Last word

Knowledge economy that works

MANUFACTURING IS AN ESSENTIAL STEP IN CAPTURING VALUE FROM IDEAS, SAYS ACADEMIC

By **CECILY LIU**
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Though the Chinese government has expressed its eagerness to transform China from being the world's manufacturing hub to a knowledge economy, it needs to tread carefully, a Cambridge University professor says.

Sir Mike Gregory, who heads the Institute for Manufacturing, at the university, says it is wrong to conceptualize the "knowledge economy" as a world without manufacturing, because manufacturing is an essential step in capturing value from ideas.

"I worry about the term knowledge economy because I think manufacturing requires a lot of knowledge. And I often say, 'I never see hands work if they're not connected to a brain'," Gregory says.

Although China is now manufacturing heavily for international brands and capturing a relatively small portion of revenue, the manufacturing capability it builds up by doing so will enable indigenous brands to be truly great in the future, he says.

So China should correctly understand and use its unique advantages in manufacturing capabilities for now, and build up design and technology innovation in the meantime, he says.

The idea of the knowledge economy dates back to 1966 when the Austrian-born American management consultant Peter Drucker described in his book *The Effective Executive* the difference between manual workers, who work with their hands to produce goods and services, and knowledge workers, who work with their heads to produce more abstract things like ideas.

But Gregory says such a distinction is a simple perception that needs to be challenged because ideas themselves will not capture value without manufacturing. He says countries such as the UK are now rethinking the differences between manufacturing and ideas, partly triggered by the financial crisis.

"The financial crisis has forced people to think, 'What went wrong there?' If we continue on these lines and commit the whole economy to just the service part, then you could be very vulnerable," he says.

As the country that once led the world's Industrial Revolution, Britain today has lost its manufacturing prowess. But Gregory points out that manufacturing in the broader sense still accounts for 60-70 percent of the country's exports.

"Five years ago, people were saying, 'We're post-industrial, we're in the knowledge economy,' but now they are realizing manufacturing is still the way to capture value from your ideas, particularly in countries with a strong science base."

Following an early career in industry, Gregory became a founding member of a team that established an undergraduate program that treated manufacturing in a broader way by integrating it with aspects like marketing, design, services and management.

The new approach led to the establishment of the Institute for Manufacturing in 1998, which has grown over the years to now include about 250 employees and research students and a further 100 undergraduate and master's students.

Understanding manufacturing in a multidisciplinary way, Gregory is ready to tackle many myths about manufacturing. One example is the commonly held perception that the assembling process of Apple iPhones is low-skills based and easily replaceable.

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Mike Gregory says China should make good use of its advantages in manufacturing and build up design and technology innovation.

BIO

MIKE GREGORY

Head of the Institute for Manufacturing at Cambridge University, UK

Age: 66

Place of birth: Bath, UK

Education:

- Heaton Grammar School, Newcastle;
- Newport High School, Newport;
- University of Southampton
- University of Cambridge

Career:

- Manufacturing engineer and manager in industry
- Industrial tutor
- Professor of manufacturing,
- Founding director of Institute for Manufacturing

Favorite author: Jane Austen

Favorite beverage: Greene King IPA beer

"We talk about iPhones as only 'put together' in China, but actually that's a very powerful capability to have. As a business, if you build capabilities that nobody has got, it becomes your unique advantage and you charge more for it."

The process of allowing the manufacturer to capture more value from the end price of a product occurs because often the brand owner loses the capacity to make the product itself after outsourcing the production for too long, he says.

It starts with the brand owner wanting to outsource to save costs and have a bigger margin. The manufacturer then learns how to make the products, and demands better pay when the brand owner comes back to ask for the next model, which only the manufacturer knows how to make.

"The manufacturer may say, 'The next model costs 10 pounds', and the brand owner says, 'Last time it cost 5 pounds', and the manufacturer says, 'it's now 10 because we know you're getting 15 pounds'," Gregory says.

He expects China to capture more value from manufacturing the way that Japan and South Korea have been able to, only its journey will be quicker. An example of this transition is the South Korean electronics brand Samsung.

"I went to the Samsung factory in South Korea 25 years ago. It only said 'Samsung' on the outside, and all the manufacturing inside the factory was for American brands. Now all the American brands have disappeared and people only know Samsung," he says.

Having acted as the world's manufacturing factory with an export-led growth for the past 30 years, China has already built up an impressive manufacturing capability, and some indigenous brands like the telecommunications firm Huawei and white goods maker Haier are now gaining international recognition.

Gregory says he has confidence in Chinese brands. He says Chinese manufacturing capability in electronics, cars and solar panels are already high, and some Chinese factories are now leading industry standards.

One reason that the Chinese government placed heavy emphasis on the need to move up the value chain in its 12th Five-Year Plan (2011-15) is that the country's labor costs are rising, so the old model of cheap export-driven economic growth is no longer sustainable.

In fact, some foreign companies that once considered China a good outsourcing destination have now moved manufacturing back to their home countries or to other emerging countries like Vietnam and India for even cheaper manufacturing.

British companies like the computer manufacturer Raspberry Pi moved production from China back to Wales in 2012 and the food manufacturer Symingtons moved manufacturing from China to Leeds last year.

This re-shoring process has generated considerable media attention, but Gregory says there is no data demonstrating it to be a widespread trend.

Companies that tend to move manufacturing back to Western markets may be motivated by the responsiveness to consumer demand such arrangements can allow for, he says.

"If the market is in the UK, and there's demand for change, people can just ring up the factory the next day, whereas if you've got two months of production coming from China on a ship, then you've got less flexibility," he says.

For this reason, brands that greatly target the Chinese consumer market will probably keep their production in China, especially for heavy products where transport costs are high.

Meanwhile, many Chinese companies are going global by acquiring Western brands, and Gregory believes this is logical and sensible, as Chinese production capacity can develop behind the brands acquired and continue to make these brands great.

Gregory says often Western brands become uncompetitive because they lose the scale of production as sales volume is small. But if the Chinese partner cultivates a new customer base for the brand in China's domestic market, then the scale of production can grow again and the Western brands acquired will flourish.

The Western brands will manage to retain their value because often customers do not realize there has been a change of ownership for the brand. So the brand has not changed in their minds, he says.

He gives an example with Chinese carmaker SAIC's purchase of MG Motor, a British brand that dates back to the 1920s but eventually went out of production after losing competitiveness.

"The MG brand is iconic. People may have forgotten it, but now if you can breathe life into it, then it is a good buy."

At the same time, he says Chinese buyers should be able to distinguish between good and bad acquisition targets by analyzing how the brands have failed initially.

"If the company failed because of poor quality, then you're buying a damaged brand. But if you're buying a brand where the owner cannot make sufficient margins, causing it to fail, then the brand may still be great," he says.

Gregory is optimistic about the process of Chinese companies internationalizing, whether through organic growth or acquisition.

He believes success is just a matter of time, referring to the fact that Apple Inc started business only 38 years ago, but China's reform and opening-up has only been in place for about 30 years and many Chinese brands are still young.

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