Bamboo innovation

**Beware of judging China’s innovation engine by the standards of Silicon Valley**

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CHINA’S continued economic progress depends on mastering the art of mould-breaking innovation. President Hu Jintao intones that the “capacity for independent innovation” is the “core of our national development strategy”. Sceptics agree with his premise, but scoff that innovation and autocracy do not mix. So long as China remains a dictatorship, it will be trapped in a world of mass production and routine assembly, they say. One scholar, Cong Cao, argues that the country faces a future of “premature senility”.

China has invested heavily in homegrown innovation. The government has not only persuaded Microsoft and Google to establish research centres in China. It has also set up science parks across the country, in the hope of creating a Chinese Silicon Valley. Beijing’s Zhongguancun Science Park alone is home to thousands of high-tech enterprises. Chinese universities are joining the charge. Peking University, for example, has established “innovation and entrepreneurship” programmes.

So far, however, China has little to show for all this investment in mould-breaking. The most successful Chinese companies, such as Lenovo and Baidu, produce low-cost versions of Western products or adapt Western innovations to the Chinese market. Chinese venture capitalists invest in established industries, such as hotels and agriculture, or in copycat technologies. Multinational managers grumble privately that China’s “research and development” projects involve far more development than research. And the government’s vast investment in innovation is more than offset by its failures. Squabbles over standards discourage companies from placing long-term bets. Lax intellectual-property rights penalise cutting-edge research. The power of the state prompts firms to spend more time grovelling to politicians than grappling with original thoughts.

Yet China’s lack of originality matters less than you may think, believe Dan Breznitz and Michael Murphree of the Georgia Institute of Technology. In a new book, “Run of the Red Queen”, they argue that it is wrong to equate innovation solely with the invention of breakthrough products. In an emerging economy, other forms of innovation can yield bigger dividends. One is “process innovation”: the relentless improvement of factories and distribution systems. Another is “product innovation”: the adaptation of existing goods to China’s unique requirements.

This is particularly true in an era of globalisation. Some claims about the borderless world may be exaggerated, but there is no doubt that firms increasingly disperse production to wherever it can be done most efficiently. If China is the world’s most efficient workshop, perhaps it does not also need to be the world’s most cutting-edge laboratory.

But wait, says nearly everyone, won’t cheaper hands in Indonesia and Vietnam eventually take China’s jobs? Not necessarily. Messrs Breznitz and Murphree argue that Chinese companies have become world leaders in everything from mass production to logistics. Huawei, which makes telecoms gear, is a master of recombining existing technologies and bringing them to market at lightning speed. Foxconn, headquartered in Taiwan, produces iPads and other gizmos efficiently in China because of the country’s huge labour pool (it employs 270,000 people at its factory complex in Shenzhen) and its mastery of flexible production. China’s universities churn out legions of science and technology graduates who specialise in subjects that have almost been forgotten in the West, such as mining or heavy engineering. The Pearl River delta is packed with small firms that dominate tiny market niches.

They also point out that China’s sheer size will protect it from the commodity trap. No one can outdo Chinese companies when it comes to adapting advanced technologies to the purses and preferences of 1.3 billion Chinese consumers. Lenovo has mastered the art of selling cheap computers to people with not many yuan to spare. Baidu has learned how to provide the internet with Chinese characteristics. Its web page looks remarkably like Google’s, but Baidu has outdone Google when it comes to dealing with the country’s peculiarities. In other words, China is ideally placed to be the world’s middleman: close enough to the frontier of innovation to keep up with the latest developments, and skilled at adapting new ideas for the mass market.

**The Middle Kingdom as middleman**

Yet for all their bullishness, Messrs Breznitz and Murphree detect two possible snags. The first is the Chinese regime’s obsession with “independent innovation”. This is leading it to pour resources into dubious innovation champions while at the same time strewing obstacles in the path of the vast majority of private-sector companies. The second is the difficulties of being a middleman. Middlemen bear huge risks. If a high-end innovator stumbles, China may find that its huge factories and lean distribution channels have nothing to make or ship. Also, middlemen can be cut out. When multinationals tire of having their ideas stolen in China, many build their R&D facilities elsewhere.

The biggest threat to the Chinese model comes from a country that, strangely, is barely mentioned in this book. India combines many of China’s advantages, such as its size and cheap labour, with a democratic political system and an Anglo-Saxon legal code. India has outperformed China when it comes to applying mass-production techniques to IT services. It is also proving more imaginative than China when it comes to radically redesigning products for the mass market. Nonetheless, “Run of the Red Queen” is an important book. It should make both Chinese bureaucrats and Western pundits think twice before pronouncing on China’s “innovation deficit”.