta point to innovative products

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such as a redesigned ultrasound machine produced for smaller hospitals in rural areas which costs about 80 per cent less than the standard product, with about 50 per cent of the performance. That product, however, came from a multinational – GE.

Then there's the Indian car project, the Tata Nano, which sells for around \$3,000, even though European suppliers are providing many of the parts.

"It's basic, yes, but when you create such basic products that are ultra low cost, you cannot do that by just dumbing it down," says Gupta. "You cannot do that by just de-featuring and localising the cost structure. All of those are necessary. But what's needed is also to push the boundaries of technology and what I would call 'intelligent design.'"

China is investing heavily in clean tech, whether wind or solar power, and is also focusing on biotech. India appears to be ahead of China in pharmaceuticals. "India started out as a world leader along with Israel in terms of generics, which wasn't really about innovation," says Gupta. "It was about process efficiency and certainly process innovation. But Indian pharmaceutical companies are rapidly moving ahead in terms of innovative products or innovative drug R&D."

Indian IT companies have also posted rapid growth, based mainly on the proportion that if you want to double your revenue, you need to double your workforce. However, this 'people game' is reaching its limits as companies such as Tata [see related [article](#): Outsourcing: India's Tata eyes China market as part of drive to go global], Infosys and Wipro are starting to realise that now that they have workforces of 140,000 people, "if they continue to grow at 15-20 per cent a year, they're going to have half a million before you blink an eye. And they're beginning to realise they actually need to start thinking about technology rather than people."

The two Asian giants each have their own strengths. "If you look at fundamental science and technology, I would say China is ahead of India because it has an economy that's four times as large as India's," says Gupta. "China is putting in a lot more money into science, technology and innovation." But when it comes to 'frugal innovation' – ultra low-cost products and services for the very poor – India is leading.

"I think what we're witnessing is that the product advancements coming out of China and India right now are largely by multinationals." Citing GE, which carries out R&D in both countries, he says its healthcare arm developed a low cost ECG machine in India which was taken to China, upgraded and then brought back to the US. GE China, on the other hand, developed the low-cost ultrasound machine

mentioned earlier.

Along with GE, many other Western MNCs currently have R&D centres in one or both of the countries, Gupta says, and they're trying not to duplicate the work. Microsoft is focusing on China, despite India's strengths in IT and software; Google has a centre of excellence on cloud computing in India; and Cisco has invested heavily in a major base in India [see related [article](#): Globalising the brand: Looking beyond lower costs]. Although the MNCs are likely to face stiff competition from Indian and Chinese companies, for now the multinationals have the upper hand "because they know how to take a product and really globalise it," says Gupta.

"I think what we will probably begin to see is, in certain product categories over the next five years, companies from China and India will begin to compete head to head," says Gupta. "We are probably going to see that in the software sector and in the automotive sector. We are beginning to see that already in the pharma sector. And out of China, we will begin to see this in terms of transportation, fast trains, for example."

"So I think what we will see is that over the next five years, it will be in certain pockets but not across the board," says Gupta. "It will start in certain niches and then spread over time. So for a China or an India to be like a Japan or a Germany or a US in terms of competing across the board in science, technology and innovation, I would say we're talking about two decades."

Even though the MNCs have the edge now in terms of innovation, Schütte believes that, in order to survive and thrive in future, old multinationals will have to learn new tricks and speed up their decision-making processes to keep pace with the local competition in China. "The real challenge for foreign firms is not so much the top end of the market in many given industries, but the medium sector, which we call the 'good enough' sector."

These markets in China and India will be key, he says, citing the automobile industry in particular as this is where "future battles for world market share will be fought."

China's car market has become the largest in the world and could grow to be not just the biggest, but also almost as big as the car market in the rest of the world combined. But some of the companies, which now look promising, may not prove to be successful.

"It's not easy – it's tough. And we may have, to some extent also, to slim down in the West, when we face these competitors. Slim down in terms of the costs we carry, the comfortable life we have in terms of working hours, etc. That may not be sustainable.

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That will be a challenge as well.”

“When you come from a Western background and you’re focused on the top segment of the market, let’s say, the Mercedes Benz of this world, you find it difficult to get into the ‘good enough’ market, which is very volatile, fast moving, where trial and error by Chinese competitors is more and more practised. [See related [article](#): Is it too late to get into the China market?]. And when you come with a very analytical mindset and are risk averse deep down in attitude, expecting high margins but relatively low volume, and being very slow in what you’re doing, then you have a true challenge as a company in terms of strategies, and strategy development and implementation.”

The bottom line: the MNCs have no choice but to compete in these huge emerging markets. “There’s probably a much more radical approach to what strategy is needed,” Schütte says. Western companies will have to act as if they are in a “very different world to that of their home countries where cost cutting and outsourcing are still the priority.”

“The multinational of the future is an organisation which is able to combine very different strategies in different parts of the world and pull them together ... But an organisation which pulls them together may not necessarily be as headquarter-centred as it was in the past.”

However, it may be too early to start writing off the MNCs. “We shouldn’t underestimate 100 years of experience,” Schütte cautions. He adds that in any case it will not be a ‘zero sum game’ with winners on one side and losers on the other. “We can all gain and in recent years, very clearly, the West has profited tremendously from the emergence of China and India.”

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