

# Building a sustainable digital economy in S-E Asia

It will require concerted efforts across market development, technological development, and institutional development. BY LAWRENCE LOH AND SABRINA SOON

THE Asia Tech x Singapore mega-event, held in June together with various co-located thematic events, highlighted key challenges for technology advancements, including those for a sustainable digital economy.

Indeed, the economies of South-east Asia have experienced significant growth in recent times. This has been driven notably by developments in the digital economy, which spearheaded the reshaping of key industries and creation of new market opportunities.

Digital Economy Companies (DECs), in particular, play a crucial role as creators, distributors and users of digital technology, making them influential stakeholders in the building of a sustainable digital economy that is inclusive and secure.

To better understand the dynamics of this evolving landscape, the Tech for Good Institute (TFGI), together with the Centre for Governance and Sustainability (CGS) at the National University of Singapore, conducted an industry study of 439 DECs. These DECs were from six markets in South-east Asia: Indonesia, Malaysia, Philippines, Singapore, Thailand and Vietnam, often known collectively as the "SEA-6" countries. The study aimed to examine how these DECs frame their impact beyond delivering economic growth.

The benefits of the digital economy extend to all segments of society and contribute to the broader sustainable development of the region. For these benefits to be realised, a collaborative effort between DECs and other stakeholders, particularly regulators, is needed. This effort can be rooted in three key pillars that drive growth in the digital economy: market development, technological development, and institutional development.

## Creating an inclusive digital economy

Market development is essential to ensure that all segments of society can access the advantages offered by the digital economy. The TFGI-CGS study highlights that local communities are among the most frequently cited stakeholders and the issues of focus for DECs.

This underscores the importance of developing the market to adequately serve these communities and promote equal opportunities for all to participate in the digital economy. Market initiatives include prioritising digital adoption in lower-income families to ensure that everyone can benefit from the digital economy such as accessing telemedicine, online education, social connections, and maintaining competitiveness in the evolving workforce.

To bridge the digital divide, governments must invest in both digital and physical infrastructure, as well as improve Internet penetration, particularly in rural areas and across income levels and genders. Additionally, governments can provide support through skills training, digital tools, subsidies for digital devices and Internet connection, and user-friendly digital services for all groups.

Small and medium-sized enterprises (SMEs) are crucial for social and economic development in South-east Asia, accounting for 67 per cent of the region's job creation and 20 per cent year-on-year GDP growth. However, they face challenges in adopting digital technologies due to limited capital, lack of digital skills, and difficulties with online-to-offline facilitation.

Governments and larger DECs can support SMEs by providing external support, advice, and facilitating connections with



To bridge the digital divide, governments must invest in both digital and physical infrastructure, as well as improve Internet penetration. PHOTO: PIXABAY

DEC platforms. Fintech solutions also play a valuable role in bridging the digital divide for SMEs. Fintech enables enterprises to lower transaction costs, access mobile banking, and provide alternative credit risk assessment methods. Fintech DECs can harness solutions to offer SMEs a broader range of financial service products, such as micro-loans, wealth management, e-wallets, and insurance.

## Fostering a responsible digital economy

Advances in technology such as artificial intelligence (AI), machine learning (ML), chatbots, cloud computing and augmented reality (AR) have been utilised in the digital economy to tackle challenging issues such as climate change, food insecurity, resource efficiency, and diseases. However, they can also have unintended consequences if adverse environmental and social impacts are not mitigated.

The environmental cost of technology stems from resource depletion, energy usage, waste management and carbon footprint. Policymakers and DECs can mitigate by promoting renewable energy integration, using data analytics to manage emissions, and implementing collaborative platforms for waste management. In this regard, some companies have turned the climate risks into a potential market opportunity.

For instance, there are companies partnering recycling organisations to facilitate end-of-life management for electronic devices. This collaboration allows companies to incentivise consumers to trade in their devices, offering a rate determined by the condition and internal components of the device.

A major social cost of the technology is the rise of cybersecurity and data privacy. As personal data collection increases, protecting individuals' privacy and mitigating cybersecurity threats are paramount. The TFGI-CGS study shows that cybersecurity and data privacy is the most common issue of focus among the assessed DECs, as it impacts their financial performance, customer trusts, and competitive advantage.

Developing a system-wide digital resilience strategy is essential and requires a collaborative approach among all stakeholders to proactively manage risks and vulnerabilities. DECs should continue to implement governance, risk management, data ownership and incident management strategies to ensure secure operations.

## Ensuring a secure digital economy

To foster the inclusive and sustainable growth of the digital economy, it is crucial to establish a trusted regulatory landscape. The growth and evolution of DECs

have outpaced that of traditional offline companies, presenting challenges for emerging legislation to keep pace with these dynamic cross-sector industries and new business models. Policymakers now face the urgent task of developing a regulatory environment that instils trust and safeguards the digital economy.

Studies have shown that a single-tech regulator is less efficient and ideal for a region like South-east Asia due to diverse needs and priorities. A more effective approach to regulate the digital space involves enhancing the technological understanding of existing regulators.

By equipping regulators with necessary skills and knowledge about technology and its associated business models, they can effectively oversee the digital landscape.

Regional coordination can also help advocate for better practices among tech companies and encourage regulatory innovation through shared perspective and knowledge. This collaborative model can serve as an exemplary blueprint for other regions, unlocking the benefits of technology while safeguarding the population.

In essence, the development of an inclusive and sustainable digital economy in South-east Asia requires concerted efforts across market development, technological development, and institutional development.

To ensure equal access and opportunities for local communities and SMEs, market development should focus on bridging the digital divide by investing in infrastructure, providing skills training and ensuring access to Internet connection and digital devices.

There should also be an increasing focus on mitigating environmental impacts and addressing cybersecurity and data privacy concerns to ensure a responsible technological development. Policymakers should develop a trusted regulatory landscape that keeps pace with the evolving digital economy, through regional collaboration to foster innovation and best practices.

By embracing these challenges and working together, South-east Asia can ensure that the digital economy becomes a force for positive change, benefiting all its citizens and contributing to the region's overall sustainable development.

The writers are from CGS at NUS Business School. Lawrence Loh is CGS director, and Sabrina Soon, a research associate. The TFGI-CGS research team also includes Ming Tan, Mohamad Matin Mohdari, Keith Detros, Hui San Seah and Regina Ng at TFGI, and Minjun Huang, Sharmine Tan and Verity Thoi at CGS. The report is available at: <https://tinyurl.com/TFGI-CGS-June-2023>