

A NEW WAVE OF DIGITALLY INNOVATION DEVELOPMENT IN SOUTHEAST ASIA

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Abstract Southeast Asia will face particular challenges because the new technologies will disrupt global value chains (a network of interconnected stages in the production of goods and services) and undermine the model of labor-intensive, export-oriented manufacturing that drives the region's growth. But these new technologies will also open up opportunities for small businesses and create the potential for the productivity gains that Southeast Asia will need to move out of the middle-income category. This article aims to analyze the challenges and opportunities that are facing developing Southeast Asian countries in the process of developing and creating the digital economy.

Key words: the digital revolution, E-commerce, financial technology, cryptoassets.

The digital economy brings in the global market with it a number of opportunities, but also new challenges and rules of the game. Positioning of the country on the global stage largely depends on its ability to adapt to new conditions. Digital economy brings a new set of benefits, which can make it possible to reduce the differences that exist between rich and poor nations. Developing countries have the opportunity to transform its economy and to contribute to the development of the digital economy. Although these economies are characterized by high added value, faced with numerous obstacles, many developing countries can not adequately respond to the demands of the digital

economy. Inadequate access to the latest technology, sophisticated telecommunications infrastructure, low computer literacy as well as numerous cultural and socio-economic factors are just some of the challenges that developing countries have to face. On the other hand, with a clear policy and specific plans and objectives, it is possible to "skip" a few steps and effectively respond to the demands of the global market.

Asia is embracing the digital revolution. As in other regions, the digital revolution is sweeping sectors ranging from retailing and banking to manufacturing and transportation. Southeast Asia will face particular challenges because the new technologies will disrupt global value chains (a network of interconnected stages in the production of goods and services) and undermine the model of labor-intensive, export-oriented manufacturing that drives the region's growth. But these new technologies will also open up opportunities for small businesses and create the potential for the productivity gains that Southeast Asia will need to move out of the middle-income category. For frontier economies such as Cambodia, Lao PDR, and Myanmar, digital technology can be a powerful new tool in the fight to overcome poverty.

Asia is at the forefront Market participants in Asia are leading in almost every aspect of digitalization, but some countries are lagging far behind. Asian countries fall into a wide range of income categories, so the region has the widest spread in terms of digital adoption, with Japan, Korea, Hong Kong and Singapore leading the world. But at any income level, Asian countries are at the forefront compared to comparable countries around the world. Moreover, even in relatively poor Asian countries such as Cambodia and Nepal, digitalization is accelerating. The share of e-commerce in other Asian countries is lower but increasing rapidly, especially the in India, Indonesia and Vietnam. In Indonesia, e-commerce platforms such as Bukalapak, Lazada and Tokopedia are competing for the largest e-commerce market in Southeast Asia.

From 2005 to 2015, ICT growth averaged 15.9 percent in India, 13.7 percent in China, and 7.1 percent in Thailand, far outpacing their economic growth rates of 7.7, 9.7, and 3.5 percent, respectively. In Japan, ICT growth was almost four times faster than GDP growth. Digitalization is becoming an increasingly large component of GDP in many Asian countries. Among the top 10 economies in the world with the highest ICT-to-GDP ratio, seven are in Asia; they include Malaysia, Thailand and Singapore. The use of digital technology can also increase the productivity of other industries. Empirical research shows that a 1 percentage point increase in the digitalization of China's economy is associated with a 0.3 percentage point increase in GDP. Importantly, innovation in Asia is skewed toward the digital sector: if we rank countries according to the share of ICT in total patents, Asian countries rank in the top five, further highlighting the potential for digitalization to accelerate future growth. E-commerce has the potential not only to support growth, but also to make it more sustainable. For consumers, e-commerce can mean better access to a wider range of products and services at lower prices, ultimately increasing consumption. A McKinsey study shows that 60 percent of online spending in China comes from switching from traditional retailing, but about 40 percent represents new consumption. For companies, e-commerce creates new business opportunities and provides access to broader markets, thereby facilitating investment. At the firm level in Asia, participation in online commerce is associated with an increase in total factor productivity of more than 30 percent, otherwise some of the output is not explained by traditionally measured measures of labor and capital used in production. Innovation, human capital, and, to some extent, access to finance seem to favor higher output of Internet companies. Finally, also conclude that e-commerce firms also export 50 percent more. Financial technology can also contribute to potential economic growth and poverty reduction by strengthening financial sector development, integration, and efficiency. Financial technology can help millions of individuals and small and medium-sized businesses quickly gain access to financial services at affordable

prices, especially in poor countries. These technologies can also lead to significant efficiency gains in the financial sector. For example, they can enable cross-border payments that reduce risks and costs for participants. Our analysis suggests that if all Asian countries without widespread access to financial services reached the level of Thailand, Asia's leading emerging market country, 20 million people could be lifted out of poverty. Finally, digitalization creates opportunities to improve the quality of public finance. Digital adoption by government agencies could lead to higher revenues from value-added taxes, tariffs, and other sources through better transaction reporting. If Asian countries were to move halfway to the global frontier, our research shows that VAT revenues could increase by 0.6 percent of GDP. For the Association of Southeast Asian Nations, the increase is estimated at 1.2 percent of GDP, and for smaller Asian nations, which tend to be farther from the front lines, it would be about 2.5 percent of GDP. These new technologies are leading to the automation of increasingly complex activities that were previously carried out only by humans. There are important transitions ahead that may be comparable in scale to historical transitions from agriculture and manufacturing, creating new challenges for policymakers.

This new wave of creative disruption will transform jobs and skills, previous jobs and companies will disappear and new ones will emerge. In the past, adaptation to change has been difficult, and the benefits have been unevenly distributed. The new wave of automation also risks increasing structural unemployment, especially for older and unskilled workers, which could lead to greater inequality if other opportunities for displaced workers cannot be created. Automation through the use of industrial robots represents one area in which Asia, E-commerce has the potential to not only support growth but also make it more sustainable. Is clearly at the forefront, as the region is home to two-thirds of the world's industrial robots. In our study, we analyze the impact of the use of robots on employment in a large sample of countries in Asia, Europe, and the Americas. Contrary to the worst fears of some observers, we conclude that productivity-

enhancing (and hence job-creating) effects probably neutralize the destruction of previous jobs. However, if we focus only on Asia, there is little negative effect on overall employment, especially in industries with high levels of automation, such as the electronics and automotive industries. Furthermore, like other researchers, we conclude that workers with intermediate levels of education are more vulnerable to this crowding out than workers with low or high levels of education, because the jobs most exposed to automation often involve routine tasks performed by workers with intermediate skills. In Japan, where the labor force is shrinking, increased robot density in the manufacturing industry is associated not only with increased productivity, but also with gains in local employment and wages. Japan's experience suggests that countries such as China, Korea, and Thailand, which face similar demographic trends in the future, could also benefit from automation. In the future, some of the latest digital technologies could transform global value chains in which Asian countries are important players.

Traditionally, manufacturing in Asia has been based on a supply of relatively low-cost, low-skilled labor. But artificial intelligence, robotics and 3-D printing are expected to reduce wage-based competitiveness, transform the nature of manufacturing and possibly lead to a return to manufacturing in advanced economies. This interesting point of economics evidence suggests that a return to manufacturing is already happening, and countries with significant low-skill labor may be required to create radical new growth models. Fintech also poses risks to the financial sector if it undermines competition, monetary policy, financial stability and integrity, and consumer and investor protection. These technologies can disrupt the business models of existing financial institutions and displace activities outside the regulated sector. It is concluded that countries with a greater propensity to leapfrog technology also often see a decline in traditional financial infrastructure, especially bank branches. In contrast to similar firms in the United States, technology giants in Asia, especially China, have become critical providers of financial services and put competitive pressure on traditional financial

institutions. Cryptoassets, in which Asia is a leader, can pose risks related to money laundering, tax evasion and circumvention of capital transaction restrictions and other forms of illegal activity. While digital platforms can multiply the benefits of e-commerce, they can also pose challenges to competition. Economies of scale can lead to a winner-take-all dynamic, especially when online commerce platforms become large. Network effects can also make it difficult for retailers and suppliers to move from one platform to another, increasing the market power of platforms. Digital platforms can also pose the risk of eroding the tax base. For example, peer-to-peer platforms such as Airbnb and Uber (or their Asian competitors such as GO-JEK, Grab, and Tujia) allow tax-free transactions that typically occur in highly taxed and regulated industries such as cabs and hotels. While the digital revolution is inevitable, its outcomes (fantastic or terrible) depend on policy measures.

While the digital revolution is inevitable, its outcomes (fantastic or terrible) depend on policy responses. Policy responses must strike the right balance between creating opportunities for successful digital technologies and overcoming risks. Policy measures needed to reap the dividends of digital technology include: revising the education system to meet the demand for more flexible skill sets and lifelong learning, as well as new job training, especially for workers most affected; reducing the skills mismatch between workers and jobs; investing in physical and regulatory infrastructure that promotes competition and innovation; addressing labor market and social Given the inherent global reach of these technologies, regional and international cooperation will be critical to preparing effective responses. The more society is willing to support those left behind, the faster the pace of innovation society can afford while ensuring growth in prosperity for all. With the right policies, the digital revolution can be a new engine of growth and prosperity for Asia and the world.

Reference

1. [2014 37th International Convention on Information and Communication Technology, Electronics and Microelectronics \(MIPRO\)](#)

2. Nikolina Žajdela Hrustek, Renata Mekovec, Igor Pihir, "Developing and Validating Measurement Instrument for Various Aspects of Digital economy", *International Journal of E-Services and Mobile Applications*, vol.11, no.1, pp.50, 2019.
3. Murali Krishna Penmetsa, Sebastián Bruque-Camara, "A framework for building a sustainable digital nation: essential elements and challenges", *Digital Policy, Regulation and Governance*, vol.23, no.3, pp.262, 2021.
4. Dharmendra Trikamlal Patel, "Education in the Era of Industry 4.0", *Research Anthology on Cross-Industry Challenges of Industry 4.0*, pp.1647, 2021.