



## Background Paper

# ASEAN Development Prospective Toward Shared Prosperity in the Post-COVID-19 Pandemic

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## Abbreviation

ADB	Asian Development Bank
AEC	ASEAN Economic Community
AMS	ASEAN member states
ASEAN	Association of Southeast Asian Nations
CPTPP	Comprehensive and Progressive Agreement for Trans-Pacific Partnership
EVFTA	EU-Vietnam Free Trade Agreement
FDI	Foreign Direct Investment
FTA	Free Trade Agreement
GDP	Gross Domestic Product
ICT	Information Communication Technology
ILO	International Labour Organisation
IMF	International Monetary Fund
PRO	Prosperous, Resilient, and Open Society
RCEP	Regional Comprehensive Economic Partnership Agreement
SMEs	Small and Medium-Sized Enterprises
UKVFTA	UK-Vietnam Free Trade Agreement
WB	World Bank

## Summary

The COVID-19 pandemic has significantly impacted Southeast Asia, causing global economic disruption and reducing GDP by -2.4. However, it has also created opportunities for new businesses to grow and readjust drivers of global and regional economic growth, as confirmed by the adoption of digital technologies, e-commerce, and online services. This digital economy has pushed for stronger regional integration of ASEAN member states (AMS), as an effective mitigation strategy to control the pandemic. Myanmar's real GDP growth has been revised to reflect positive trends, while Vietnam has experienced minimal impact due to infrastructure investment and successful foreign policy. ASEAN countries aim to close development gaps, maintain their identity, and become a borderless economic community by 2030. This aspiration could be supported by the following policy options:

1. **Enhanced Digital Infrastructure Investment:** Increase government investments in digital infrastructure, including broadband connectivity and technology adoption, especially in less developed AMS such as Cambodia, Laos, and Myanmar. This will help improve access to digital services and foster inclusive growth.
2. **Capacity Building and Digital Literacy:** Prioritize digital literacy programs and education initiatives to ensure that all citizens, particularly youth, have the skills needed to participate in the digital economy. This includes incorporating digital skills into school curricula and providing vocational training programs.
3. **Regional Cooperation and Knowledge Exchange:** Facilitate knowledge exchange and cooperation among AMS to harmonize digital transformation policies and frameworks. Establish platforms for sharing best practices and expertise in areas such as e-government, digital innovation, and technology adoption.
4. **Support for SMEs and Startups:** Provide support for small and medium-sized enterprises (SMEs) and startups to accelerate their digital transformation. This could include financial incentives, access to funding, and training programs to help them adopt digital technologies and expand their market reach.
5. **Regulatory Reforms and Investment Climate:** Implement regulatory reforms to create a conducive environment for digital investment and innovation. This includes improving ease of doing business, streamlining regulations related to digital commerce, and protecting intellectual property rights.
6. **Promotion of Digital Inclusion:** Address the digital divide by ensuring equitable access to technology and digital services, especially in rural and underserved areas. This may involve initiatives to expand internet connectivity, reduce the cost of access, and promote digital inclusion policies.
7. **Cybersecurity and Data Protection:** Strengthen cybersecurity measures and data protection frameworks to build trust and confidence in digital technologies. This is essential for safeguarding sensitive information, promoting secure digital transactions, and protecting citizens' privacy.
8. **Parliamentary Oversight and Policy Support:** Empower parliamentary institutions to play a proactive role in shaping digital policies and strategies. This includes allocating resources for digital initiatives, monitoring progress, and advocating for policies that promote inclusive digital growth.

By implementing these policy options, ASEAN may not be able to achieve its goal to have a borderless economic society by 2030 but they can help promote connectivity and inclusive growth, leverage the opportunities offered by digital transformation, and advance towards its vision of becoming a dynamic and prosperous economic community.

## 1. Introduction

The unprecedented COVID-19 pandemic affecting southeast Asia in early 2020 has not yet been completely controlled as of October 2023. All ASEAN member states (AMS) have done their best to upgrade social protection and basic healthcare for all in response to the COVID-19 pandemic [1,2,3]. The pandemic is a two-edged sword, resulting in global economic disruption and reducing GDP by -2.4 (Table 1), exhausting health system capacity, and especially disturbing, the global and regional trade and supply chains. At the same time, it has created opportunities for new businesses to grow and readjust drivers of global and regional economic growth, confirmed by the flourish of adopting digital technologies, e-commerce, and online services [4]. The rise of this digital economy has further pushed a stronger regional integration of AMS which is considered an effective mitigation strategy to control the pandemic while there are risks of depending on, distracted nations such as the US and EU markets [5].

Table 1: Real Growth by ASEAN Member States, 2019 - 2028

	Real GDP growth (Annual % change)						Average 2024-2028
	2019	2020	2021	2022	2023	2028	
1. Brunei	3.9	1.1	-1.6	-1.5	3.3	3.1	3.1
2. Cambodia	7.1	-3.1	3.0	5.0	5.8	6.3	6.3
3. Indonesia	5.0	-2.1	3.7	5.3	5.0	5.0	5.0
4. Laos PDR	4.7	-0.4	2.1	2.3	4.0	4.5	4.2
5. Malaysia	4.4	-5.5	3.1	8.7	4.5	3.9	4.2
6. Myanmar	6.8	3.2	-17.9	2.0	2.6	3.4	2.8
7. Philippines	6.1	-9.5	5.7	7.6	6.0	6.4	6.2
8. Singapore	1.3	-3.9	8.9	3.6	1.5	2.5	2.4
9. Thailand	2.1	-6.2	1.6	2.6	3.4	3.1	3.2
10. Vietnam	7.4	2.9	2.6	8.0	5.8	6.7	6.8
<b>ASEAN</b>	<b>4.9</b>	<b>-2.4</b>	<b>1.1</b>	<b>4.4</b>	<b>4.2</b>	<b>4.5</b>	<b>4.4</b>

Source: IMF dataset available at <https://www.imf.org/external/datamapper/datasets>, accessed on 12 September 2023

Despite the continuing internal conflict of almost three years [6], the real GDP growth of Myanmar has been revised to positive trends after falling to - 17.9 % in 2021. Among the AMS, only Vietnam has experienced the least impact on economic growth with a positive record of economic growth while other AMS had experienced negative growth during the pandemic. The positive growth of Vietnam was due largely to infrastructure investment and the success of foreign policy to increase global trade including the [EU-Vietnam Free Trade Agreement \(EVFTA\)](#), the [UK-Vietnam Free Trade Agreement \(UKVFTA\)](#), and the [Comprehensive and Progressive Agreement for Trans-Pacific Partnership \(CPTPP\)](#) with exports to Canada and Mexico, which have boosted international exports. In addition, competitive wages in the regions and friendly investment policies have attracted foreign direct investment FDI (7). In contrast, other AMS have been struggling to retain the volume of exports during the pandemic in 2020 and 2021[1, 8].

Unavoidably, ASEAN's economic recovery from the pandemic has been threatened by beleaguered global supply chains as a result of the Russia-Ukraine war [9]. ASEAN countries wish to build their unique ways of integration to close development gaps, maintain their identity, and become a borderless economic community by 2030[10]. In this vein, this background paper reviews the growth and digital transformation of ASEAN member states (AMS) as noted by the latest international digital reports and/or articles and various international statistics such as the International Monetary Fund (IMF), World Bank (WB), Asian Development Bank (ADB), International Labour Organisation (ILO), and global rankings of the AMS, (i.e. [Global knowledge index 2022](#), [Digital Skills Gap Index 2020](#), [Digital Integration Index 2021](#), [Digital Competitiveness Ranking 2022](#), [Global Innovation Index 2022](#), [network readiness index 2022](#), [Ease of Doing Business rankings 2020](#), and [Global Talent Competitiveness Index 2022](#) available for online access to answer the following questions:

- What is the progress and challenges for promoting integration and cooperation for resilient and shared growth and development during the post-pandemic era?
- How should parliaments of AMS work together to address challenges in promoting integration and cooperation for a stronger, resilient and shared development in ASEAN?

## 2. ASEAN's Growth and Development Diversity

The AMS have exhibited various stages of growth and development in terms of GDP per capita, urbanization, knowledge, and innovation. For example, two countries, Singapore and Brunei, have already reached high-income countries, while three others—Malaysia, Thailand, and Indonesia—have become upper-middle-income countries according to [the income classification of the World Bank in 2022 \(Figure 1\)](#). The other five countries—Vietnam, the Philippines, Cambodia, Lao PDR, and Myanmar—are grouped into lower middle incomes. This economic development gap is a great challenge to achieving [economic integration or convergence in 2025](#).

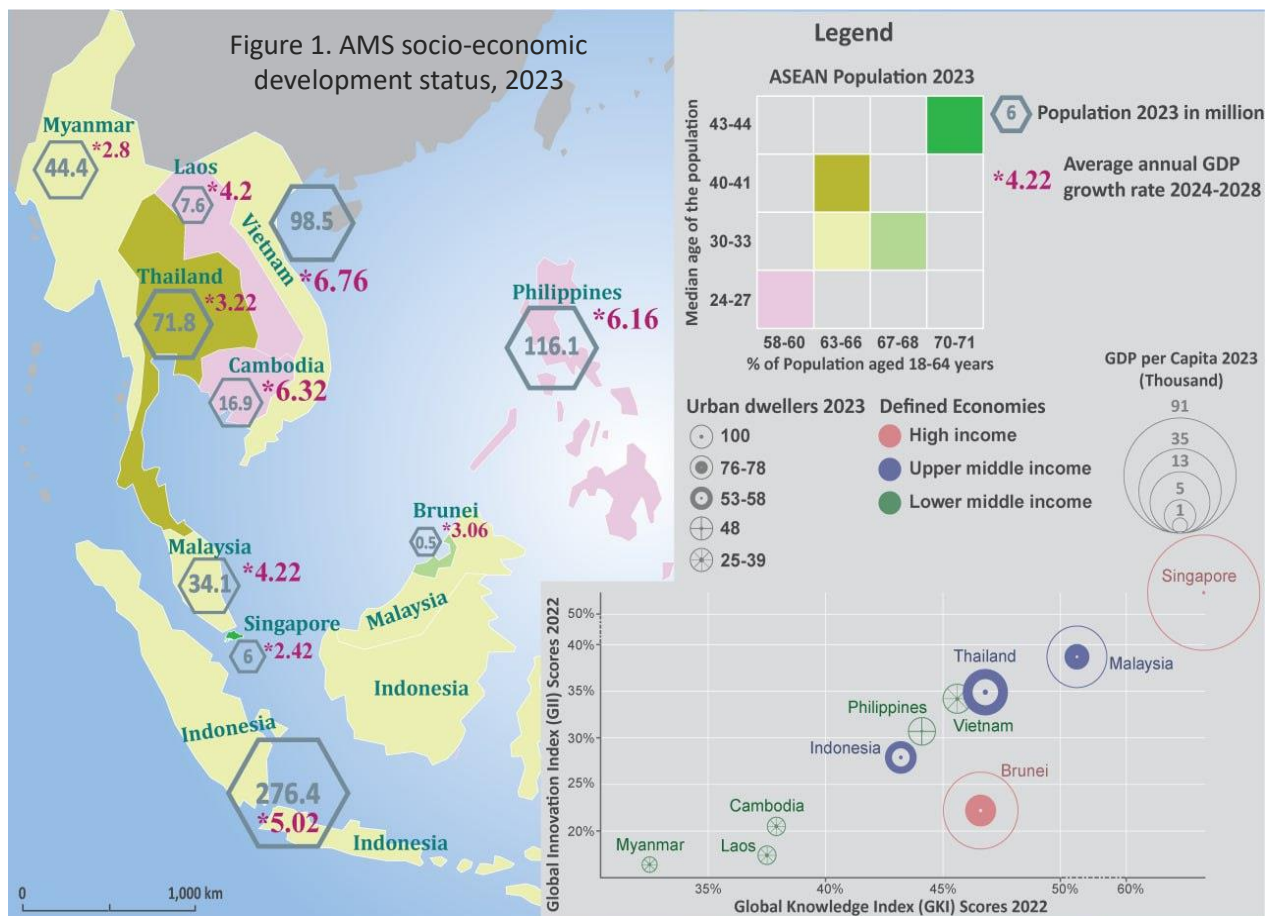
Indonesia is the largest economy with a current GDP of more than 35 % of ASEAN GDP at around 3943 million USD followed by Thailand with more than 14 % of ASEAN GDP in 2023 (Annex 1). Singapore, the third largest economy in Southeast Asia, is the most advanced country in the region, with a per capita income of 91,100 USD in 2023, even a higher level than the United States of 80,035 USD per person, and China with 13,721 USD per person (see Figure 1 and Annex 1 for more details).

If Myanmar attains political stability it must push economic efforts more than 77 times to raise the GDP per capita to that of Singapore while Lao PDR and Cambodia have to raise their economies 49 and 48 times respectively to reach Singapore's level of per capita income in 2023 (Annex 1). Although Brunei has already joined the high-income group, its GDP per capita is almost 2 times lower than Singapore while Vietnam would have to increase its economic efforts 20 times to catch up with Singapore. Even though such predictions did not capture the different trajectories of economic, social, and political systems in each AMS, it does indicate great variations for ASEAN to achieve the embodiment of 'unity in diversity' bonded together in peace, security, and prosperity. Along with such efforts, political stability is the initial foundation of growth and development.

Figure 1 also shows large gaps in knowledge and innovation among AMS after seven years of implementing the ASEAN Plan of Action to accelerate the adoption of science, technology, and Innovation, [2016–2025](#). For example, Cambodia, the Lao PRD, and Myanmar are struggling to catch up with others. These countries would likely need to double or triple their development efforts to build human capital for growth to reach Singapore's level in 2023 (Figure 1). Strengthening their knowledge capital and the ability to build effective knowledge economies should have seen a committed for probably 20 - 30 years, at least, to gain equitable and sustainable development, which necessitates increasing the quality of pre-university education, technical and vocational education, and training (TVET), and higher education. Interestingly, a high-income country such as Brunei with a good knowledge index still requires adopting innovation, which includes the political environment, education, infrastructure, and knowledge creation for sustainable development (Figure 1).

This disparity calls for stronger intra-capacity exchange or learning the best digital transformation options from the well-developed AMS for growing together and fostering a stronger trust and better convergent among the AMS. AMS have yet to unite to take advantage of its relationship with the United States and China [11]. The uncertainty for AMS unity is also rising from the issue of the South China Sea and the current trade war between the United States and China [12]. Nonetheless, the AMS leaders, as a Community of Southeast Asian nations, have concentrated on being outward-looking, living in peace, stability, and prosperity, bonding together in partnership in dynamic development and in a community of

caring societies [13]. [ASEAN Economic Community 2025](#) also stresses the importance for AMS to work collectively to find ways to ensure that the people of ASEAN can continue to live in a peaceful, secure, and prosperous region [14]. Building intra-regional trust and utilization of collective synergies remains a primary requirement to ensure these visions for ASEAN sharing growth.



\* Source of legends:

- Population and urban dwellers were taken from the Digital 2023 Global Overview Report, available at <https://datareportal.com/reports/digital-2023-global-overview-report>, accessed on September 14, 2023.
- GDP per capita and average annual GDP growth rate were taken from the IMF dataset, available at <https://www.imf.org/external/datamapper/datasets>, accessed on September 11, 2023.
- Global Innovation Index was taken from WIPO, 2022, available from <https://www.wipo.int/edocs/pubdocs/en/wipo-pub-2000-2022-en-main-report-global-innovation-index-2022-15th-edition.pdf>, accessed on September 8, 2028.
- The Global Knowledge Index scores of ASEAN member states were taken from UNDP (2022), available at [https://knowledge4all.com/admin/2022/Methodology/GKI2022\\_Methodology\\_EN.pdf](https://knowledge4all.com/admin/2022/Methodology/GKI2022_Methodology_EN.pdf), accessed on September 7, 2023.

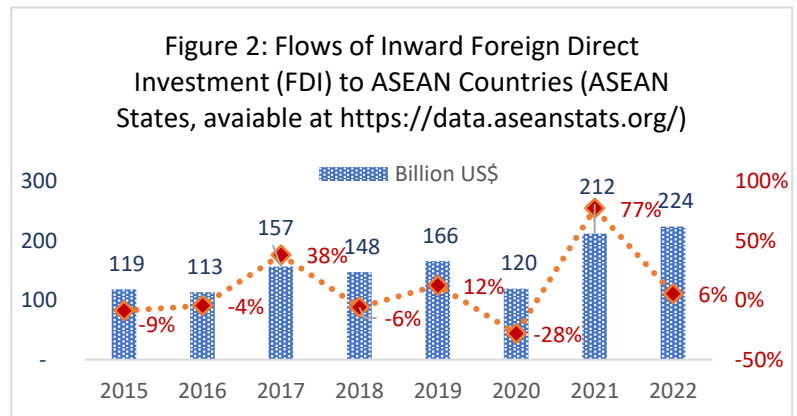
### 3. ASEAN Expectations in 2023

By 2030 the ASEAN economy is expected to eclipse Japan’s and become the fourth largest single market after the EU, US, and China. According to the ASEAN Economic Community ([AEC Blueprint](#)), a ten-year implementation plan (2016-2025), AMS is strongly committing to achieve five key milestones by 2025 to become the world's fourth-largest economy by 2030 [15]. The five milestones are: i) a highly integrated and cohesive economy; ii) a competitive, innovative, and dynamic ASEAN; iii) enhanced connectivity and sectoral cooperation; iv) a resilient, inclusive people-oriented, and people-centred ASEAN; and v) a global ASEAN. There are many factors driving the rise, not the least of which is advantages of encompassing a



young population of 672 million and a growing middle class (Annex 1), but also a geographic position situated at the confluence of major trade routes with 3.7 trillion USD of global trade passing through each year [10]. ASEAN has resumed business even though COVID-19 has slowed economic expansion as the worst effects of the epidemic continue to recede. With forecasts that the middle class in Southeast Asia will rapidly increase to 65% of the population by 2030 from the 29% it was in 2010 [16] and is a large market of 72.3 million people, and an attractive destination for foreign direct investment (FDI), second only to China and is expected to play an important role in the global economic recovery.

The FDI flows have returned to pre-epidemic levels (Figure 2), reflecting the attractiveness of the regional economy for global investors. Despite the gloomy state of the economy right now, several industries such as tech, manufacturing, and infrastructure development, seem to be well-positioned for development in 2023, and the ASEAN region remains particularly appealing for FDI. James Fox (2023) noted that ASEAN manufacturing, an important part of the regional economy, continues to attract capital inflows in

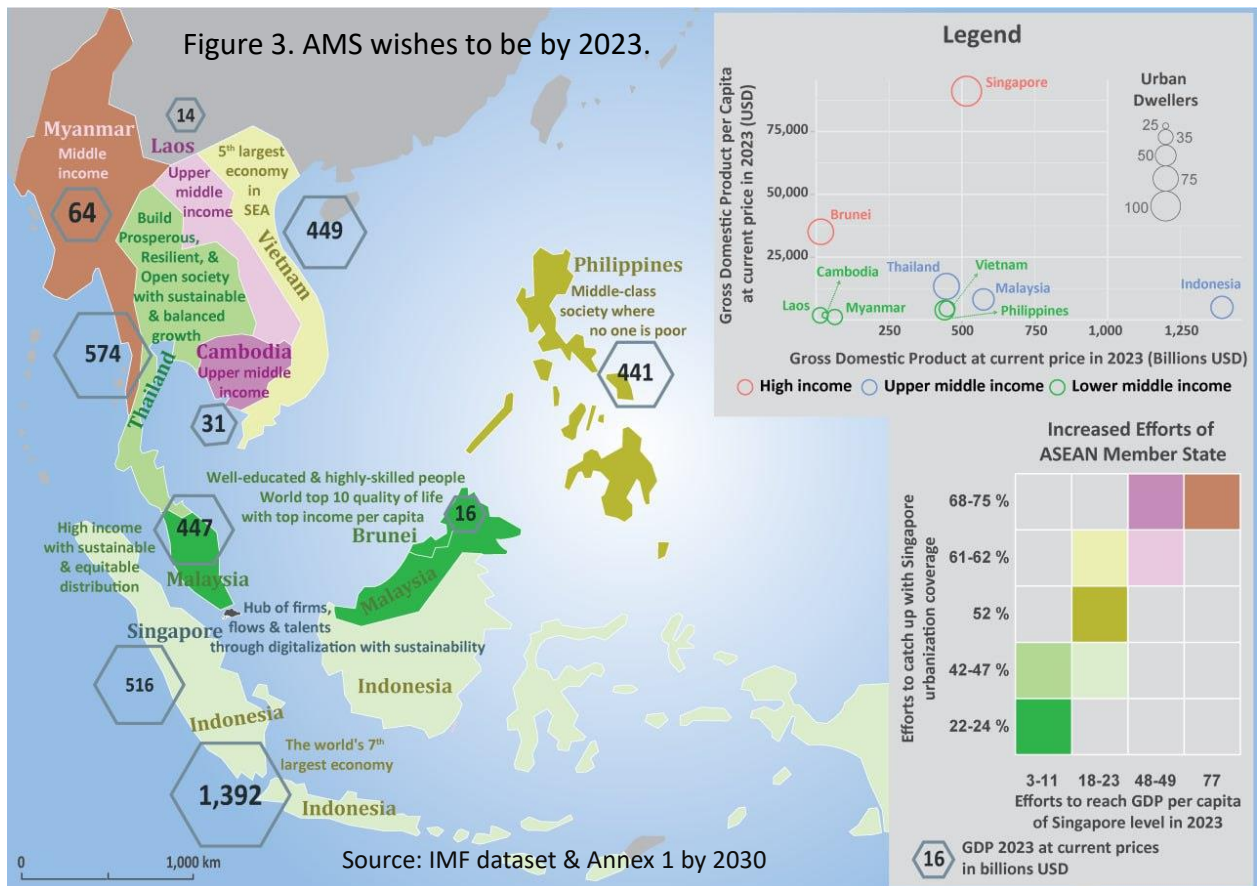


2023 as its goods are more cost-effective than those made in China, primarily due to factors such as labour costs, leading to the growing shift to ASEAN. The US-China trade war has forced many China-based manufacturers to move part of, and in some cases, all of their supply chains to Southeast Asia[17]. In addition, the travel and tourism sectors will benefit greatly from China's "reopening," and patterns of capital inflow into crucial areas like IT, manufacturing, and infrastructure development will increase [17].

Singapore with the highest developed human capital, innovation, [digital readiness](#), and [network business index](#) is the leading AMS to receive FDI, accounting for 61.3%, followed by Indonesia with 9.9%, Vietnam with 7.4%, Thailand with 6.9%, Malaysia, and the Philippines with around 5.7% of 212 billion US dollars in 2021 (Figure 2 and Annex 2). This reflects the level of trust in doing business in those countries with relatively higher skills competency of human resources in Singapore. With its strong human capital, large population and educated people Indonesia is the second largest recipient of FDI in ASEAN.

This diversity has posed a challenge as to whether ASEAN can become a [borderless community by 2030](#). Singapore, the most advanced economy in the region, wishes to become a hub of firms, a hub of transportation and trade flows, and talents by harnessing new growth opportunities in sustainability and digitalization (Figure 3, Annex 3a and 3b). Brunei expects to become a dynamic and sustainable economy with a high income per capita, well-educated, and highly skilled people, and a quality of life reaching the top 10 nations in the world by 2035. Malaysia aims to become a high-income country with sustainable and equitable distribution by 2030. Thailand commits to building a prosperous, resilient, and open society (PRO), moving to a forward-looking trajectory for sustainable and balanced growth. This is a critical challenge for Thailand as it is trapped in a "middle-income country", and to get richer it will require innovation and technology upgrades [18]. For the less developed AMS, increasing investment in education and higher quality human capital and agricultural and governance reform may be a good approach for other lower middle-income countries in the region to move out of this. This approach would help the AMS to break the regional gaps for attaining stronger connections and integration. Singapore's development level can be the target of other AMS growth. In addition, the development prospects of these AMS largely depend on the success of their respective foreign policies with the United States, China, and the European community for bilateral and multilateral trade agreements.





#### 4. ASEAN Destination and Digital Transformation

ASEAN is in the world's largest free trade agreement under the Regional Comprehensive Economic Partnership Agreement (RCEP) with its five FTA partners (Australia, China, Japan, New Zealand, and the Republic of Korea). The AMS is expected to benefit from removing import duties; promoting facilitation, protection, and investment liberation; protection of intellectual property rights, facilitation in e-commerce; and economic and technical cooperation. With the RCEP and FTA, AMS could continue to harness the opportunities of digital transformation to support regional recovery and improve the lives of its people. By 2030, the digital economy will reach 1 trillion USD [19]. Digital transformation to increase and sustain connectivity, infrastructure, human capital and skills, citizen participation, the development of the digital private sector, digital government, and supporting regulation will help advance and grow AMS economies. Much of this potential growth can be attributed to new technologies, products, and services, such as e-wallets, which are aimed at improving accessibility for consumers. Young dynamic populations and growing urbanization are a good combination for digital transformation [3] or attracting FinTech investment across the 10 ASEAN countries, reaching US \$ 4.3 billion (S \$ 5.72b) in the first nine months of 2022, which is higher than the sum from 2018 to 2020. [20].

There is a need to breach the disparity of access to technology for inclusive growth in ASEAN. For example, in 2020, only 53 % of rural children and adolescents had internet at home, compared to 72 % of urban children. A small portion of homes have high-speed internet access in Cambodia, Laos, and Myanmar. While mobile penetration is high in most ASEAN countries, many people still do not have unlimited internet access on their mobile devices. The cost of accessing digital networks is also too high, thus limiting internet access. AMS could work together to address this gap of access to technology through improving digital infrastructure and building the capacity of civil servants to accelerate the digital delivery of services.

Only five AMS participate in the global competitiveness ranking in 2022. Singapore demonstrated 99.48 points out of 100, followed by Malaysia with 76.42 points, Thailand with 68.19 points, Indonesia with 56.74 points and the Philippines with 56.74 points while there is no information about the other countries (ANNEX 1).

However, exchanging expertise among AMS at this stage could help to harmonize their digital transformation policy and framework of actions for better economic integration and sustainable growth in the region. Below are specific expertise/skills that each AMS can learn to speed up the digital integration as noted by the [ASEAN Digital transformation](#) for each AMS,

1. Brunei Darussalam: Managing Civil Service Competencies
2. Cambodia: Public Service Delivery
3. Indonesia: ASEAN Pool of Experts on Civil Service
4. The Lao PDR: Civil Service Performance Appraisal
5. Malaysia: Innovation in the Civil Service through Strategic Collaboration
6. Myanmar: Public Service Motivation
7. The Philippines: Assessment and Organization Development
8. Singapore: Leaders in Strategic Human Resource Program – Building a Future-Ready Public Service
9. Thailand: Human Resource Innovation
10. Viet Nam: Centre for Personnel Management

## 5. Individual AMS for Digitalization Future

Brunei recently launched the [Digital Economy Masterplan 2025](#) envisioning a smart nation through digital transformation to drive and enhance Brunei Darussalam's socio-economic growth through Digital Transformation to support the objective of Brunei Darussalam's Vision 2035 which includes high quality of life; highly educated, skilled and accomplished people, and a dynamic and sustainable economy (Annex 1). This "Smart Nation" is driven by Digital Government, Digital Economy, and Digital Society which are categorized by a vibrant and diversified economy; improved competitiveness and economic growth by developing infrastructure, innovation, data capability, human capital and other resources; and improved quality of life, public services, schools, safety, mobility of people and to achieve environment sustainability.

Cambodia has introduced its [Digital Economy and Society Framework for 2021–2025](#), aiming to 'build a vibrant digital economy and society by laying the foundations to promote digital adoption and transformation in all social actors, including the state, citizens, and businesses, to accelerate new economic growth and promote social welfare in the new normal' [Annex 1]. This policy framework sets out three principles: "Building Digital Foundations, Digital Adoption, and Digital Transformation" for implementation. The General Secretariat of the Digital Economy and Business Committee, a government body, was established in 2021 to update and prioritize relevant measures corresponding to each principle and actual needs for sustainable growth.

[Digital technology will help achieve high-income status by 2040](#) <sup>[21]</sup> and Indonesia to become the World's Fourth Largest Economy by 2050. There are four development pillars including human development and mastery of science and technology; sustainable economic development; equitable development; and national resilience and governance.

In addition, Malaysia established digital competency standards in 2015 to gauge the digital competency level of the Malaysian youth towards preparing them for the future workforce [22]. The Malaysia [Digital Economy Blueprint](#) in 2021 plans to improve digital literacy, create high-income employment opportunities, further streamline banking and finance, bring medical facilities to remote towns, and

provide access to virtual education nationwide [23]. This blueprint outlining efforts and initiatives will be implemented up to 2030; and by 2025 it hopes to see:

- all household with access to the internet, 500,000 new jobs created, and all students having access to online learning
- all civil servants possessing digital literacy and in all ministries and agencies providing a cashless payment option in 2022. However, there is about 80% usage of cloud storage across the government and 80% end-to-end online government services in 2022.
- efforts geared to a 30% improvement in productivity across all sectors by 2030, contributing 22.6% of the digital economy to Malaysia's GDP; having 875,000 micro, small, and medium enterprises (MSMEs) adopt eCommerce; and increasing the number of start-ups to 5,000.

The Philippines has undergone three decades of digital transformation, starting with the national information technology plan for the first 21st century (1992–1998), followed by various plans such as the e-Philippines Strategy Government Information Systems Plan (1998–2001), the Philippine Information Communication Technology (ICT) road map (2006–2010), the Philippines Digital Strategy of 2011–2016, the Philippines e-Government Master Plan of 2012 [24], and the current Philippine Digital Transformation Strategy 2022<sup>[25]</sup>. The strategy focuses on economic transformation, people engagement, and innovation, as well as infrastructure development, human capital development, and bridging the digital divide. The government is now introducing a [Digital Transformation Roadmap 2022-2026](#) to build a convergent hub using APIs, GovTech, digital tax bypass, and data engineering.

The Malaysian Economic Blueprint, launched in 2020, aims to advance the digital economy, which contributes 22.6% to Malaysia's GDP and is expected to rise to 25.5% by 2025 [26]. Key digital technologies include robotics, artificial intelligence, big data, the Internet of Things, cloud technology, blockchain, financial technology, and cybersecurity. The government has set six MyDigital Aspirations to fully realize the potential of the digital economy in achieving inclusive, responsible, and sustainable socioeconomic development. These include adopting a digital-first mindset, supporting local enterprises in digitalizing, establishing quality broadband and digital technologies infrastructure, nurturing a future-ready workforce, narrowing the digital divide among income and age groups, and building trust and ethics in data and technology. The initiative supports the national recovery strategy by encouraging adoption and creating opportunities in the digital economy and hastens the growth of the nation's digital ecosystem. The National Strategy focuses on eight main areas: the Islamic digital economy, smart cities, finance, healthcare, commerce, agriculture, services, and content.

Thailand is among the ASEAN countries that have seen the most rapid growth in digital infrastructure and e-commerce since the COVID-19 pandemic. It is aiming at: “maximizing the benefits of digital technologies, developing infrastructure for digital technology, raising the country's competitiveness with digital innovation, creating equal opportunities with information and digital services, developing human capital for the digital era, and creating public confidence. These efforts are set out in the [National Strategy of Thailand, 2018 – 2037](#)<sup>[27]</sup>. If these opportunities are fully captured, the digital transformation can create **up to USD 7.5 billion worth of economic value annually by 2030**, or equivalent to about 16 % of the country's GDP in 2020 [28]. This strategy is potentially supported by a combination of digital policies, including [the 20-Year National Strategy \(2017–2026\)](#) and [the 12th National Economic and Social Development Plan \(2017–2021\)](#), which have emphasized the use of digital technology to drive the nation's economy and society. The 8th strategy on science, technology, research, and innovation sets the framework for the areas to which digital technology can lend its support, namely: design and business management, digital transformation, and manufacturing and service industries. Digital technology has

been identified as one of the ten target industries and a new engine of growth. Moreover, the Thailand 4.0 policy calls for the transformation from value-added industries to value-creation industries, and digital technology is one of the key drivers to achieving this goal. In addition, Digital Park Thailand was introduced to support and promote the creation and transfer of digital technology, approved by the Eastern Economic Corridor Policy Committee on July 6, 2017[29].

The Government of Vietnam wishes to become a fully digital society by 2030, with support from the implementation of the National Digital Transformation Program 2025, with a focus on 2030[30]. With this program, Vietnam plans to achieve goals of developing a digital government, digital economy, digital society, and creating digital technology enterprises with global competitiveness. The aspiration is to lift the average growth rate of the digital economy to 20 % a year and labor productivity growth of 7 to 10 % by 2030 [31]. If this can be achieved, Vietnam will be in the top 20 globally and in the top three in ASEAN in terms of the global competitiveness index, as well as building a transparent and effective government to be in the world's top 50 in terms of e-government. Electronic transactions will be applied to boost the digital economy by 2030 [10]. This digital transformation will be divided into three phases:

- Phase 1 focuses on digitalizing industrial sectors and implementing digital transformation of the economy, society and state agencies in 2020-2022
- Phase 2 is to improve labor productivity, creating new growth momentum and competitiveness by 2023-25
- Phase 3 is to move towards the development of a comprehensive digital economy and society in the last period from 2026 to 2030.

Despite some progress, business enterprises struggle to adopt digital technologies due to technical, financial and regulatory constraints. These include conversion costs, weak internal infrastructure resources, data leakages and ineffective regulations [32]. The government has provided support for the digital transformation of enterprises through improvements in its framework for the digital economy, promotion of science and technology, taxation regime and SME assistance. Legal reforms could be further strengthened to support digital transformation, in addition to strengthened digital human resource skills and enhanced e-government capabilities.

The Lao PDR has set out a vision for the digital economy to grow from the current level of 3 % to 10 % of GDP by 2040 [33]. This vision will be achieved depending on the successful digital commitments and efforts noted in the National Digital Economic [Development Vision for 2021-2040](#), the National Digital Economic Development Strategy for 2021-2030, and [the National Digital Economic Development Plan for 2021-2025](#) [33]. The success will be felt in all facets of society including from the way people interact, learn, transact, and to the way the government delivers services (Government-to-Citizen), Government to Business, or Government to Government transactions) and how businesses sell goods/services and collect payments. Like Cambodia and Myanmar, Laos is still behind other ASMs in terms of digital readiness (Table 2). The government has shown a strong commitment to the implementation of digital initiatives based on their prioritization and a roadmap as noted in the above three initiatives. The efforts have been adopted by various government agencies, development partners, and private sectors and work to achieve the long-term goal of digital government transformation. The digitalization efforts not only increase administrative efficiency but also build the capacity of all sectors to maximize opportunities to bolster balanced economic growth and facilitate active communication and engagement with the citizens.

## **6. Digital Readiness of AMS for Sustainable Growth**

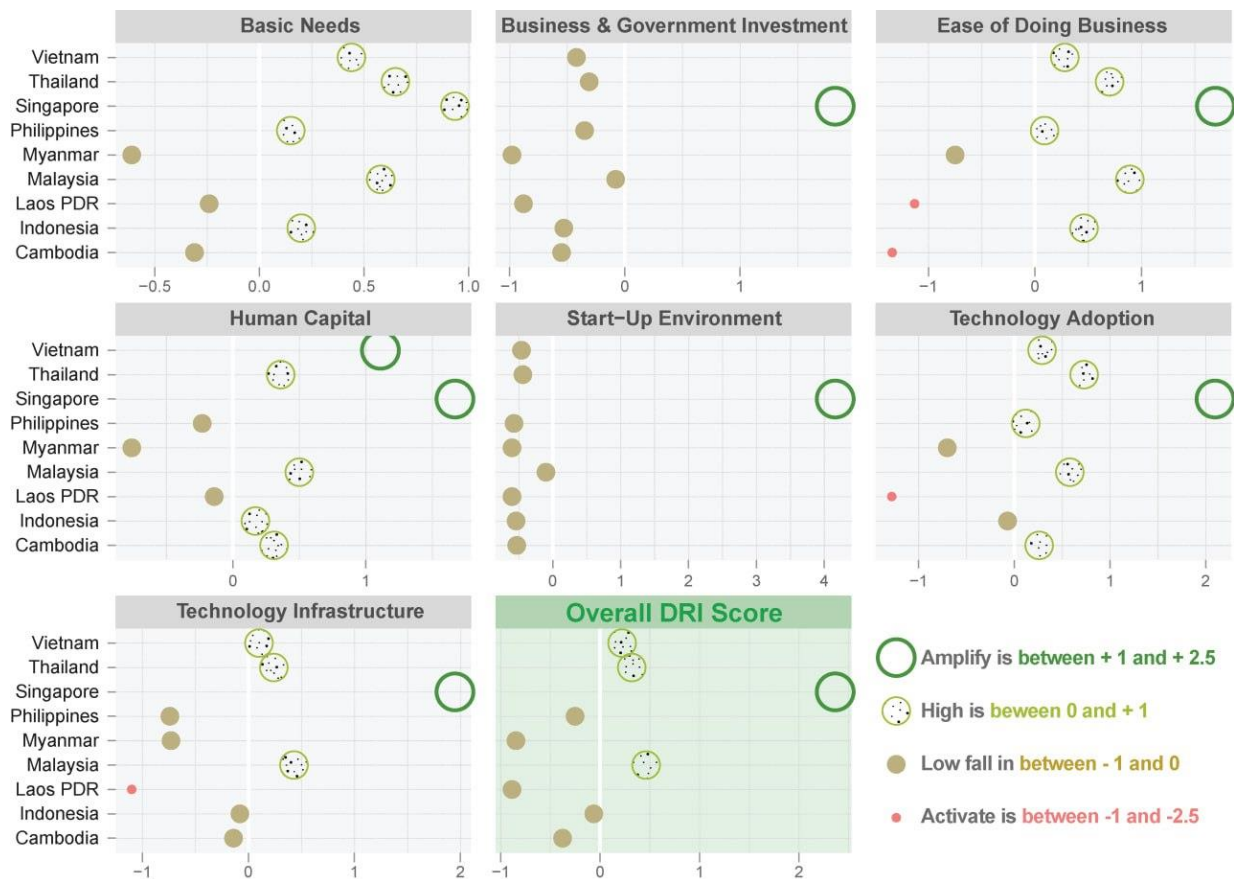
All AMS agree that their ability to sustain future growth will depend on their ability to increase their respective digital readiness scores, as indicated by Figure 4. Singapore is more mature than other AMS and



has the best average 2.37 score rating of ‘Amplify’ (between +1 and +2.5) of its five components of digital readiness, higher than other ASEAN countries and international and regional peers such as the United States with an average 2.08 score, China with 0.23, South Korea with an average 1.73 score, and Japan with 1.35 average score (Annex 4). so there is a big gap to catch up with Singapore’s present level. In addition, three AMS, Malysa, Thailand, and Vietnam, are identified as the fastest-growing countries, reaching high scores between 0 and +1.

Figure 2 also suggests the priorities for actions for each ASM to focus on if they wish to make the most of digital opportunities in the region. For example, Indonesia, Philippines, Cambodia, Laos and Myanmar should further address the basic needs of its population, especially access to electricity among other requirements. Increasing government investments on research and development, and renewable energy is required for all AMS except Singapore with the ‘Amplify’ score of the business and government investment. Cambodia, Lao PDR and Myanmar should increase their respective scores of “ease of doing business” for investment freedom or attracting the FDI flows. Learning to improve the startup up

**Figure 4: AMS’s Digital Position as Indicated by Digital Readiness Score Index 2021**



environment from Singapore could help the expansion of digital business and other investment in other AMS as suggested by Figure 4.

Speeding up and securing technology infrastructure development is required for Myanmar, Lao PDR and Philippines, which have lower average [human capital scores](#) covering literacy rates, years of schooling, labour force participation and harmonised test scores. Increasing digital literacy is the priority for actions in the process of digital transformation. There is no systematic information on the proportion of general education with good access to digital literacy. However, the [UNDP’s Human Development Report 2022](#) indicated wider gaps of average years of schooling among the AMS which ranges from the 5.1 years for

Cambodia to 11.9 years for Singapore. Lacking education is apparently fundamental constraint to increase digital literacy for inclusive digital transformation<sup>[34]</sup>.

## **7. Parliamentary Support for the Digital Future**

In ASEAN, the digital economy is rapidly growing, and the pandemic has accelerated digital transformation; and become a driving source of growth and development in the post-COVID-19 world. The adoption of digital technologies and innovation has changed not only the way people work but also the way they live; and has enhanced connectivity, financial systems, and access to trade and public services. The rise in digital innovation is accelerating e-commerce, digital payments, and the emergence of new business models, which are changing the economic system. The digital economy is expected to reach US\$1 trillion and contributed about 28 % of the ASEAN GDP by 2030, with a significant potential for expanded growth and job creation. This promising message has been well captured by parliaments in region [35,36]. They can ensure that development policies focus on three areas, namely digital finance, digital training and development, and digital infrastructure, both physical and institutional. This development could be well implanted and monitored and mutual-supported by a common data policy and payment platform for the Asian region, a good training and development policy to equip the workforce with digital skills, and digital mindset as well as building cybersecurity capability and capacity at the regional level.

The role of parliament extends beyond harnessing digital dividends through increasing transparency and citizen engagement. It involves ensuring ample resources to elevate the lowest scores on the digital readiness index and securing mutual-digital support, digital skills training, digital security laws and regulations for collective growth. Though this goal may seem optimistic, ASEAN leaders have identified it as a priority by 2025.

By 2022, AMS have reached different stages of growth, development and commitment to improving digital innovation and technologies to benefit from opportunities generated by digital transformation despite large capacity gaps in the region. For example, in Indonesia, Malaysia, the Philippines, Singapore, Thailand and Vietnam since 2016 have tracked the progress of the digital economy<sup>37</sup> in the ASEA region. Cambodia, Laos, and Myanmar could have increased their efforts to catch up with Singapore's present level of per capita income and digital readiness while other AMS may take lesser time to catch up with the advanced AMS. The good news is that ASEAN does have a reliable model for growth and digital technology, and experts can learn from. This will lead to building trust in AMS to become one ASEAN community. Digital literacy for over half (about 61%) of young individuals aged [10-24, specifically 61%](#), who missed this in their school curriculum it is important to build their capacity so they benefit from this digital transformation process. Besides including digital skills in school curricula and increasing digital vocational training, enlarging the youth networks for building digital literacy could be one of the effective ways for increasing digital skills in the region.

## **8. Conclusion**

The multifaceted impact of the COVID-19 pandemic on Southeast Asia has created both challenges and opportunities for the ASEAN member states (AMS). Despite the economic disruptions caused by the pandemic, ASEAN countries have made efforts to strengthen social protection and healthcare systems. However, the pandemic has also exposed vulnerabilities in global supply chains, threatening ASEAN's economic recovery.

Nevertheless, the AMS countries' routes to growth and development differ, with some reaching high-income status and others finding it difficult to catch up. Urbanization, innovation, and variations in per capita GDP remain barriers to economic integration.

ASEAN aims to become the fourth-largest single market by 2030, leveraging its young population and geographic advantage. The region has seen a resurgence in foreign direct investment (FDI), particularly in tech, manufacturing, and infrastructure sectors.

Digital transformation is identified as a key driver of sustainable growth, with AMS implementing various strategies to enhance digital readiness and connectivity. However, disparities in digital access and literacy persist, posing challenges to inclusive growth.

Parliaments in the region play a crucial role in harnessing the benefits of digitalization, ensuring policies prioritize digital finance, training, and infrastructure. Collaboration among AMS is essential to address capacity gaps and foster collective growth.

While ASEAN faces complex challenges, including economic disparities and the digital divide, there is optimism about the region's potential for growth and development. By prioritizing digital transformation and fostering intra-regional cooperation, ASEAN can work towards a more resilient and inclusive future.



## 9. Annex

**Annex 1: Overview of economic development and goal of ASEAN member states, 2023**

	Population (Million)*	% of Pop. aged 18 - 64*	Median Age of the Population*	Urbanization		GDP in Billions (Current prices in USD)		GDP per capita (current price in USD)			World Digital Competitiveness Ranking 2022 (highest score = 100)	By 2030 wish to:	
				Urban dwellers*	Increase to catch up with Singapore level (%age)	2023	2028	2023	2028f	Income classification 2023			
United states	339.1	61	38	83.2		26,855	32,350	80,035	Increase efforts to reach Singapore level	93,259	High income	99.81	
China	1.43 billion	65	38.8	63.9		19,374	27,493	2,601		3,720	Upper middle income	86.42	
Singapore	6	70	43	100	0%	516	641	91,100		110,841	High income	99.48	
Brunei	0.5	67	30	76	-24%	16	18	35,104	3	41,124	High income	n/a	<a href="#">We aim to entrench Singapore as a hub of firms, a hub of flows, and a hub of talents, by harnessing new growth opportunities in sustainability and digitalization.</a> <a href="#">by 2035, the accomplishments of its well-educated and highly skilled</a>

														<a href="#">people as measured by the highest international standard; quality of life that is among the top 10 nations in the world; and dynamic and sustainable economy with income per capita within the top countries in the world.</a>
<i>Malaysia</i>	34.1	65	31	78	-22%	447	635	13,382	7	17,971	Upper middle income	76.42	<a href="#">High income with sustainable and equitable distribution</a>	
<i>Thailand</i>	71.8	66	40	53	-47%	574	767	8,182	11	10,895	Upper middle income	68.19	<a href="#">Building a Prosperous, Resilient, and Open (PRO) and moving a forward-looking trajectory for sustainable and balanced growth</a>	
<i>Indonesia</i>	276.4	63	30	58	-42%	1,392	2,049	5,017	18	7,073	Upper middle income	56.74	<a href="#">The world's seventh-largest economy</a>	

Vietnam	98.5	64	33	39	-61%	449	726	4,476	20	6,962	Lower middle income	n/a	<a href="#">The fifth-largest economy in Southeast Asia</a>
Philippines	116.1	59	25	48	-52%	441	640	3,905	23	5,375	Lower middle income	52.81	<a href="#">Upper-middle-income, 2024 and 2025; and by 2040, Filipinos live in a prosperous, predominantly middle-class society where no one is poor.</a>
Cambodia	16.9	60	27	25	-75%	31	45	1,896	48	2,630	Lower middle income	n/a	Upper-middle-income
Laos PDR	7.6	59	24	38	-62%	14	18	1,858	49	2,189	Lower middle income	n/a	Upper-middle-income
Myanmar	44.4	64	30	32	-68%	64	83	1,180	77	1,491	Lower middle income	n/a	<a href="#">Middle-income</a>
ASEM	672	64	31	55		3,944	5,622	16,610		20,655			

\* Digital 2023 Global Overview Report: The Essential Guide to the World's Connected Behaviors, available at <https://datareportal.com/reports/digital-2023-global-overview-report>, accessed on 14 September 2023

\*\* IMF Dataset, available at <https://www.imf.org/external/datamapper/datasets>, [Online] accessed on 13 September 2023

\*\*\*[hdr2021-22pdf](https://hdr.undp.org/system/files/documents/global-report-document/hdr2021-22pdf_1.pdf), available at [https://hdr.undp.org/system/files/documents/global-report-document/hdr2021-22pdf\\_1.pdf](https://hdr.undp.org/system/files/documents/global-report-document/hdr2021-22pdf_1.pdf)

**Annex 2: Ease of doing business and larger size of the population help attract the highest flow of Foreign Direct Investment (FD)**

Ease of Doing Business Ranking (190 Countries)			Inflow of Foreign Direct Investment (FDI), 2018-2022		Program for International Student Assessment (PISA) assesses the knowledge and skills of 15-year-old students in reading, mathematics, and science (74 countries).					Education Ranking (78 countries)		Literacy Rate (207 Countries)		Most Educated Countries (44 Countries)	
	Rank	Score	Billion USD	%	Rank	Score	Math	Science	Reading	Rank	Score	Rank	Score	Rank	Score
New Zealand (highest ranking)	1	86.8			13	502.7	494	508	506	11	11	48	99.00%	20	40.10%
United States	6	84			22	495	478	502	505	1	1	36	99.00%	6	50.10%
China	31	77.9			1	578.7	591	590	555	22	22	89	96.40%	n/a	n/a
<b>ASEAN</b>		<b>67.2</b>	<b>870.06</b>	<b>100.00%</b>											
Singapore	2	86.2	516.25	59.30%	2	556.3	569	551	549	21	21	84	96.80%	n/a	n/a
Malaysia	12	81.5	47.9	5.50%	45	431	440	438	415	38	38	112	94.60%	n/a	n/a
Thailand	21	80.1	38.9	4.50%	57	412.7	419	426	393	46	46	122	94.00%	n/a	n/a
Brunei	66	70.1	1.39	0.20%	50	423	430	431	408	n/a	n/a	86	96.70%	n/a	n/a
Vietnam	70	69.8	80.98	9.30%	n/a	n/a	n/a	n/a	n/a	59	59	117	94.50%	n/a	n/a
Indonesia	73	69.6	106.14	12.20%	68	382	379	396	371	54	54	100	95.40%	44	11.90%
Philippines	95	62.8	46.63	5.40%	73	350	353	357	340	55	55	88	96.60%	n/a	n/a
Cambodia	144	53.8	17.56	2.00%	n/a	n/a	n/a	n/a	n/a	75	75	163	78.40%	n/a	n/a
Lao PDR	154	50.8	4.79	0.60%	n/a	n/a	n/a	n/a	n/a	n/a	n/a	158	79.90%	n/a	n/a

Annex 3a: ASEAN Digital Integration Index (ADII) Pillar Scores 2021 (The highest score is 100)								Annex 3b: Digital Skill Gap Scores, 2021 (134 countries with the higher bound of each score range, e.g., 10 refers to 8-10 range)						
International Best Practice	ASEAN ADII Scores	P1. Digital Trade & Logistic	P2. Data protection & Cybersecurity	P3. Digital Payment & Identifies	P4. Digital skills & talent	P5. Innovation & Entrepreneurs	P6. Institutional & Infrastructural Readiness	Digital Skills Gap Index	1. Digital Skill Institution	2. Digital Responsiveness	3. Government Support	4. Supply, Demand and Competitiveness	5. Data Ethics and Integrity	6. Research Intensity
Japan	76.5	93.4	90.9	82.0	54.8	77.3	60.7	5.9	6.6	4.8	5.1	5.6	9.3	5.6
New Zealand	75.6	92.0	85.9	90.3	55.7	65.8	63.9	6.2	7.3	6.4	4.9	6	6.6	6
Australia	74.9	90.7	90.8	88.0	53.0	66.3	60.9	6.1	5.9	6.4	5.0	5.6	8.6	6.4
South Korea	75.7	89.3	88.4	81.4	53.8	77.9	63.6	7.0	6.9	6.4	7.3	7.3	8.5	6.1
China	70.7	86.5	75.7	74.7	64.8	68.7	53.6	6.7	6.5	6.4	6.8	7.2	6	6.9
United States	n/a	n/a	n/a	n/a	n/a	n/a	n/a	6.3	6.3	6.3	4.5	7.1	7.1	6.9
ASEAN Scores	56.2	55.3	62.8	58.8	48.2	49.3	62.9	5.2	5.1	5.0	5.4	6.1	5.2	3.5
Singapore	80.7	82.6	89.7	86.6	63.8	71.1	90.4	7.8	7.9	7.9	9.4	7.7	7.7	5.9
Malaysia	72.8	67.4	91.3	79.2	57.9	59.2	82.2	7.2	6.6	6.2	8.4	7.9	8.1	5.6
Brunei Darussalam	63.0	55.0	67.5	87.6	53.3	43.0	71.4	6.1	6.5	6.3	8.5	6.4	4.3	3
Indonesia	57.5	49.7	78.4	59.7	45.6	48.8	62.4	5.2	4.7	4.6	4.5	6.9	6.3	3.6
Philippines	54.0	60.6	72.5	31.9	53.1	46.9	58.9	5.1	5.6	4.9	4.6	6	5.3	3
Viet Nam	57.3	78.5	63.1	58.3	38.4	44.6	60.7	5	4	4.3	5.2	6.1	5.3	5.2
Thailand	67.2	83.3	87.9	69.7	43.8	56.1	62.6	4.5	4.3	4.3	3.2	5.3	6.1	3.9
Myanmar	30.1	18.5	20.4	32.9	19.6	44.7	44.6	3	2.8	3.6	1.7	5.1	1.7	0.1
Lao PDR	36.6	23.2	32.6	44.5	43.9	36.9	38.3	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Cambodia	37.6	33.9	24.8	41.2	36.6	38.2	51.0	2.8	3.3	2.6	3.3	3.5	1.6	0.8

Source: AUSAID (2021) ASEAN Digital Integration Index: Measuring Digital Integration to Inform Economic Policy. [Online]. Available at <https://asean.org/wp-content/uploads/2021/09/ADII-Report-2021.pdf>

Source: John Wiley (2021), Skills Gap Index (DSGI). [Online]. Available at <https://dsgi.wiley.com/global-rankings/>. Accessed on 10 October 2023

Note: There is no information about Lao PDR in this global ranking.

Annex 4: [Digital Readiness Score Index, 2021\\*](#)

	Ranking of 149 countries	Overall DRI Score	Basic Needs	Business & Government Investment	Ease of Doing Business	Human Capital	Start-Up Environment	Technology Adoption	Technology Infrastructure
United States	4	<b>2.08</b>	<b>0.74</b>	<b>2.19</b>	<b>1.05</b>	<b>1.20</b>	<b>2.19</b>	<b>3.01</b>	<b>2.23</b>
China	57	0.23	0.56	-0.73	0.45	0.47	0.01	0.24	0.38
Japan	18	<b>1.35</b>	<b>0.97</b>	<b>0.95</b>	<b>1.04</b>	<b>1.28</b>	<b>0.92</b>	<b>1.29</b>	<b>1.69</b>
South Korea	7	<b>1.73</b>	<b>0.91</b>	<b>1.79</b>	<b>1.54</b>	<b>1.31</b>	<b>2.56</b>	<b>1.28</b>	<b>1.12</b>
<b>Singapore</b>	<b>1</b>	<b>2.37</b>	<b>0.93</b>	<b>1.83</b>	<b>1.69</b>	<b>1.67</b>	<b>4.16</b>	<b>2.10</b>	<b>1.95</b>
<i>Brunei</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>
<i>Malaysia</i>	42	0.46	0.58	-0.08	0.89	0.50	-0.10	0.58	0.43
<i>Thailand</i>	51	0.32	0.65	-0.31	0.70	0.36	-0.44	0.73	0.24
<i>Indonesia</i>	73	-0.06	0.20	-0.53	0.46	0.17	-0.54	-0.07	-0.08
<i>Vietnam</i>	57	0.22	0.44	-0.42	0.28	<b>1.11</b>	-0.46	0.29	0.10
<i>Philippines</i>	87	-0.25	0.15	-0.35	0.09	-0.23	-0.57	0.12	-0.74
<i>Cambodia</i>	92	-0.38	-0.31	-0.55	<b>-1.34</b>	0.31	-0.53	<b>0.26</b>	-0.14
<i>Laos PDR</i>	115	-0.89	-0.24	-0.88	<b>-1.13</b>	-0.14	-0.60	<b>-1.28</b>	<b>-1.10</b>
<i>Myanmar</i>	110	-0.85	-0.61	-0.98	-0.75	-0.76	-0.60	-0.70	-0.73
<b>Scores:</b>									
<i>Activate</i> is between -1 and -2.5									
<i>Low</i> fall in between - 1 and 0									
<b>High</b> is between 0 and + 1									
<i>Amplify</i> is between + 1 and + 2.5									
*Note: The digital readiness is an average composite score of seven submit indexes. 1) Basic needs cover life expectancy, mortality rate (under 5 years), access to electricity, population using safe drinking water services; 2) Business and Government Investment covers renewable energy investments, research and development expenditures, investment freedom; 3) Ease of doing business covers ease of doing business index, rule of law, ease of paying taxes and time to get electricity; 4) Human capital covers literacy rate, education index (years of schooling) and labor participation , and harmonization test scores; 5) Start-up environment covers venture capital investment, patents and trademarks, and new business density; and 6) Technology adoption covers mobile cellular penetration, internet usage, and public cloud services (IT spend forecast); and 7) mobile broadband subscriptions, fixed broadband subscriptions, and secure internet services, and household internet access.									

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