

ASEAN in Digital Economy: Opportunities and Challenges

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Abstract

Developing countries like most countries in Southeast Asia 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 cannot adequately respond to the demands of the digital economy. The problems and challenges faced on the road to becoming digital and analyses a new approach for business industries to initialize their digital transformation. The objective of this article is to review the opportunities and challenges that ASEAN countries have to face to initialize their digital transformation. The digitalization of a growing number of new business opportunities, including new types of products and services goods is huge access to crowd-sourced. On the other hands, the problems and challenges are the inadequate access to the latest technology, sophisticated telecommunications infrastructure, low computer literacy as well as numerous cultural and socio-economic.

Keywords: Digital Economy, Opportunities, Challenges

Introduction

The digitalization of a growing number of new business opportunities, including new types of products and services goods is huge access to crowd-sourced. These players are taking advantage of big data, powerful analytics, artificial intelligence, and other key innovations to drive growth. On the other hands, the industries are destined for technological disruption. Many businesses and industries are being disrupted by digital technology. Anyway, while the revolution of digital technology is expected to impact the overall economic landscape, it is clear that these innovations are disrupting ecosystems in most of the industries.

Digitalization of ASEAN

Since the change of technologies and widespread diffusion of the digital economy, it led to innovation in business models, which in turn allows consumers and businesses to connect around the world any time. The growing of the digital economy in the business field has heightened demand for new big data being used for business intelligence. The digital economy

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provides business an ability of the transformational effects of new way to use the data as in the fields of information and communication. It gives rise to certain form of new business models, which is important to the business to adapt in the new environments. The importance of the digital economy. The digital economy is developing rapidly worldwide. It is the single most important driver of innovation, competitiveness and growth, and it holds huge potential for businesses.

The Association of Southeast Asian Nations (ASEAN) is the fastest growing Internet market in the world. With 125,000 new users coming onto the Internet every day, the ASEAN digital economy is projected to grow significantly, adding an estimated \$1 trillion to regional GDP over the next ten years (World Economic Forum, 2020). The digital business rises to a number of new business models recently from traditional business to modern advances in technological involvement that have made it possible to conduct many types of business at outstanding greater scale and over longer distances than was previously. These digital technologies are fundamentally re-shaping the traditional business strategy, as modular, distributed, cross-functional, and global business processes, which enable work to be carried out across boundaries of time, distance, and function. The Association of Southeast Asian Nations (ASEAN) has an opportunity to leapfrog to the forefront of the fast-moving global digital economy. According to ABC Connect (2020), ASEAN's digital business was forecasted to have its digital economy reach \$240 billion by 2025. The digital economy sectors including e-commerce, online media, online travel, and ride-hailing, new online services like online vacation rentals, online food delivery, video on demand, and subscription music. Comparing to the year of 2019, this value is 20% higher than the value estimated last year.

Through the ASEAN Economic Community Blueprint 2025, ASEAN encourages Member States to promote digital payments at the national level and interoperability at the regional level. The top countries generated the huge market size are Singapore, Vietnam, the Philippines, Malaysia, Indonesia, and Thailand, in which totally over 350 million Internet users, and over 90% of people in the region use smartphones to access the Internet. According to Samaya (2020) out of all the top ASEAN countries, Vietnam's digital economy is the fastest growing country from \$3 billion in 2015 to \$33 billion in 2025. The largest digital economy is Indonesian with it expected to be valued at \$100 billion by 2025. The second largest single market in ASEAN is Thailand at \$43 billion in 2025. In terms of mobile cellular subscriptions per 100 people, Thailand and Indonesia are the standout performers in the Asia-Pacific region, with 176 and 174 respectively (Oxford Business Group, 2020)

Since the digital economy provides business an ability of the transformational effects of new way to use the data as in the fields of information and communication. It gives rise to certain form of new business models, which is important to the business to adapt in the new environments. Moreover, the growths of the technology, especially the digital economy and the revolution of business processes have transformed a new interest in the digital business development and business strategy. Furthermore, digitization forms are both threatening, but also providing an opportunity to transform business; and can make entire business models redundant (Leipzig et al., 2017). Digitization provides a lot of traction and completely changed customer behavior and expectations. Therefore, businesses need to reinvent of business in order to create and participate with their customers. Obviously, customers currently are no longer only expect businesses to respond to their expressed demands, but implicitly expect companies to anticipate and create their future demands. Therefore, business in ASEAN need to change their business model ready for the digital economy.

Leveraging the Opportunities of Digital Economy

Many commercial transactions are moving online and the so-called digital economy continues to expand its reach into every facet of the traditional analogue economy (Oxford Business Group, 2020). Digital economy provides the access to new channels to reach existing customers as well as new opportunities to expand market segment with a competitive digital advantage. In market side perspective, consumers the ever-expanding digital economy promises greater access to products and services at their screen devices, as well as increased ease in accessing and comparing information about them. As a result, it creates more competitive pricing among providers. In the industry development perspective, the development of digital channels provides industries to essentially skip stages of development seen in other countries, moving directly to digital solutions rather than having to invest in vast networks of hard infrastructure (Oxford Business Group, 2020). Therefore, 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.

Digitalization for Growth

The region's internet economy was valued at \$100 billion in 2019 in a report conducted by Google, Temasek Holdings, and Bain & Co. This is expected to rise to \$300 billion by 2025, spurred by the region's young demographic using the internet for everything from purchasing games to banking (Medina, 2020). Digital economy has been addressed for a significant method to transform a new way of doing business. The digital economy allows the rapid development of new business models; it can also quickly cause existing businesses to become obsolete. Digital economy is generally defined as being the use of digital technologies to transform business operations in order to improve effectiveness, efficiency, productivity, and service delivery (Easley & Kleinberg, 2010). The digital technology has revolutionized the way of doing business, allowing individuals and organizations to overcome the new business model (Simmons, Palmer, & Truong, 2013). Digital economy specifically helps businesses mitigate the isolation inherent to most online data analysis activities. Furthermore, it is an online community-based e-commerce platform that brings together products from a vast array of stores into one digital platform. The types of business expand to several varieties of e-commerce, app stores, online advertising, cloud computing, participative networked platforms, high speed trading, and online payment services. A younger generation of entrepreneurs who are more attuned to customer experiences, might already have digital innovation in their core DNA, and are more willing to experiment with emerging technology and challenge existing ways of conducting business.

Moreover, the pandemic (COVID-19) has changed the behavior, attitude, and purchasing habits of consumers and many of these are set to remain post-pandemic. Although purchases are currently centered around basic needs, a growing number of these transactions are done through digital commerce. Traffic on online commerce platforms has surged during the pandemic. Digital commerce was previously adopted by many businesses in ASEAN as an alternative channel rather than being an essential business initiative. The digital and innovation allows the rapid development of new business models; it can also quickly cause existing businesses to become obsolete. It becomes digital business which is the creation of new business designs by blurring the digital and physical world. The digital and innovation rises to a number of new business models recently from traditional business to modern advances in

technological and innovative involvement that have made it possible to conduct many types of business at outstanding greater scale and over longer distances than was previously. Especially, the digitalization is revolutionizing the way business is conducted in industry throughout value chains.

Digital Technology and Innovation for Productivity

Since the emergence of the digital technology in the late 20th century, innovation, and digital technology among individuals and organizations of all sizes has changed dramatically. The digital technology has revolutionized the way of doing business, allowing individuals and organizations to overcome the new business model (Simmons, Palmer, & Truong, 2013). Globalization and integrated development of the new industrial economy model considerably increases the startup business possibilities. Digital technology today provides mobile access and analytic power, which satisfy the needs of providing trade and management of enterprises on a national and continental scale (Garifova, 2014).

Furthermore, seeking for new business model that contribute to competitive advantage in the market and thus raise the level of innovation. Innovation today is synonymous with progress and modernity in every area (Witkowski, 2017). According to Schumpeter (1960), innovations are related to the developing a new product or introducing products with new properties to the market, and Carrying out a new organization of economic processes. Additionally, Drucker (1986) said that “innovation is the specific tool of entrepreneurs, by means of which the changes make them an opportunity to take up a new business or the provision of new services.”

Advances in technology, especially surrounding mobile, data analytics, artificial intelligence, and cloud computing, seemed to flourish overnight and dramatically affected the overhead required for businesses to launch, reach their customers, and collect the data necessary to tailor their new customer-centric business models around existing paradigms (Kollmorgen, 2017). Over the past decade, Artificial Intelligence (AI) in platform adoption worldwide has grown significantly, driving full customer engagement and enabling service providers. Automation and machine learning now play a major role in which customer data is processed. Another digital technology that has been widely adopted is Internet of Things (IoT), which shapes mobile strategy. In the mobile sector, the demand for global carrier-grade connectivity is expected to come to fruition in 2018. Businesses continue to be fueled by IoT and will be dependent on connectivity in an effort to capitalize on the socio-economic benefits of a connected world (Futuma, 2020).

According to Indonesia’s economic masterplan, Indonesia’s government plans to become Southeast Asia’s largest digital economy (2020 Go Digital Vision” program) and have the digital economy contribute \$130 billion to its economy in 2020. The Ministry of Communication and Information Technology (MCIT) launching “Industry 4.0” that refers to five industrial digital technologies: IoT, AI, human-machine interface, robot and sensor technology, and 3D printing. The initial prime beneficiaries are expected to be from food and beverage, automotive, electronics, chemicals, textile and garment industries. The government is aggressively pushing its smart city initiatives as part of Industry 4.0, using IoT to develop smart cities in Jakarta.

Malaysia’s government stated the National Policy on Industry 4.0, launched in October 2018 encourages the adoption of Industry 4.0 technologies including IoT. Sectors in focus include the digitization of manufacturing processes in the electrical and electronics, machinery and equipment, chemical, medical devices and aerospace industries. Furthermore, the country is deploying an intelligent IoT network in populated cities to test out urban management

solutions in optimizing cities infrastructure and connectivity and enhancing the livability for citizens such as health care, media and entertainment, automotive, manufacturing, public safety, agriculture and education.

In Thailand, the government develops the Eastern Economic Corridor (EEC), establishing to be a pillar of Digital Transformation in the country to improve digital government infrastructure and public personnel capabilities, including building infrastructure to improve efficiency and transparency for delivering government services and improving accessibility of services to the public.

Additionally, the digital company has been gathering data from its digital shopping experience across all of their platforms since its inception. Artificial intelligence is used to track customer behaviors, and identify exactly where shoppers are on their purchasing journeys and target them with products accordingly. Lastly, the change in consumer expectations is likely a result of advances in technology and data analytics, but it is also the single most powerful influencer of digital disruption. Society quickly learned to value the experiences associated with the purchasing of products and services. In some cases, we have also demonstrated we are willing to pay more for premium experiences and some customer segments, willing to pay for an experience over a product.

The Challenges Facing the Digital Economy

The problems and challenges faced on the road to becoming digital and analyses a new approach for business industries to initialize their digital transformation. 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. The threats for the industries in the business environment is the increasing competition in a dynamic environment where traditional boundaries are shifting. For example, telecommunications companies or land line telecom has been replaced by voice over internet protocol (VoIP) (Yovanof & Hazapis, 2008), and many social messaging applications such as What Apps, Line, and WeChat. Therefore, business owners or executives must consider about their business transforming to the digital era, crafting strategy for the purpose of achieving sustainable innovation in the face of the reshaping of the industry and the market. One of the main purposes of this research is to seek the answer that how companies can overcome these obstacles and become digital.

Digital Literacies and Skills

In the digital economic climate, most businesses try to maximize return on investments on multiple levels. Due to their versatility, digital technologies may be an important factor in reducing costs and at the same time increasing the value offered by information and communication technologies. Although most companies have realized the need to digitize, various challenges are inhibiting them from starting or benefitting from digital transformation, especially for the SMEs. Basically, the major barriers for SMEs are related to insufficient IT structures, lack of technical skills, inadequate business processes and high implementation risks and costs (Leipzig et al, 2017). Generally speaking, the efficiency, whereby ventures can utilize digital business through highly scalable infrastructures. Thus, the digital decade has seen businesses taking advantage of lower price/performance levels of computing (hardware and software) as well as global connectivity through standard protocols such as the Internet, mobile web, and application to adapt their business infrastructure to the new digital era. Therefore,

digital transformation challenging for traditional businesses require hardware infrastructure, software infrastructure, and digital literacy (Boonnoon, 2014; Bharadwaj, El Sawy, Pavlou, & Venkatraman, 2013; Eshet-Alkalai, 2004; Ziphorah, 2014).

Participating in the digital revolution requires change; acquiring new skills and knowledge; new systems and processes; new partnerships; new forms of collaboration and investment in new digital strategies, people skill, business procurement and digital tools. The need to reskill and transition existing staff toward a digital-first mindset is important. This has big implications for jobs as workers are finding themselves with outdated skills and struggle to match the demands of these changing business models. Change on this scale can create uncertainty, doubt and many other real or perceived barriers to progress. The elements with the greatest influence on success are clear targets for organizations' key performance indicators and clear communication of the transformation's timeline. These categories suggest where and how companies can start to improve their chances of successfully making digital changes to their business.

In addition, strengthening the digital skills of ASEAN's population of 680 million people will ensure that opportunities and benefits reach everyone. Although the region already has good literacy and numeracy rates, education systems need to be more flexible in developing the skills needed to operate in a digital economy. These skills range from basic computer knowledge to advanced skills like coding and data analytics. So-called "soft skills" like collaboration and communication are also essential. Digital literacies and skills are another significant consideration focused on developing the human capital force. In ASEAN, the citizens have the skills needed to thrive as digital disruption creates both risks and opportunities for workers. The workers are dedicated to re-skills and up-skills of all types of workers in the digital ecosystem. (Nguyen, 2020). The main objective to re-skill and up-skill is to convene group of like-minded organizations united in their new digital skill sets.

For example, Indonesia is lack of new digital talent. The world's fourth-most populous country with more than 260 million people has a legion of young but lowly skilled workers, with 121 million primarily working in fields such as agriculture, manufacturing and services (Soon & Chuan, 2019). This makes digitalization difficult and drives the need for the government, industry associations, academia and businesses to collaboratively uplift skillsets of the entire workforce to achieve Indonesia's Industry 4.0 aspirations to equip them with industrial skills for the digital economy in two vocational schools, as well as developing Industry 4.0 mini factories in three polytechnics across the nation.

In Singapore, to accelerate the digitalization of local companies, the government has supported several plans to businesses, including to boost employees' digital skills, and harnesses digital tech to enhance capabilities in cybersecurity, data protection and analytics (Soon & Chuan, 2019).

Since the change of technologies and widespread diffusion of the digital economy, it led to innovation in business models, which in turn allows consumers and businesses to connect around the world any time (Harris & Rae, 2009). The digital economy provides business an ability of the transformational effects of new way to use the data as in the fields of information and communication. It gives rise to certain form of new business models, which is important to the business to adapt in the new environments. Digital skill sets have been among the most popular expressions featuring in the curricula of the last few years (Dani, 2013). The information literacy concept has been adapted to include ICT.

Strategy Development

To success in the change in digital economy is required digital transformation demands vision, leadership and process change alongside powering core operations with technology. Therefore, digital transformation requires a change at the most fundamental level, the way in which things get done everywhere in the organization. Digital transformation affects the company culture itself. Without addressing culture change digital transformation is bound to be a superficial attempt. According to Hemerling et.al (2018) nearly 80% of the companies that focused on culture sustained strong or breakthrough performance. Not one of the companies that neglected to focus on culture achieved such performance.

Policies are one of the keys for strategy development, that help in building the foundations for the digitization. This includes policies that affect the broad enabling environment for the digital economy, as well as policies that foster accessible and affordable digital infrastructures and services. The pandemic has reshaped ASEAN's digital landscape with many governments and businesses in the region being forced to accelerate the transition towards a digital economy.

Strategy development should enable the effective use of digital technologies by people, firms and governments, and policies that foster the application of digital technologies in specific activities and policy areas. Furthermore, it can help all individuals, including citizens, workers and consumers, as well as society as a whole to adjust to the digital transformation, including by ensuring that all people have the skills they need to adapt to and excel in an increasingly digital world. Moreover, it includes policies aimed at the use of digital tools to enhance well-being, including by providing more equitable access to public services. However, there is quite a challenge to co-ordination among ministries and other bodies at all levels of government, as well as actively involving all key stakeholders in the policymaking process to ensure that all policies are mutually reinforcing and aligned with one coherent and strategic national digital agenda. Moreover, collective action will be needed in several areas to seize the opportunities and tackle the evolving challenges of the digital economy (OECD, 2017).

In sum, differences within countries in the uptake of digital networks are also linked to age and education, though income levels play a more important role in explaining differences across the region. Moreover, regional differences within countries can be large, with rural areas lagging urban areas (World Bank, 2016). Providing access for all would help people in Southeast Asia, those in rural areas and lagging and disadvantaged groups, in benefitting from the education, employment and health opportunities enabled by digital economy.

Conclusion

Developing countries like most countries in South East Asia 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 cannot adequately respond to the demands of the digital economy. In order to achieve a change business process to digital economy, businesses should adapt to changing business landscape and scale at speed and redesign the business model to modernize business, amplify efficiency, agility and scalability and boost revenue from operations. Furthermore, empower employees, including mobilize business, boost workforce productivity and drive innovation need to be improved to forge ahead with their digital transformation strategy are front-running the competition. Therefore, digital economy creates significant opportunities for the businesses but is a difficult proposition to deliver on. The main idea is not

to utilize new technology to merely replicate an existing product, service or solution in a digital platform, but ideally, to enhance these offerings to support superior customer engagements and potentially new business model in the digital economy system.

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