

Capitalise on global innovations



innovation

Professor Seeram Ramakrishna, Chair of Circular Economy, National University of Singapore and Professor V.V. Krishna, Asian Research Institute, National University of Singapore

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The need for sustained economic growth and market competition is driving China to match the United States' spending on innovation.

Together they invest about 40 per cent of the world's expenditure on scientific research and innovation.

Behind these two big spenders, Japan, South Korea, Germany, the United Kingdom, France and India are strategically investing in specific sectors such as artificial intelligence, big data, robotics, smart manufacturing, 3D printing and wearables.

Finance Minister Heng Swee Keat, who chairs the National Research Foundation, recently announced that the future of food, medicine and digital technology will form the backbone of long-term research plans to keep Singapore competitive. With annual spending of over \$3 billion, Singapore is among the most research and innovation-intensive countries in the world.

Growing investments in scientific research and education has triggered the growth of a number of world-class universities in Asia. The world is keenly noticing how Asia is rapidly embracing and adapting high technology.

As late as the 19th century, India and China accounted for 31 per cent of the world trade. However, following disruptions caused by colonialism and Western dominance in science and technology innovations, these two countries were pushed back. Asia has once again become resurgent since the turn of the 21st century.

It now accounts for about 50 per cent of the global research output and outpaces Western Europe and the US in scientific human capital.

Leading universities in Asia are not only catching up with the world-class universities in the UK and the US, but they have also become the frontiers of innovation and seed beds of entrepreneurial start-ups.

A corollary question is what makes Asians innovative? External factors are obvious and similar to those observed elsewhere in the world. These include necessity and a conducive ecosystem in terms of investment, supporting regulations, laws and infrastructure, governance, rewards and recognition.

Intrinsic factors include education, encouraging culture, family and friends' support, inspiration and motivation to change the status quo. These intrinsic factors are also found in other societies and civilisations. So, what is unique about Asian innovative minds?

For a deeper insight, one has to understand the mindset of Asians.

Asians are very diverse, with different languages, lifestyles, systems, beliefs, cultures and historical backgrounds – which are continually changing. A Chinese mind is attuned to Confucius concepts of hierarchy, compliance and priority for the greater good of family and society. An Indian mind is attuned to abstract and critical thinking and spirit of harmony with nature and universe.

Authors are mindful that these elements do exist in both cultures as well as

in other cultures. Western scholars also point out that taking risks, freedom to think differently and pursuit of individual happiness foster innovation.

Overall, diversity of intrinsic factors as well as conducive external factors have been contributing to the innovativeness of Asian minds.

Given these enabling factors, it is necessary for Asian countries to safeguard and emulate the diversity they enjoy. Even more important is to enhance the value of Asian diversity via globalisation. This can be nurtured through interactions and mutual learning.

Tech innovations in the world and Singapore are redefining jobs and living styles. Singaporeans are naturally drawn to technology innovations for better living and future opportunities. To stay ahead of the curve, it is important to closely plug into the innovations and progress happening around the world.

It is no secret that most block-buster innovations are no more confined to in-house research and development that is vertically integrated in mega transnational corporations. To a large extent, these are now horizontally dispersed across the globe with important nodes in Asia.

More importantly, capitalising on global innovations and being economically successful also depend on transnational networks, integration with global value chains and clever use of cyberspace. Hence, a Singaporean's innovation space is beyond the country.

➔ tabla@sph.com.sg