



## WHY CHINA IS ON THE WAY TO BEING A GLOBAL INNOVATOR

### 4 PATTERNS WORTH NOTING

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As part of the transformation of the Chinese economy, attested by many elements of the recent news, China is fast transitioning from low cost manufacturing to a higher value innovation-led economy. Anticipating the next few years is fraught with difficulties. China is a huge and diverse country going through major transitions. After extensive field work and time spent in China for the new book “Created in China,” it is clear that China is on its way to become a major, global power for innovation. This is mainly due to private firms, essential engines of the wealth-creation process. These, however, operate in a unique environment, in which the public sector is extremely powerful.

It's also an innovation environment that's difficult to measure with metrics. Innovation is about quality of output and not quantity of input. It is therefore extremely difficult to describe and to anticipate. Several of the metrics commonly used are interesting indicators but not always the most reliable.

### **Metrics on China's innovation**

*Investments in R&D:* These are taken as a percentage of a country's GDP (Gross National product). In the case of China, the increase of this figure of merit is spectacular, from 0,5 % in 1995 to 2% in 2014. The objective is to reach 2,5% in 2020, thus overtaking the average investments of the European Union.

Given the rapid growth of China's economy, numbers in absolute terms are even more impressive. In 2014, R&D investments in China are expected to total \$270 bio. Following recent trend, this number may overtake that of the USA as early as 2023.

*Patents output:* The top patent owners in China are the telecommunications companies, ZTE and Huawei, as well as the car-maker Chery. In any country, overall patent statistics is only a proxy indicator of innovation. In 2014, China granted 233,000 patents. The quality and the business potential of the inventions, however, are more important than the number of patents.

In the case of China, this indicator is questionable, as the government has given incentives to firms and academics for filing patents. Also, “utility patents,” valid for ten years as opposed to invention patents, which last 20 years, are of questionable value. As a result, it is a rough estimate that roughly two thirds of China's patents are close to being worthless.

On the other hand, the handling of patent litigation by the courts is steadily improving, so that non-Chinese firms can place increasing confidence in the process. Currently, well over half of the litigation cases take place between two Chinese firms.

*Non-technical innovations:* the metrics above concern technical innovations. Many important innovations have nothing to do with technology; one example is self service, which revolutionized retail stores in the 1950s. Indeed, most advances in the services sectors are not patentable. Thus, one firm may copy the service offered by a competitor.

In China, many innovations concern specific aspects of the business model. For example, the way Haier, guarantees one day appliance delivery by imposing this condition to the transporting sub-contractor. Mobile phone-maker Xiaomi hardly advertises and mainly sells on the internet. Product innovations are often the result of numerous, very small adaptations of existing products; these changes are not patented, but are the reason for the success of the offering in the Chinese market.

Yet these metrics, as used to assess the innovation level in China are not extremely relevant. Rather, one must examine larger patterns taking place.

### **Patterns for China becoming a global innovator**

As the landscape in China changes, it follows some noteworthy routes that promote innovation.

*Chinese society* is highly entrepreneurial, eager to make money and able to extract value very effectively. Innovations are seen in a totally market-oriented way and companies are ready to experiment and rapidly correct mistakes. Technical aspects constitute only a tool to be successful in the market place. Furthermore, the internet is of vast importance, with an estimated of 800 million users in 2016.

*Copying* a product, while improving many different elements of it and making it much better suited to the Chinese market, represents a legitimate way to operate. Innovating to reduce costs by copying and improving explains the success of many Chinese companies, such as Baidu (adaptation of Google), or Alibaba, initially inspired by eBay.

*China's government* is obsessed with providing a context favourable to innovation-led growth. Like Japan and Korea, innovation is perceived as a crucial ingredient of wealth-creation and economic development.

A set of non-tariff barriers and practices favour domestic firms under the cover of a policy of promoting "indigenous innovation." This is particularly the case for the renewable energy sector.

*Chinese firms* contribute a rapidly growing share of innovations that are private and entrepreneurial. They are very active in the ICT-information and communication technologies and electronic games. The weight of the SOE - State owned enterprises is decreasing, both as a factor of GDP and in the production of innovative offerings.

A small number of Chinese firms have ventured abroad. Huawei, Lenovo, Haier are notable examples. This number will grow, as in 2014, Chinese investments going abroad have equalled the flow of investments going into China for the first time. We are at the beginning of a rapid increase in the outflow of China's investments, especially towards Europe.

### **The way forward**

A strong entrepreneurial spirit, a relentless market-orientation, an agile and rapid implementation in a vibrant economy demanding outstanding quality to price ratios: these are the basic descriptors of Chinese society.

China is the ultimate internet country, by the sheer number of users, as well as by the intensity of its usage. Already the biggest market for on-line shopping, China is expected to soon lead in on-line financial services.

Combined to that is a strong government relentlessly committed to foster innovation-led growth.

Barring major mishaps, Chinese firms are expected to turn the country into one of the world's major sources for innovations, particularly in IT-enabled services. There is much to learn from the "Chinese way" of innovating. That China is becoming a major source of innovations is good for China and good for the world.

*Georges Haour is a Professor of Technology and Innovation Management at IMD business school. He is co-author with Max von Zedwitz of the new book - [Created in China: How China is Becoming a Global Innovator](#) (Bloomsbury, London, 2016)*

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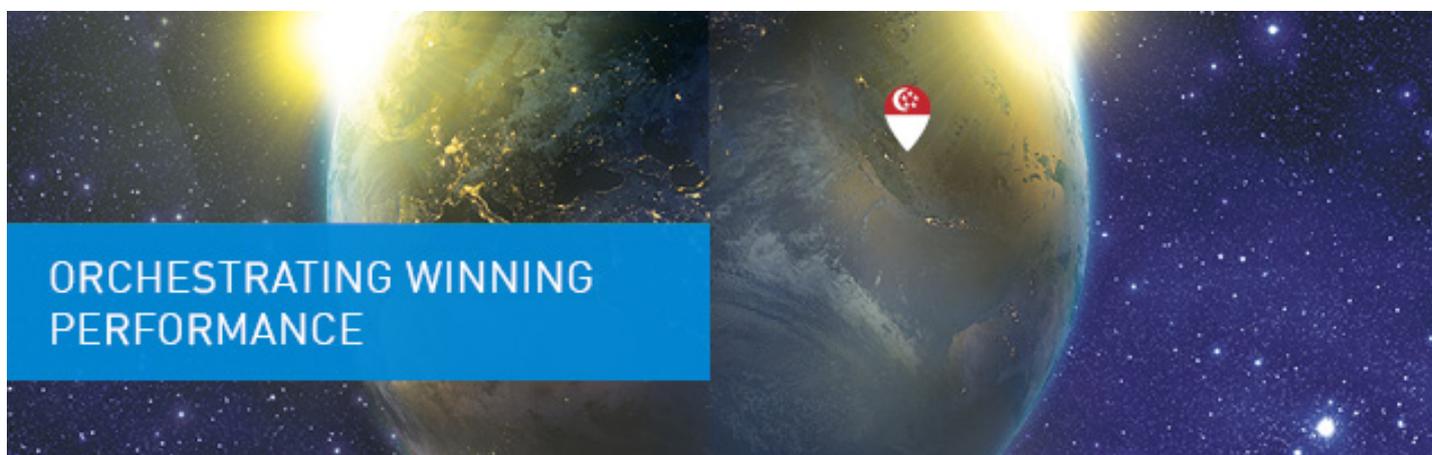


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