Innovation key to competitiveness

SUSTAINING GROWTH: Vital for nation to have nurturing, unique ecosystem

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We cannot deny that natural resource endowments help in promoting a nation's competitiveness, more so, when they are exploited efficiently. Neither can we deny that favourable macroeconomic indicators, such as a depreciated currency, are instrumental in a nation's competitiveness.

In his book, The Competitive Advantage of Nations, Michael Porter, the world-renowned Harvard University professor, argues that innovation and productivity growth are the true sources of competitive advantage. Industries' relentless pursuit of innovation is the only way to enhance national productivity and, consequently, wages for their workers. Why is there a need for continuous innovation? Once an innovative product is out in the market, copycats soon surface to erode that advantage. Hence, it is through constant innovation that industries maintain their lead over their competitors.

For continuous innovation to take place, Porter argues that there must exist an innovation ecosystem. Four components constitute an ecosystem that nurtures continuous innovation. The elements of one country's ecosystem must be differentiated from that of another to constitute a competitive advantage.

FIRST, a nation must have a unique set of advanced factor conditions. Infrastructure is one such condition. Recently, Lim Khee Shyan, president of the Malaysian Rubber Board Manufacturers’ Association, highlighted the central importance of infrastructure in national competitiveness. He considered that with adequate infrastructure support, Malaysia could capture 65 per cent of the global glove market by 2020.

Specialised research institutions that serve the needs of particular industries constitute another advanced factor condition in national competitiveness. In Germany, for example, 20,000 employees in 80 applied science research institutions actively develop new technologies for the industry and public sector. Seventeen of these institutions undertake research and development in machinery and equipment manufacturing. Contrast this big number with the situation of only one such institution in Malaysia to realise why Germany hogs the limelight when it comes to national competitiveness.

Skilled manpower is another factor that affords a competitive advantage. Switzerland owes its competitiveness to, among others, its world-class education system. It ranks first for the quality of its education system. That system produces the requisite talent for the innovation that Switzerland is famous for, be it in pharmaceuticals or watch-making. Like Germany, Switzerland possesses a dual vocational and education training system, in which apprenticeship is promoted and valued.

SECOND, an innovation ecosystem can only thrive if there is sophisticated demand by the public for better-quality products. Such a demand will pile pressure on local companies to constantly innovate. Companies also gain a competitive advantage when they respond quickly to a home demand that offers key insights into emerging needs in the global marketplace.

Such local demand may even set trends for the world to follow. Such was the case for the fast-food and blue-jeans industries in the United States. Often, such trends are a consequence of the value system of a country. For example, Denmark’s care for the environment prompted it to develop water-pollution control and renewable energy systems.

THIRD is the existence of related and supporting industries. Innovation is accelerated when industries, including their suppliers, cluster in a particular geographic region. A classic instance is Silicon Valley in California. The close proximity of suppliers ensures cheaper logistics, and a speedier exchange of ideas and information. The latter is a key ingredient in sparking innovation; and,

FOURTH is the intensity of rivalry in an industry. Such competition causes industry players to find ways to push costs down and improve product quality. Monopolies, duopolies or even oligopolies rarely innovate. They have no reason to do.

Therefore, to foster national competitiveness, the government and industry should promote domestic rivalry among industry participants. Nowhere is this rivalry as intense as it is in Japan, where the number of competitors in any industry is legion. Take the case of machine tools. There are more than 100 Japanese producers of machine tools. There are close to 80 automobile manufacturers in the United Kingdom. The US and India can each boast only half of this number. In contrast, China has only nine automobile makers.

HOW CAN MALAYSIA STRENGTHEN ITS INNOVATION ECOSYSTEM?

FIRST, roughly 80 per cent of our workforce has had only secondary-level education. That level of education does not inspire confidence in our ability to match much less, exceed — the innovative levels of advanced countries. Our society does not value vocational education as much as those in Switzerland and Germany do. Hence, wages lag behind those with tertiary education. That does little to attract talent to vocational education. And, the vicious cycle repeats.

Our education system appears to not produce the right skills for the industry. We are reliant on unskilled migrant labour, which prevents industrial upgrading. Our youngsters appear to prefer the arts over the science and technology education stream.

Conceivably, our development focus has always been on human capital development. That focus must be trained on equipping our youngsters with the skills required by the economy. The public and private sectors must collaborate even more closely to ensure a better fit between the supply and demand for skills.

SECOND, our growth corridors appear to be delineated, so that growth across the nation is balanced. However, these corridors require a realignment, so they would nurture industrial clusters in the growth swaths. The government has a role to play in the development of these evolving clusters.

THIRD, government regulation should promote greater competition within industries, rather than protect them, unless national interest dictates so; and,

FOURTH, a tighter human resource and immigration policy, and tighter controls to prevent wage abuses should compel industries to move up the value chain. Automation is one avenue in which to tackle the shortage of labour and increase productivity.

Innovation is the key source of long-term growth. It is vital for Malaysia to create an innovation ecosystem that has the right talent, ever-demanding consumers and intense domestic rivalry among competitors, while developing industrial clusters as they develop in certain geographic areas. Improving education and vocational training is also a prerequisite for sustained growth and competitiveness.

If we can develop our innovation ecosystem and create a scientific tradition, we can, then, become an innovation powerhouse to propel Malaysia to greater heights of competitiveness.

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