

DIGITAL ECONOMY GROWTH IN SINGAPORE AND THAILAND FOLLOWING THE POST-COVID-19 PANDEMIC

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ABSTRACT

This research aims to identify the development of the digital economy and its impact on welfare and economic growth in Singapore and Thailand. The two countries allocate a budget for the specific purpose of building a broadband network all over the country. This national broadband network will help bridge the gap digital divide and encourage modern economic development through e-commerce. However, in its application or implementation, there are many differences between the two countries in their achievements. The method used in this study is Qualitative Research Method. It uses the Literature Review Method to understand better the state of digital economy growth in both countries. Based on the comparison of the results, Singapore is far superior in average internet speed. Although high internet speed lags, however, in the field of e-commerce and means of payment electronics, Thailand is much more accessible compared to Singapore.

Keywords: digital economy; Singapore; Thailand; economic growth

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INTRODUCTION

The topic of the digital economy has been brought up as a significant means to change a new way of conducting business. The use of

digital technologies to transform company operations to increase effectiveness, efficiency, productivity, and service delivery is usually referred to as a digital economy (Easley &

Kleinberg, 2010; Chotigo & Kadono, 2022).

The digital economy typically consists of five components: promotion and invention, society and knowledge, hardware infrastructure, software infrastructure, and service infrastructure. IT infrastructure used to support a digital economy, such as high-speed broadband Internet and digital networks, is referred to as hardware infrastructure. Software infrastructure includes online networks, online transactions, such as identity-verification tools that help people online be recognized, and cyber-security tools that help e-Commerce transactions run more smoothly. While the promotion and innovation component is focused on assisting entrepreneurs in developing their digital skills to increase their productivity and workflow efficiency through the supply chain, which will use digital tools and work alongside the banking system, services, and manufacturing, the service infrastructure would build a platform to support the private sector (Yang, 2022). Society and knowledge refer to the universal access ability, which allows people to access various online channels at an affordable price. Specific business models are lucrative due to the integration of activities at various levels. The implications of these interactions in many contexts, including online activities, have been derived from the growing recognition of the role of the digital economy in enabling consumer and supplier interactions as an essential co-value creation. The digital economy is expanding quickly, and comments about brands and goods are common. Additionally, customers depend on and value collaborations more and more. Numerous new business models have shared characteristics like movement, the use of data to create value, and network effects (Cheong & Morrison, 2008; Kurnia et al., 2022).

Thailand's government launched Thailand 4.0 in 2016 as a new economic paradigm to rescue Thailand from the middle-income trap and transform it into a high-income nation. The development must also be sustainable to accomplish economic growth and sustainable development without harming the environment. Therefore primarily focuses on three fundamental changes: 1) changing the production of commodities into innovative products; 2) changing industry-driven activities into those driven by technology, creativity, and innovation; and 3) shifting the emphasis from

producing products to providing services. Thailand 4.0 typically focuses on an open society, a knowledge-based economy, and sustainable growth and development. These three will start strengthening society, developing the human resource base, sustaining economic growth, ensuring a more equitable distribution of resources and chances, and improving the standard and accessibility of public services (Rodchenko et al., 2021).

Singapore is ranked second in the world according to national digital transformation evaluations conducted in 2018 using the Global Connectivity Index (GCI), highlighting Singapore's robust digital connectivity on a global scale. One of the first nations in the world to create a building strategy for a smart nation is Singapore, a well-known developed city. Since the 1980s, Singapore has been developing a long-term strategic plan. In 2006 and 2016, respectively, the country launched the Smart Nation 2015 and Smart Nation 2025 initiatives to create the first smart nation in the world. The core concept of Singapore's intelligent nation construction is people-oriented, and it relies on the advancement of the Internet of Things, big data, and AI technology, as well as joint industry associations to support the development of the information industry and promote the digital transformation of businesses. It also incorporates real-time urban monitoring of the Internet big data to produce excellent overall government services, improves citizen digital literacy, and fosters communication.

LITERATURE REVIEW

Robert J Kaufmann wrote in his journal explaining how the condition of the digital economy in Asia is by taking a case study of developments during COVID-19. His journal discusses the background and foundation, its significance in Asia, and its contribution to removing historical barriers in traditional business. In conclusion, the digital economy in Asian countries involves revamping business processes through technological innovation, government policies for growth, and digital entrepreneurship. Noppasit Capital, in its journal entitled *"Thailand in the era of the digital economy: How does digital technology promote economic growth?"* explained how Thailand has undergone reforms in the social and economic dimensions due to the digital economy,

technology has now become a new driving force for economic growth. In her journal entitled "*Creating the Digital Economy: Strategies and Perspectives from Singapore*," Margaret Tan explains how many countries in the world have planned their own information highways. In the Asia-Pacific region, Singapore laid the foundations of its information superhighway in the 1980s, and today, at the turn of the millennium, the vision of a smart city, or intelligent island, is becoming a reality.

Yongwang Liu and Zhenxiong Fan, in their journal paper, "*Impact on The Socioeconomic Development in Asia and The Pacific*," describes how governments implemented measures to impose restrictions on socioeconomic activity and slow the virus' spread, the COVID-19 pandemic has contributed to a global economic downturn. This has impacted consumption, investment, manufacturing, and trade, leading to weak economic development and recession. The pandemic also highlighted the critical role of telecommunications and information and communications technology (ICT) infrastructure in supporting economies, institutions of higher learning, and governments.

Internet traffic has significantly increased because of the pandemic's shift from offline to online activities, with broadband networks handling many of them. In 2020, there was a 35 percent rise in global Internet bandwidth, the most significant yearly growth since 2013. The digital gap has, nevertheless, had a severe effect on vulnerable people, especially those without Internet access. People over 50, who might not be accustomed to utilizing the Internet, have been particularly impacted. Additionally, despite having decreased in many nations, there is still a difference in internet usage between men and women. Mobile network coverage in rural areas has increased, bridging the divide with urban areas. Small and medium-sized businesses (SMEs) and conventional manufacturing companies have needed help utilizing digital technologies to their full potential throughout the epidemic. While digitalization has improved company processes and helped organizations deal with the crisis, not all companies have had the same resources to adapt. SMEs and established manufacturing companies have suffered more harm than those

who embraced digitalization.

With a focus on digital connectivity, technology applications, and data, digital transformation has emerged as a critical component of economic recovery and sustainable development. The pandemic has sped up the use of digital technologies across various societal and economic sectors, transferring daily activities like work, play, and leisure to online platforms. The digital economy has lowered the risk of COVID-19 transmission and promoted sustainable development. The epidemic has highlighted the value of regional collaboration in resolving global issues. The UN and other states have worked together to address the COVID-19 crisis, notably through donating vaccines and multilateral supply agreements.

However, challenges still need to be addressed, such as the low priority of ICT projects regarding funding. ICT infrastructure is becoming increasingly important to individual and societal activities as the epidemic moves into the "new normal phase. Also, it is critical to close the digital gap and provide accessible ICT services for long-term socioeconomic growth, governments, international organizations, the business sector, and stakeholders must collaborate based on the report "*ASEAN Post-COVID Digital Goals: How have COVID-19 and new economic forces altered ASEAN's top goals for digital policy?*"

Describe how the ASEAN countries' economies differ in income levels and developmental phases but are similar in that they all depend on international trade and are situated in a highly active economic region. The COVID-19 epidemic slowed regional and worldwide economic expansion, raising awareness of our reliance on far-off countries for necessities. This has encouraged a shift away from economic dependence on despotic governments, especially in the United States. As a result of these developments, the emphasis will be shifted away from regions dominated by China and toward new trade and economic development potential inside ASEAN. Middle and less-developed ASEAN nations are racing to avoid the middle-income trap and accelerate economic development to achieve higher average income levels.

Each ASEAN member state needs to implement reforms and policies to maximize economic growth potential. Information and communications technology (ICT) plays an increasingly important role in innovation,

productivity, competitiveness, and national economic growth, so there are some similarities. Access to government services and education, digital literacy, and connectivity are equally essential for social inclusion.

The level of ICT development, or "digital readiness," varies among the ASEAN nations. Despite no publication, the ICT Development Index (IDI) offered a helpful overview of each nation's ICT advancement. ASEAN countries have created national digital strategies to address the expanding contribution of ICT to economic growth. These plans strongly emphasize local digital entrepreneurship and innovation, digital skills, enhancing government services through digital procedures, business adoption of digital technology, and promoting the digital economy.

Each ASEAN country's priorities for digital growth are determined by its current digital development landscape and strategic goals. The linkages between digital progress and the area have been made more challenging by the COVID-19 epidemic. It has been crucial to control the pandemic using digital tools and systems that enable public outreach, telehealth, contact tracing, and resource management. Despite lockdowns and social segregation measures, digital infrastructure and services have made economic activity possible. Governments now better grasp how to use digital technologies for upcoming catastrophes and can pinpoint areas where digital preparation needs improvement. COVID-19's disruption of global trade and supply networks offers opportunities for nations with more advanced digital economies. Integration and effective communication systems are essential for modern supply chains, making nations with higher digital readiness more appealing to supply chains and investors. The reorganization of trade and investment patterns highlights the need for ASEAN to increase its digital readiness. ASEAN nations have the chance to create indigenous digital firms that will produce wealth, revenue, and employment. Even though the value of internet companies has recently fluctuated globally, ASEAN has seen the rise of billion-dollar tech companies (also known as "unicorns") in Indonesia, Singapore, Malaysia, and Thailand, suggesting the possibility of stable prices. ASEAN's digital policy stakeholders were polled to gain insight into their opinions. With responses mostly coming from public sector entities and some representation from the

commercial sector, the poll underscored the significance of digital policies.

There still needs to be more information about the development of the digital economy in ASEAN in the post-COVID-19 period, particularly in Thailand and Singapore. However, some of the literature mentioned above has provided the author team with thorough information and knowledge about developing the digital economy in ASEAN. Consequently, our research team is interested in researching how the digital economies of Thailand and Singapore are developing during post COVID-19 pandemic.

METHODOLOGY

The methodology used in this study is qualitative research. The data collection technique that will be used is library research, which is a study that relies on data from libraries such as books, journals, magazines, and others, then examines a number of these data to describe or reconstruct certain social phenomena in a holistic manner, objective and accurate. Then, the data that has been collected will be analyzed qualitatively and then presented descriptively. The data collection process carried out in this study is to collect data from international and local media, journals, and online searches by accessing websites related to Digital Economy in Singapore and Thailand.

RESULTS AND DISCUSSION

The Covid-19 pandemic, which hit almost all countries worldwide, resulted in major impacts in almost every life sector— from the economy, health, and tourism to triggering political crises in several countries. In addition to health, one of the sectors that have experienced quite a severe impact due to the pandemic, of course, is none other than the economic sector. In 2020 the IMF said that the global economy grew by -4.4%, the greatest setback since the Great Depression of the 1930s. The digital economy is a novel economy made possible by the widespread use of the Internet and high-speed computing. In ASEAN, the digital economy revolution has experienced impressive development rates. According to Google, the Southeast Asian (SEA) online economy's value increased by 40% between 2018 and 2019, averaging a 33%

compound average growth rate (CAGR). Additionally, Southeast Asians are among the world's most frequent mobile Internet consumers. The COVID-19 pandemic has accelerated the adoption of digital technology; in 2020, 40 million people in the six largest ASEAN digital economies got online for the first time, increasing the region's online population to 70% (Erh, 2021).

Singapore and Thailand Digitalized after COVID-19 Pandemic

The COVID-19 pandemic has accelerated digitization in many countries, including Singapore. Here are some examples of how Singapore has digitized in the wake of the pandemic:

With physical distancing measures in place, there has been a surge in online shopping and delivery services in Singapore. The government has also launched initiatives to encourage digital adoption in the retail sector, such as the "Go Digital" program. Telemedicine: The pandemic has increased demand for virtual healthcare services, and the government has encouraged the adoption of telemedicine to reduce the risk of COVID-19 transmission. Digital government services: The government has increased the availability of digital services, including e-payments, e-services, and online forms, to reduce the need for in-person interactions and limit the spread of COVID-19 (Lei & Yuwei, 2019).

While Thailand since the start of the pandemic in March 2020, 30% of all consumers of digital services in Thailand are new consumers, and the consumption rate of Internet users has reached 90%, the second highest in the region after Singapore (Djalante et al., 2020). According to the report, the pandemic has accelerated the adoption of digital technologies in Thailand, mainly in response to expanded movement restrictions and to keep the healthcare sector afloat. Most companies have shifted their digital adoption stage from digital assessors to digital adopters. Besides robotics, advanced and enabling technologies saw increased implementation rates (Marome & Shaw, 2021). Besides technology, media, and telecommunications, these four industries believe the COVID-19 pandemic has significantly impacted their business. In particular, the Life Sciences & Health Care and Financial Services sectors consider the pandemic to have a high

impact and contribute to the high acceleration of digital transformation. Data shows that digital transformation improves the customer experience, increases employee productivity, and reduces costs. Only 25% of respondents noted increased revenue due to digital transformation, ranking the lowest of all results. Furthermore, the Sectors reporting increased revenues were Technology, Media and Telecommunications, and Life Sciences and Health Care (Kraiwanit, 2016).

Digital Economy Trend in Singapore and Thailand

The "digital economy" refers to using digital technologies to enhance or transform traditional economic activities and create new business models and markets.

There is much hype around the digital economy in Singapore because the government has been actively promoting and investing in it as a critical driver of economic growth and job creation. Singapore has been positioning itself as a digital hub in Southeast Asia and implementing various initiatives to support the development of the digital economy. These include investing in digital infrastructure, supporting the growth of local tech start-ups, and encouraging the adoption of digital technologies by businesses and government agencies. The government has also launched several flagship programs, such as the "Smart Nation" initiative to promote the development of digital technologies and services and the "Digital Economy Framework for Action" to support transforming traditional industries into digital ones. Overall, the digital economy is seen as a critical driver of economic growth and competitiveness in Singapore, and the government is working to create a favorable ecosystem for the growth of digital businesses and technologies. This has led to much excitement and interest in the digital economy among businesses, investors, and the general public in Singapore (Darmastuti et al., 2021).

Thai retailers usually did a good job embracing the digital age before the pandemic struck. In order to better understand their customers' needs, many retailers developed online platforms for their customers to complete transactions. Due to the COVID-19 pandemic, social isolation, lockdowns, and other regulations went into effect at the beginning of 2020, which caused consumers to alter their

behavior and turn to online shopping, social media use, internet telephony for teleconferencing, and streaming of videos and movies. Increases in business-to-business (B2B) and business-to-consumer (B2C) e-commerce specifically were caused by these developments (Altinay & Taheri, 2019; Kim, 2019).

Increased Internet and mobile phone use and improved logistics and e-payment systems, which increased consumer confidence to shop online, are the reasons driving this development. The Digital Economy Promotion Agency estimates that the e-commerce industry will generate \$4,492 million in revenue in 2019 and \$6,384 million by 2023, with an annual growth rate of 9.2%. By 2023, the mobile commerce market is projected to reach \$25 billion, growing at a compound annual growth rate of 12%, due in part to increasing smartphone penetration (around 40%) and a well-established preference for mobile over desktop purchasing (Adams et al., 2021; Amornkitvikai et al., 2022).

The Thai government has set aside a budget as part of its Thailand 4.0 policy to build a broadband network for every hamlet nationwide. Through e-commerce, this national broadband network will support modern economic growth and help close the digital divide. The government also plans to develop the newest digital application systems to support and advance online activities like e-government, e-payment, and e-marketplace. The ultimate objective is for the villagers to begin operating online stores for their regional goods and services (Ingaldi & Ulewicz, 2018). Government support and rising smartphone usage should boost the adoption of digital wallets. Debit and credit card user for online purchases is still typical in Thailand, claims JP Morgan. In place of credit, debit is favored. Although it still exists in the Thai e-commerce industry, the use of cash on delivery is decreasing (Yaseen, 2021).

Business-to-business (B2B), business-to-consumer (B2C), and business-to-government (B2G) transactions are the three types of e-commerce networks that exist in Thailand. B2C transactions comprise most of all three types of transactions, accounting for 50% of all transactions, followed by B2B transactions (27%) and B2G transactions (23%). JP Morgan claims that a rise in local e-commerce vendors will also help sales volume. The Thai e-commerce industry is almost 30% taken up by cross-border

transactions. Nearly 50% of online buyers have already made an international transaction. China, Japan, and the United States are the top three foreign markets for Thai goods. As local Thai businesses take advantage of the possibility of having a digital sales presence, this balance may change. The top five e-commerce websites currently are Shopee, Lazada, Kaidee, AliExpress, and Amazon, all of which are seller platforms with cutting-edge shipping and logistics systems.

Due to the Internet's growth and smartphone technology's evolution, B2B e-commerce is also expanding quickly in Thailand. According to the Electronic Transactions Development Agency, the food and service industry accounts for 31% of the industries using e-commerce platforms to boost output, followed by manufacturing with 16% and retail and wholesale with 15%. Interestingly, demand for e-commerce services comes from other regions besides Bangkok, including Nonthaburi and Chonburi. Several variables, such as rising smartphone penetration and fierce competition among e-commerce operators, propelled Thailand's online retail trade (Boonlua et al., 2022). The national e-payment system, which includes the government's PromptPay service, primarily encourages e-commerce. Numerous courier service providers have begun introducing their e-commerce platforms in Thailand over the past few years, bringing end-to-end domestic delivery to the market. Due to the intense rivalry among logistic service providers, delivery costs for goods purchased through online retailers have drastically decreased (Noorit et al., 2020).

The impact of the digital economy in Singapore and Thailand on GDP, efficiency, innovation, and the inclusion of the country

The digital economy has significantly impacted Singapore's economy and society, contributing to several key areas such as Gross Domestic Product (GDP), efficiency, innovation, and inclusion.

According to the Infocomm Media Development Authority (IMDA), the digital economy in Singapore accounted for about 7.5% of the country's GDP in 2019, and it is expected to grow in the coming years. The digital economy has also been a significant source of job creation in the country, with many new opportunities arising in the tech and digital sectors. The digital economy has increased efficiency in various

retail, logistics, and financial services industries. For example, adopting e-commerce has allowed businesses to reach a broader customer base and streamline operations. At the same time, using digital tools and platforms has increased the speed and accuracy of transactions and reduced the costs associated with traditional methods (Erh, 2021).

The digital economy has been a significant catalyst for innovation in Singapore, as it has enabled the development of new technologies and services that have the potential to transform traditional industries. The government has also been investing in research and development in the digital sector, focusing on areas such as artificial intelligence, cybersecurity, and the Internet of Things (IoT). The digital economy can potentially increase social and economic inclusion, as it provides access to new opportunities and services for individuals and communities that were previously underserved or excluded. For example, digital technologies can help bridge the digital divide and provide access to financial and other essential services to people in rural or remote areas.

Overall, the digital economy has positively impacted Singapore's economy and society, and the government is continuing to invest in and support its development to drive further growth and transformation in the country (Anggara & Cao, 2019).

One that is very fast is the digital economy sector in Business-to-Consumer (B2C) and Business-to-Business (B2B) E-Commerce. The improvement in this growth is the increased use of the Internet and cell phones, as well as logistics and e-payment systems, due to consumers' increased convenience, trust, and convenience in shopping online. The Thai government focuses on the Thailand 4.0 policy, including allocating a budget for building broadband networks in all corners of Thailand. The Thai government also envisions creating a digital application platform to promote online activities, including E-Marketplace, E-Payment, and E-Government. In the end, Thailand aims for residents in all parts of Thailand to be able to do E-Commerce business for their local products. The impact of the digital economy in Thailand includes a contribution to GDP, efficiency, innovation, and inclusion for the country. Thailand has set a digital economy roadmap for 2023, namely robotics, to contribute to the

nation's economy. Every business and organization has the opportunity to develop and unlock its potential through digital transformation. By 2030, the digital economy is expected to contribute 30% to the country's GDP. By then, Thailand's digital transformation will generate an annual economic value of USD 65 billion.

Additionally, approximately 65% of Thailand's digital opportunities will be driven by applications that help businesses reduce economic impact. In terms of consumer data protection, Thailand itself has laws that protect its people, as recorded in the Thai Personal Data Protection Act by the State Gazette of the Kingdom of Thailand. Its purpose is to protect website users from unauthorized collection and use of their data. To support its growth and development, the government of Thailand has made several policies and initiatives, including the National Digital Economy Policy Framework, Thailand Digital Park, Promotion and Development of E-commerce, Skills Development, Cyber Security, and Regulating the Digital Economy. These policies and initiatives demonstrate the Thai government's commitment to promoting the development of the digital economy and leveraging technology to drive economic growth and improve the lives of its citizens (Kunkel & Matthes, 2020; Kasatpibal et al., 2022).

Singapore and Thailand Government Policy for Digital Economy and Development

The Singapore government has a comprehensive policy for developing its digital economy to promote innovation, boost competitiveness, and improve its citizens' overall standard of living. Some of the critical elements of the government's policy include Smart Nation Initiative: Launched in 2014, the Smart Nation Initiative aims to use technology to transform Singapore into a leading digital city where citizens can enjoy a high quality of life and businesses can thrive. The initiative encompasses many areas, including transportation, healthcare, and the public sector. Digital Transformation of Industries: The government is actively promoting the digital transformation of critical industries, such as finance, healthcare, and tourism, through initiatives such as the Financial Sector Technology and Innovation (FSTI) plan, the

Healthcare Transformation Map, and the Tourism Technology Fund. **Development of Digital Infrastructure:** The government is investing in developing a robust digital infrastructure, including expanding high-speed broadband and deploying 5G networks. This will support the growth of the digital economy and provide citizens with access to advanced digital services. **Fostering a Culture of Innovation:** The government is encouraging the development of a culture of innovation in Singapore through initiatives such as the Infocomm Media Development Authority's (IMDA) Tech Skills Accelerator and the SG:D Talent Program. These initiatives aim to equip citizens with the skills to participate in the digital economy. **Data Privacy and Cybersecurity:** The government is committed to protecting personal data and promoting cybersecurity in the digital economy (Aguerre, 2019). This is reflected in laws such as the Personal Data Protection Act (PDPA) and the Cybersecurity Act, as well as initiatives such as the Cyber Security Agency of Singapore's (CSA) Industry Partnership Program. Overall, the Singapore government is taking a proactive and comprehensive approach to developing its digital economy, promoting innovation, fostering digital skills, and ensuring personal data protection and cybersecurity.

In 2021, Thailand's digital businesses had a gross merchandise value (GMV) of USD 30 billion. This number is set to reach USD57 billion in 2025, behind Indonesia's USD146 billion, reported ASEAN Briefing. Thailand's digital economy is mainly driven by e-commerce. It had a GMV of USD21 billion last year and is expected to reach USD35 billion in 2025. According to the Bangkok Post, as technology and customer behavior continue to evolve, organizations will need digital transformation strategies to stay ahead of the competition. In 2030 the digital economy is expected to contribute 30 % to the nation's GDP (Statham et al., 2020). At that point, Thailand's digital transformation will have unlocked an annual economic value of USD65 billion. Moreover, approximately 65 % of Thailand's digital opportunities will have driven by applications that help businesses mitigate the economic impact of the pandemic (Intaratat, 2021).

Meanwhile, The Thai government recognizes the importance of the digital economy and has implemented many policies and initiatives to

support its growth and development. The government has established a national policy framework to guide the development of the digital economy, which outlines its vision, objectives, and strategies for the sector. Digital Economy Promotion Agency (DEPA) is the government agency responsible for promoting the development of the digital economy in Thailand. Its website provides detailed information about the government's policies and initiatives for the sector and the support services and resources available to businesses by launching Digital Park Thailand, a hub for technology and innovation designed to attract start-ups, tech companies, and investors to the country. The park provides a range of facilities and support services to help businesses succeed (Komin et al., 2021).

Thailand also offers tax incentives and subsidies to active businesses in the sector. It is also working to improve the legal and regulatory environment for e-commerce to make it easier for businesses to operate and grow. The government is investing in skills development programs to help citizens acquire the digital skills they need to participate in the digital economy. This includes providing training and education programs and incentives for businesses to invest in employee training. These policies and initiatives demonstrate the Thai government's commitment to promoting the development of the digital economy and leveraging technology to drive economic growth and improve the lives of its citizens.

CONCLUSION

The Covid-19 pandemic led to a decline in several sectors, including the economy. However, a new economic structure, the "digital economy," emerged and saw incredible growth rates throughout ASEAN. Singapore and Thailand have both invested in the digital economy to drive economic growth and competitiveness. The government has supported the development of digital services, such as electronic payments and online forms, to limit direct interaction and reduce the spread of Covid-19. The digital economy has positively impacted the economy and society in Singapore and Thailand, and the governments continue to invest in and support its development. Thailand has also implemented policies on social distancing and remote work, resulting in high economic activity through

social media, the Internet for telecommunication, and video streaming. By following best practices such as developing a robust digital infrastructure, cultivating a culture of innovation, increasing cyber security measures, promoting digital literacy and skills development, driving digital adoption, and building a regulatory framework, both countries can succeed in the digital economy, and the digital economy can contribute to each country development.

Recommendations for Best Practice through digital economy and development

Singapore should ensure that they comply with the Personal Data Protection Act (PDPA) and other relevant laws and regulations regarding data protection and privacy laws and regulations. This includes implementing appropriate measures to protect personal data and having clear policies and procedures for data management. Singapore should implement robust cyber security measures to protect its systems and networks from cyber threats. This includes having in place firewalls, anti-virus software, and regular security updates, as well as conducting regular security assessments and penetration testing.

Singapore should embrace digital transformation and adopt digital technologies to improve its operations and enhance the customer experience. This includes adopting cloud computing, big data analytics, and artificial intelligence to gain a competitive advantage. Singapore should invest in talent development to ensure they have the right skills and capabilities to succeed in the digital economy. This includes providing training and development programs and creating a culture of innovation and collaboration. Collaborate with government agencies such as the Information and Communication Media Development Authority (IMDA) and the Cyber Security Agency of Singapore (CSA) to tap into the resources and support available to promote the growth of the digital economy. By following these best practices, organizations can succeed in the digital economy and contribute to its development in Singapore. Second, **Thailand**, Thailand should focus on building a robust digital infrastructure capable of supporting the growing demands of the digital economy. This includes investing in high-speed internet networks, data centers, and

cloud computing services. Encouraging entrepreneurship and innovation is vital to developing a robust digital economy. The government should provide support and resources to start SMEs to help them succeed. As the digital economy grows, it is critical to ensure the safety and security of online transactions.

Thailand should invest in cyber security measures to prevent cybercrime and protect consumers' personal and financial information. The digital economy requires a highly skilled workforce. Thailand should promote digital literacy and provide training and education programs to help citizens develop the necessary skills to participate in the digital economy. Encouraging Digital Adoption: To fully realize the benefits of the digital economy, Thailand should encourage widespread adoption of digital technologies by businesses, government agencies, and consumers. This can be achieved by offering incentives, providing education and support, and simplifying the digital adoption process. Building a Regulatory Framework: The digital economy is a rapidly evolving field, and it is essential to have a clear and effective regulatory framework to manage its growth and development.

Finally, Thailand should work to establish a regulatory framework that promotes innovation while protecting consumers' rights and interests. By following these best practices, organizations can succeed in the digital economy and contribute to its development in Thailand.

REFERENCES

- Adams, K. M., Choe, J., Mostafanezhad, M., & Phi, G. T. (2021). (Post-) pandemic tourism resiliency: Southeast Asian lives and livelihoods in limbo. *Tourism Geographies*, 23(4), 915-936. <http://dx.doi.org/10.1080/14616688.2021.1916584>
- Aguerre, C. (2019). Digital trade in Latin America: mapping issues and approaches. *Digital Policy, Regulation and Governance*, 21(1), 2-18. <https://doi.org/10.1108/DPRG-11-2018-0063>
- Altinay, L., & Taheri, B. (2019). Emerging themes and theories in the sharing economy: a critical note for hospitality and tourism. *International journal of contemporary hospitality management*, 31(1), 180-193.

- <https://doi.org/10.1108/IJCHM-02-2018-0171>
- Amornkitvikai, Y., Tham, S. Y., Harvie, C., & Buachoom, W. W. (2022). Barriers and Factors Affecting the E-Commerce Sustainability of Thai Micro-, Small-and Medium-Sized Enterprises (MSMEs). *Sustainability*, 14(14), 8476. <https://doi.org/10.3390/su14148476>
- Anggara, S., & Cao, Z. (2019). E-Commerce in Singapore and Indonesia: Comparison of Policies. *International Journal of Science and Society*, 1(1), 12-23. <https://doi.org/10.54783/ijssoc.v1i1.6>
- ASEAN. (2023). ASEAN Post-COVID Digital Policy Priorities: How do COVID-19 and emerging economic drivers change ASEAN digital policy priorities? Retrieved from <https://asean.org/wp-content/uploads/2023/04/Completion-Report-ASEAN-Post-Covid-Digital-priorities.pdf>
- Boonlua, S., Gan, C., Palasak, S., & Chuwiruch, N. (2022). Strategic Agility Determinants: Achieving Organisational Goals in the E-Commerce Business, Thailand. *Journal Of Algebraic Statistics*, 13(3), 4747-4761.
- Cheong, H. J., & Morrison, M. A. (2008). Consumers' reliance on product information and recommendations found in UGC. *Journal of interactive advertising*, 8(2), 38-49. <https://doi.org/10.1080/15252019.2008.10722141>
- Chotigo, J., & Kadono, Y. (2022). Are there any key factors that encourage food delivery applications use during the COVID-19 pandemic in Thailand and the role of HRM? *Human Systems Management*, 41(2), 177-198. <https://doi.org/10.3233/HSM-201140>
- Darmastuti, S., Juned, M., Susanto, F. A., & Al-Husin, R. N. (2021). COVID-19 dan kebijakan dalam menyikapi resesi ekonomi: Studi kasus Indonesia, Filipina, dan Singapura. *Jurnal Madani: Ilmu Pengetahuan, Teknologi, Dan Humaniora*, 4(1), 70-86. <https://doi.org/10.33753/madani.v4i1.148>
- Djalante, R., Nurhidayah, L., Van Minh, H., Phuong, N. T. N., Mahendradhata, Y., Trias, A., & Miller, M. A. (2020). COVID-19 and ASEAN responses: Comparative policy analysis. *Progress in Disaster Science*, 8, 100129. <https://doi.org/10.1016/j.pdisas.2020.100129>
- Easley, D., & Kleinberg, J. (2010). *Networks, crowds, and markets: Reasoning about a highly connected world*. Cambridge university press. <https://doi.org/10.1017/CBO9780511761942>
- Erh, J. (2021). Assessing digital economy policies in six Southeast Asian countries. 50, pp. 1-19, 2021. ISSN 2335-6677 Retrieved from <https://www.iseas.edu.sg/articles-commentaries/iseas-perspective/2021-50-assessing-digital-economy-policies-in-six-southeast-asian-countries-by-joey-erh/>
- Ingaldi, M., & Ulewicz, R. (2018). Evaluation of Quality of the e-Commerce Service. *International Journal of Ambient Computing and Intelligence (IJACI)*, 9(2), 55-66. <https://doi.org/10.4018/IJACI.2018040105>
- Intaratat, K. (2021). Digital skills scenario of the workforce to promote digital economy in Thailand under & post COVID-19 pandemic. *International Journal of Research and Innovation in Social Science*, 10, 116-127. <https://doi.org/10.4236/ojbm.2022.101007>
- Kasatpibal, N., Oberdorfer, P., Katip, W., Mektrirat, R., Wattananandkul, U., & Thummathai, K. (2022). Factors predicting practices in prevention of COVID-19 and impacts among population in Chiang Mai, Thailand. *Medicina*, 58(4), 505. <https://doi.org/10.3390/medicina58040505>
- Kim, H. (2019). Globalization and regulatory change: The interplay of laws and technologies in E-commerce in Southeast Asia. *Computer Law & Security Review*, 35(5), 105315. <https://doi.org/10.1016/j.clsr.2019.03.009>
- Komin, W., Thepparp, R., Subsing, B., & Engstrom, D. (2021). Covid-19 and its impact on informal sector workers: a case study of Thailand. *Asia Pacific Journal of Social Work and Development*, 31(1-2), 80-88. <https://doi.org/10.1080/02185385.2020.1832564>
- Kraiwanit, T. (2016). Underground digital economy in Thailand. *Review of Integrative Business and Economics Research*, 5(4), 29-39. ISSN: 2304-1013 Retrieved from https://sibresearch.org/uploads/3/4/0/9/34097180/riber_s16-031_29-39.pdf
- Kunkel, S., & Matthes, M. (2020). Digital transformation and environmental

- sustainability in industry: Putting expectations in Asian and African policies into perspective. *Environmental Science & Policy*, 112, 318-329.
<https://doi.org/10.1016/j.envsci.2020.06.022>
- Kurnia Rahayu, S., Budiarti, I., Waluya Firdaus, D., & Onegina, V. (2023). Digitalization and informal MSME: Digital financial inclusion for MSME development in the formal economy. *Journal of Eastern European and Central Asian Research (JEECAR)*, 10(1), 9-19.
<https://doi.org/10.15549/jeecar.v10i1.1056>
- Lei, T., & Yuwei, T. (2019). Digital Governance Model for Big Data Era----Based on Typical Practices in Singapore. *Humanities and Social Sciences*, 7(2), 76-82.
<https://doi.org/10.11648/j.hss.20190702.15>
- Marome, W., & Shaw, R. (2021). COVID-19 response in Thailand and its implications on future preparedness. *International journal of environmental research and public health*, 18(3), 1089.
<https://doi.org/10.3390/ijerph18031089>
- Noorit, N., Thapayom, A., & Pornpundejwittaya, P. (2020). Guidelines for adaptation of the Thai industrial business to support the digital economy. *Academy of Strategic Management Journal*, 19(6), 1-15.
<https://doi.org/10.26668/businessreview/2023.v8i5.1896%20>
- Ramsetty, A., & Adams, C. (2020). Impact of the digital divide in the age of COVID-19. *Journal of the American Medical Informatics Association*, 27(7), 1147-1148.
<https://doi.org/10.1093/jamia/ocaa078>
- Rodchenko, V., Rekun, G., Fedoryshyna, L., Roshchin, I., & Gazarian, S. (2021). The effectiveness of human capital in the context of the digital transformation of the economy: The case of Ukraine. *Journal of Eastern European and Central Asian Research (JEECAR)*, 8(2), 202-213.
<https://doi.org/10.15549/jeecar.v8i2.686>
- Statham, P., Scuzzarello, S., Sunanta, S., & Trupp, A. (2020). Globalizing Thailand through gendered 'both-ways' migration pathways with 'the West': cross-border connections between people, states, and places. *Journal of Ethnic and Migration Studies*, 46(8), 1513-1542.
<https://doi.org/10.1080/1369183X.2020.1711567>
- Yang, C. (2022). Cross-border expansion of digital platforms and transformation of the trade and distribution networks of imported fresh fruits from Southeast Asia to China. *Global Networks*, 22(4), 716-734.
<https://doi.org/10.1111/glob.12352>
- Yaseen, A. (2021). Next-wave of E-commerce: Mobile customers churn prediction using machine learning. *Lahore Garrison University Research Journal of Computer Science and Information Technology*, 5(2), 62-72.
<https://doi.org/10.54692/lgurjcsit.2021.0502209>
- Yongwang L., & Zhenxiong F. (2022). The Digital Divide and COVID-19: Impact on the Socioeconomic Development in Asia and the Pacific. *ESCAP Working Paper Series: Information And Communications Technology And Disaster Risk Reduction Division*. Retrieved from
<https://www.unescap.org/kp/2022/digital-divide-and-covid-19-impact-socioeconomic-development-asia-and-pacific>

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