



Workers preparing to lift a giant blade, part of a wind turbine, in Tianjin earlier this month. China has been aggressively pursuing green technology opportunities. PHOTO: ASSOCIATED PRESS

ASK: NUS ECONOMISTS

Green may be colour of China's economic future



BY ALBERT HU

■ *China is now the world's second-largest economy, but it is still a developing economy. How will it become an advanced developed country?*

DEVELOPING economies often find themselves stuck in the so-called "middle-income trap": After an initial period of rapid development, economic growth stalls.

China has become a middle-income country by the World Bank's definition, with its coastal regions overtaking upper-middle income countries such as Argentina, Brazil and Malaysia.

Will it now fall prey to the middle-income trap?

For less developed economies, one advantage of being behind is that you do not have to reinvent the wheel. Imitating and adapting existing technologies enables rapid economic growth.

But the returns from catching up tend

to diminish as the gap is narrowed. To close the final gap, you need to have your own innovations. Those that fail to make this leap fall into the middle-income trap.

There are three gaps in China's economic development: between China's coast and the world's advanced economies, between China's interior and the coast, and between China's urban centres and rural areas.

Narrowing the gap between its coastal regions and the developed economies has provided China with the most important source of economic growth in the last three decades.

China's strategy in closing that gap has been similar to that of Singapore and others: engage with the advanced economies through foreign direct investment and trade, and build good infrastructure and market-friendly institutions.

But with rising labour costs and increasingly congested infrastructure, coastal China's catch-up is bound to slow down. With the good infrastructure that they have, the interior provinces are taking over some of the coast's manufacturing. The narrowing of the gap between the interior and the coast gives China another engine of growth.

Nevertheless, the export-driven model of economic development has largely run its course for China as a whole.

The Chinese economy is now too big for its growth to be sustained by external demand. China's potentially huge domestic demand is being unlocked by the process of urbanisation.

The proportion of China's population living in the cities, currently at below 50 per cent, is set to increase by one percentage point a year. That translates into 13 million new urban residents a year – and all the urban amenities they will demand.

But while urbanisation holds promise as a robust engine of growth, it also raises big concern for the sustainability of China's economic development.

Also, it leaves unsettled the ultimate solution to the middle-income trap: Will China become an innovator?

Using the number of patents granted by the United States Patent and Trademark Office as an indicator of a country's innovative capability, China was ranked ninth in the world last year, with 1,655 patents, behind France (3,140) but ahead of Israel (1,404). China was ranked 18th with 402 patents in 2005 and 26th with 119 patents in 2000.

It is hard to conclude from these numbers that the creative juices are set to overflow in China. Technological innovation depends on the availability of creative individuals and an environment that protects the incentives to innovate and the means of securing the returns from innovation.

Some of these elements are noticeably missing in China. Intellectual property rights protection is still relatively weak. Not all researchers have the right incentive structure. Nor are innovation resources efficiently allocated.

But the Chinese have reasons to be optimistic. China has a huge pool of raw talent. The return of overseas Chinese students has been accelerating.

History also shows that the emergence of new technology can give countries that are behind an opportunity to catch up or even overtake leading countries. The first oil crisis, for example, created a niche market for Japanese-produced fuel-efficient, durable cars and energy-saving home appliances.

The information and communication technology revolution helped to fuel the explosive growth of Korean and Taiwanese innovations in semiconductor-related industries.

We may be on the cusp of another technology paradigm shift – the green technology revolution.

China has been aggressively pursuing opportunities in this area, from electric cars to wind turbines. This may well be a window of opportunity for China to become an innovator.

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