

The Road Ahead for Developing Digitalisation in Asean

PRIOR to the pandemic, the technological progress in Asean and China focussed on traditional industries such as agriculture, manufacturing and services. However, the pandemic created space for new solutions and innovations. Besides the digital economy, the disrupted supply chain is undergoing a new era of adjustments to expedite post-pandemic recovery. The development of infrastructure for Industry 4.0 presented both opportunities and challenges. Consequently, Industry 4.0 also calls for a deeper integration of regional production networks.

Culture, geography and emerging industries all contributed to Asean and China's innovative approach to economic cooperation. The most recent synergy cooperation is based on the Master Plan on Asean Connectivity (MPAC) 2025 and the Belt and Road Initiative (BRI), with digitalisation skewed towards people-centric, high-standard, sustainable development. Post-pandemic, both developed and developing countries have focussed digitalisation on Sustainable Development Goals (SDG), followed by an increase in the use of automation-based technologies such as artificial intelligence (AI).

Developed countries' digitalisation efforts concentrate on fundamental and applied science, talent attraction and development. On another hand, developing countries are concentrating on public sector reform and infrastructure development. China has developed itself as the leader in digitalisation development, and further drove Asean to the next level.

The developed areas consisted of physical investment, human capital and technological endeavours such as 5G mobile networks and cloud services. Wireless 5G is anticipated to be a crucial component of the Internet of Things (IoT), playing a role in managing massive amounts of data. In addition, the economic digitalisation revolution is associated with a number of cutting-edge technologies, including AI, blockchain, data analytics and software-oriented technologies.

In addition, automation, robotics, IoT, cloud computing, user-facing devices, 3D printers and specialised machine-oriented hardware technologies will be widely adopted in the future.

The Asean Digital Master Plan 2025 highlights the most significant technological trends over the next decade. Some of the existing trends include the Internet, which will continue as a catalyst and will evolve to provide a wide range of cloud services. Virtual reality (VR) and augmented reality (AR) will remain niche technologies. Robotics has been widely adopted in the manufacturing sector, while IoT provides productivity and enhances effectiveness of work devices

On the other hand, future trends revolve around AI as a solution in specific problem areas, whereby big data will act as an integral part of the manufacturing process and data analytics. Digitalisation is in need of data, in formats that can be processed into digital intelligence. The outcomes, which may take the form of statistics, databases, information, or insights, contribute to the enhancement of process development.

In the digital economy, data fluxes serve as the catalyst for international production networks and international commerce. China, Indonesia and Vietnam have adopted a data-restrictive approach, whereas Malaysia and Thailand have adopted a conditional data-prescriptive approach and the Philippines and Singapore have adopted a free-flow light-touch data approach.

This fragmentation diminished global digital opportunities and participation in global interconnection. Low digital literacy levels, insufficient human resources and inadequate policy regulation continue to be obstacles to Asean and China's digitalisation cooperation. Digital literacy is an important mitigating factor for supply chain disruption.

However, it remains the primary obstacle to sustainable recovery and inclusion. As of 2019, it was estimated that a little over half the world's population (51.4%) uses the Internet, with developed countries having the highest utilisation rate (86.6%), followed by developing countries (46%) and least developed countries (19%). In developed nations, there were 33.6 fixed broadband subscriptions for every 100 people, compared to 11.2 in developing nations, and almost none in the least developed nations. On the other hand, mobile broadband subscriptions in developed countries have reached 124 active subscriptions per 100 people, while developing countries have reached 64 per 100.

Moreover, there were significant differences between the geographic locations within a country, with urban areas having 72% Internet access and rural areas having only 38%. Therefore, cooperation initiatives are required to ensure that the public has access to affordable and secure Internet services.

Such cooperation should prioritise balancing diverse member nations' interests and the convergence of digital economy characteristics. Building a more resilient and robust digital infrastructure, human skills development and digital capacity building, strategies for regionally advanced manufacturing value chain, supply chain innovation policy, coordinated border management and developed border clearance procedures, as well as regional collaboration on a data regulation framework are some of the paths that can be taken.

First, to improve the quality and accessibility of ICT infrastructure services, to create resilience and support digitalisation, such as the Asean-China Superhighway Project, in order to encourage the proactive participation of members' business sectors.

Second, efforts should be introduced to accomplish SDG inclusion through digital literacy programmes and capacity development.

Third, the establishment of manufacturing bases entails research, consulting, advertising and marketing in order to contribute value to global supply chains. The establishment of the Asean-China Action Plan for Manufacturing-Related Services enables promoting the role of services in strengthening regional value chains by creating unique propositions for goods and services transformation.

This can be accomplished by aligning national Science, Technology and Innovation (STI) policies. Fourth, governments should serve as a catalyst for digital commerce and security. Countries may have adopted seamless customs clearance, electronic transaction documents, digital authentication as well as electronic and online payments to facilitate digital trade.

Lastly, it also increases mutual understanding and strengthens data regulation cooperation. In this aspect, the China Hainan Pilot Free Trade Zone has signalled its willingness to permit cross-border data flow by employing capacity-building strategies to raise awareness of data-related concerns.

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