Strengthening E-commerce cooperation to promote business to business and business to consumers under AHKFTA: a case study of ASEAN countries and Hong Kong Special Administrative Region of the People's Republic of China



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> Institute for Industry and Commerce Ministry of Industry and Commerce Vientiane, Lao PDR

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PREFACE

In many nations around the world, the growth of the digital economy has become a major factor in promoting e-commerce. The rapid advancement of information and communication technology has pushed communication between many points of connection in the direction of virtual and real-time approaches. The cost-effectiveness of this evolution serves to encourage business launches and competitiveness, particularly micro, small, and medium-sized firms (MSMEs). the rise of e-commerce platforms, also known as a marketspace where B2C and B2B are fluidly connected both inside and outside of national borders. Using a variety of online selling and marketing platforms, e-commerce enables the exchange of products and services across national boundaries. It was even more attractive during the pandemic when people were asked to practice social isolation and distancing. Nonetheless, the growth of e-commerce in developing countries, particularly in ASEAN, is still in its infancy, with many platforms typically concentrating on local consumers rather than international e-commerce transactions. In terms of e-commerce development, the ASEAN and Hongkong, China free trade agreement will offer a window of commercial opportunity for this virtual trade to flourish across border among member states.

Since 2019, the ASEAN and Hong Kong, China Free Trade Agreement (AHKFTA) has been in effect as the cornerstone of the two sides' trade liberalization. Importantly, AHKFTA contributes substantially to increase the bilateral trade through tariff reduction schemes. Hong Kong, China, whose trade value accounted for 3.9% of ASEAN's overall trade in 2019, rose to become the region's sixth-largest commercial partner, according to the ASEAN secretariat. Under the AHKFTA, traditional trading continues to have a significant impact on bilateral trade. Less trade obstacles for export and import result in increased trade on both sides as a result of freer flow of goods. Yet, the rapidly expanding e-commerce sectors in China, Hong Kong, and ASEAN are showing themselves to be viable alternatives to traditional retail outlets, with benefits such as direct sales between B2C and B2B. For the years 2022-2025, it is anticipated that e-commerce markets will produce roughly 52% in ASEAN and 49% for Hong Kong, China.

E-commerce has the potential to significantly increase trade between ASEAN and Hong Kong, China. According to this study, the majority of member nations are working together to promote and expand e-commerce in the region. The focus of the country case study has been on cross-border e-commerce trading. A country's preparation for e-commerce in terms of infrastructure, transportation/logistics, and regulation is primarily correlated with the success of cross-border e-commerce through online sales platforms. For the rise of cross-border e-commerce, the significant development gap of those elements among member states is a concern. Another significant factor is the mutual recognition and understanding of regional financial transactions, consumer protection, and intellectual property rights, all of which appear to receive little attention from regional discussions under the AHKFTA. The untapped trade potential from cross-border e-commerce development can thereby expand bilateral trade between ASEAN and Hong Kong, China, in the coming year, assuming the obstacles mentioned in this study are collectively overcome.

The research institutes from ASEAN and Hong Kong, China have produced the country case studies relevant to the promotion of e-commerce for regional cooperation under the AHKFTA, and they have presented a variety of informative and insightful experiences from each country's perspectives. With the project's open-source website, the IIC has compiled and combined all the aforementioned studies into a publication for the benefit of numerous stakeholders and developed into a significant literature database for both public and academic research.

Dr. Keomorakoth SIDLAKONE D/G of Institute for Industry and Commerce Ministry of Industry and Commerce Lao PDR

AN OVERVIEW OF E-COMMERCE IN ASEAN AND HONGKONG

ABSTRACT

The rapid growth of e-commerce and availability of digital platforms present an opportunity for MSMEs in ASEAN and Hong Kong to increase their participation in domestic and international markets. However, the benefits of e-commerce for MSMEs are not automatic. They require MSMEs to invest in adopting digital technologies and acquiring new skills to leverage data-driven innovation. At the same time, they also require that governments of ASEAN countries and Hong Kong provide a supportive domestic and international operating environment. In this regard, ASEAN and Hong Kong's governments should strengthen data safeguard measures and data enablers, while improving e-commerce infrastructure as well as logistics and transportation. Furthermore, a dedicated e-commerce chapter should be incorporated into the ASEAN-Hong Kong FTA to create greater coherence of legal framework for cross-border e-commerce and to improve MSMEs' ability to adapt to e-commerce in the region.

BACKGROUND OF THE STUDY

The rapid growth of electronic commerce (e-commerce) and availability of digital platforms (e.g. social networks and e-commerce marketplaces) present an opportunity for small and medium-sized enterprises (SMEs) in member states of the Association of Southeast Asian Nations (ASEAN) and Hong Kong to increase their participation in domestic and international markets. The e-commerce market in ASEAN is forecasted to grow by 52% over the period 2022-2025 from US\$142 billion in 2022 to US\$216 billion in 2025, while the e-commerce market in Hong Kong is projected to grow by 49% over the same period (Table 1.1).

The Organization for Economic Cooperation and Development (OECD) defines e-commerce as the sale or purchase of goods or services, conducted over computer networks specifically designed to receive or place orders. The payment and the delivery of the goods or services are not necessarily conducted online. Orders made over the web, extranet or electronic data interchange are regarded as e-commerce transactions. Orders made by telephone calls, facsimile or manually typed e-mail are not regarded as e-commerce transactions.¹ E-commerce stakeholders include businesses, consumers, and government. These stakeholders interact with each other, and generate four basic types of e-commerce transactions, namely consumer to consumer (C2C), business to consumer (B2C), business to business (B2B), and business to government (B2G).



Figure 1.1: Population in ASEAN Countries and Hong Kong, million people

Note: HKG = Hong Kong, ASEAN = Association of Southeast Asian Nations, BRN = Brunei, IDN = Indonesia, LAO = Laos, MYS = Malaysia, MMR = Myanmar, PHL = Philippines, SGP = Singapore, THA = Thailand, VNM = Vietnam. Source: Author's calculation using data from the United Nations' World Population Prospects 2022, available at https://population.un.org/wpp/dataquery/. Accessed on May 31, 2022.

ASEAN and Hong Kong would offer a large market size of US\$5.7 trillion in 2027 and 734 million people in 2030. In 2027, the largest economy will be Indonesia (32.8% of the combined

¹ OECD: <u>https://stats.oecd.org/glossary/detail.asp?ID=4721</u>

GDP of ASEAN and Hong Kong), followed by Thailand (12.2%), Vietnam (12.1%), and Malaysia (11.1%). In 2030, Indonesia would remain the biggest market in terms of the number of population (40.8% of the total combined population of ASEAN and Hong Kong), followed by the Philippines (16.9%), Vietnam (14.2%), and Thailand (9.6%) (Figure 1.1).

More than one-third of ASEAN and Hong Kong's population falls in the top three age groups of e-commerce buyers. Based on the distribution of digital buyers in the United States of America as of February 2020², the top three age groups are people aged 25-34, 35-44, and 45-54 years old. In 2020, the share of population aged 25-54 years was 44.2% in Hong Kong, which was slightly higher than that in ASEAN as a group (42.3%). The demographic profile in ASEAN varies across countries, ranging from 38.7% in Lao PDR and the Philippines, to 42.4% in Indonesia, 45.4% in Vietnam, and 47.2% in Singapore (Figure 1.2).





Note: See Figure 1.1.

Source: Author's calculation using data from the United Nations' World Population Prospects 2022, available at <u>https://population.un.org/wpp/dataquery/</u>. Accessed on May 31, 2022.

This demographic trend in ASEAN and Hong Kong would change by 2030. The demographic profile of digital consumers in Hong Kong would be shrinking faster than that in ASEAN. The main reason is that ASEAN countries have relatively young population, where the share of population aged under 25 in 2020 ranges from 23.6% in Singapore to 42.7% in Indonesia, 48.8% in Cambodia, and 51.2% in Lao PDR. In 2030, the share of population aged 25-54 years would be 37.6% in Hong Kong and 41.6% in ASEAN. The top five ASEAN countries with the large share of population aged 25-54 years would be Brunei, Malaysia, Myanmar, Vietnam, and Singapore. These countries will be more likely to experience faster adoption of online sales of goods and services, which should drive the e-commerce in the region. This suggests the possibility of further expansion of e-commerce markets in ASEAN countries over the next decade.

² Statista: <u>https://www.statista.com/statistics/469184/us-digital-buyer-share-age-group/</u>

Moreover, the COVID-19 pandemic has accelerated the growth of e-commerce sales. Businesses with an established online presence or those that could quickly shift from an offline to online presence have been better equipped to take advantage of the rise in online shopping volumes due to movement restrictions and consumer anxieties about social interaction. Consumers have adopted new online services and increased their frequency of use and spending in groceries, beauty products, apparel, and electronics. ASEAN e-commerce growth over the next few years is likely to be sustainable as e-commerce consumers perceived the convenience of e-commerce and adopted e-commerce as part of their routines (Google, Temasek and Brain, 2021).

However, the rise of e-commerce and digital platforms digital trade raises policymakers' concerns over the management of trade and data flows such as losses in tax revenues, data security, and data transfers, which result in government interventions to regulate the digital sectors. An increase in national digital trade regulations coupled with the lack of coordination and data on these regulations across countries contribute to the regulatory divergence, which raises firms' compliance costs and limits the benefits of e-commerce both within ASEAN and between ASEAN and Hong Kong.

OBJECTIVES AND COVERAGE OF THE RESEARCH

The degree to which ASEAN countries and Hong Kong can take advantage of the growing opportunities mentioned in the previous section depends on a number of complex domestic and external factors. This particular study assesses the current state of e-commerce development, examines the extent to which ASEAN countries and Hong Kong are ready to participate in the upcoming wave of e-commerce, and evaluates the economic impacts of e-commerce in these countries.

This volume consists of papers for 10 countries, covering 9 ASEAN countries (except Brunei Darussalam) and Hong Kong. The papers were prepared collaboratively by experts from leading research institutions within the region. Chapters 2–12 of this volume contain country case studies that review the development of e-commerce sector and assess a country's readiness to participate in cross-border e-commerce, and investigate the potential benefits of e-commerce. The studies adopt both quantitative and qualitative approaches to gauge the current stage of e-commerce markets and regulatory framework, and identify the key issues facing the e-commerce sector. A few studies have moved one step further by empirically examining the impact of e-commerce platforms on international trade.

DEVELOPMENTS OF THE E-COMMERCE SECTOR IN ASEAN AND HONGKONG

Available data on e-commerce sales reveals the rise of e-commerce in ASEAN countries and Hong Kong. Table 1.1 shows the estimates of e-commerce market size from two sources. The first source is Google, Temasek and Brain (2021), which covers six ASEAN countries, namely, Indonesia, Malaysia, the Philippines, Singapore, Thailand, and Vietnam. In 2020, total

population in these countries stood at 589 million people, which accounted for 88% of total population in 10 ASEAN countries. Their e-commerce sales are forecasted to grow by 87.4% from US\$38.9 billion in 2019 to US\$72.9 billion in 2020. Such growth rate would then decrease to 74.8% in 2021 and 23.5% per annum during 2021-2025.

The fastest growing e-commerce market in ASEAN-6 countries over the period 2021-2025 is projected to be Vietnam (50.0% per annum), followed by the Philippines (29.2%), Indonesia (24.1%), and Thailand (16.7%). In 2025, the largest e-commerce market size in ASEAN-6 countries is Indonesia (45% of ASEAN-6 e-commerce sales), followed by Vietnam (17%), Thailand (15%), and the Philippines (11%).

The second source of estimated e-commerce market size is Statista (2022), which covers ASEAN-10 countries and Hong Kong. It confirms the rising importance of e-commerce, but produces different magnitudes of e-commerce market size. Total e-commerce sales in ASEAN-10 countries are estimated to grow by 17.2% per annum from US\$142.6 billion in 2022 to US\$216.4 billion in 2025, while those in Hong Kong are predicted to grow by 16.3% per annum from US\$15.5 billion to US\$28.0 billion over the same period. The fastest growing e-commerce market in ASEAN-10 countries between 2022-2025 is expected to be the Lao PDR (22.9% per annum), followed by Malaysia (22.1%), the Philippines (20.7%), and Cambodia (20.1%).

In 2025, the largest e-commerce market size is Indonesia, followed by Thailand, the Philippines, and Vietnam. Vietnam is projected to be the fourth largest e-commerce market in ASEAN by Statista (2022), while it is expected to be the second largest e-commerce market by Google, Temasek and Brain (2021). Such difference may be due to the use of different methodologies such as different years of forecasting, the inclusion of e-commerce activities and sample size included in the business and consumer surveys. Different estimates of e-commerce market size highlight the need to create a common definition and methodology to measure e-commerce transactions in ASEAN and Hong Kong.

	E-commerce market (I)							E-commerce market (II)		
	Sales (US\$ billion)				Annual growth (%)			Sales (US\$ billion)		Annual growth (%)
	2019	2020	2021	2025	2020	2021	2021-2025	2022	2025	2022-2025
Hong Kong								25.50	38.00	16.34
ASEAN-10								142.63	216.40	17.24
ASEAN-6	38.90	72.90	120.10	232.80	87.40	64.75	23.46	137.19	213.11	18.45
Brunei								0.17	0.23	11.21
Cambodia								1.11	1.78	20.13
Indonesia	21.00	35.00	53.00	104.00	66.67	51.43	24.06	62.59	90.19	14.70
Lao PDR								0.76	1.28	22.90
Malaysia	3.00	8.00	14.00	19.00	166.67	75.00	8.93	10.12	16.83	22.10
Myanmar								3.40	4.65	12.24
Philippines	3.00	5.00	12.00	26.00	66.67	140.00	29.17	20.18	32.70	20.68
Singapore	1.90	4.90	7.10	9.80	157.89	44.90	9.51	7.29	11.45	19.02
Thailand	5.00	12.00	21.00	35.00	140.00	75.00	16.67	22.20	33.58	17.09
Vietnam	5.00	8.00	13.00	39.00	60.00	62.50	50.00	14.81	23.71	20.03
Sources		Google, Temasek and Brain (2021)						Statista (2022)		

Table 1.1: Estimates of E-commerce Market Size and E-commerce Growth in ASEAN Countries and Hong Kong

Source: Author's compilation using data from Google, Temasek, and Brain (2021) and Statista (2022).

COUNTRY CASE STUDIES ON E-COMMERCE HIGHLIGHTS THE DOMINANT ROLE OF B2C AND B2B IN STIMULATING E-COMMERCE GROWTH IN THE REGION

The study of Cambodia, prepared by the Cambodia Development Resource Institute, shows that the e-commerce sector is emerging. E-commerce transactions are dominated by B2C, which is conducted through Facebook, Amazon, or e-commerce firms' websites. Some key e-commerce participants are Little Fashion, Khmer24, Cambo Quick, and Fado168. The B2C e-commerce concentrates in three segments, namely electronics, fashion, and beauty.

The study of Indonesia, conducted by the Center of Innovation of Digital Economy, observes the rapid development of the e-commerce sector, driven by the B2C and C2C modes of e-commerce. About 14% of total e-commerce sales in 2020 were accounted by the cross-border e-commerce, which concentrated in three markets, namely, China (41% of cross-border e-commerce sales), the United States (US) (10%), and Singapore (10%). The key e-commerce platforms include Shopee, Lazada, and JD.id. E-commerce activity concentrates in three segments, namely fashion, electronics, and food. The top-3 cross-border shopping origin markets are China (43% of cross-border e-commerce sales), US (10%), and Singapore (9%) (PPRO, 2022).

The study of Laos, conducted by the Institute for Industry and Commerce, suggests that the ecommerce sector is also emerging in Laos. E-commerce transactions are dominated by B2C and C2C, which are conducted through social media platforms such as Facebook and Instagram. The cross-border e-commerce is dominated by imports, which are mainly sourced from Thailand and China.

For Malaysia, the study by the Malaysian Institute of Economic Research, shows the upward trend of e-commerce sales, dominated by B2B and B2C. The top-3 e-commerce platforms are the SEA-owned Shopee, Lazada, and PG Mall. Activities in e-commerce concentrates in three segments, namely fashion (31% of total e-commerce sales), electronics and media (28%), and toys and hobby (19%). The amount of cross-border e-commerce sales has been recorded at US\$3.8 billion, or 59% of total e-commerce sales, in 2020. The top-3 cross-border shopping origin markets are China (61% of cross-border e-commerce sales), Singapore (9%), and Japan (5%) (PPRO, 2022).

In Myanmar, the country study prepared by Yangon University of Economics shows that the e-commerce sector is emerging. Its market consists of 13.36 million digital consumers and recorded US\$1.15 billion of sales or an average spending of US\$86 per consumer in 2021. The e-commerce transactions are dominated by B2C, which is conducted through shop.com.mm, citymall.com.mm, and spree.com.mm. The cross-border e-commerce is in the early stage of development, but there is a possibility to use e-commerce platforms to increase exports of agricultural products such as rice, beef, bananas, and pineapples to Yunnan or to China's domestic market through Yunnan.

For the Philippines, a report prepared by De La Salle University reveals the dominant role of B2C in the e-commerce sector. More than two-thirds of B2C e-commerce sales are conducted through social media sites such as Facebook, Instagram, and YouTube. The e-commerce market concentrates in three segments, namely electronics and media (45% of total e-commerce sales), food and personal care (25%), and furniture and appliances (16%). The cross-border e-commerce sales are also growing. Its share in total e-commerce sales rose from 41% in 2016 to 60% in 2018 and 83% in 2020. The top-3 cross-border shopping origin markets include China, the US, and South Korea (PPRO, 2022).

The study of Singapore, prepared by the National University of Singapore, shows the rapid growth of e-commerce sales since the start of the pandemic in March 2020. The share of retail e-commerce sales in total retail sales during the pandemic doubled from its pre-pandemic level from 6.7% in December 2019 to 11.1% in December 2020. The top-3 e-commerce platforms include Shopee, Lazada, and Qoo10. The e-commerce market concentrates in electronics and media (29%), fashion (26%), and food and personal care (22%). The cross-border e-commerce sales accounted for 49% of total e-commerce sales, which are sourced from China (62% of cross-border e-commerce sales) and South Korea (19%) (PPRO, 2022).

In Thailand, a study prepared by Thailand Development Research Institute reveals the upward trend of the e-commerce sector. E-commerce transactions have shifted from B2B to B2C over the past five years. The share of B2C in total e-commerce sales rose from 27.5% in 2016 to 50.6% in 2021, while the share of B2B in total e-commerce sales dropped from 60.4% to 27.2% over the same period. Such a shift has been driven by the adoption of online platforms by businesses during the pandemic, which enable them to sell goods and services directly to consumers. The e-commerce transactions are conducted through Shopee, Lazada, and Facebook. The e-commerce market concentrates in food and personal care (35% of total e-commerce sales), electronics and media (31%), and toys and hobby (20%). Exports of goods and services through the e-commerce accounted for only 8.71% of total e-commerce sales. The top-3 cross-border shopping origin markets are China, Japan, and the US (PPRO, 2022).

For Vietnam, a report prepared by the Centre of Analysis and Forecasting reveals the dominant role of B2C e-commerce. The key B2C e-commerce platforms include Shopee.vn, Lazada.vn, Tiki.vn, and Sendo.vn. The B2B transaction is still the early stage of development. There is only one key B2B e-commerce platform, Ecvn.com, which is operated by a state-owned unit. The e-commerce market concentrates in electronics and media (28% of total e-commerce sales), fashion (22%), and food and personal care (18%). The cross-border e-commerce sales account for 36% of total e-commerce sales, which are sourced from the US, China, and Japan (PPRO, 2022).

Finally, the study for Hong Kong, made by the Hong Kong Institute of Business and Strategy, shows an upward trend of e-commerce sales. 60% of e-commerce sales are accounted by B2C. The remaining 40% of e-commerce sales are accounted by B2B (39%) and B2G (1%). The top-3 e-commerce platforms include Tmall, DCFever, and HKTVmall. The e-commerce

market is concentrated in fashion (50% of total e-commerce sales), food and personal care (15%), and electronics and media (14%). Cross-border e-commerce sales account for 25% of total e-commerce sales. The top-3 cross-border shopping origin markets are China, Singapore, and Japan (PPRO, 2022).

E-COMERCE READINESS IN ASEAN AND HONG KONG

A country's readiness to participate in the e-commerce sector is assessed against three broad categories, namely e-commerce infrastructure, transport and logistics services, and regulatory frameworks on data flows. This study reveals that countries with greater levels of e-commerce infrastructure development are associated with better transport and logistics services. Also, ASEAN countries and Hong Kong have underregulated the data safeguards and data enablers

E-commerce Infrastructure

Better e-commerce infrastructure enhances countries' participation in the e-commerce sector. The e-commerce infrastructure is measured by the UNCTAD B2C e-commerce index. Here, the index measures the extent to which a country is ready to support online shopping.

Country		Country	ranking		B2C e-commerce index			
	2020	2019	Change in ranking	Index value change	Share of individuals using internet (2019 or latest)	Share of individuals with account (15+, 2017)	Index of secure internet servers (2019)	UPU postal reliability index (2019 or latest)
Cambodia	117	121	4	0.3	- 40	22	42	21
Indonesia	83	85	2	0	48	49	60	43
Laos	101	112	11	5.4	26	29	30-	78
Malaysia	30	31	1	-2.1	84	85	71	85
Myanmar	130	128	-2	-2.9	Л	26	22	17
Philippines	96	86	-10	-5.1	65	35	39	40
Singapore	- 4	3	-1	-0.4	89	98	94	97
Thailand	42	48	6	2	67	82	59	97
Vietnam	63	66	3	0.8	69	31	64	83
Hong Kong	10	14	4	1.	92	95	88	92
Memo: Category criteria								
Low	103-152	1			0-47	0-44	0-39	0-26
Medium	52-102	1	1		48-80	45-80	40-65	27-73
High	1-51				81-100	81-100	66-100	74-100

Table 1.2: Country Ranking and B2C E-commerce Index, 2020

Note: Country ranking refers to the ranking of 152 countries with 1st as the best and 152nd as the worst. *Source*: Author's calculation using data from UNCTAD (2021

It is calculated as the average of four indicators, namely the share of population aged 15+ that holds at least one bank account, the share of population that uses the internet, index of secure internet server, and postal reliability index. Table 1.2 shows the degree of e-commerce infrastructure development, which is classified into three categories, namely low, moderate,

and high. The e-commerce infrastructure ranges from low levels in Cambodia and Myanmar to moderate levels in Indonesia, Laos, the Philippines, and Vietnam, to high levels in Malaysia, Singapore, Thailand, and Hong Kong.

From 2019 to 2020, only one out of two countries with low level of e-commerce infrastructure has managed to develop its e-commerce infrastructure. Cambodia has improved its country ranking from 121 in 2019 to 117 in 2020 (note that the lower country ranking indicates better e-commerce infrastructure). The security of internet servers in Cambodia has been moderately developed, but other areas such as access to the internet, access to bank accounts, and postal reliability in 2019 are still in the early stages of development. However, the country study for Cambodia shows that the most recent statistics on the internet penetration rate was 99% in 2020 which was substantially greater than that reported by UNCTAD in 2019 (40%). This indicates that 9 in 10 people in Cambodia are now using the internet in 2020, which should contribute to the improvement of the UNCTAD B2C e-commerce index for Cambodia.

Meanwhile, Myanmar has made slow progress as its country ranking worsened from 128 in 2019 to 130 in 2020. All four areas of the e-commerce infrastructure in Myanmar are still in the early stages of development. According to the case study of Myanmar, the internet penetration rate was only at 43% in 2020, which was greater than that reported by UNCTAD in 2019 (31%). But this still falls into the category of low level of internet penetration rate (0-47%) employed in this study.

Three out of four countries with moderate levels of e-commerce infrastructure have improved their e-commerce infrastructure during 2019-2020. These are Indonesia, Laos, and Vietnam. The e-commerce country ranking for Indonesia improved from 85 in 2019 to 83 in 2020; from 112 to 101 for Lao PDR; and from 66 to 63 for Vietnam. Indonesia has moderately developed all aspects of its domestic e-commerce infrastructure. The case study shows that the internet penetration rate in Indonesia was 74% in 2020, which was greater than that reported by UNCTAD in 2019 (48%), but nevertheless still falls into the category of moderate level of internet penetration rate (48-80%) employed in this study.

Vietnam is currently characterized by a high level of postal reliability, a moderate level of access to the internet and security of internet servers, with low level of access to bank accounts. While, for Lao PDR, the postal reliability index is the only area in which Laos is doing moderately well, but other areas such as access to the internet, access to bank accounts, and the security of internet servers are still in the early stages of development.

The Philippines, however, has made slow progress between 2019 and 2020. Its e-commerce ranking deteriorated by 10 ranks from 86 to 96. The country has moderately improved access to the internet and increased its postal reliability, but it remains in the early stage of access to bank accounts and in development of secure internet servers. The case study shows that the internet penetration rate in the Philippines was 18%, which was more than two times lower than that reported by UNCTAD (65%). This suggests that the actual level of e-commerce

infrastructure in the Philippines may be less developed than that measured by UNCTAD B2C e-commerce index.

Three out of four countries with high levels of infrastructural development have improved their e-commerce infrastructure. These are Malaysia, Thailand, and Hong Kong. The e-commerce country ranking for Malaysia improved slightly from 31 in 2019 to 30 in 2020; from 48 to 42 for Thailand; and from 14 to 10 for Hong Kong. Meanwhile, Singapore's ranking slightly deteriorated from 3 in 2019 to 4 in 2020, but it remains at the forefront of e-commerce infrastructure development at the global level. Noteworthily, Malaysia, Singapore, and Hong Kong have achieved advanced levels of all aspects of e-commerce infrastructure, while Thailand has achieved the advanced level of access to bank accounts and the postal reliability score, and moderate level of access to the internet and the security of internet servers.

Transport and Logistics Services

The transport and logistics services play an important role in supporting e-commerce transactions. While some e-commerce transactions, such as advertising, ordering, billing, purchasing and payment, can be completed electronically, smooth delivery of goods requires well-functioning logistics, road transport, ports, postal delivery services and customs. Inefficiencies in the logistics system, including freight transportation, warehousing, border clearance, and domestic postal delivery, all raise the trade costs of firms, especially MSMEs engaging in e-commerce.

The state of transport and logistics services in ASEAN countries and Hong Kong is assessed against the aggregate logistic performance index (LPI) and its six components, developed by the World Bank. These components include (1) the efficiency of customs and border management clearance, (2) the quality of trade- and transport-related infrastructure, (3) the competence and quality of logistics services, (4) the ease of arranging competitively priced international shipments, (5) the ability to track and trace consignments, and (6) the frequency with which shipments reach consignees within the scheduled or expected delivery time. The first three components (e.g., customs, infrastructure, logistics services) are the areas for policy interventions, while the last three components (e.g., international shipments, tracking and tracing, timeliness) are the outcomes of supply chain performance.

An analysis of the World Bank's LPI in ASEAN countries and Hong Kong in 2018 – the latest available data – reveals that better performing countries in logistics have a greater level of ecommerce infrastructure (Tables 1.2 and 1.3). In 2018, Cambodia had a moderate level of logistics performance, while Myanmar had a low level of logistics performance. Both countries are less competitive than before as their LPIs over the period 2016-2018 dropped by 7.9% for Cambodia and 6.5% for Myanmar. As a result, the ranking of Cambodia deteriorated from 73 out of 160 countries in 2016 to 98 in 2018, while the ranking of Myanmar worsened from 113 to 137 in the same period. Higher LPI country ranking means worse logistics performance. Cambodia has moderately achieved the ease of arranging competitively priced international shipments and the timeliness of reaching consignees within the scheduled or expected delivery time. But it still faces the problems of low efficiency of customs and border management clearance, a low quality of trade- and transport-related infrastructure, a limited ability to track and trace consignments, and a low competence and quality of logistics services. Meanwhile, Myanmar needs to develop all six aspects of the LPI.

Country	Country ranking				Score of LPI components					
	2018	2016	Change in ranking	LPI change (%)	Customs	Infra- structure	Services quality	Inter- national shipment	Timeliness	Tracking & tracing
Brunei	80	70	-10	-5.6	2.62	2.46	2.71	2.51	3.17	2.75
Cambodia	98	73	-25	-7.9	2.37	2.14	2.41	2.79	3.16	2.52
Indonesia	46	63	17	5.7	2.67	2,9	3,1	3,23	3.67	3.3
Laos	82	152	70	30.4	2.61	2.44	2.65	2.72	2.84	2.91
Malaysia	41	32	-9	-6.1	2.9	3.15	3.3	3.35	3.46	3.15
Myanmar	137	113	-24	-6.5	2.17	1.99	2.28	2.2	2.91	2.2
Philippines	60	71	11	1.4	2.53	2.73	2.78	3.29	2.98	3.06
Singapore	7	5	-2	-3.4	3.89	4.06	4.1	3.58	4.32	4.08
Thailand	32	45	13	4.6	3.14	3,14	3.41	3.46	3.81	3.47
Vietnam	39	64	25	9.7	2.95	3.01	3.4	3.16	3.67	3.45
Hong Kong	12	9	-3	-3.7	3.81	3.97	3.93	3.77	4.14	3.92
Memo: Category criteria										
Low	107-160				1.6-2.4	1.6-2.4	1.9-2.5	1.8-2.6	2.0-2.9	1.6-2.6
Medium	53-106				2.4-2.8	2.4-2.9	2.5-3.0	2.6-3.1	2.9-3.5	2.6-3.1
High	1-52				2.8-4.1	2.9-4.4	3.0-4.3	3.1-4.0	3.5-4.4	3.1-4.3

Table 1.3: Country Ranking and Logistic Performance Index, 2016 and 2018

Note: Country ranking refers to the ranking of 160 countries with 1st as the best and 160th as the worst. *Source:* Author's calculation using data from World Bank (2018).

All four countries with moderate levels of e-commerce infrastructure have improved their logistics performance. Indonesia and Vietnam are classified as high logistics performing countries, while Laos and the Philippines are classified as the low logistics performing ones. Between 2016 and 2018, the LPI ranking in Indonesia improved from 63 to 46; from 64 to 39 for Vietnam; from 152 to 82 for Laos; and from 71 to 60 for the Philippines. Indonesia and Vietnam have done well in all aspects of LPI. The Philippines has done well in the ease of arranging competitively priced international shipments, but it has moderately achieved the efficiency of customs and border clearance, quality of trade- and transport-related infrastructure, the ability to track and trace consignments, timeliness of goods delivery, and the quality of logistics services.

Laos still needs to improve the timeliness of goods delivery and establishes formal arrangements of transport and logistic services for cross-border e-commerce with its key trading partners. According to the case study of Laos, the cross-border e-commerce between Laos and its shopping origin markets such as Thailand and China rely on informal transportation, whereby a customer in Laos has to use a transportation company in the shopping origin markets to order products online. Such practice could undermine trust in online shopping as the customer could not trace the process of product delivery.

All four countries with the high level of e-commerce infrastructure scores have high logistics performance. Singapore, Thailand, and Hong Kong have done well in all aspects of LPI. Malaysia still needs to improve the timeliness of goods delivery.

The logistics performance in Brunei in 2018 was moderate. Between 2016 and 2018, Brunei's LPI decreased by 5.6%, resulting in the deterioration of its country ranking from 70 to 80. The country has moderately achieved the efficiency of customs and border clearance, quality of trade- and transport-related infrastructure, ability to track and trace consignment, timeliness of goods delivery, and quality of logistics services, but it still needs to improve the ease of arranging competitively priced international shipments.

Regulatory Frameworks on Data Flows

The expansion of digital connectivity among businesses, consumers and governments both within and across borders increases the need for data safeguards. Data safeguards promote trust in the data governance and data management ecosystem by avoiding and limiting harm arising from the misuse of data or breaches affecting its security and integrity. Firms engaging in digital trade usually store customers' bank account and credit card information, email addresses, mailing addresses, and usernames and passwords. One of the key cyberthreats to online shoppers in ASEAN in 2020 has been the issue of e-commerce data interception (Interpol, 2021), which obstructs consumer data transmission to and from the device and remotely alters the messages³. This reduces consumer confidence in online payments since cybercriminals may use individuals' online data to steal credit card information or use consumers' personal information for identity theft and fraud.

Following the method used by the World Bank (2021), regulatory frameworks for data safeguards are analysed against 31 regulatory elements; these fall into three broad categories, namely, cybersecurity, personal data protection and nonpersonal data protection (Figure A.1). Cybersecurity refers to measures for protecting internet-connected devices, network and data from unauthorized access and criminal use. Cybersecurity safeguards consist of three groups and 18 regulatory elements. These groups include security requirements for automated processing of personal data, cybersecurity requirements for data controllers and processors, and regulation of cybercrime activities for personal data. Safeguards for personal data contain

³ IGI Global: https://www.igi-global.com/dictionary/data-interception/63971

two groups and 12 regulatory elements. These include legal basis and government exceptions in the data protection laws, and the quality and enforcement of data protection laws. The analysis of non-personal data focuses on the use of intellectual property rights (IPR) to prevent data sharing.

Country	Da	ta safeguards		Data enablers			
	Cybersecurity and cybercrime	Personal data	Nonpersonal data	E-commerce and e- transactions	Public intent data	Private intent data	
Cambodia	33	33	0	75	0	0	
Indonesia	39	50	100	100	100	25	
Laos	50	50	0	75	0	Ó	
Malaysia	44	67	100	100	67	75	
Myanmar	28	8	0	75	33	0	
Philippines	94	83	100	50	67	50	
Singapore	61	67	0	100	33	25	
Thailand	39	17	100	100	100	0	
Vietnam	89	42	100	75	50	25	
ASEAN	53	46	56	83	50	22	

<u>Table 1.4</u>: Scores of Regulatory Frameworks for Data Safeguards and Enablers in ASEAN

Note: The table shows the score for good-practice governance by regulatory framework as of 2020. Colours refer to the level of the regulatory framework: \blacksquare = advanced level (score of 75-100); \blacksquare = moderate level (scores of 50-75); \blacksquare = evolving level (scores of 25-50); and \blacksquare = basic level (scores below 25). *Source*: Author's calculation based on the World Bank's Global Data Regulation Diagnostic Survey in 2021, available at https://microdata.worldbank.org/index.php/catalog/3866. Accessed April 21, 2022

Regulatory frameworks for data sharing are assessed against three enablers, namely electronic transactions (e-transactions), public intent data, and private intent data (Figure A.2). Public intent data refers to data collected with the intent of serving the public good by informing the design, execution, monitoring, and evaluation of public programmes and policies. Such data include administrative, census and survey data produced by government agencies, citizengenerated data produced by individuals, and machine-generated data produced without human interactions. Private intent data refers to data collected by the private sector as part of routine business processes. Such data include transaction and browsing histories, mode of payments, internet protocol (IP) addresses, and smartphone app logs. These three enablers aim to capture policies, laws, regulations, and standards that facilitate the use, reuse, and sharing of data within and between stakeholder groups through openness, interoperability, and portability.

The analysis of regulatory elements reveals that ASEAN has underregulated data safeguards and data enablers (Table 1.4). On average, safeguards for cybersecurity and non-personal data in ASEAN are moderately developed, while safeguards for personal data are the weakest area of performance. The level of regulatory framework for safeguarding cybersecurity is most advanced in the Philippines and Vietnam, while it is less developed in five of the ASEAN countries, namely, Cambodia, Indonesia, Malaysia, Myanmar, and Thailand. The level of regulatory framework for protecting personal data is most advanced in the Philippines, while it is still at the basic level in Myanmar and Thailand. It should be noted that Indonesia, Malaysia, the Philippines, Thailand and Vietnam have used the IPR to prevent the sharing of nonpersonal data, while other ASEAN countries have not yet done so.

Regulatory frameworks to enable data flows are unevenly developed across different enablers and countries. These divergences may be exacerbated by different degrees of enforcement of laws and regulations. E-commerce and e-transactions-related laws and regulations are the only area in which all ASEAN countries are doing relatively well. Enabling reuse of public intent data is moderately developed, while enabling reuse of private intent data is the weakest area of performance in most ASEAN countries. While limited regulations on data safeguards and data sharing imply less restrictions on the movement of data, they may affect the willingness of ecommerce's stakeholders (e.g. firms, consumers, and governments) to share their data due to concerns over data privacy or national security.

ECONOMIC IMPACTS OF E-COMMERCE

Conclusion

The e-commerce sector in ASEAN countries and Hong Kong is on the rise. Using data from Statista (2022), this study shows that total e-commerce sales in ASEAN-10 countries are estimated to grow by 17.2% per annum from US\$142.6 billion in 2022 to US\$216.4 billion in 2025, while those in Hong Kong are forecasted to grow by 16.3% per annum from US\$15.5 billion to US\$28.0 billion over the same period. The top-3 fastest growing e-commerce markets in ASEAN-10 countries over the next five years are forecasted to be Laos, Malaysia, and the Philippines, while in 2025, the top-3 large e-commerce markets would likely be Indonesia, Thailand, and the Philippines.

A review of country case studies indicates that, currently, e-commerce sales are dominated by B2C, and to a lesser extent by B2B. More than 80% of e-commerce sales are accounted by domestic transactions, whereas the remaining 20% of e-commerce sales are accounted by cross-border e-commerce, which are mainly sourced from countries both within and outside the region such as Singapore, Thailand, China, the US, Japan, and South Korea. The key e-commerce platforms in ASEAN countries are Shopee and Lazada, while those in Hong Kong are Tmall, DCFever, and HKTVmall. The e-commerce market concentrates in electronics and media, fashion, and food and personal care.

The development of e-commerce infrastructure as well as transport and logistics varies across countries, ranging from the basic levels in Cambodia and Myanmar to the moderate level in Indonesia, Laos, the Philippines, and Vietnam, and advanced levels in Malaysia, Singapore, Thailand, and Hong Kong. Meanwhile, ASEAN as a group of countries has underregulated data safeguards and data enablers. While safeguards for cybersecurity and non-personal data as well as e-commerce related laws and regulations are moderately developed, personal data protection and the sharing of public and private intent data remain the weakest areas of performance.

Moreover, empirical evidence in the country case studies confirms the significant impacts of e-commerce on international trade and labour productivity. By using websites for marketing and e-sales channels, firms are able to create new markets or extend to market reach beyond traditional and conventional borders. This could increase the number of customers and export volume. The adoption of e-commerce could also boost labour productivity through the digitalization of procurement and sales procedures within a firm and an increased competition among firms in the e-commerce sector.

Policy Recommendation

Still small in economic terms, the cross-border e-commerce between ASEAN and Hong Kong has the potential to leverage momentum from existing trends and introducing new ways of conducting international business. At any rate, unlocking the potential benefits of e-commerce in ASEAN and Hong Kong requires substantial improvements in the e-commerce infrastructure, transport and logistics, and regulatory frameworks on data flows at the national and regional levels.

National Policies on E-commerce Development

At the national level, individual ASEAN countries and Hong Kong should focus on four aspects, namely promoting financial inclusion and cashless payment, improving the efficiency of transport and logistics, strengthening personal data protection laws and cybersecurity measures, and promoting data sharing among public sector, private sector, and consumers.

Firstly, financial inclusion and cashless payment should be improved by adopting and implementing the central bank digital currency (CBDC). CBDC is a national digital banknote issued and controlled by a country's central bank. It is different from cryptocurrencies, which are unregulated and decentralised. CBDCs can be used in the same way that national fiat currencies in circulation are used, except that they are entirely in digital form and allow individuals and businesses to hold CBDC accounts directly with the central banks. As of June 2022, eight out of ten ASEAN member states – namely, Cambodia, Indonesia, Laos, Malaysia, the Philippines, Singapore, Thailand, and Vietnam – have conducted research on CBDC, launched pilot projects, or even started to introduce CBDCs.

The implementation of CBDC, by gradually substituting the national physical banknote and expanding digital payment systems, will allow unbanked populations in poor or remote regions to buy, sell, save, and invest more easily than before. For example, Cambodia's CBDC – called Bakong – reached about half of its population within a year of its launch in October 2020. Users do not need a bank account to register for Bakong, but they need a smartphone with a Cambodian mobile phone number to transmit funds⁴. In addition to centralised digital currencies, greater numbers of digital consumers and larger digital payment systems should

⁴ Nikkei Asia: https://asia.nikkei.com/Business/Finance/Cambodia-s-digital-currency-reaches-nearly-half-the-population

incentivise MSMEs to participate in e-commerce and raise their revenues, which will boost the prospects of MSMEs obtaining bank loans.

Second, one way to improve the efficiency of cross-border transport and logistics is to provide additional trade facilitation measures to trusted traders and providers of logistics services under Article 7.7 of the WTO's Trade Facilitation Agreement. This article requires WTO members, including all ASEAN countries and Hong Kong, to provide additional trade facilitation measures related to import, export or transit formalities and procedures to operators who qualify as authorised economic operators (AEOs) according to specified criteria. Potential AEOs include traders and logistics services providers such as customs agents, truck operators and freight forwarders.

If Article 7.7 is fully implemented, there will be fewer physical inspections, faster release times and reduced documentation and data requirements for AEO companies operating across ASEAN and Hong Kong. Although data on clearance times for AEO companies in ASEAN are currently not available, the implementation of the AEO program in Brazil shows that the average export and import clearance times for AEO companies are 65% and 81% faster respectively than for non-AEO companies.⁵ Customs and other border authorities could better allocate their resources to handle riskier shipment inspections and more complex procedures due to enhanced supply chain security. The recognition of AEOs as secure and safe business partners should also improve the relationship between such entities and border authorities.

ASEAN countries are at different stages in implementing Article 7.7. The implementation commitments notified to the WTO reveal that Indonesia, Malaysia, the Philippines, Singapore and Thailand have been implementing the AEO scheme's obligations since February 2017. Brunei and Vietnam will be ready to do so in February 2022 and January 2024, respectively. Cambodia, Laos, and Myanmar plan to implement Article 7.7 after a transition period but have yet to determine definitive dates of implementation.

The use of the AEO criteria should ensure a mutual recognition arrangement (MRA) of the WTO's AEO scheme at bilateral and regional levels in ASEAN and Hong Kong. MRAs may be established among ASEAN's developing economies and Hong Kong, and then expanded to the remaining ASEAN countries. Greater coverage of MRAs will improve trade efficiency through reduced time and costs associated with cross-border customs controls. This will complement efforts to expand the ASEAN Single Window to key trading partners, streamline non-tariff measures in the region, and further boost ASEAN's internal and external trade by making it simpler, faster and more cost-effective for AEO companies.

Third, strengthening data safeguards in ASEAN countries and Hong Kong requires the adoption and implementation of a sector-wide personal data protection law. The personal data protection law plays an important role in enhancing trust for data usage in digital economies

⁵ Global Alliance for Trade Facilitation: https://www.tradefacilitation.org/project/helping-to-establish-an-aeo-regional-recognition-arrangement-2/

and trade. Without it, individuals may not be willing to share their personal data; and policymakers would impose restrictions on data flows. Although the existing consumer protection and competition laws in ASEAN and Hong Kong can be helpful in addressing certain forms of personal data misuse, their scopes of application are limited. These laws are to be considered as complements - but not substitutes - for the personal data protection law.

Finally, efforts to promote data sharing requires a two-pronged approach, i.e. enabling reuse of public intent data and enabling reuse of private intent data. Reuse of public intent data should be enhanced by adopting a legal framework of common technical standards and an open licensing regime for data; allowing individuals or firms' access to public sector data that have not been published on an open data platform; and establishing open data policies as well as policies or directives on government data classification. Reuse of private intent data should be improved by encouraging open data licenses between private firms, promoting data portability right for individuals, and strengthening public-private partnership to utilize the digital ID system.

The development of domestic personal data protection laws and regulations on data sharing should follow good regulatory practices, which consist of impact assessment of proposed laws and regulations, stakeholder consultations, and ex-post evaluation of such laws and regulations. These practices should enhance the quality of the proposed laws and regulations, and avoid unnecessary, redundant or inefficient provisions in those laws and regulations. ASEAN countries and Hong Kong should also promote the interoperability of data privacy and data sharing approaches, and provide reference to international standards, principles, guidelines and criteria when developing their national personal data in the region.

Regional Cooperation on E-commerce

At the regional level, ASEAN countries and Hong Kong should focus on three aspects. First, they should incorporate a dedicated chapter on e-commerce into the ASEAN-Hong Kong FTA to increase the scope of e-commerce cooperation, create trust and confidence in the use of e-commerce, and enhance e-commerce development among partners. Some of the key provisions to be included are those aimed at supporting micro, small and medium-sized enterprises (MSMEs) to participate in the e-commerce sector; facilitating cross-border e-commerce through paperless trade, electronic authentication, and electronic signature; creating a conducive business environment for e-commerce development through online consumer protection and online personal information protection; facilitating cross-border e-commerce by not restricting the location of computing facilities and data transfers.

Second, ASEAN countries and Hong Kong should accelerate the adoption of coherent data security measures and cybersecurity requirements for data controllers and processors. Underregulation of cybersecurity increases the risks of cyber threats and reduces trust in digital economies and trade. This can be built on the ASEAN-Hong Kong FTA with the purpose of reinforcing the role of consensus-based standards with commitments to develop international standards, and to use such standards where they exist as a basis for developing their domestic regulations on data security and cybersecurity requirements for data controllers and processors. This should support the implementation of the ASEAN Cybersecurity Cooperation Strategy 2021-2025⁶ to enhance regional cybersecurity cooperation. In addition, such measures should promote the development of globally consistent and least trade-restrictive approaches to cybersecurity, while reducing concerns over the use of cybersecurity measures as a disguised restriction on trade aimed at sheltering domestic industry.

Third, ASEAN countries and Hong Kong should pledge capacity-building assistance on starting e-commerce businesses for MSMEs, safeguarding data, and enabling data sharing, especially for emerging economies such as Cambodia, Laos, Myanmar and Vietnam. Such assistance should be aimed at raising awareness and understanding of the importance of e-commerce for businesses, while strengthening government officials' technical capacity on data safeguards that meet international standards, principles and guidelines as well as supporting them to implement national regulatory reforms for developing or aligning their laws. This should ensure more equitable distribution of the gains from e-commerce and data flows, while addressing risks and concerns across countries. Without such technical assistance, ASEAN countries that currently possess limited technical capacity may not be able to undertake regulatory reforms for data safeguards, which result in regulatory divergence in ASEAN. Such regulatory divergence impedes cross-border data flows, and limits the benefits of digital economies and trade in the region.

Efforts to strengthen regional data safeguards and data enablers should be championed by the existing sectoral bodies in ASEAN. These include the ASEAN Network Security Action Council (ANSAC), Working Group on Digital Data Governance (WG-DDG), and ASEAN Coordinating Committee on Electronic Commerce (ACCEC). The ANSAC is in charge of coordination on ASEAN cybersecurity cooperation activities, while the WG-DDG is responsible for developing and implementing the ASEAN Framework on Digital Data Governance in the digital sector.⁷

These two working groups should play an important role in translating the existing commitments on regional data safeguards into national action plans, or proposing new ones. Meanwhile, engaging the ACCEC in the establishment of regional data safeguard measures should be helpful in providing feedbacks on the potential impacts of the proposed data safeguard measures on cross-border e-commerce transactions, and thus reducing the compliance costs for traders. The ACCEC aims to enhance the coordination of initiatives on ASEAN e-commerce, and consists of representatives from trade-related government agencies

⁶ ASEAN Cybersecurity Cooperation Strategy: https://asean.org/wp-content/uploads/2022/02/01-ASEAN-Cybersecurity-Cooperation-Paper-2021-2025_final-23-0122.pdf

⁷ ASEAN digital sector: <u>https://asean.org/our-communities/economic-community/asean-digital-sector</u>. Accessed June 16, 2022.

(e.g., trade, customs, transport facilitation, consumer protection, standards and conformance, and micro, small, and medium enterprises) from all ASEAN countries.⁸

⁸ ASEAN e-commerce: <u>https://asean.org/our-communities/economic-community/asean-e-commerce</u>. Accessed June 16, 2022.

Appendix

Figure A.1: An analytical framework for assessing data safeguards in ASEAN



Note: Figure in the bracket refers to the number of regulatory elements. CERT stands for cybersecurity infrastructure and enforcement agency. Source: Author's construction based on World Bank (2021).

Figure A.2: An analytical framework for assessing data enablers in ASEAN



Note: Figure in the bracket refers to the number of regulatory elements. *Source:* Author's construction based on World Bank (2021).

CHAPTER 1

STRENGTHENING E-COMMERCE COOPERATION UNDER AHKFTA: A CASE STUDY OF CAMBODIA

AUTHORS

- Teng Delux
- Pen Socheata

Cambodia Development Research Institute (CDRI)

ABSTRACT

This study focuses on the e-commerce development in Cambodia through Business-to-Consumer and Business-to-Business e-commerce, Cambodia's readiness to participate in cross-border e-commerce with analysis on economic and legal factors and conditions, including strategic objectives of Cambodia cross-border e-commerce, and analysis of Cambodia's trade flow. E-commerce will bring both challenges and opportunities which require critical study to assess the potential impacts of cross-border e-commerce. The result of this study is to provide policies transformation for future inclusive growth in term of Ecommerce. Both descriptive and quantitative analysis were carried out in the present study. The findings indicate that Cambodia's B2C e-commerce has been adaptive to local context despite less digitalized conduct of e-commerce processes, especially on e-payment. In B2B, there have been support from development partner and the government. However, the government's supports are perceived as new in which the inexperienced approaches might not yield fruitful result for local business operators. On the level of Cambodia's e-commerce readiness through economic factors and conditions, the ICT infrastructure and Financial Technology have steady growth which help encourage and accelerate the processes of B2C and B2B e-commerce in Cambodia. Nevertheless, ICT infrastructure has two main critical gaps which needs to be addressed including the slow internet speed and internet speed divide between the rural and urban areas. E-commerce in Cambodia has potential growth with enabling economic and legal factors and conditions despite some constraints in the factors and indirect link of implication for Cambodia's e-commerce under AHKFTA.

BACKGROUND AND RATIONALE

With the recognition of multilateralism and economic development, ASEAN – Hong Kong, China Free Trade Agreement⁹ (AHKFTA) aims to liberalize and facilitate trade in goods and services, promote and enhance investment opportunities, and strengthen, diversify and enhance trade, investment and economic links in the region (*AHKFTA Chapter I*, 2017). The ASEAN Hong Kong Free Trade Agreement has not incorporated specific chapters or articles that govern e-commerce in the region. Nevertheless, rules of origin and schedules for the reduction of tariffs on imported goods and services have detailed the timeframe of trade reduction by years. Schedules of tariff commitments of trade in goods for Cambodia¹⁰ and in services¹¹ started from 2019 to 2038 based on the MFN 2014 tariff. Cambodia will eliminate customs duties for 65% of its products within 15 years and reduce another 20% of tariff lines within 20 years. AHKFTA came into force on 12 February 2021 for Cambodia (Enterprise Singapore, 2022).

Cambodia has signed and endorsed the ASEAN Agreement on E-commerce which is an integral part of a legal and regulation framework that accelerates e-commerce growth in ASEAN (ASEAN, 2000). The Ministry of Commerce (MoC) adopted National E-commerce Strategy as a guiding map for e-commerce sector development under a harmonized and well-coordinated framework. The E-commerce law was promulgated on 02 November 2019, serving as a legal foundation for e-commerce sector development, especially for protecting and building trust among e-commerce users while attracting foreign investors in the e-commerce sector (Ministry of Commerce, 2021).

E-commerce will bring challenges and opportunities that require critical study to assess the potential impacts of cross-border e-commerce under AHKFTA on Cambodia's trade flows. The finding will provide policy recommendations for reaping the potential benefits of cross-border e-commerce so that Cambodia can enhance its trade flows by strengthening its domestic capacity, efficiency, and competitiveness in cross-border e-commerce

Introduction

The AEC Blueprint 2025 highlighted that global e-commerce has become an increasingly vital element of the international economy. E-commerce plays an essential role in facilitating foreign investment through the supply of intermediary services, reduced barriers to entry, and operating costs for doing business. ASEAN shall intensify cooperation on e-commerce, building upon Article 5 of the e-ASEAN Framework Agreement adopted by ASEAN Leaders in November 2000 to develop an ASEAN Agreement on E-Commerce in facilitating cross-border e-commerce transactions in ASEAN with coherent and comprehensive regulations and standards (ASEAN, 2015).

In this aspect, ASEAN Digital Integration Framework Action Plan (DIFAP) 2019-2025¹ has been implemented, and one of the six priority areas "Facilitating Seamless Trade" includes ASEAN Work Program on Electronic Commerce (AWPEC) 2017-2025². The DIFAP 2019-2025 incorporates the related objectives and action plans of the ASEAN Economic Community (AEC) Blueprint 2025, in particular the ASEAN ICT Master Plan 2020, the Master Plan on ASEAN Connectivity (MPAC) 2025, and relevant Strategic Action Plans (SAPs). Under the ASEAN Agreement on E-commerce and AHKFTA, Cambodia will benefit from trade development by improving its comparative advantages in cross-cutting sectors. AHKFTA covers four major areas, namely tariff reduction for goods traded, reducing restrictions for trade in services, longer stay for business travelers, and better investment protection. Chapter 2 of the agreement outlines trade in goods, and chapter 3 outlines rules of origin, defining standards and criteria for whether a product will be given preferential tariff treatment under the AHKFTA, whereas chapter 8 focuses on trade in services. However, AHKFTA doesn't provide the framework for e-commerce (TINA, 2022).

Some literature acknowledged that China's cross-border e-commerce (CBEC) improves international trade (Giufrida et al. (2017), Wang, Y., Wang & Lee (2017), Xing (2018), Yousef (2018)), while others examined the impact of CBEC on a firm's export performance (Houghton & Winklhofer (2004), Burinskienė (2012), Yue & Li (2019)). According to Zi & Chang (2021), the effects of CBEC on its goods and services exports to 'Belt and Road' (B&R) countries for the period 2000–2018, CBEC has a greater positive impact on trade in services than on trade in goods, especially after the implementation of the B&R initiative. Furthermore, as the level of CBEC rises, distance tends to have a lower impact on trade in services and higher impact on trade in goods. Hence, promoting the sustainable development of CBEC can lead to increased export volume to B&R countries, especially for its services, suggesting that the growth of CBEC creates new competitive advantages for China's exports and the favorable CBEC policies under the B&R initiative are part of the reason for this increase.

It is believed that AHKFTA will enhance cross-border flows of goods, services, and investment between ASEAN and Hong Kong economies. However, the study on the effect of trade in goods and services for Cambodia in AHKFTA is very limited. With the challenges and opportunities of AHKFTA, Cambodia can prepare the policies and agenda for reaping the potential benefits of cross-border e-commerce through enhancing its trade flows by strengthening its domestic capacity, efficiency, and competitiveness in the development of cross-border e-commerce. The result of this study is to provide policy transformation for future inclusive growth in terms of E-commerce.

¹See: AECC18-ASEAN-DIFAP_Endorsed.pdf

² See: ASEAN-Work-Programme-on-Electronic-Commerce_published.pdf

Research Objectives

The goal of the research is to focus on the development of e-commerce in Cambodia and Cambodia's Readiness to participate in cross-border e-commerce. It consists of four main objectives:

- To review the development of e-commerce in Cambodia;
- To assess the country's readiness to participate in cross-border e-commerce under AHKFTA;
- To assess the potential impacts of cross-border e-commerce under AHKFTA on the trade flows of the country;
- To provide policy recommendations for reaping potential benefits from crossborder e-commerce under AHKFTA

Significance of the Study

This study plays a significant role in assessing the potential of e-commerce development in Cambodia and the impacts of cross-border e-commerce under AHKFTA on Cambodia's trade flows. Research output expects to acquire a better understanding of the e-commerce situation in Cambodia and its readiness to participate in cross-border e-commerce under AHKFTA.

RESEARCH METHODS

In this study, both descriptive and quantitative analyses, including factors influencing ecommerce development, policies, and procedures of several agencies, associations, and the government to promote e-commerce, and the export and import of Cambodia with countries under AHKFTA, are conducted.

Research Design

Two factors and conditions are analyzed to assess Cambodia's readiness to participate in ecommerce under AHKFTA (Figure 1). Firstly, economic factors and conditions cover Information and Communication Technology (ICT) infrastructure and Financial Technology (FinTech). Secondly, the legal and institutional environment that assess the existing law and regulations that govern and encourage e-commerce development in Cambodia, including National E-commerce Strategy, Law on E-commerce, Law on Investment, and other regulations. In addition, the trade flow of Cambodia under AHKFTA has been analyzed to detail the trade balance through export and import. Understanding the trade flow and products which Cambodia imports and export will provide more strategic choices and options for Cambodia to prepare itself for regional and global competitiveness by improving economic factors and conditions and the legal and institutional environment to support Cambodia's readiness to participate in cross-border e-commerce.



Figure 1: E-commerce development: factors, conditions and environment

Source of Information

The present study is based on secondary data. Books, scholarly journals, government documents, and data aggregated websites, including the statistics and publications from the Ministry of Economy and Finance, Ministry of Commerce, Royal Government of Cambodia, ADB, World Bank, ASEAN, International Trade Center, and Statista.

Statistical Analysis Methods

The secondary data descriptively presents the overview of the e-commerce state in Cambodia and the economic and legal factors for Cambodia's e-commerce readiness assessment. Lastly, Data from International Trade Center and TINA are analyzed to assess Cambodia's trade flow to see the dynamic change in the export and import of specific products under AHKFTA.

DEVELOPMENT OF E-COMMERCE IN CAMBODIA

Overview of E-commerce State in Cambodia

Business-to-Consumer E-commerce (B2C) in Cambodia

B2C e-commerce has become a part of the e-commerce system. As defined by Ecommerce Foundation, B2C e-commerce focuses on the sales of goods or services conducted online as ways for communication (ADB, 2018). Owing to UNCTAD (2020), shown in Table 1, Cambodia's rank and value in the B2C E-commerce Index fluctuated throughout the years from 2016 to 2020. The best ranking was 115 out of 152 countries worldwide in 2017. Nevertheless, the ranking dropped to 122 which indicates the uncertain development of B2C.

Time Units	Rank	Value
	Rank, 1= highest E-commerce	Index, 0-100
2015	-	19.5
2016	119	29.0
2017	115	30.5
2018	118	-
2019	122	30.8
2020	117	31.10

Table 1:	Cambodia's ra	nk and value	in the UNCTA	D B2C E-commerce	Index
I WOIC II	Cumbound 510	min wind , winde			

Source: UNCTAD (2020)

Cambodia made significant progress even with the fluctuating trend. UNCTAD (2020) also further emphasizes the state of the B2C E-commerce Index with more specific indicators. The share of individuals using the Internet in 2019 or the latest and the secure internet servers in 2019 scored 40 and 42 out of 100 (Table 2)

2020	Economy	Share of	Share of	Secure Internet	UPU postal	2020	Index
Rank		individuals	individuals	servers	reliability	Index	value
		using the	with an	(normalized,	score (2019	value)	change
		Internet	account	2019)	or latest)		(2019-
		(2019 or	(15+, 2017)				20 data)
		latest)					
117	Cambodia	40	22	42	21	31.1	0.3

Table 2: UNCTAD B2C e-commerce index, 2020

Source: UNCTAD (2020)

It indicates a good position in terms of internet penetration. As for the low-scored indicators, including the share of individuals with accounts (15+, 2017) and UPU postal reliability, it reflects more room for improvement. Demographically, based on Table 3, out of the entire population, only 3.1% bought online, which was only 11% of internet users in 2017.

<u>Table 3</u>: Internet shoppers as a share of internet users and of population

Economy	As a share of Internet	As a share of	Latest	Note
	users (%)	population (%)	data	
Cambodia	11	3.1	2017	Used the internet to buy something
				online in the past year (% age 15+),
				FINDEX.

Source: UNCTAD (2020)

Besides B2C E-commerce Index, ICT infrastructure, accessibility rate from shoppers, and characteristics of B2C sales provide further insight into e-commerce. Hale (2016), as cited in (ADB, 2018), highlighted that B2C e-commerce is adaptive to local conditions. The first one is online delivery-based selling, where the sellers are associated with delivery firms for product distribution. Another one is the adaptation of the payment types. Hale (2016) further elaborates on the payment types for consumers' locations. The payment method for Phnom Penh is cash-on-delivery, while delivery to provinces requires mobile payment via WING. The last element is the sales of a wide range of products with different structures. ADB (2018) explicitly described those structures in the form of malls, associated malls with website portals, store collaboration, and social media as a communication platform. Those ways are convenient and adaptive to local consumers as they are reachable and viable in terms of communication, payment, and logistics. However, those are still the basics for conducting B2C e-commerce as the elements have not involved more digitally equipped sales, payment, and logistics. Various local players and stakeholders in B2C e-commerce in Cambodia are shown in (Table 4).

Company	Explanation	Remarks
Little	Started Facebook commerce in 2010, selling	Offers its own delivery-by-moto service.
Fashion	apparel, footwear, bags, accessories and beauty	2014: up to 50 deliveries a day
	products— also sold in brick-and-mortar stores.	
	October 2017: about 1.5 million Facebook	
	'likes'.	
Khmer24	Created in 2009, biggest online market in	July 2013: more than 70,000 users,
	Cambodia.	9,000,000 pages viewed per month.
Cambo	Began operations in mid-2014. It processes	2017: handled about 300 orders per month;
Quick	orders on Amazon via an address in the United	more during the holiday season.
	States. Handles logistics and applicable duties	
	for delivery to Cambodia.	
Fado168	Operates a web portal and Facebook page,	August 2017: handled over 200,000
	delivering products ordered from Amazon's full	transactions.
	catalogue. Normal delivery time is 10-20 days.	
MAIO	April 2015: Worldbridge International and	September 2017: Web.horde.org reported
Mall	ACLEDA Bank's MAIO Mall began selling	that MAIO Mall websites received about
	clothes, jewelry, groceries, accessories,	15,000 visitors monthly. 46.1% of the
	electronic products and other items online.	visitors were Cambodian and 99% females
		(http://web.horde.to/maiomall.com)
Shop168.	Shop168 helps established stores place products	August 2015: the company teamed up with
	onto its web portal	30 stores.
Mall 855	A C2C website that allows consumers to sell	Currently makes money from
	goods to one another. Consumers use Mall 855	advertisements. Buyers and sellers need to
	to sell items such as washing machines, cars and	make their own arrangements for payment
	houses.	and delivery. September 2017: Mall 855
		exploring partnership with a Malaysian
		company to provide payment solutions.
		Also looking for logistics companies for
		delivery solutions.
Roserb	Started in December 2013 as a website for	July 2015: shipped 170 to 220 packages per
	cosmetics and skincare products, with 50 types	month, average value of \$37.50 each.
	of cosmetics items from the Republic of Korea,	
	and offering about 2,000 items by July 2015.	

Table 4: Some key e-commerce participants in Cambodia

Little Fashion has been reported as a successful and leading e-commerce player in Cambodia due to its adaptation from selling through a Facebook page to a website, owned retail store, and more cashless payments (Mango Tango Asia, 2017). Little Fashion received a 5 million USD investment from Belt Road Capital Management (BRCM) which is the potential for its regional market's expansion. Despite unexposed revenue, Little Fashion's Facebook page has approximately 1.6 million followers (May, 2019).

Business-to-Business E-commerce (B2B) in Cambodia

The overview of B2B e-commerce in Cambodia could be observed by its characteristics. ADB (2018) detailed Cambodia's business models, including sales and buying strategies for B2B e-

commerce. The first strategy is associated with internet portals which contain the giveaway and content sponsorship. The second strategy is "Bundlers of services" that include an available combination of services for buyers' choices. Last but not least, the strategy is manufacturer's agents that come in the form of seller representation whose income is user and provider paid (ADB, 2018). Though current marketing strategies have emerged and operated in the last few years, there are still limitations in digital adoption in the context of business in Small and Medium Enterprises (SMEs) in Cambodia, which requires support to move closer toward better e-commerce.

Small and Medium Enterprises (SMEs) are exposed to market creation and capacity building which is supported by Development partners, and the Cambodian government. (ADB, 2018) raised an example of Kiu, a multilingual and multicurrency platform of e-commerce for SMEs. Kiu is available in Cambodia and Vietnam and is supported by Asian Development Bank. For the roles, Kiu creates the wholesale marketplace for importers and consumers, provides resource management tools and planning for SMEs, and shipping facilitation which helps buyers ship products in the Mekong region. On the other hand, the government support in capacity building of local SMEs, based on UNCTAD (2020a), the Ministry of Commerce, funded by EIF, launched a Go4eCam project worth 2.5 million USD to build a marketplace for both B2B and B2C e-commerce in Cambodia, available online in July (Badzmierowski, 2021).

The government's support toward B2B e-commerce in Cambodia is very new. Therefore, the work and way forward can be challenging. However, this is a good sign as the government starts paying more attention to promoting e-commerce via SME capacity building and market creation. In April 2022, Cambodia launched the country's first business-to-business-to-customer (B2B2C) e-commerce platform³, aiming to help small and medium-sized enterprises (SMEs) sell their products to potential clients. The CambodiaTrade e-marketplace sells locally-made products only. So far, some 394 SMEs have already registered by selling more than 1,000 kinds of products on the platform (Khmer Times, 2022).

Cambodia E-commerce Revenue and Projection

UNCTAD viewed E-commerce in Cambodia as an infant which is potential and viable for development (Soeng et al., 2019). Cambodia's e-commerce revenue is in sight of growth and resonates with the view of UNCTAD. In Asian Development Bank's (ADB) report titled "Asia Economic Integration Report 2021: Making Digital Platforms Work for Asia and the Pacific", tech and digital business in 2019 gained 470 million USD in revenue. E-commerce revenue shared 129.72 million USD (May, 2021).

³ See: https://cambodiatrade.com/home-page



Figure 2: B2C revenue based on products from 2017 to 2025 (in million USD)

Source: Statista (2022)

The cumulative annual growth rate of B2C (CAGR 2022-2025) is projected to be 17.06 percent, resulting in a projected market volume of 1,782 million USD by 2025 (Statista, 2022). B2C revenue based on products from 2017 to 2025 indicates steady growth of e-commerce development in Cambodia (figure 2). Therefore, there are spaces for improvement and enlargement of the market, which confirms the view raised by UNCTAD.

Cambodia's Readiness to Participate in Cross-border E-commerce

Economic Factors and Conditions

Economic factors and conditions are derived from one of the three e-commerce facilitators. Economic factors, including ICT infrastructure and financial technology, will be covered. The early phase of the emergence of the e-commerce trend started with a strong desire for the pursuit of information technology by young people of the social middle class in the urban area. Thus, this little progress is the foundation or stepping stone in the digital adoption of Cambodian people.

ICT Infrastructure in Cambodia

Information and Communication Technology infrastructure is one among other facilitators or barriers that could encourage or hinder the growth of e-commerce. The percentage of FDI in the telecommunication sector is very marginal, at only 3 percent (Soeng et al., 2019). Despite constraints, Cambodia's ICT infrastructure has substantially improved the basic digital infrastructure, including mobile and fixed-broadband, network infrastructure, data center, platform, and user device. As of July 2021, mobile subscriptions have reached 20.5 million subscribers, and internet subscriptions for mobile - have 17.5 million subscribers (Table 5).
	2017	2018	2019	2020	2021 (July)
Mobile internet subscribers	10,703,056	13,458,050	16,126,356	16,331,328	17,498,837
Fixed internet subscribers	138,672	153,348	224,104	283,508	309,242
Mobile phone subscribers	18,572,973	19,417,123	21,675,523	20,827,435	20,493,857
Fixed phone subscribers	132,911	88,157	57,438	49,381	42,195

Table 5: Internet and phone subscribers in Cambodia, 2017-2021

Source: (Telecommunication Regulator of Cambodia, 2021)

According to the telecommunication regulator of Cambodia (TRC), there was an exponential growth of mobile and fixed internet subscriptions in Cambodia which moved from only 10,8 million subscribers in 2017 to 16,6 million in 2020 (Table 6). Mobile network coverage has increased. It is also significant to look at the supplier side of internet service. Cambodia has two main submarine fiber cables, MCT and AAE-1, which generate the network in a distance of 41,643 kilometers, reported in 2019. The capability could supply 250,000 subscribers in fixed broadband and 15 million mobile internet subscribers (Supreme National Economic Council, 2021).

Table 6: Cambodia's population & internet penetration

	2017	2018	2019	2020
Total internet subscribers	10,841,728	13,611,398	16,350,460	16,614,836
Total population	16,009,413	16,249,795	16,486,542	16,718,971
Internet penetration rate	68%	84%	99%	99%

Source: (Telecommunication Regulator of Cambodia, 2021)

Starting with the ICT Development Index analysis, Cambodia has been behind compared to some advanced economies in ASEAN while being ahead of Laos and Myanmar (ADB, 2018). Owing to ADB (2018), Cambodia had low availability of bandwidth at only 30 gigabits per second (GBPS) in 2014. It is an undermining factor for internet usage as it is time-consuming for transferring data. However, in the Telecommunication Infrastructure Index of Cambodia 2020, assessed by the United Nations, Cambodia gained a 0.54 score out of 1.00, which is at a moderate level. As analyzed in the Cambodia Digital Economy and Society Policy Framework 2021-2035, the ICT infrastructure development is in demand of internet usage (mobile broadband) and a key accelerator of socio-economic development in terms of promoting digital transformation (Supreme National Economic Council, 2021). The number of users in the e-commerce market is expected to increase from 5.6 million in 2021 to 7.8 million by 2025 (figure 3). User penetration will be 37.0 percent in 2022 and 44.1 percent by 2025 (Statista 2022).

According to data from Statista, sales channels online increased to 7.9 percent in 2021 and are projected to reach 11.2 percent by 2025 (figure 4). There is little increase in sales channels by desktop and mobile split from 2017 to 2025 (figure 5).



Figure 3: Users of e-commerce in Cambodia, 2017-2025 (million)

Source: Statista (2022)

Note: this shows the number of active paying customers (or accounts) of the selected market (market segment, region) in millions for each year.



Figure 4: Sale channels – online and offline split, 2017-2025 (percent)

Source: Statista (2022)

Note: the distribution channel Online refers to the purchase of physical goods in online retail. In other words, the purchase is concluded via the internet - on a desktop PC, tablet or smartphone. The distribution channel Offline covers all purchases in stationary stores, via tele sale or mail-order (e.g., print catalogs)





Financial Technology (Fintech) in Cambodia

In the Fintech section, the factors affecting internet banking adoption and Fintech development in the kingdom will be covered to see whether there are some contributions toward encouraging e-commerce in Cambodia.

In the study of Soeng et al. (2019), the authors ran a regression analysis to study the factors that affect internet banking adoption in Cambodia. The regression result showed the perceived ease of use, attitude of consumers, perceived benefits, and social influence as the important factors for consumers to adopt internet banking. The perceived benefit was found to be the most significant among the other three. The authors also further stressed the importance of internet banking in Cambodia as instant and flexible in the transaction. Thus, advanced Financial Technology (Fintech) is crucial to the e-commerce market in Cambodia and development progress.

On Financial Technology (Fintech) development, the report from ADB (2018) highlighted epayment progress as part of Cambodia's e-commerce. Owing to the Cambodia Digital Economy and Society Policy Framework (2021-2035), there were three indicators for the growth of digital payment. Firstly, for accounts and credit cards. 8.9 million savings accounts, 6.91 million electronic wallet accounts, and 6.8 million payment cards were the last record. Secondly, the payment method includes (i) internet banking at 1.1 million transactions worth 5.1 million USD, (ii) mobile banking at 55.2 million transactions worth 22.1 billion USD, and (ii) QR code payment at 2.3 million transactions worth 30.1 million USD. Thirdly, payment infrastructures that facilitate digital payment, including the Bakong system, Retail Pay System, Fast Payment System, Online Banking System, and more. In the same policy framework, Financial Technology (Fintech), with digital payment as an essential means, has been analyzed as significant in facilitating the financial transaction (Supreme National Economic Council, 2021). Therefore, Fintech is more than a facilitator driver of e-commerce as it pushes for more digital e-commerce.

Cambodia's payment and settlement systems have developed remarkably in recent years, and the use of electronic payment systems increased substantially during the pandemic. For instance, the value of retail electronic payments, including both KHR and USD, markedly expanded 34.5 percent to KHR415.5 trillion, equivalent to 3.8 times the GDP, and the number of e-wallet accounts has surged to 13.6 million, accounting for more than 80 percent of the total population. In 2021, the value of online payments using e-wallet accounts expanded 17.3 percent to almost KHR200 trillion with 343.8 million transactions (NBC, 2022).

As of 2021, NBC has provided licenses to payment service institutions, banks, and financial institutions to operate payment services focusing on digital payment services through their mobile applications and agents (46,278 outlets). Customers can directly walk into any agent network to conduct various transactions, such as bill payments and money transfers (106.2 million customers recorded in 2021), allowing the previously unbanked to access and use formal financial services at affordable costs.

In 2021, the value of internet banking almost doubled to KHR 90.1 trillion with 4.4 million transactions, and that of mobile banking increased 28.6 percent to KHR 28.9 trillion with 254.1 million transactions, and around 10.6 million cards have been issued, and the total value of card payments increased 20 percent to KHR 84.1 trillion with 105.3 million transactions. To facilitate the increasing trend of card payments, banks and financial institutions installed 3,639 ATMs and 49,432 POS machines across the country. Meanwhile, QR code payments have also expanded notably in recent years, and NBC has introduced the KHQR code standard to facilitate interoperable QR code payments among banks and financial institutions to enhance financial connectivity in the region. In 2021, the value of QR code payments increased 2.2 times to KHR 953.9 billion with 4.4 million transactions, and total transactions through Bakong were recorded at KHR 14.3 trillion with 8.2 million transactions (NBC, 2022).

Despite the growth, there have been gaps, addressed in the E-Commerce Strategy 2021. To enhance strategic objectives for payment development, the government raised four main areas to be improved. The improvement should be in (i) inter-operational payment infrastructure, (ii) strengthened Fintech regulatory framework, (iii) expanding financial literacy, and (iv) promotion of diverse payment options (Ministry of Commerce, 2021).

Overview of Cambodia's Legal and Institutional Environment

Cambodia Ministry of Commerce (MoC) adopted National E-commerce Strategy as a guiding map for e-commerce sector development under a harmonized and well-coordinated

framework. Formulation of the E-commerce Strategy is consistent and responsive to recommendations in other trade-related strategy documents, such as (i) Cambodia Trade Integration Strategy 2019-2023, which focuses on Trade in Service, Ecommerce, and Digital Economy and IR 4.0; (ii) Cambodia ICT Master Plan 2020 and (iii) Cambodia eTrade Readiness Assessment by UNCTAD in 2017. The E-commerce Strategy is related to the strategies/policies of relevant line ministries. Relevant stakeholders in the private sector, public sector, and development partners in the study of the ten components of the e-commerce ecosystem to make this E-commerce Strategy harmonized and consistent with other related areas. Furthermore, the E-commerce Strategy also provides Plan of Action (PoA) determining actions to be implemented to develop the ecommerce sector (Ministry of Commerce, 2021).

Law on E-commerce was promulgated on the 02nd November 2019 and will serve as an important legal foundation for e-commerce sector development, especially for protecting and building trust among e-commerce users, as well as attracting foreign investors in the e-commerce sector (Ministry of Commerce, 2021).

The law on Electronic Commerce was enacted by the National Assembly on 08, October 2019, and entirely reviewed and approved by the Senate on its form and legal concept on 18, October 2019. The purposes of this law include 1. To govern electronic commerce in the Kingdom of Cambodia and other international partners; 2. To create legal certainty in civil and commercial transactions by the electronic system; and 3. To give confidence to the public in the usage of electronic communication (*Law on Electronic Commerce*, 2019) (table 7).

Governing legislation/ framework	The laws that would apply are as follows: Law on E-commerce (2019), Sub-Decree No. 134 on Classification, Formalities, and Procedures on Granting of Permit or License to Intermediary and E-commerce Service Provider, and Exemptions, dated 24 August 2020, Prakas (Ministerial Declaration) No. 290 on Granting of Permit of License to E-commerce Service Providers, dated 9 October 2020.
Regulatory authority	Under the Law on E-commerce, the Ministry of Commerce and Ministry of Posts and Telecommunications are the competent authorities governing on the E-commerce sector. The Ministry of Commerce is in charge of issuing the E-commerce permit/license to the service providers, while the Ministry of Posts and Telecommunications regulates the technological side of the sector, such as the security and safety procedures regarding the storing of data and information, and the issuance of online service certificate.
Licensing & market entry requirements Foreign equity restrictions	 Under the Law on E-Commerce, the following persons are permitted to operate E-commerce in Cambodia: natural person; sole proprietorship; legal person; and branch of foreign company. The E-commerce licensing requirement is regulated as follows: natural person and sole proprietorship are required to obtain the E-commerce permit. legal person and branch of foreign company are required to obtain the E-commerce license. In applying for the E-commerce permit/license, the applicant is also required to obtain the Online Service Certificate from the Ministry of Posts and Telecommunications.
	Foreign entities can set up a company operating E-commerce in Cambodia and there are no foreign equity restrictions on such company.

<u>Table 7</u>: Cambodia electronic commerce regulations

Payment solutions, foreign exchange administration and merchant acquiring services	 Payment solutions: there are numerous payment solutions on E-commerce platforms in Cambodia, including cashless/e-wallet, cash on demand, and credit card. In June 2020, the government officially launched the Bakong System (see response below) to incentivize the use of electronic money in payments by the public. Foreign exchange administration: to the best of our knowledge, as of the date of this response, there is no regulation issued on whether the local currency (Khmer Riel) can be used for E-commerce platforms which do not have a local presence in Cambodia. Merchant acquiring services: to the best of our knowledge, we are not aware of any specific laws or regulations on merchant acquiring services as currently there is a regulatory framework on third-party payment processors.
Product liability	 The Law on Consumer Protection (2019) ("CPL") provides protection of consumers in Cambodia. It is applicable to all persons conducting business (for profit or not) which provide or offer goods or services, in all sectors, to consumers in Cambodia. The Law sets out a number of prohibited activities including false, misleading, and/or baited advertisement and misrepresentation regarding the quality of the offer products, as well as supplier's liability for any health and safety impact of consumers caused by the supplier's "unfair" practices. The law also grants the consumers the right to complain and claim compensation for any violation of their rights. The Law on Management of Quality and Safety of Products, Goods, and Services (2000) ("LMQS") requires entities, including manufacturers, importers, exporters, merchants, service providers, and advertisers, to submit their products, goods, and/or services to the relevant authorities for quality check and inspection. The LMQS also put civil and/or criminal liabilities on the abovementioned entities for any falsified, tampered and/or modified products post-inspection, as well as any contaminated or counterfeited products.
Data protection	The Law on E-commerce provides general requirements on data processing and storing for E-commerce service providers. It should be noted that there is no specific law or regulation governing data protection in Cambodia. Generally, under the Law on E-Commerce, the E-commerce service providers are required to obtain express consent for any usage or storage of the other person's personal data and information. In addition, the service provider storing such personal information, shall use all means to ensure that the information is safely protected in all reasonable circumstances.
Consumer protection	The Law on E-Commerce and CPL provide that the E-commerce service providers (except those operating in securities and insurance sectors) are required to provide consumers with correct, clear, and sufficient information, which contain the following points at the minimum: person's name or legal corporate name, registered business address, and electronic means of contract or phone number form of contact, which is fast, convenient, and effective between the consumer and seller; terms and conditions, and the cost of the goods or services related to the business transactions, especially the terms and conditions, payment methods, and details related to removal or cancellation of purchase order, stoppage, delivery, and replacement of goods and refund; and goods and services which are put on sale. Such information shall be in Khmer language.



The Ministry of Post and Telecommunications (MPTC) is producing and executing the policies and strategies related to telecommunication. MPTC has a leading role in overseeing the ICT sector, formulating related policies, and forming guidance in developing the ICT sector in Cambodia. National ICT Development Agency (NIDA) was established in 2000 to develop and promote ICT technology by improving and promoting public service delivery, efficiency, and effectiveness. Telecommunication Regulator of Cambodia (TRC) was officially established in 2012 to formulate telecommunication policies and regulations, monitor telecommunication services, ensure a standard for telecommunication infrastructures and networks and resolve disputes in the ICT sector.

The Ministry of Commerce (MoC) has digitized trade information and trade-in services, including trade agreements, commodity prices, annual reports, trade information books, bulletins, trade statistics, commercial counselors, and links to WTO, ASEAN, and Cambodia's special economic zones. Other three-core services have been transformed into online procedures of the Certificate of

Origin (CO), Company Registration, and Trade Mark Registration), which encourage trade by reducing trade costs and promoting time efficiency. In 2019, the Ministry of Economy and Finance (MEF) launched the Cambodia National Single Window (CNSW)⁴, and made initiative to improve the trade facilitation of Automatic System Custom Data (ASYCUDA)⁵, undertaken by the General Department of Custom and Excise (GDCE) of the MEF. More than that, in June 2020, the MEF has also officially launched Online Business Registration with a collaboration of many remarkable and relevant institutions such as the Ministry of Commerce, General Department of Taxation, Ministry of Labor and Vocational Training, Ministry of Interior, and Council Development of Cambodia. This system aims at facilitating business registration procedures to be more friendly by reducing the cost of doing business, and bureaucratic issues, and promoting time efficiency. This online system also helps firms to reap multiple benefits that are provided by public institutions including a chance to receive the QIP projects which are provided by the CDC. These online procedures help improve and promote significantly the productivity of both international and domestic firms that also influences international trade by reducing the cost of trade and eliminating regulatory barriers (SEAN & LOR, n.d.).

Overview of Cambodia's International Trade

Joining ASEAN in 1999 and WTO in 2004, Cambodia has integrated its economy into regional and global organizations, allowing Cambodia to potentially access an essential bilateral as well as a multilateral trading system and markets, increasing market access and fostering investment under the Most-Favored National (MFN) status and Generalized System Preference (GSP) from the US as well as EBA from the EU. Cambodia's export increased significantly from 10 billion USD in 2016 to 17.7 billion USD in 2020, and Cambodia's imports gradually jumped to 19.2 billion USD in 2020, up from 12.3 billion USD in 2016 (Table 8).

The share of Cambodia's top 10 exporters has increased from 84.8 percent in 2016 to 86.9 percent in 2020. It explained that the market is not yet diversified enough, where the share of Cambodia's top 10 importers also increased from 71.4 percent in 2016 to 81.7 percent in 2020, reflecting more dependence on concentrated markets.

Amongst the top 10 Cambodia's import destinations, Cambodia imported more than 30 percent from China about 7.1 billion USD in 2020, Thailand – 2.8 billion USD, Vietnam – 2.6 billion USD, where these three markets maintain 65 percent of Cambodia's total imports in 2020. Nine out of ten of Cambodia's import destinations are from Asia, and most of them are regional free trade areas like AFTA and RCEP (Table 9).

⁴ This system is designed to be an electronic, online service to facilitate faster and more transparent international trade procedures, reduce costs and provide consistency and certainty to the total process from the start of the regulatory requirements to the clearance of goods.

⁵ ASYCUDA is known as an electronic system which could be able to replace manual custom processes with online procedures, aiming to reduce the logistic cost and time as well as promote transparency and trade.

Year	Total Import	Top 10 exporters	Share	Total Export	Top 10 importers	Share
2016	12,312,973	10,445,613	84.8%	9,982,663	7,132,077	71.4%
2017	14,289,542	12,278,809	85.9%	11,268,954	7,936,310	70.4%
2018	17,393,051	14,786,174	85.0%	12,707,908	9,071,999	71.4%
2019	20,279,485	17,307,970	85.3%	14,824,722	11,032,876	74.4%
2020	19,296,193	16,773,853	86.9%	17,716,469	14,473,533	81.7%

<u>Table 8</u>: Cambodia's export and import, share of top 10 trading partners, year 2016-2020 (Thousand US dollar)

Source: Author's calculation (International Trade Center, 2021)

Table 9: Top 10 Cambodia's import destination, (Thousand US dollar)

Exporters	Imported value in 2016	Imported value in 2017	Imported value in 2018	Imported value in 2019	Imported value in 2020	
World	12,312,973	14,289,542	17,393,051	20,279,485	19,296,193	
China	4,553,097	5,295,221	6,141,438	7,585,748	7,098,206	
Thailand	1,846,221	2,404,730	3,132,756	3,234,432	2,868,032	
Viet Nam	t Nam 1,421,855 1,685,59		2,214,983	2,724,846	2,655,998	
Singapore	527,510	618,793	572,579	606,562	985,904	
Taipei, Chinese	695,831	709,509	775,818	800,758	754,519	
Indonesia	427,010	478,202	522,424	772,490	665,140	
Japan	526,717	580,482	740,347	887,662	651,975	
South Korea	435,895	491,642	569,011	673,164	549,368	
Switzerland	11,477	14,632	116,818	22,308	544,711	
Top 10	10,445,613	12,278,809	14,786,174	17,307,970	16,773,853	

Source: (International Trade Center, 2021)

Amongst the top 10 Cambodia's Export destinations, Cambodia exported more to the U.S.A., about 5.3 billion USD in 2020, Singapore -2.6 billion USD, and China -1.1 billion USD, where these three markets exceeded 50 percent of Cambodia's total export in 2020 (Table 10).

Traditionally, the main markets for the sale of Cambodian products are in the west, such as the U.S.A., Germany, Great Britain, and Canada, but recently Cambodia has been changing its orientation towards Asian countries that are part of the AHKFTA and RCEP. However, the trade balance between Cambodia and Thailand, Cambodia and Viet Nam are very high, which requires more effort to reduce the gap.

Importers	Exported value in 2016	Exported value in 2017	Exported value in 2018	Exported value in 2019	Exported value in 2020
World	9,982,663	11,268,954	12,707,908	14,824,722	17,716,469
U.S.A.	2,133,414	2,407,917	3,044,576	4,414,284	5,333,170
Singapore	61,882	158,557	78,503	272,668	2,622,629
China	602,563	750,430	863,317	1,012,148	1,089,124
Japan	820,892	849,951	1,076,032	1,140,013	1,062,352
Germany	893,465	1,004,813	1,098,440	1,081,793	971,131
U.K.	946,867	1,013,901	1,015,995	979,868	830,923
Canada	648,878	688,824	776,812	839,309	750,666
Hong Kong	213,116	239,686	310,672	240,815	677,707
Thailand	418,012	428,811	312,631	507,493	653,489
Belgium	392,988	393,420	495,021	544,485	482,342
Top 10	7,132,077	7,936,310	9,071,999	11,032,876	14,473,533

Table 10: Top 10 Cambodia's export destination, (Thousand US dollar)

Source: (International Trade Center, 2021)

Analysis of Cambodia's Trade under AHKFTA

According to data from ITC (International Trade Center, 2021), Cambodia's export gradually increased to 17.7 billion USD in 2020, up from 12.7 billion USD in 2018. Even with the disruption of the COVID-19 pandemic to international trade, Cambodia's export to Hong Kong increased nearly triple from around 241 million USD in 2019 to 677 million USD in 2020.

<u>Table 11</u>: Cambodia's export and import, share and annual growth, 2018-2020 (Thousand USD)

		Val	lue in 2018		Val	ue in 2019		Va	lue in 2020
_	ASEAN	Hong Kong	World	ASEAN	Hong Kong	World	ASEAN	Hong Kong	World
Total Export	958241	310672	12707908	1335990	240815	14824722	3849587	677707	17716469
Share, %	7.54%	2.44%	100.00%	9.01%	1.62%	100.00%	21.73%	3.83%	100.00%
Annual Growth, %	2 - 1			39.42%	-22.49%	16.66%	188.14%	181.42%	19.51%
Total Import	6849836	602419	17393051	7984166	541936	20279485	7684735	446591	19296193
Share, %	39.38%	3.46%	100%	39.37%	2.67%	100%	39.83%	2.31%	100%
Annual Growth, %	4. T. 1.			16.56%	-10.04%	16.60%	-3.75%	-17.59%	-4.85%

Source: Author's calculation (International Trade Center, 2021)

Cambodia's export to ASEAN increased from 1.33 billion USD in 2019 to 3.85 billion USD in 2020. Meanwhile, Cambodia's imports from ASEAN decreased from around 8 billion USD in 2019 to 7.7 billion USD in 2020, whereas Cambodia's imports from Hong Kong have decreased from 602 million USD in 2018 to 446 million USD in 2020.

Even with the disruption of the COVID-19 pandemic to international trade, Cambodia's export to ASEAN increased by 188.14 percent from 1.33 billion USD in 2019 to 3.85 billion USD in

2020, where its annual export growth rate to the world increased by 19.51 percent. Cambodia's annual export growth rate to Hong Kong increased by 181.42 percent. Meanwhile, the country's imports from Hong Kong decreased by 17.59 percent (Table 11).

Commodity	Value
Furskins; tanned or dressed, of mink, whole, with or without head, tail or paws, not assembled	27
Electrical transformers, static converters and inductors; parts thereof	20.2
Electric motors; of an output not exceeding 37.5W	18.8
Machinery; parts and accessories of the machines of heading no. 8471 (other than covers, carrying cases and the like)	12.6
T-shirts, singlets and other vests; of cotton, knitted or crocheted	11.3
Cases and containers; handbags (whether or not with shoulder strap and including those without handle), with outer surface of leather or of composition leather	10.1
Cereals; rice, semi-milled or wholly milled, whether or not polished or glazed	8.9
Jerseys, pullovers, cardigans, waistcoats and similar articles; of cotton, knitted or crocheted	7.54
Telephone sets and other apparatus for the transmission or reception of voice, images or other data, via a wired or wireless network; parts	7.03
Cases and containers; n.e.c. in heading 4202, with outer surface of plastic sheeting or of textile materials	6.26
	Commodity Furskins; tanned or dressed, of mink, whole, with or without head, tail or paws, not assembled Electrical transformers, static converters and inductors; parts thereof Electric motors; of an output not exceeding 37.5W Machinery; parts and accessories of the machines of heading no. 8471 (other than covers, carrying cases and the like) T-shirts, singlets and other vests; of cotton, knitted or crocheted Cases and containers; handbags (whether or not with shoulder strap and including those without handle), with outer surface of leather or of composition leather Cereals; rice, semi-milled or wholly milled, whether or not polished or glazed Jerseys, pullovers, cardigans, waistcoats and similar articles; of cotton, knitted or crocheted Telephone sets and other apparatus for the transmission or reception of voice, images or other data, via a wired or wireless network; parts Cases and containers; n.e.c. in heading 4202, with outer surface of plastic sheeting or of textile materials

Table 12: Top imports of Hong Kong from Cambodia 2019, (Million US dollar)

Source: TINA (2022)

In 2020, Cambodia's exports to ASEAN and Hong Kong by-product HS code 71 were 2.7 billion USD and 256 million USD. The other dominant product exported to ASEAN is HS code 40, 85, 49, 84, 62, 61, 10, 17, and 60 (Annex 1). Cambodia's imports from ASEAN and Hong Kong by-product HS code 27 were 1.8 billion USD and 148 million USD. The other dominant product exported to ASEAN is HS code 87, 60, 71, 85, 24, 84, 22, 48, and 39 (Annex 2). Based on the TINA database, 6-digit HS code products imported by Hong Kong from Cambodia in 2019 showed in Table 12.

The products with export potential from Cambodia to Hong Kong are Mink furskins, whole, tanned or dressed, not assembled, Jerseys & similar of cotton, knit/crochet, and Footwear, rubber/plastic soles & leather uppers, nes. Jerseys & similar cotton, knit/crochet show the huge absolute difference between potential and actual exports in value terms, leaving room to realize additional exports worth 40 million US dollars (Figure 6).

Under the ASEAN Agreement on E-commerce and AHKFTA, Cambodia keeps improving its trade balance with various partners, including tariff reduction for goods traded, reducing restrictions for trade in services, keeping longer stays for business travelers, and better investment protection. In recent years during the COVID-19 pandemic, E-commerce has boomed in the southeast Asian country, and it will continue to rise in the post-pandemic era, which results from the rapid development of technologies and the fast growth of Internet users.

The way of doing business and international trade become more digital in the second decade of this century, especially the disruption of business activities due to the covid-19 pandemic that requires the fast adoption of technology in business operations. Understanding trade flow and products which Cambodia imports and exports, will provide more strategic choices and options for Cambodia to prepare itself for regional and global competition. So, e-commerce will be crucial for Cambodia to maintain its comparative advantage in international trade competition.



Figure 6: The Products with Greatest Export Potential from Cambodia to Hong Kong

Source: (ITC, 2022)

Strategic Objectives of Cambodia Cross-border E-commerce

The E-commerce strategy of the RGC includes the following strategic objectives of Cambodia's cross-border e-commerce:

1. Develop the legal and regulatory framework relating to cross-border trade. Ensuring implementation of the cross-border trade tenets of the Logistics Master Plan (The capacity of authorities to be able to manage, administer, coordinate and monitor the implementation of the Logistics Master Plan); ensuring coherence with international agreements and accelerating the trade and cross-border agreements; strengthening of the related regulatory framework; continuing discussions to harmonize/unify standards

among partner countries and also to reduce the significant tariff and non-tariff barriers across Cambodian borders.

- 2. Continue the development of the National Single Window (NSW), its rollout, and other paperless trade systems. NSW development and deployment by all relevant ministries and agencies is crucial for Cambodia's cross-border trade agenda; simplification of cross-border procedures, including the deployment of NSW, will be effective to reduce overall transport time, and other paperless systems, such as the Port EDI system, and the Port Management System, will also need to be deployed; institutional mechanisms coordinating stakeholders of (cross-border) paperless trade and related capacities will need to be strengthened as well, and institutions will require training and awareness of the overall workflow; The National Trade Facilitation Committee (NTFC) and sub-committees and working groups are vital, given the NTFC's role in coordinating trade facilitation efforts.
- 3. Develop a network of hard infrastructure and services required for cross-border trade. As the scale and volume of cross-border trade increase, companies will require access to warehousing (including bonded warehouses), located at strategic points along the borders. The infrastructure would need to be improved to achieve the following core goals as stated in the LMP - lower cost and stable time of cross-border transport to maintain the investment value of Cambodia (to maintain expected production cost); More choices of transport modes; More choice and sophisticated logistics services like less than container load (LCL) and Vendor Managed Inventory (VMI) etc.
- 4. Raise capacities and efficiency levels for conducting cross-border trade. To enhance cross-border trade, enterprise-level improvements are also needed, which involves raising the knowledge levels among enterprises/traders, logistics services providers, customs brokers, and other entities on the regulations, and best practices to follow regarding administrative paperwork and customs clearance processes. The establishment of a Logistics Technical Training Centre, as well as Training of Trainer (TOT) initiatives via which access to training for both public and private sector entities, can be expanded.

The government's initiative may be warranted to ensure trust and confidence in cross-border e-commerce transactions with Cambodian SMEs acting as suppliers. The initiative could be in the form of a government-own and operated B2B platform as an outlet for Cambodian SMEs to market their products to the world and reach broader clients. Informal cross-border trade should be explored, whether the micro-entrepreneurs involved in cross-border trade can be absorbed meaningfully into the cross-border-related e-commerce activity as an intermediate step towards formalization.

CONCLUSION AND POLICY RECOMMENDATIONS

Despite a lack of maturity, Cambodia's e-commerce has more room for growth and development. The findings indicate several solid states and gaps, which is critical for policy recommendations. In the e-commerce overview, Cambodia's B2C e-commerce has been adaptive to the local context despite the less digitalized practice of e-commerce processes, especially in e-payment. In B2B, there has been support from the development partner and the government. However, the government's support is perceived as new, and the approaches might not yield fruitful results for inexperienced local business operators. On the level of Cambodia's e-commerce readiness through economic factors and conditions, the ICT infrastructure and Financial Technology have had steady growth for the past few years, which help encourage and accelerate the processes of B2C and B2B e-commerce in Cambodia. Nevertheless, ICT infrastructure has two main critical gaps which need to be addressed, including the slow internet speed and the internet speed divide between the rural and urban areas. Based on the legal and institutional environment, various laws and strategies have visioned and paved the way for e-commerce development paths in Cambodia. The issues are with how those laws could be efficiently implemented to address the gaps. Lastly, AHKFTA has no direct chapters or clauses that govern e-commerce for the region despite the schedules in goods and services. As for trade flow, Cambodia's export with Hong Kong has steady growth in contrast to import.

Therefore, to strengthen Cambodia's e-commerce and reap benefits from Cambodia's participation in AHKFTA, the following policy recommendations need to be considered:

The Royal Government of Cambodia should continue to reinforce the implementation mechanisms of Digital Economy and Society Policy with specific focuses on enhancing ICT infrastructure and Financial Technology through (i) forging collaboration with private sectors in improving bandwidth availability and coverage countrywide and (ii) cooperating with local banks, experts and relevant stakeholders to create a more synergized inter-operational payment infrastructure like Bakong initiative to ensure financial inclusiveness for providers and consumers. The improvement in these two will improve the conduct of B2C ecommerce in Cambodia in a more digitalized way.

- To support B2B e-commerce in Cambodia, the government should conduct thorough studies of B2B characteristics and behavior with rigid indicators to assess the needs of businesses in adapting and operating sales in ecommerce locally and regionally. The government should work closely with stakeholders to deliver different types of support, including fund provision to local businesses, competition for creativity, and capacity building for adaption to local, regional and global e-commerce trends.
- The government should further enhance the existing legal, regulatory, and institutional frameworks relating to electronic commerce with specific rigorous implementation and impact evaluation to ensure the fruitful result from strategic objectives. E-Commerce Strategy has comprehensive strategic goals for Cambodia's e-commerce development; however, making the strategies more realized and practical is crucial for paving e-commerce growth.
- AHKFTA should also work further to emphasize the roles of this Free Trade Area in pushing for e-commerce development in the region by narrowing more from the facilitation and liberalization of trade in goods and services. AHKFTA should consider the means in the pursuit of digital transformation that liaises the flow of e-commerce trade in the region instead of only elaborating on schedules of tariff reduction by years for trade in goods and services.

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Annexes

<u>Annex 1</u>: Cambodia's export by products under AHKFTA⁶, 2018-2020 (Thousand USD)

		l v	Value in 2	018	Value in 2019			Value in 2020		
	Cambodia's Export			World	ASEAN	Hong Kong	World	ASEAN	Hong Kong	World
Total	All products	958241	310672	12707908	1335990	240815	14824722	3849587	677707	17716469
HS Code	Product label	7.5%	2.4%	100.0%	9.0%	1.6%	100.0%	21.7%	3.8%	100.0%
'71	Natural or cultured pearls, precious or semi-precious stones, precious metals, metals clad	75659	260	86009	411778	18	438097	2754466	256826	3038699
'40	Rubber and articles thereof	163931	2268	224518	156590	41	224559	230114	13	281848
'85	Electrical machinery and equipment and parts thereof; sound recorders and reproducers, television		122990	511516	205946	69439	577480	163997	36114	762091
'49	Printed books, newspapers, pictures and other products of the printing industry; manuscripts,		1	1812	1724	0	2644	121523	261472	383764
'84	Machinery, mechanical appliances, nuclear reactors, boilers; parts thereof		7697	92939	77879	7326	116402	92971	9030	170110
'62	Articles of apparel and clothing accessories, not knitted or crocheted	26621	10514	1241146	47614	16138	2285306	81173	13937	2296771
'61	Articles of apparel and clothing accessories, knitted or crocheted	83049	62879	6586195	85240	59973	6001442	76480	35422	5188130
'10	Cereals	43729	11662	419801	48344	10777	421802	53216	19127	471157
'17	Sugars and sugar confectionery	58720	0	82318	50396	2	66147	52487	5	52877
'60	Knitted or crocheted fabrics	21099	513	26382	14336	163	24996	25791	644	39848

Source: Author's Compilation

⁶ See: <u>AHKFTA_Annex_2-1-Part_3-Schedule_of_Cambodia.pdf (enterprisesg.gov.sg)</u>

		V	alue in 201	18	Value in 2019			Value in 2020		
	Cambodia's Import	ASEAN	Hong Kong	World	ASEAN	Hong Kong	World	ASEAN	Hong Kong	World
Total	All products	6849836	602419	17393051	7984166	541936	20279485	7684735	446591	19296193
HS Code	Product label	39.4%	3.5%	100.0%	39.4%	2.7%	100.0%	39.8%	2.3%	100.0%
'27	Mineral fuels, mineral oils and products of their distillation; bituminous substances; mineral	1792857	144	1832057	2321381	84	2368044	1835947	148	1920464
'87	Vehicles other than railway or tramway rolling stock, and parts and accessories thereof	629280	47	1712035	879597	69	2377574	676439	15	1704977
'60	Knitted or crocheted fabrics	568997	222908	2734002	627152	198476	2682355	657908	140023	2366811
'71	Natural or cultured pearls, precious or semi-precious stones, precious metals, metals clad	387744	20815	574590	93383	1753	153924	510201	10656	1085256
'85	Electrical machinery and equipment and parts thereof; sound recorders and reproducers, television		20681	780737	346733	10360	1071053	304967	9084	1183125
'24	Tobacco and manufactured tobacco substitutes	259070	2120	315476	195966	63	254713	284024	289	327135
'84	Machinery, mechanical appliances, nuclear reactors, boilers; parts thereof	243586	18993	1036555	368805	15713	1413952	277748	9406	1224419
'22	Beverages, spirits and vinegar	268302	1306	332418	283561	64	346857	252545	69	328171
'48	Paper and paperboard; articles of paper pulp, of paper or of paperboard	153137	20181	385613	197779	24031	477478	245296	22983	522841
'39	Plastics and articles thereof	193259	33121	566506	227995	41383	755749	235849	42947	836837

<u>Annex 2</u>: Cambodia's import by products under AHKFTA, 2018-2020 (Thousand USD)

Source: Author's Compilation

CHAPTER 2

STRENGTHENING COOPERATION TO PROMOTE BUSINESS TO BUSINESS AND BUSINESS TO CONSUMERS UNDER AHKFTA: A CASE STUDY OF INDONESIA

AUTHOR

- Nailul Huda
- Dhenny Yuartha Junifta
- Nur Komaria

Institute for Development of Economics and Finance (INDEF)

ABSTRACT

As the biggest lucrative market in Southeast Asia, the rising digital economy significantly impacts cross-border trade in Indonesia. Rapidly growing penetration and the number of internet users are the main factors of growing e-commerce in Indonesia. These factors then encourage the increase in online payment for transactions. However, Indonesia faces significant challenges, for instance, high logistics costs, low digital literacy, and data privacy regulation. This report assesses the development of e-commerce, the country's readiness, and the potential impact of cross-border e-commerce. This topic is important because of several issues: (i) the development of e-commerce need to be addressed due to the potential impact on the domestic market; (ii) to gain the opportunity, logistic cost needs to be competitive; (iii) digital literacy and privacy as important precondition to enhance the developing of the digital economy in Indonesia. Content analysis and Input-Output analysis are used to analyze the research objective. Based on calculations, imports of consumer goods originating from cross-border ecommerce encourage increased public consumption. Ease of transactions and relative price differences have driven this increase. This condition then contributed to a rise in national output by 0.45 percent or USD7.51 billion. Labour absorption and wages also increased even no significantly. However, this research has limitations, especially on the correlation between

consumption imports and production, that are still crucial to investigate.

BACKGROUND

Pandemic Covid-19 and international global trade are connected and have a significant role. It has caused and continues to cause considerable losses to the world economy and international trade in general. Multiple factors have worsened the uncertainty in which enterprises and end consumers have found themselves. To name a few, income loss, cross-border travel limitations, evolving consumer demand, and changing market actor behavior are all factors (Leach et al., 2021). Along with this pandemic, consumer behavior in general, especially in Indonesia, has shifted from offline to online. Consumers have been advised to purchase more on online marketplaces due to global lockdown, social distancing, and other measures taken to contain the spread of the COVID-19 pandemic (Alessa et al., 2021). As a result, the business landscape underwent dramatic changes during the quarantine period. In the end, the Corona crisis hastened the growth of digital commerce.

Many consumers have switched from offline to secure and convenient online purchasing channels in the new retail era. Before COVID-19, consumers utilized offline or online purchasing channels selectively depending on their unique needs; however, in a circumstance where COVID-19 is likely to last for a long time, customers are predicted to use online shopping channels actively in a short amount of time (Moon et al., 2021). Human essentials, such as food and electrical gadgets, may be easily accessed and purchased online in the digital era of the twenty-first century. Consumers have benefited from digitization since it has resulted in higher-quality items and more individualized demand options. This demonstrates how online shopping has supplanted conventional purchasing (Warrier et al., 2021). People in metros and urban areas regard online shopping as one of the most convenient, viable, and preferred purchasing methods. It is gradually spreading to non-metro and rural areas. Retailers strive to make their online store environments more fun and appealing to attract customers (Anwar et al., 2020). Consumer shopping habits have also evolved from traditional to digital means, as advances in mobile technology have made it easier to reach marketplaces worldwide, thanks to increased access to high-speed internet.

Southeast Asia is made up of 11 nations, but six of them — Thailand, Vietnam, Malaysia, Singapore, Indonesia, and the Philippines – dominate e-commerce in the area. The area, which accounts for 8.58 percent of the world population and has a GDP of almost USD3.1 trillion, has high demand and substantial potential for cross-border e-commerce (Google et al., 2021). In recent years, ASEAN has experienced a remarkable increase in e-commerce activity. Many recent ASEAN studies have indicated that e-commerce has enormous potential for ASEAN. One of the studies conducted by Google and Temasek in "e-Conomy SEA" in 2021 estimates Southeast Asian internet economy hit USD174 billion in gross merchandise value (GMV), spanning online travel, e-commerce, online media, and ride-hailing. It had accelerated beyond the 32 percent compounded annual growth rate (CAGR) reported between 2015 and 2018, growing at 49 percent from the previous year. According to the same report, the internet

economy in Southeast Asia might reach USD363 billion by 2025. Furthermore, Indonesia leads the internet economies with USD70 billion according to GMV from 2020 to 2021 and with the Philippines leading the margin. To get into details, the e-commerce sector itself also has the most significant rapid growth among all industries, with GMV reaching USD234 billion (Google et al., 2021). Since the epidemic began, one in every two online buyers in Southeast Asia has reported increased purchasing frequency and expenditure. As a result, continual user acquisition efforts followed by penetration growth due to a greater emphasis on user stickiness and order value growth. Every area of online commerce, including apparel, accessories, footwear, and others, showed at least 1.4 times rise in online retail penetration from 2019 to 2020. However, supermarkets saw the most rise, with 2.7 times increase in online retail penetration as more individuals shopped online (Facebook & Bain & Company, 2021).





Source: Google et al., 2021

The rising digital economy also has a significant impact on cross-border trade. As seen by the increased cross-border commercial activity, Indonesia, like other nations, has been influenced by this growth. As the fourth largest population globally, Indonesia is the most lucrative market in both global and regional industries (Rumata & Sastrosubroto, 2017). Furthermore, according to the figure above, Indonesia placed first in retail e-commerce market volume in Southeast Asia. This is evident because the Indonesian market has grown more online and mobile, with over half of the population (265 million) owning a smartphone and spending nearly four hours each day online. The world's rapid e-commerce expansion has changed Indonesia's consumer behavior. For example, Indonesia experienced rapid growth in small-value goods imports (ordered online), as evidenced by an increase in the number of consignment notes from about 849 percent to 57.9 million documents in 2019, while the value increased by 132 percent to

USD673 million, accounting for only 0.3 percent of Indonesia's total imports (Pratiwi & Zein, 2020).



Figure 2: Retail e-commerce market volume in Southeast Asia from 2019 to 2021 with a forecast for 2025

Source: Statista, 2021.

Cross-border e-commerce (CBEC) is quickly expanding, offering customers a novel purchasing experience in which they may participate in a worldwide transaction. Cross-border e-commerce gets substantial transactions each year, and global transactions climbed by 27.5 percent in 2018 (Gabriella & Agus, 2020). In 2016, global CBEC growth contributed to a total of USD1.8 trillion in CBEC transactions throughout the world. Furthermore, worldwide CBEC business-to-customer (B2C) transactions climbed by 27.5 percent to USD676 billion in 2018 compared to the previous year (Gabriella & Agus, 2020). By 2020, it is expected that this value will have surpassed USD1 trillion (Mou et al., 2020). Furthermore, according to Das et al. (2018), the expansion of e-commerce is expected to influence the job market substantially. In 2022, internet commerce will provide 26 million employment in Indonesia, a more than sixfold increase over current levels (Das et al., 2018). Buyers' improved faith in the security of online transactions, the more extensive range of online items offered, and more competitive prices as the number of online sellers grows contribute to this trend.

Indonesia enables direct cross-border e-commerce sales, which means that international enterprises can sell directly to Indonesian consumers without setting up legal organizations in the country. However, Indonesia faces some challenges in enhancing this opportunity. There are at least three aspects that need to be concerned. First, as Indonesia is the largest archipelago globally, consisting of more than 17,000 islands stretching between the Indian and Pacific (World Bank, 2019c), connectivity has become challenging. Scaling delivery throughout archipelago nations presents huge logistical hurdles for e-commerce enterprises, particularly when it comes to perishable grocery deliveries and product returns management. Furthermore,

the issues aren't limited to whether or not businesses have access to a sufficiently broad and spread network of delivery boats, trucks, or planes. Even if items arrive on a particular island, factors such as a lack of internal roadways, varied approaches to addressing, and other infrastructure challenges may make delivery to individual consumers difficult.

The second challenge is associated with infrastructure. E-commerce adoption is influenced by the availability of mobile internet connections and banking services. These findings suggest that respondents who have access to the internet in their homes and reside in a hamlet with mobile internet connections and logistical services are more likely to be e-commerce adopters. Therefore, a good, stable, and equal infrastructure for every regional development matters. Although there are Palapa Ring, BTS, and multifunction satellites that spread over Indonesia, the inequality between regions still exists. For example, Indonesia is experiencing the condition of the exclusive ICT sector, which is only enjoyed by the wealthy. Problems often occur in the relevance of ICT development to regional needs, as well as the procurement of ICT infrastructure. Many villages outside Java still experience poor signals or no signal. Especially on the islands of Maluku and Papua, where more than 70 percent of villages do not yet receive a weak cellular signal (Statistics Indonesia, 2021d).

Last but not least, about labor in Indonesia. High-tech gear, software, and apps are commonly employed (Chen & Kimura, 2019). Qualified labor must possess the technical abilities to use these instruments, particularly problem-solving effectively. As a result of ICT and services sector development, the Global Value Chains that power e-commerce are far more sophisticated than ever. To administer and monitor the network, considerable managerial skills are required. There has been an increasing rise in B2C and C2C. Therefore, e-commerce users now require skills and information previously only available to professionals, such as knowledge of domestic and international marketplaces, comprehending diverse consuming patterns, and learning about trade norms. Besides, human e-commerce capital should be able to swiftly grasp new technologies and business models as they arise in the market. Lastly, competitiveness requires innovation. In e-commerce, relying on homogeneous items or services will not lead to long-term success.

Even though there is a lot of potential in cross borders, especially for Indonesia, Indonesia still faces a big challenge. This report will divide into four research objectives: (i) to review the development of e-commerce in the country; (ii) to assess the country's readiness to participate in cross-border e-commerce under AHKFTA; (iii) to assess the potential impacts of cross-border e-commerce under AHKFTA on trade flows of the country; and (iv) to provide policy recommendations for reaping potential benefits of cross-border e-commerce under AHKFTA.

RESEARCH METHODOLOGY

Research Design

This study uses two main analyzes, namely content analysis and input-output analysis. Content analysis involves analyzing texts to identify themes, concepts, and relationships. Sources of

data are government reports, journals, and other publications. The benefit of using this method is that it provides insight from language use and thought processes that allow valuable historical/cultural insights over time, often not captured through quantitative data.

Content Analysis

Content Analysis is an interpretive and naturalistic approach. It is both observational and narrative. It relies less on the experimental elements generally associated with scientific research (reliability, validity, and generalizability) (Ethnography, Observational Research, and Narrative Inquiry, 1994-2012).

The content analysis offers several advantages to researchers who consider using it. In particular, content analysis (Columbia University Mailman School of Public Health, n.d.) :

- Directly examines communication using text.
- Allows for both qualitative and quantitative analysis
- Provides valuable historical and cultural insights over time
- Allows a closeness to data
- The coded form of the text can be statistically analyzed.
- Unobtrusive means of analyzing interactions
- Provides insight into complex models of human thought and language use
- When done well, it is considered a relatively "exact" research method.
- Content analysis is a readily understood and inexpensive research method.

Input-Output Analysis

In addition to content analysis, this study also uses input-output analysis to determine how much benefit cross-border activities via e-commerce in Indonesia have for national output, Entrepreneur's Income, Labor Income, and Labor Absorption. The I-O model presents information about transactions of goods and services and the interrelationships between units of economic activity for a specific time which is presented in tabular form.

Table IO contains 1) information on transactions of goods and services between industries/economic sectors in an economy, 2) detailed information on the stock and flow of goods/services within an economic entity, 3) detailed information on the structure of the supply of goods and services either in the form of domestic production and goods originating from imports, 4) providing detailed information on the structure of demand for goods and services, both demand by production activities and final demand for consumption, investment, and exports. The explanation of input-output analysis will be explained again in the "Statistical Analysis Method" sub-chapter.

So graphically, the research design of this research is:





Source of Information Used

This study's data sources come from Statistics Indonesia, Google, Temasek, Bain, Bank Indonesia, and the Ministry of Communication and Information. The data collected is secondary data such as data on internet penetration rates, data on e-commerce transactions, and data on imports of consumer goods.

Data Collection Techniques

Data was collected through the data documentation method. Data collection through data documentation is done by looking for information and data that are secondary data. Data documentation is carried out by collecting information and data such as public data, scientific journals, reports from international institutions, books, laws and regulations, and other documents issued by government and non-government institutions.

Statistical Analysis Method

This study uses an Input-Output (I-O) Metric Analysis approach. Input-Output Analysis in this study is to determine how much benefit cross-border activities via e-commerce in Indonesia have for national output, Entrepreneur's Income, Labor Income, and Labor Absorption. The I-O data used is the 2016 I-O data issued in 2021. Although using 2016 data, this data is still relevant today because there has been no significant change in the economic structure during the last ten years.

In general, the I-O analysis is described in Table 1, where there is a process of inputting inputs to produce specific outputs. In producing output, the production sector X will produce inputs to the production sector to X itself and other sectors and are added from final demand. In the Input-Output method, the column used as a simulation is the final request column. We use the variable number of cross-border transaction values via e-commerce in Indonesia, whose data comes from PPRO Financial (2021)

		Producti	Production Sector			Final Demand			
		Primer	Sekunder	Tersier	с	ı	G	E	x
	Primer	Z11	Z12	Z13	C1	11	G1	E1	X1
Production Sector	Sekunder	Z21	Z22	Z23	C2	12	G2	E2	X2
	Tersier	Z31	Z32	Z33	С3	13	G3	E3	ХЗ
	L	L1	L2	L3	LC	LI	LG	LE	L
	N	N1	N2	N3	NC	NI	NG	NE	Ν
Impor	М	M1	M2	M3	MC	MI	MG	ME	м
Total of Input	Х	X1	X2	Х3	С	I	G	E	х

Table 1: Input-Output Table

RESULT OF THE STUDY

Development of e-commerce

Indonesia is an excellent country with more than 17,000 islands, 270.20 million people, and massive potential for a digital economy. This country is supported by the high rates of penetration and 202 million internet users (Startup Indonesia & Bubu.com, 2021). This fact will also be supported by the opportunity for middle-class growth in 2045, and Indonesia will have a demographic bonus in 2045. When it is compared to other generations, now the share of millennials in Indonesia is the largest (33.75 percent), followed by generation Z (29.23 percent) and generation X (25.74 percent), even as the baby boomer technology and veterans contain the smallest group (11.27 percent) (Delloite, 2019). The number of millennials that have increasingly dominated the demographic blend is each an assignment and an opportunity for the Indonesia also has the ambition to be the greatest five-country, known as the Indonesian Gold Vision. One of the pillars is sustainable economic development, which should be supported by industry and a creative economy (Bappenas, 2019). To generate a well-developed digital economy, Indonesia must strengthen the ecosystem and develop di and develop digital transformation to boost productivity and economic efficiency.

Another critical driver of e-commerce is the increasing middle-class growth income population. The middle-class growth in Indonesia has increased by 10 percent every year. In addition, the consumption of middle-income people has also increased by 12 percent per year since 2002 (World Bank, 2019a). With a population reaching 20 percent, the consumption of middle-income people is the driver of the increase in the value of transactions in e-commerce.

The covid-19 pandemic also accelerates the digital transformation, supporting the digital ecosystem, including e-commerce. There is a shift in people's behavior from offline transactions to online transactions due to the social distancing policy. Like blessing in disguise, people are forced to use online transactions that Google, Temasek, and Bain stated there are 21M new digital consumers since the initial pandemic until H1 2020 in South East Asia (Google et al., 2020). The paradigm of the physical to the digital era is more prominent. Several commodities traded conventional, such as music, software, film, and video games, are now shifting into digitalin application platforms or streaming.

Besides, the digital ecosystem, which has grown rapidly, has contributed to online commerce, ride-sharing services, and financial technology services. E-commerce is a significant benefit, especially for Indonesian people, since the geography of Indonesia is spread over more than 17,000 islands. E-commerce is leading in the digital ecosystem and remains potential in the future with fundamental factors, such as reliable logistics and infrastructure (Market Research Indonesia, 2021). Compared to other countries in Southeast Asia, Indonesia is the greatest sales retail through e-commerce and has to reach USD20,21 billion in 2021, and the lowest is from the Philippines.



Figure 4: Retail E-Commerce Sales in Southeast Asia Countries, 2021

Global, cross-border commerce has become popular in recent years, and international players such as Alibaba, Amazon, and eBay generate domination (Chen & Kimura, 2020). However,

Source: eMarketer in TechnoBusiness (2021)

cross-border commerce has developed a powerful opportunity for its competitiveness globally, entering the global market without any physical presence, new customers, creating the image, and applying sales through multiple channels. Besides, the customer also benefits from the transactions, such as lower prices, higher quality or premium brands, access to the various products that may not exist in the countries, more products, and new shopping experiences.

The existence of cross-border commerce also occurs in Indonesia. Cross-border e-commerce in Indonesia reached USD4.5 billion in 2020. This number has contributed to more than 14 percent of all e-commerce transactions in 2020 (PPRO Financial, 2021). The cross-border transactions in Indonesia have increased but slowed down in 2020, which is in 2018, only 1.6 billion US dollars, and became 4.5 billion US Dollars due to decreased purchasing power. This report also states that Shopee, Lazada, and JD.id have become the e-commerce that independently manages the operation of cross-border transactions. China's largest cross-border share is at 41 percent, the USA at 10 percent, and Singapore at 10 percent (PPRO Financial, 2021).



Figure 5: E-commerce transactions in Indonesia (USD Billion)

Source: PPRO Financial, 2021

Figure 6: Market share of cross-border e-commerce in Indonesia as of January 2020, by country



Source: PPRO Financial, 2021

If Indonesia has a great intention to win and develop cross-border e-commerce, there are challenges to face, such as time and quality, delivery cost, payment terms, communication in a foreign language, payment currency, legal and tax conditions, and return services (Kawa & Zdrenka, 2016).

Delivery cost is the obstacle because the distance between countries varies and can be a lot higher than the product and does not compensate for the delivery fee. It will disincentive the business to conduct cross-border commerce. The language, which is the main gate of business, often becomes the barrier too that needs translation features to help the businessman. Next is the currency which also depends on the country offered and commonly has additional fees. The next challenge is the payment system between countries that need collaboration with the payment gateway to ease cross-border transactions, and the users are well facilitated. If the users are not familiar with the payment, it will also generate a lack of service. The next challenge is laws and taxes that have always been a hot issue for cross-border e-commerce. In Indonesia, the regulation is still developed, especially for the digital economy and cross-border commerce.

Besides the barriers, the actor, namely Mico, Small, and Medium Enterprises (MSMEs), must have played a great role in cross-border commerce through e-commerce adoption. This adoption has four essential elements: technology, finance, culture, and organization (Hasan et al., 2021)



Figure 7: Cross Border E-Commerce Challenges

Source: Kawa & Zdrenka, 2016

Like or dislike, MSMEs should adopt the technology. The growth of the digital economy in Indonesia, especially for developing digital start-ups, should be linked with the growth of MSMEs. The MSMEs in Indonesia are the backbone since they contribute 61 percent of GDP and about 97 percent of the workforce. The main problems are difficulties in accessing finance, lack of infrastructure for MSMEs, low level of R&D in the MSMEs sector, and insufficient use of information technology in MSMEs (Yoshino & Naoyuki Taghizadeh-Hesary, 2016). The challenge of MSMEs is about funding which, based on data, most MSMEs used their funding rather than lend it from a bank.

But last not the least, the more MSMEs use digital technology, the more MSMEs generate more impact.

- To use digital financing to address financial issues,
- To use HR software to address human resource management issues,
- To use ERP e-procurement,
- To use POS digital payment accounting software e-invoicing tax application,
- To use e-commerce.

It cannot be denied that MSMEs in Indonesia should have entered the competition of crossborder e-commerce in line with the rapid growth of technology. However, the latest issue stated by Akumindo (The MSMEs of Indonesia Association) highlights that MSMEs are oppressed by the existence of cross-border e-commerce and also the covid-19 pandemic (Bisnis.com, 2021). The lack of regulation makes the MSMEs not secure to run their business since they will lose to the imported products with lower prices and various options. It will be a threat, especially for the producer who spends more budget on production (Pranata et al., 2019). Besides, based on its regulation, there is an unfair approach between the domestic trade and imported products from e-commerce, as the application of VAT is as much as 10 percent for domestic practices (Pranata et al., 2019). Meanwhile, the product of global e-commerce based on Ministry Regulation number 112 in 2018 about the Import Goods Delivery regulation with a value under USD 75 is not imposed for any custom, including VAT (PPN). This fact leads to a lower price and generates injustice.

Readiness to Participate in Cross-Border E-commerce

Indonesia is an ASEAN country with the most significant proportion of the digital economy in ASEAN. The size of the digital economy in Indonesia reaches USD 70 billion, or 40.2 percent of the total digital economy in Southeast Asia. Thailand has a digital economy of USD 30 billion or 17.2 percent (second in Southeast Asia) (Google et al., 2021). The difference between Indonesia and Thailand reached USD 40 billion or more than 50 percent. In 2025, Indonesia's digital economy is predicted to reach USD146 billion.

Data from Google, Temasek and Bain (2021) show that of the USD70 billion, 75 percent came from e-commerce transactions. E-commerce transactions in Indonesia reached USD 53 billion in 2021. This figure increased by 52 percent from 2020, which reached USD 35 billion. In Southeast Asia alone, e-commerce will contribute around 69 percent or equivalent to USD120 billion in 2021. So, compared to other Southeast Asian countries, e-commerce in Indonesia contributes up to 44 percent of total e-commerce transactions (Google et al., 2021).

The pandemic has also caused Indonesia's real sales index (IPR) to experience a sharp decline. From March to December 2020, Indonesia's IPR decreased by more than 20 percent (Bank Indonesia, 2021b). It means that people are reluctant to shop offline to avoid contracting the virus. By seeing IPR decline and transactions in e-commerce increasing, there is a shift of consumers from offline retail to online retail.

Several factors make the development of e-commerce in Indonesia potential. First, the internet penetration rate in Indonesia is growing rapidly. Data from the Indonesian Internet Services Providers Association Survey (2020) show that in 2011, Indonesia's internet penetration was only 22.7 percent. In 2017, the internet penetration rate in Indonesia reached 51.8 percent. From 2016 to 2017, the development of the digital economy was indeed very rapid, which was marked by the rise of national digital companies, including e-commerce companies (Indonesian Internet Service Providers Association, 2020). In that period, e-commerce such as Tokopedia, Tokobagus (now changed to OLX), and Lazada were still in the exponential growth stage or growing rapidly. Likewise, ride-hailing services such as Gojek, Grab, and Uber are still competitive in Indonesia.





Source: Bank Indonesia 2021

By 2020, internet penetration in Indonesia will reach 73.7 percent (Indonesian Internet Services Providers Association, 2020). In a pandemic like this, internet penetration grows rapidly, where almost all community activities are carried out online or virtual. Government policies that limit physical activities such as school, work, and worship make internet use even more massive.

Internet users in Indonesia are also increasing along with internet penetration. In 2011, internet users in Indonesia were only 55 million users. In 2020, internet users in Indonesia will reach 200 million users (Indonesian Internet Service Providers Association, 2020). This means that there has been an increase of up to 3 times over the last 10 years. Especially in 2020, the use of e-commerce in Indonesia is becoming more frequent. Online shopping activities of Indonesian consumers have also increased 2.1 times compared to before the pandemic (Google et al., 2020).

In addition, Indonesia is also experiencing a demographic bonus where the largest age of the Indonesian population is in the productive age. The largest percentage of Indonesia's population is also the millennial generation and generation Z. The two generations contribute 53 percent to the total population of Indonesia (Statistics Indonesia, 2021c). Both generations are also the generation with the fastest technological adaptability.





Source: Indonesian Internet Service Providers Association, 2020 Figure 10: Indonesia's Internet Penetration



Source: Indonesian Internet Service Providers Association, 2020

The increasingly massive use of e-commerce also encourages the use of online payments. Data from PPRO Financial (2021) shows that payments via wallets are the most frequently used payments in Indonesia, reaching 29 percent. Second, the most frequently used payments are card-based (debit and credit card) with 25 percent, and the third is payments using bank transfers (23 percent).

Nominal electronic money transactions in 2020 experienced a relatively rapid increase with an increase of 42 percent, with total transactions reaching Rp205 trillion or USD14 billion (Bank Indonesia, 2021a). The highest increase occurred in 2018, with growth coming 281 percent. In 2020, the nominal value of electronic money transactions had increased monthly, starting from the initial determination of the pandemic status until the end of 2020.

In addition, MSME business actors are also increasingly using digital payment services to support e-commerce transactions. By 2020, as many as 45 percent of MSME business actors can accept payments digitally. By 2022, 76 percent of MSME business actors are predicted to be able to accept payments digitally (Google et al., 2021).



Figure 11: Indonesia Online Payment Condition

Source: Bank Indonesia, 2021a

The development of e-commerce has also increased imports of consumer goods in Indonesia. In the 2010-2020 period, there was an exponential increase in imports of consumer goods. Especially in 2018, there was a 2-fold increase in imports of consumer goods. In February 2021, the annual increase in imports of consumer goods reached 43 percent (Statistics Indonesia, 2021b). Furthermore, there is 74 percent of sellers in e-commerce sell goods that

are not their production (Statistics Indonesia, 2021a). The higher imports of consumer goods after the increase in e-commerce transactions show that people have accepted cross-border transactions in e-commerce.



Figure 12: Indonesia's Import of Consumption Goods

Source: Statistics Indonesia, 2021b

Data security

Data problems are still a challenge for the Indonesian government in implementing crossborder e-commerce. In Indonesia, personal data leakage and misuse of personal data cases by certain individuals are still common. In the last two years, several cases of leakage of personal data owned by the government or private sites have been leaked. In 2020, the Tokopedia data leak case caused 91 million user data accounts to be circulated in certain forums (Reuters, 2020). Another case is the case of Bhinneka.com's data leak of 1.2 million data and RedDooorz's 5.8 million data (Mime Asia, 2020). In addition, there was also a data leak on government-owned sites, namely BPJS data of 279 million personal data and the government's special Covid-19 application, Electronic Health Alert Card (e-Hac) (VOI, 2021).

Indonesia has several laws and regulations, for instance, Consumer Protection Act 8/1998 Electronic Information and Transactions Law (ITE), also known as the cyber law, Regulation of the Minister of Communications and Information Technology Number 20/2016, Financial Services Authority Regulation (POJK) 77/2016, Government Regulation 71/2019. Furthermore, Indonesia has applied seven main principles for protecting user data privacy. However, the seven principles are still independent of various laws and regulations. All of those regulations do not regulate the protection of personal data (Ministry of Law and Human Rights, 2016). The Government and the House of Representative ratified personal data protection in September 2022. However, it still considerable challenges to implement the law due to the high cost of business and the private sector to comply with the provisions. Before the data protection law was ratified, companies and public bodies such as the banking industry, hospitals, public service applications, as well as institutions or companies related to finance, benefited the most from this legal vacuum. Besides them, digital platforms, companies, and public bodies that have been collecting, managing, and storing big data from the public are parties who are negligent in protecting data, because they can study and control the use of the data.

Apart from the regulatory side, the still rampant cases of personal data leakage in Indonesia are also caused by the low digital literacy of the community. A survey from Katadata and the Ministry of Communication and Information (2021) shows that only 50-60 percent of Indonesians do not upload their data on social media. The rest of Indonesian people like to upload personal data such as date of birth, child's name, and phone number to a home address (Katadata Insight Center & Ministry of Communications and Informatics, 2021).

Most Indonesians also do not know how to make reports of misuse of personal data. Katadata Insight Center & Ministry of Communications and Informatics (2021) shows only 40 percent of Indonesians know how to report accounts that harm them. Most Indonesian people also can't tell the difference between emails that contain viruses and those that don't. Only 28 percent of internet users can tell the difference (Katadata Insight Center & Ministry of Communications and Informatics, 2021). The results of this digital literacy show that Indonesia is still vulnerable to misuse of data, resulting in the security of e-commerce users' data (Katadata Insight Center & Ministry of Communications and Informatics, 2021).

Indonesia actually already has an Electronic Information and Transactions Law (ITE) – also known as the cyber law and consumer protection law, but the application of the two laws in terms of personal data protection is still relatively weak. The current application of the ITE Law only applies to defamation but has not been able to provide effectiveness in protecting personal data in cases of fraud (Setiawan & Arista, 2013). ITE Law needs to improve as the guideline to control Indonesia's transaction and information process because of the cyber communities' lack of definition and involvement (Lubis & Maulana, 2010).

Regulation

Another problem experienced by Indonesia in implementing cross-border e-commerce is the competitiveness of local MSME business actors, which is still inferior to foreign companies. To protect local MSME business actors, the government has issued several regulations to minimize the import of e-commerce goods into the country. The regulation is contained in Minister of Finance Regulation (PMK) number 199/PMK.010/2019 concerning Customs, Excise, and Tax Provisions on Imported Shipments. In the PMK, the import threshold is set,
given free facilities of import duty and import duty of USD 3 per shipment per person per day. If the import shipment via e-commerce exceeds USD 3, a tariff of 7.5 percent of the value of the goods will be charged (Ministry of Finance, 2019).

However, based on internal calculations, it has no effect on the import of consumer goods via e-commerce. In the author's internal report, there is no significant difference between before the implementation of PMK 199/010/2019 and after the implementation of the regulation.

Apart from the readiness of business actors, another problem is that Indonesia's logistics costs are indeed quite high. Logistics costs per GDP are still at 23-24 percent (World Bank, 2019b). Ideally, it should be at 15-17 percent. Indonesia occupies the 48th position in the 2018 logistic performance index (ILP) released by the World Bank and is still lagging behind Malaysia, Vietnam, and even Thailand (World Bank, 2019b). These high logistics costs can hinder e-commerce trade in the country.

To reduce imports from cross-border e-commerce, the government prohibits cross-border sales via e-commerce. The government officially banned Thirteen products (CNN Indonesia, 2021). The 13 products include hijab, female Muslim tops, female Muslim subordinates, Muslim dresses, male Muslim tops, male Muslim subordinates, Muslim outwear, children's Muslim clothing, Muslim accessories, prayer equipment, batik, and kebaya (CNN Indonesia, 2021). However, the official regulations are under discussion. It is also still possible to import goods through normal channels. Therefore, this policy is less effective considering that local sellers trade many imported goods.

Another e-commerce problem in Indonesia was the error in delivering the package. 3,085 packages were wrongly sent (Wahyuningsih & Suryanto, 2015). One of the problem factors is the Indonesian postal code system, which Indonesian people still do not understand. Postal codes are regulated in Law No. 38 of 2009 concerning Postal. The law states that the postal code serves as an address guide to facilitate the delivery process and can also be used by other parties according to interests, is dynamic, and developed according to needs. Wahyuningsih & Suryanto (2015) also said that 57 percent of their respondent did not know the meaning of the postal code. Their research also found that 42 percent of respondents did not know the use of postal codes.

Potential Impact of Cross-Border E-Commerce on Trade

Based on the previously described methodology, this report uses Input-Output (IO) analysis to calculate the impact of cross-border e-commerce. The assumptions are based on PPRO Financial (2021) data. The table below shows the details of e-commerce data in Indonesia. Cross-border e-commerce in Indonesia is still the main contributor to total e-commerce, with a 59 percent contribution. Through this contribution, cross-border E-commerce in Indonesia reached USD4.8 billion (Rp67,200 billion)

<u>Table 2</u>: Data on the Proportion and Segmentation of cross-border e-commerce in Indonesia

Top e-commerce segments			Cross-border e commerce	
	2019	2020	Cross-border proportion of total e-commerce	
Airlines & Hotels	59%	20%	Value of Cross-border e commerce (US\$ billion)	
		2070	Percentage of online shippers who have shopped cross-border	
Clothing & Footwear	15%	NA	Top 3 cross-border shopping origin ma	
Homeware & Furniture	9%	NA		
Electrical Goods	8%	NA	China	
			USA	
Health & Beauty	7%	NA	Singapore	

Source: PPRO Financial, 2021

Based on calculations, imports of consumer goods originating from cross-border e-commerce encourage increased public consumption. Ease of transactions and relative price differences have driven this increase. This condition then contributed to an increase in national output by 0.45 percent or USD7.51 billion. Labor absorption also increased, although not significantly, by 0.95 percent or an increase of 1.13 million workers with an increase in aggregate wages of USD3.39 billion. The impact of changes in economic aggregate indicators can be seen below.

Table 3: Impact of Cross-Border E-Commerce on National Output

Indicators	Item	Value	Change
National Output	USD Billion	7.51	0.45
Entrepreneurs Surplus	USD Billion	4.62	0.90
Worker Wage	USD Billion	3.19	0.91
	Million		
Employment	Worker	1.13	0.95

Source: Author's calculation

CONCLUSION AND POLICY RECOMMENDATIONS

Conclusion

From the discussion in the previous chapter, this study has a conclusion:

1. Indonesia has the most significant development and potential in online sales or ecommerce in ASEAN. The factors include increasing internet penetration, increasing internet users, a population dominated by Millennials and Generation Z, and an increasingly fast-growing middle class.

- 2. Indonesia's readiness to face the era of cross-border e-commerce is still considered very unprepared. The reasons are that local business actors have not been able to compete with sellers from abroad due to high logistics costs.
- 3. The impact of positive cross-border e-commerce practices on the macroeconomy with the assumption that imports will cause public consumption to increase. The national output will rise by USD7.51 billion, and employment will be absorbed by 1.13 million people.

Policy Recommendation

By looking at the discussion in the previous chapter, this study can provide the following policy recommendations:

- 1. Reorientation of the e-commerce policy. Government needs to focusing and prioritizing on e-commerce sector, which are have more impact on job creation
- 2. Supporting equitable access to information and communication technology infrastructure and the internet for underdeveloped regions and villages in Indonesia to tackle the digital divide.
- 3. The government encourages local business actors to engage in cross-border ecommerce as sellers. The huge market in ASEAN and other Asian countries creates opportunities for local MSME players to be able to export their products to ASEAN and other Asian countries.
- 4. Reducing logistics costs in Indonesia to support the efficiency of the digital economy. These high logistics costs can hinder e-commerce trade in the country.

Future research recommendation:

- 1. Cross borders encourage an increase in imports of consumer products. The increase in imports of consumer goods, on the one hand, has an impact on increasing public consumption. This increased public consumption contributed to the 0.45 percent increase in output, labor, and labor wages. However, the correlation between consumption imports and production still needs to be investigated.
- 2. Comparison of the increase in imports of consumer products with or without cross-border trade to national output also needs to be studied further.
- 3. Indonesia has a problem with digital inequality both between regions and ruralurban areas. The impact of the cross border on increasing income in the village also needs to be studied further.

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CHAPTER 3

STRENTHENING E-COMMERCE COOPERATION TO PROMOTE BUSINESS-TO-BUSINESS AND BUSINESS-TO-CONSUMERS E-COMMERCE UNDER AHKFTA: A CASE STUDY OF LAOS

AUTHORS

- Viengsavang Thipphavong
- Chanhphasouk Vidavong
- Somdeth Bodhisane

Institute for Industry and Commerce Ministry of Industry and Commerce (IIC, MOIC)

ABSTRACT

The benefit from The ASEAN-Hong Kong Free Trade Agreement (AHKFTA) should contribute to all parties in terms of socio-economic development. Hence, this study aims to identify a new business environment and secure benefits from the cooperation by understanding countries' current e-commerce development, assessing the country's readiness in AHKFTA utilization and its impact on cross-border trade, and taking advantage of ecommerce in cross-border trade under AHKFTA. The study applied both descriptive analysis from case studies and empirical analysis through from the World Bank's Enterprise Survey. The evidences indicated that Laos' government has been firmly committed to the ASEAN Work Program on Electronic Commerce 2017. There are relevant supportive regulations adopted in line with this objective. However, Laos' B2C e-commerce is still lagging behind other players in ASEAN - Hong Kong cooperation, despite ongoing infrastructural improvement. E-commerce is still in its infancy and is classified as informal trading. At present, the private logistics businesses in domestic shipping are booming, causing many individuals in Laos to turn to e-commerce as a new option to purchase desired commodities from abroad during the COVID-19 pandemic, but the activities are still mostly limited to big cities. In addition, the cross-border e-commerce activities continue to rely on informal

transportation without a monitoring mechanism, traceability, or protection for buyers and consumers. Around 71 percent of firms does not have website for its business operations. However, the empirical result insisted that the use of an e-commerce platform has increased export intensity and improved business performance, in terms of firm labor productivity. Furthermore, the determinants, e.g., business types, firm size, location, and Internet security investment, have contributed to export intensity growth. According to the study outcomes, several policy recommendations are then proposed for policymakers on the fundamental e-commerce infrastructure development – these are: e-payment system development, mechanisms for collecting taxes, logistics system improvement, cooperative efforts to develop mutual/regional e-commerce platforms, and the creation of opportunities for entrepreneurs to be more aware of e-commerce's importance and fruitful opportunities generated.

INTRODUCTION

The global business world is constantly moving toward digitalization, and e-commerce plays a crucial role in contemporary business development. Currently, virtual trade is becoming more common in business operations, with remote selling and buying from distant places rapidly increasing. It was reported that global e-commerce rose to 26.7 trillion dollars in 2019, and the proportion of e-commerce in retail sales jumped from 16 percent in 2019 to 19 percent in 2020 (UN, 2021). Similar to other in Southeast Asian countries, Laos will have to adjust to the "New Normal" economic and life environment as result of the COVID-19 pandemic. Adapting to a new environment that increasingly involves e-commerce is important for Lao businesses (where most are micro-small and medium-sized enterprises). In 2020, the population of Laos was just well above 7 million people, whereas there are five internet providers in Laos. Mobile phone internet usage in 2019 was around half of registered mobile numbers (3.5 million users) nationwide (Mininstry of Technology and Communication, 2019). It should also be noted that the percentage increase in internet users (3G and 4G) in Laos have been increasing at about 8 percent year on year from 2015 to 2019. A substantial increase in internet users in Laos over the past five years has made Laos one of the top four developing countries that had the B2C ecommerce index surging over five points in 2019 (UNCTAD, 2021).

Lao e-commerce is growing amidst an increasing internet penetration among mobile phone users. Many products have been advertised and sold through Facebook pages, WhatsApp groups, websites, and other mobile phone applications. At any rate, regardless of the increasing e-commerce in Laos, the virtual business platforms between sellers and buyers are informal. Most e-commerce operators in Laos are still individual-based and un-registered businesses. This is because the weak enforcement of rules and regulations has led to very few e-commerce businesses being registered as official business entities and paying tax to the government (Vientianetimes, 2017). Currently, the government of Laos has approved several supportive regulations to promote e-commerce development, namely, the law on consumer protection, business competition, electronic signatures, electronic data protection, electronic transactions, and law on information and communications technology. The decree 296/PM on e-commerce has just been enacted since April 2021, yet it will serve as a key legislation for managing and promoting e-commerce in Laos in the years to come.

E-commerce has been enabling reduced costs and lowering barriers to businesses, and this is allowing the remote selling and buying of goods and services to grow very fast between business to business (B2B) and business to customers (B2C), both domestically and internationally. Given Laos' geography as a small and landlocked economy, taking advantage of e-commerce is even more important than in the case of other countries. 90% of Laos' trading occurs in the region, particularly in neighboring countries. Therefore, adaptation in e-commerce is crucial for strengthening business competition and cooperation. The e-ASEAN framework agreement in 2000 and the ASEAN digital masterplan 2025 have become fundamental guidelines for ASEAN countries for digitalizing the economy, and for facilitating

trade among members and regional trading partners. To realize these objectives, member states have to comply with eight important frameworks, which are: utilization of ASEAN Digital Masterplan for recovering from the COVID-19 pandemic, increasing quality of fixed-mobile and broadband infrastructures, customer protection, sustaining competitiveness in supplying digital services, increasing quality of e-government services, promoting digital services for cross-border trade, encouraging businesses and people to participate in the digital economy and realizing digital inclusiveness (ASEAN, 2000, 2021). With the increasing trend of nations moving toward digitalization, the utilization of e-commerce in B2B and B2C will further accelerate cross-border trade development within ASEAN and ASEAN+ under intraregional and interregional-trade agreements. For the case of Laos, however, to maximize the benefits of e-commerce for trade expansion within the scopes of regional free trade agreements is still a big issue facing many business entities/firms that are MSMEs.

The ASEAN – Hong Kong Free Trade Agreement (AHKFTA) has been fully in effect for all parties since February 12th, 2021. This is the latest FTA between ASEAN and a regional trading partner. According to the report of the Hong Kong (China)'s trade and industry department, in 2020, ASEAN was the second-largest trading partner of Hong Kong, China, whereas Hong Kong, China was ranked in sixth out of the top ten most significant trading partners of ASEAN. Singapore, Malaysia and Vietnam were the top three trading partners of Hong Kong (China) in ASEAN; however, trading between Laos and Hong Kong, China accounted for the smallest one, which was about HKD146 million (USD18.72 million) in 2020 (Trade and Industry Department, 2021). Nonetheless, the zero-tariff rate under the free trade policy of Hong Kong, and the privilege of new ASEAN members¹ under the AHKFTA will provide business advantages for Lao enterprises to explore the Hong Kong market.

It should be noted that the AHKFTA fully came into effect in early 2021, at a time when global trade needed to adjust to the "New Normal" paradigm following the COVID-19 pandemic, including social distancing, lockdowns within cities, tighter border controls, and travel restrictions. This phenomenon has significantly promoted an important role of e-commerce, substantially making it an essential vessel in both domestic and international trade transactions. Therefore, to assist Lao businesses to adjust to this new business environment and take advantage of the benefits from AHKFTA, this paper will be the first study examining the ongoing phenomenon with regard to e-commerce platforms (both in B2B and B2C) under AHKFTA. Moreover, it also aims to understand Laos' current e-commerce development, assessing the country's readiness in AHKFTA utilization and the impact on cross-border trade, particularly focusing on e-commerce as a means to promote bilateral trade between Laos and Hong Kong, China. Finally, the study will provide policy recommendations on the issues

¹ Having longer period of completing tariff reduction under AHKFTA

mentioned, and challenges impeding Lao businesses in taking full benefits of e-commerce on cross-border trade under AHKFTA.

This study will be divided into five sections, after the introduction and literature review, the methodology and data sources, and followed by the conclusion section. The paper ends with the last section on policy implications.

LITERATURE REVIEWS

The emergence of the internet in the early 1990s has been the turning point of e-commerce development as a new business paradigm. E-commerce has been recognized as a potential trade platform since the WTO Second Ministerial conference in 1998, when it adopted the Declaration on Global Electronic Commerce (e-commerce) and agreed to establish the WTO General Council to address any trade-related issues on global e-commerce. The conference also defined e-commerce as "the production, distribution, marketing, sale or delivery of goods.

and services by electronic means" (WTO, 1998). Over the past decade, a drastic increase in global internet users has become an important accelerator for e-commerce development in many countries in different continents. By 2019, the number of internet users worldwide rose to approximately 4 billion people, accounting for over half of the global population (51 percent) (ITU, 2021). Consequently, e-commerce has become a global viral online business platform, which is even more pronounced during the current outbreak of COVID-19 as a vital thruster of trade growth.

The internet has indeed enabled much benefits from the advantages of global e-commerce, however, the fundamental driving forces behind the success of e-commerce are the reduction in transportation costs, improved coordination, and greater sharing of information among each node of business connection. González and Jouanjean (2017) demonstrated that as businesses enter hyperconnectivity, large quantities of small-sized and low-value physical goods and digital services, including non-tradeable services, will now increasingly be traded across borders. Thus, to optimize e-commerce for cross-border trades, the issue of market access and regulatory measures beyond borders needs to be addressed and prioritized for any trade negotiations among countries. In addition, streamlining regulations related to data flow, and promoting digital connectivity and interoperability are also crucial for developing e-commerce (González, 2019).

ASEAN is a promising region in e-commerce development. The ASEAN Digital Masterplan 2025 has become a key guideline for the region to digitalize each member state during the current five years. In particular, the development of e-commerce was addressed on the masterplan by two main frameworks: protecting and securing consumers' rights, and promoting last mile-fulfillment cooperation (ASEAN, 2021). Digital economy will play an essential role in ASEAN's economy in upcoming years, and this is estimated to contribute about USD 0.8-1 trillion in GDP by 2025, and MSMEs will be a critical driving force of digital markets expansion under e-commerce platforms (Hoppe et al., 2018; The Asia Foundation, 2020).

However, according to ERIA (2018), over half (56 percent) of MSMEs in ASEAN largely used only or mostly basic digital tools, namely, Microsoft Office, e-mail, WhatsApp, personal computers, and mobile phones, for business operations and communications. Only 34 percent applied intermediate digital tools like websites, social media, e-commerce sites, tablets, and printers to support sales and marketing, and, only 10 percent made use of advanced digital tools, enterprise resource planning, customer relationship management, big data and automation, bank card readers, central servers, and imaging devices for various business purposes.

The integration of digital trade in regional trade cooperation will strengthen and enlarge ASEAN's bilateral trade with its partners. The benefits of digital trade from utilizing ecommerce platforms (social media, search engines and online marketing) of MSMEs can be summarized into three elements, which are: reducing costs associated with acquiring and applying information, eliminating intermediaries and decreasing trade barriers, and effective utilization of assets to lower production and distribution costs (ADB, 2021). The utilization of digital communication technologies has also paved a solid foundation for strengthening bilateral trade between ASEAN and its partners. A paper by Chu and Guo (2019) showed that the application of ICT devices, particularly mobile internet, had a positive effect on bilateral trade between ASEAN and China. Aryani and Andari (2021) also found a similar result in a country- specific study that demonstrated a positive impact of e-commerce on Indonesian exports to ASEAN, by examining the correlation between Indonesian ITC, B2B, and B2C with its trading partners.

The evidence of ICT's role in enabling bilateral trade development of parties within FTAs is unambiguous in times where global businesses are constantly moving toward digital trade. ASEAN and Hong Kong free trade agreement (AHKFTA) is going hand in hand with this trend, becoming one of the fundamental facilitators in promoting bilateral trade. An UNCTAD report in 2020 showed that two countries within AHKFTA member states, Singapore and Hong Kong (China) were ranked among the world's top ten economies with the highest e-commerce index, while Malaysia and Thailand joined the top ten developing countries in 2019, and, particularly, Laos was also recognized as one of the four developing countries that had a significant increase of this index in 2019.

With regard to a specific country case study on how e-commerce affects a country's trade outcomes from the AHKFTA, this study will focus on Laos, the only landlocked country in the trading bloc. Utilizing e-commerce for promoting bilateral trade with Hong Kong is an optimal choice for strengthening the two sides' trade in the coming years. At present, the trade flow between Laos and Hong Kong remains low compared to other ASEAN countries. In 2020 Hong Kong was at third place in Laos' top ten most significant trading partners, whereas Laos was ranked at the bottom for Hong Kong under AHKFTA (MOIC, 2020; Trade and Industry Department, 2021). By this circumstance, there are still untapped opportunities for trade

expansion, particularly in the niche markets where e-commerce can play a vital part in leveraging two sides' potential business cooperation.

METHODOLOGY AND DATA SOURCES

The research team applies both a qualitative-based research design and empirical study. For the qualitative-based research part, the underlying reason for using such a research design is to obtain an understanding of e-commerce in Laos's situation from first-hand observation. The number of stakeholders who participated is much lower when compared to a quantitativebased counterpart in objective three that mainly relies on statistical analysis. This research drew on both primary and secondary data sources. The core data was gathered via in-depth interview sessions. We managed to interview three logistic companies, two money exchange vendors, two preorder service providers, and ten e-commerce platform users based on voluntary and purposive selection. On the other hand, secondary data was based on UNCTAD, as well as previous studies, and other trustworthy sources. Between August and September of 2021, data collection was undertaken. As a result of the current Covid-19 pandemic, some cases were conducted via virtual conferencing platforms. The scope of qualitative study is set to be within the capital of Laos. Vientiane capital has been purposively selected as a study site for the e-commerce activities during the Covid-19 pandemic. Here, the inclusion criteria for respondents are either Lao or foreigners involved in buying and selling online. The ecommerce activities involve both domestic and international marketplaces, focusing on Thailand and the PRC, regarded as Laos' leading online trading partners.

Second, the authors utilize the dataset from the World Bank's business survey as a case for Laos in this section. This study intends to observe and comprehend the nature of e-commerce business platforms in Laos by assessing the impact of e-commerce platforms on export intensity (LnEI) and business performance when enterprises have their websites. The study applies the empirical estimation to find the robustness of a firm's characteristics and the role of marketing innovation on Export Intensity in the first stage (OLS) modified from OECD (2018). After that, the export intensity variable is set to remedy the endogeneity between export and productivity with causal relation by taking into account outputs from 2SLS estimation. The instrument variables refer to all variables in OLS estimation that LnEI is a dependent variable. The LnEI refers to the share of export value to total sales. A firm with higher export intensity has more competitive costs of production, which brings about higher productivity (Vidavong and Otsubo, 2020, Araujo & Salemo, 2015; Ganotakis & Love, 2012). The 2SLS will enhance the role of export growth in the form of export-led-growth influenced from the e-commerce application that reflects to businesses outperforming (Labor Productivity).

The purpose of this empirical study is to determine the role of an e-commerce platform as a type of market innovation by examining the firms owning websites, to see whether this can improve export growth, and how it accelerates company performance in a sample test. The business that applies the e-commerce platform is anticipated to increase the export intensity and labor productivity. In addition, innovation has always been a crucial component of

socioeconomic progress (WB, 2010, p.31). There is potential to improve productivity, job growth, sustainability, social welfare, and overall quality of life (Vidavong & Otsubo, 2020; Akcali & Sismanaglu, 2015; Raymond & St-Pierre, 2010). According to the study by Minniti and Venturini (2017), innovation is a vital aspect of SMEs' survival, growth, and development. The variables used in modeling are described in the followed section.

Variables

- <u>Export Intensity (InEX)</u>: This proxy refers to the share of a firm's export value to total sales, by taking a logarithm. A firm with higher export intensity has a more competitive cost of production, which brings about higher productivity (Vidavong, 2019; Araujo & Salemo, 2015; Ganotakis & Love, 2012). A firm with great applicable innovation, especially market innovation (e-commerce platform), is expected to have higher productivity relative to others.
- <u>Labor Productivity (lnPR)</u>: Firms with higher productivity are more competitive due to effective and efficient production through innovation, production networks, marketing, and procurement (Vidavong and Otsubo, 2020, Prete et al., 2017; Dikova et al., 2016; Baumann & Kritikos, 2016; Roper & Arvanitis, 2012; Biesebroeck, 2005). Labor-productivity is derived from the total sales divided by total employment in the logarithm form, and is used as a proxy for firm performance.
- <u>Firm Capacity (LnFC)</u>: A proxy for skill intensity (proportion of employees with secondary school education attainment and above) in a logarithm form. A firm with higher education is expected to bring about better business strategies associated with technological spillovers to enhance a firm's competitiveness (Dijk, 2002). This variable is assumed to have a positive correlation with the dependent variable.
- Innovation (IN): Higher innovation accelerates firms' performance by promoting higher productivity (Minniti & Venturini, 2017; Baumann & Kritikos, 2016). This study attempts to test the roles of innovation, namely process innovation (introduced any new or improved processes), product innovation (new or improved products), market innovation (e-commerce platforms e.g., a firm owns website is a proxy referring to one of e-commerce platforms that is applied in this study), and organization innovation (planning). These proxies are applied to determine which type(s) of innovation has the most significant impact on business performance. These are applied as the dummy variables.
- <u>Firm Age (LnFA)</u>: This denotes the number of years of establishment, in logarithmic form. It refers to the experience of doing business that enhances management from learning-bydoing repeatedly (Liu, 2017). Firms may work with market information, maintain partners' relationships, and provide products and services to market with efficiency and flexibility.
- <u>Foreign Ownership (DFO)</u>: A firm with shared foreign ownership takes a value of one, otherwise zero. Tsang (2002) suggested that firms as a form of joint ventures increase knowledge skill acquisition through learning-by-doing.

- <u>Manufacturing (DSM</u>): This variable investigates whether any difference among sectors are present. Manufacturing takes a value of one for each, otherwise zero. It intends to control the fixed effect in terms of the business sector.
- <u>Location (DLC)</u>: A firm located in Vientiane capital takes a value of one, otherwise zero. It is based on an expected positive impact on business performance due to accessible facilities and market information.
- <u>Firm Size (LnEM)</u>: This proxy refers to the number of employees, by taking the logarithm, to denote the firm size. It is anticipated to have a positive on export intensity and productivity.
- <u>Internet Security (DINS)</u>: A firm investing in Internet security takes a value of one, otherwise zero. This proxy indicates that the firm concentrating on data protection might enhance confidence amongst business partners. It is strongly expected a positive impact on business performance via export intensity.
- <u>International Standard Certificates (DISC</u>): DISC refers to the firm with an international standard certificates taking a value of one, otherwise zero. It is expected that there would be a positive relationship between DISC and export intensity as well as business performance (productivity).

RESULTS

Descriptive Analysis

Trend of E-commerce and E-commerce Platforms

E-commerce is increasingly becoming a vital element of the global economy as part of retailing business' multi-channel strategy. In interconnected marketplace systems, e- commerce has become critical in cross-border trade. It plays a vital role in facilitating the inflow of foreign investment through the supply chain of intermediary services. Without physical selling locations (shops and product showrooms), e-commerce significantly lowers entry barriers and miscellaneous operating costs for businesses, especially for those who classify as smaller businesses or MSMEs. Under the Association of Southeast Asian Nations (ASEAN) Economic Community Blueprint 2025, e-commerce is regarded as an essential component for economic development (ASEAN, 2015). E-commerce activities have been growing at a rapid pace in both developed and developing countries. As a developing country in the Southeast Asia region, Laos' Information Communications Technology (ICT) and e- commerce have been remarkably developing over the previous decade. The government of Laos has continuously committed to pursuing the ASEAN Work Program on Electronic Commerce 2017. The element of the e-commerce work program has been categorized into different segments concerning the various mandates of the strategic measure and the sectorial bodies under the ASEAN Economic Community Blueprint 2025. The elements of the ASEAN Work Program includes: infrastructure, education, and technology competency, consumer protection, legal framework modernization, security of electronic transactions, payment system, trade facilitation, competition, logistics, and e-commerce framework (ASEAN, 2021).

In this regard, the Lao government emphasizes various aspects of e-commerce framework, logistics, competition, security of electronic transactions, legal framework modernization, consumer protection, education and technology competency, and infrastructure (Leebouapao, Sitthideth, Douangpaseuth, & Suhud, 2020). However, e-commerce is still in the initial stage and is characterized in the realm of informal trade without a complete set of e-commerce laws and regulations (JC Laos, 2017). More specifically, in terms of e-commerce platforms, the government has continuously encouraged e-commerce platform development, aiming to support Lao SMEs to Asian and International markets. In this regard, the Lao online trade website specialized in Lao products known as "Plaosme" has been established as the Ministry of Industry and Commerce's initiative. The Plaosme aims to encourage and facilitate trade and investment between Lao and ASEAN SMEs. Besides, this platform also aims to create a favorable regional trading environment in ASEAN and promote the implementation of the ASEAN Free Trade Area (AFTA) and other Free Trade Agreements (FTAs). In the longer term, this platform is also aimed to equip Lao SMEs with the necessary resources to compete in international markets (Plaosme, 2021; UNCTAD, 2018). However, most e-commerce activities are in the form of Business-to-Consumer (B2C) and Consumer-to-Consumer (C2C) transactions through the social media platform, predominantly led by Facebook, Instagram, WeChat, Line, official websites, and other social medial platforms. By relying upon this social media platform model, there is no middle party to resolve the dispute that may have happened between parties. Without laws on privacy, online consumer protection, and e-commerce regulation, there is a great concern about potential revenue losses from sales through social media platforms (Leebouapao et al., 2020).

Key Drivers of E-Commerce

Regardless of limited studies and literature, the available information shows that Laos is still in the initial stage and has a minimal presence of e-commerce. Yet, there is the recent introduction of mobile phone banking such as BCEL One from Banque Pour le Commerce Exterieur Lao, ST Hub from ST bank, MJ Saduak from Maruhan Japan Bank Lao, and others, and there are also huge potential and opportunities for businesses, e.g., e-commerce plays a vital role in lowering the costs for Lao exporters and competitive prices for consumers. Ecommerce has successfully circumvented barriers faced by minorities, women, isolated communities, and handicapped populations. At any rate, numerous problems, including internet speed, regulatory infrastructure, high-cost and inefficient logistic systems, and other trade facilitation concerns, are now impeding the growth of wider economic involvement (World Bank, 2019).

E-commerce Activities in Laos After and During the Covid-19 Outbreak

After the introduction of electronic payment systems and mobile phone banking, e-commerce has become increasingly popular. Electronic banking systems allow distant buyers to order and purchase goods from both domestic and international sources, which creates a perfectly competitive environment that will enable buyers/ consumers to purchase desired items at lower

prices. Domestic e-commerce activities has increased dramatically due to travel restrictions, unemployment by service sectors, and availability of privately-owned logistic companies dominated as HAL Logistics, Anousith Express, Mixay Express, SCN Express, and others, which offers overnight province-to-province transportation service at competitive prices. During the pandemic and the lock-down period, all population groups were encouraged to be at home and maintain social distancing to prevent the spread of Covid-19. People in Laos' major cities in Vientiane Capital, Savannakhet, and Champasack Provinces prefer mobile phone applications such as Foodpanda, Goteddy, and others to order food and groceries². In 2016, the Lao government introduced the value-added tax (VAT) to control and minimize informal or smuggling of imported items. This policy was initialized in the First Lao-Thai Friendship Bridge connecting Vientiane capital, Laos, and Nong Khai province, Thailand. In particular, under this policy, ex-pats or Lao citizens have to pay a 10% VAT on the accompanied items with the value of more than US\$50 when entering Laos through border checkpoints (Arunmas, 2016). This policy is not practically used as it is not easy for custom officers to check and estimate all vehicles or passengers at the checkpoints. For instance, Lao customs officers could not detect all small and valuable electronic devices. After the Covid-19 outbreak and subsequent travel restriction in early 2020, local people and foreigners in Laos cannot travel for shopping purposes during the weekends and holidays as before the pandemic.

Before the Covid-19 pandemic, many Lao people still preferred to go to Thailand to buy expensive items in Thailand's neighboring cities. For instance: people in the Vientiane capital prefer to go to Udon Thani Province to mobile phones and other electronic devices. After the Covid-19 outbreak and travel restriction in early 2020, local people and foreigners in Laos cannot travel for shopping purposes during the weekends and holidays as before the pandemic. As such, it is necessary to find alternative ways to purchase rare or certain unavailable items in Laos. As a result, China and Thailand have been seen as the most effective online shopping destinations for customers in Laos. Due to the pandemic impact, large numbers of people lost their job in the service sectors. These people decide to sell goods online to make their livings (due to the minimal entry cost) through social media platforms. Most of these online sellers have been supplied by China's and Thailand's e-commerce platforms.

Accessibility to Thailand's E-Commerce Platform

There are several methods to order items from Thailand. Firstly, there is the method of direct transfers to Thai merchants' accounts. Those who have a Thai bank account can process the payments by using the money transfer service at counters (usually offered by money exchange stores). Secondly, one can do a direct purchase through Thailand-based e-commerce applications such as Shopee and Lazada e- commerce platforms.

² More information on in-depth interview is available in Annex 1, part 1



Figure 1: Accessibility to Thailand's E-Commerce Platform by Customers in Laos

Source: Author's own work

Customers in Laos with a Thai bank account could directly purchase from these applications. On the other hand, people without Thai bank accounts could use preorder services offered by local retailers and Facebook pages. Finally, Laos-based customers could directly purchase goods from Thailand using a Lao credit card on companies' official websites. The delivery time from Bangkok to Vientiane Capital only take as quick as one day or overnight, with the minimum transportation fee of 50 THB or US\$ 1.50 ³.

Accessibility to PRC's E-Commerce Platform

Lao customers can access PRC (the People's Republic of China, China)'s online marketplace in 2 ways. Firstly, buyers without credit or debit cards could quickly go to preorder service providers, where cash could be paid in exchange for the services. Buyers with either debit or credit cards can directly access China's e-commerce platform, notably: TaoBao, JD, Tmall, 1688, and others. In China's e-commerce platform, a buyer needs to use China's addresses (transportation company's address) with the Lao phone number in the confirmation process. Similar to the case of Thailand, the items are shipped from China through land transportation for Laos-based transportation companies. Once delivered, buyers will be notified by transportations companies to pick up the delivered items. Transportation fees from China start from LAK 5,000 (US\$ 0.5), which is relatively competitive when compared to the case of Thailand and domestic transportation fees. The delivery time usually takes around ten days to three weeks.

³ More information on in-depth interview is available in Annex 1, part 2



Figure 2: Accessibility to PRC's E-Commerce Platform by Customers in Laos

Source: Author's own work

For buyers without debit or credit cards, preorder service providers charge at the starting rate of LAK 20,000 (US\$ 2), depending on the weight and/or dimension of parcels. Preorder service providers are responsible for mismatched items, undelivered items, broken items, and negotiation with Chinese sellers. There are two payment methods; firstly, customers can directly transfer to the company's bank account. Secondly, customers can pay by cash at the headquarter⁴.

By purchasing items from Thailand's e-commerce platforms such as Shopee and Lazada, it is possible to send the items (with specific issues) back to sellers. However, the only limitation is that outbound logistics costs (from Laos to Thailand) is four times the price of Thailand to Laos, which is composed of the expenses from Vientiane to Nong Khai province, and from Nong Khai province to a seller's destination. In the case of China, regardless of the coverage by China's e-commerce platform, in practice, the transportation company does not offer the outbound logistic service back to China. In this regard, outbound transportation fee has been seen as a significant issue for cross-border e-commerce. According to the in-depth interview, the Laos-based e-commerce company reported that using the international shipping company is the best option, but only for the items with relatively high value. Due to the high outbound transportation cost, it is not possible to miscellaneous items with lower values to foreign markets. Another important issue raised by the respondent is that the transfer fees from foreign countries to Laos is relatively more expensive in comparison to other countries. As a result, sellers who are based in Laos need to use Thai bank accounts instead of Lao bank account to minimize the cost ⁵.

⁴ More information on in-depth interview is available in Annex 1, part3

⁵ More information on in-depth interview is available in Annex 1, part4

Readiness to Participate in Cross-Border E-Commerce

Southeast Asia's digital consumers are dramatically growing faster than expected. It is predicted the digital consumers in the Southeast Asia region will reach US\$ 310 million by 2025. Yet, people in Southeast Asia are still familiar with cash in exchange for goods and services. However, in recent years, the number of populations who prefer using cash decreased from 40 percent to 37 percent in 2019. In the meantime, extensive use of smartphones has led to the steady rise in mobile phone payment or e-wallet adoption in this region (Nortajuddin, 2020).

There has been a massive improvement in accessibility to telecommunication services in Laos; in particular, mobile phone services have dramatically increased in the past ten years. In addition to the growth of mobile phone connectivity in recent years, internet connectivity needs to be further strengthened to enhance accessibility to Digital Financial Services (DFS) population-base in Laos. However, it has also been observed that the major challenges to the adoption and penetration of DFS include limited understanding of technology and low technology literacy. Despite the existence of many government-owned and private commercial banks and the SME fund, it seems that these banks are not incentivized to provide loans to small businesses. In particular, no commercial banks aim to support tech MSMEs. In terms of transportation, private logistics companies are available in major provinces/ cities such as Vientiane capital, Champasack, Luang Prabang, Savannakhet province, and other major cities. However, compared to other neighboring countries, the transportation costs remain high, which is inhabited by the absence of a formal address/ postal system. Lao still highly relies upon on-road transportation, road conditions, traffic congestion, and lack of a conducive regulatory framework, and these factors create major constraints for third-party logistic providers (UNCTAD, 2018).

Laos has made good progress on the regulatory and legal development framework, ensuring the country is on track with its commitment to the ASEAN framework. However, there is room for improvement with respect to legal instruments related to online consumers' protection and data privacy. With the increase in orders from neighboring countries, especially Thailand and China, there is a growing concern about unregulated border trades in terms of consumer protection. To facilitate and respond to the growth of e-commerce, the government have applied legislations related to consumer protection, cyber-crime, electronic signatures, and more (MOIC, 2021)⁶

Table 1 provides the UNTAC B2C E-commerce Index of all ASEAN countries, except Brunei Darussalam and Hong Kong Special Administrative Region of the PRC. This e-commerce index includes seven indicators: the proportion of individuals using the internet, the proportion of individuals with accounts, secure internet services, Universal UPC postal reliability score, index value, the index value change between 2019 to 2020, and world rank. In particular, the

⁶ More information on legislations is available in Annex 2

UPU score refers to the Integrated Index for Postal Development (2IPD), which is based on four pillars: reliability, reach, relevance, and resilience. The final index value is calculated based on the financial institution's account ownership or mobile-money-service provider (for people aged more than 15 years old), percentage of people accessing the internet network, and postal reliability index. Table 1 reveals that Laos stood at the lowest rank, 14 percent behind Cambodia. As access to the internet is an essential component of e-commerce, it can be said that Laos has the least endowment in participating in e-commerce. Opening an account with a financial institute is fundamental in e-commerce development. Based on the latest data in 2019, Laos people still highly prefer to use cash as a medium of exchange. The proportion of individuals was the second last, only a few percent higher than in Cambodia. However, Laos has a relatively good UPU postal reliability score, only behind Malaysia, Singapore, Thailand, Vietnam, and Hong Kong. Although Laos had a meager index value in 2020, Laos has made good progress as the change in index value from 2019 to 2020 was 5.4, being the highest value compared to other countries (UNCTAD, 2020).

Country	Proportion of individual using internet (2019 or latest)	Proportion of individual with account 2019 or latest)	Secure Internet servers (2019)	UPU postal reliability score (2019)	Index value (2020)	Index value change (2019 - 2020)	World rank (2020)
Cambodia	40	22	42	21	31.1	0.3	117
Indonesia	48	49	60	43	50.1	0.0	83
Laos	26	29	30	78	40.6	5.4	101
Malaysia	84	85	71	85	80.5	1.6	30
Myanmar	31	26	22	17	24	-2.9	130
Philippines	65	35	39	40	44.7	-5.1	96
Singapore	89	98	94	.97	94.4	-0,4	4
Thailand	67	82	59	97	76	2	42
Vietnam	69	31	64	83	61.6	0.8	63
Hong Kong	92	95	88	92	91.8	() - T	10

	Table 1	I: ASE	AN – Hong	Kong in	the UNCTAD) B2C E-Comr	nerce Index
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Source: The UNCTAD B2C E-Commerce Index 2020 (UNCTAD, 2020)

Legal and Institutional Environment

As shown in Annex 2, there are multiple laws/regulations related to e-commerce. Predominantly, the Lao government issues the Law on Consumer Protection (2010) to ensure legitimate interests and safety for consumers from negative impacts resulting from goods and services. The policy instrument covers labels, services, contracts, and horizontal advertising. Mobile banking payments are available everywhere and continuously becoming very popular in Laos' major cities. With the intention to define the principles, regulations, and measures for the formation, use, recognition, management, and inspections of electronic transactions to create reliability and confidence in an electronic transaction, the Law of Electronic Transaction (2012) has also been issued. Most recently, under the MOIC, the Decree on Electronic Commerce (2021) has recently been promulgated with the objective to define methods, rules

and regulations, as well as monitoring processes to promote e-commerce. At the regional level, the ASEAN Agreement on Electronic Commerce has been introduced (2019). This agreement intends to facilitate cross-border e-commerce transactions and create an environment of trust and confidence in the use of e-commerce. The agreement also addresses multiple related areas in e-commerce, which are: Information and Communication Technology (ICT), education and technology competency, online consumer protection, e- commerce legal regulations, electronic transactions security, protection of online personal information, electronic payments and settlements, and other important areas.

As was mentioned earlier, the e-commerce situation in Laos can be broadly split into two categories: domestic e-commerce and cross-border e-commerce. Typically, in the case of domestic e-commerce, the supply and demand sides meet up on a social media platform, in which an electronic transaction via a mobile phone has been utilized as proof of payment. The Department of Internal Trade, Ministry of Industry and Commerce is currently in charge of consumer protection (including e-commerce activities) at the national level. The consumer protection hotline (at tel. 1510 hotline) is available to assess consumer suggestions and recommendations. The call center has continuously received multiple complaints related to product quality, packaging, counterfeit items, and other issues in recent years. Also, merchandises not matching the advertised description has been identified as the major issue for the e-commerce transaction. Despite the existence of the Law on Consumer Protection, Laos is still in the early stages of e-commerce development, with a substantial number of people lacking adequate awareness of e-commerce-related rules and regulations. As the majority of e- commerce transactions are of a minor monetary value, most disputes between consumers and sellers are resolved through manual negotiation and mutual consent.

During the Covid-19 pandemic and international travel restriction, the inbound e-commerce activities between Laos and neighboring countries (Thailand and PRC) have tremendously grown in the last few years. For the purpose of clarification, international e-commerce transactions can be generally categorized into two methods. The first one is very similar to the practice of domestic e-commerce; Lao buyers simply transfer financial resources to sellers in neighboring countries without any contract in place. The second method is entirely relying on neighboring countries' e-commerce platforms. It should be reminded that the ordered items will be shipped to neighboring countries' border cities before being forwarded to Laos afterwards. As these items are acknowledged as domestic consumption rather than export, the items are fully protected by origin countries' e-commerce platforms. However, buyers need to bear the return costs, which are usually very high when required. It can be said that the ASEAN Agreement on Electronic Commerce has not been generally utilized in practice. Regarding the fact that the Department of Internal Trade has recently signed the MOU with Thailand's Office of the Consumer Board, the Department of Internal Trade is in charge of forwarding the message of Laos-based online consumers to the Office of the Consumer Board in Thailand. It is possible for the customers in Laos to submit their feedback to the Department of Internal Trade's call center (Call 1510), where the messages will subsequently be transferred to

Thailand's Office of the Consumer Board for consideration. It is reported that two cases of international e-commerce transactions were sorted out in 2021. At any rate, it has been observed that there were not many issues related to e-commerce between Thailand and Laos. This situation may be due to buyers and sellers being able to reach an agreement through Thailand's e-commerce platform. Moreover, the lack of customers' awareness of the Department of Internal Trade's call center could be another important reason explaining low numbers of cases reported. In terms of international level agreements, the current progress of developing the WTO Joint Statement Initiative and agreements in e-commerce are⁷:

- Regional Comprehensive Partnership Agreement (RCEP) located in Chapter 12, containing 17 articles (2021);
- The ASEAN Agreement on Electronic Commerce (ECA), containing 19 articles (2021);
- ASEAN-Australia-New Zealand Free Trade Area (AANZFTA), 2010 (revised 2015) in the process of further revision and development;
- WTO Joint Statement Initiative on E-Commerce, completing 5 out of 52 topics.

Empirical Results

The samples are 332 firms in Laos, from Vientiane capital, Luang Prabang, Khammouane, Savannakhet, and Champasak Provinces. The businesses located in Vientiane capital account for 41.27 percent. There are three major sectors, namely manufacturing, retail service, and other services. Other services refer to wholesale, hotels and restaurants, construction, etc. The feature showed that manufacturing is around 42.77 percent out of total firms. However, small businesses are dominated by accounting for 63.5 percent. The foreign business accounts for 6 percent, while this dataset is dominated by formal business covering 86.4 percent, and the export firm accounting for only 13.55 percent.

This section developed from conceptual innovation. Innovation improvement, which is imperative for long-term business performance, consists of four principal forms, namely product innovation, process innovation, market innovation, and organizational innovation. For entrepreneurs, a business plan is a critical and essential tool. A solid business innovation application leverages enterprises with higher competitiveness on export and assists them in achieving short-term and long-term goals. However, the sampling shows that the number of firms investing in an innovation capacity has been seemingly low, except for business plans, accounting for 61.14 percent. It implies that entrepreneurs in Laos concentrate more on the business plan (organization innovation) much more than other types of innovation. For instance, only 28.31 percent of firms emphasized on market innovation (own website), as shown in Table 2, with 62.77 percent out of those firms locating in Vientiane capital. In addition, process innovation, which refers to the firms using new machines or improving existing machines in order to upgrade new or improved process, counts for 19.28 percent only. Lastly, product innovation, referring to a firm which introduces new products

⁷ Department of Foreign Trade Policy, MOIC

and designs, is observed only in 20.18 percent of firms examined. The feature also shows that firms invested in R&D at only 3.92 percent of firms examined. Also, businesses in Laos with technology licenses from their business partners is still very few, accounting for only 2.71 percent. On the other hand, 35.54 percent out of total firms purchased the new assets (e.g., machinery, vehicles, equipment, land or buildings, including expansion and renovations of existing structures). It implies that Lao businesses are aware of the crucial innovation improvement on business performance and competitiveness.

No.	Type of innovation and technology	Percent
1	Market innovation (own website)	28.31
2	Introduced new or improved product or service	20.18
3	Introduced any new or improved process	19.28
4	R&D	3.92
5	Technology license(s) from business partners	2.71
6	Purchase any new or used fixed assets (eg., machinery, vehicles, equipment, land or buildings, including expansion and renovations of existing structures)	35.54

<u>Table 2</u>: Application of Innovation and Technology amongst Lao Firms

Source: author's calculation from enterprise survey by WB, 2018.

Next, the Table 3 compares whether the firms that own websites as an e-commerce platform or market innovation performs better than firms without a website or not in terms of export intensity through business performance, based on labor productivity. This also estimates the impact of other types of innovation. Model (1) and (3) tested the role of innovation on export intensity without control variables. The findings indicate that market innovation is significant at the 1% level of both models. However, product innovation is significant at a 5% level on export intensity, while process innovation is significant at a 5% level on productivity. This implies that having a website for firms is the most important determinant of international market engagement as well as business performance (productivity). When increasing large covariates in model (2), the results are consistent with the first model (1) in terms of the variables of interest, especially with e-commerce platform on export intensity. Other determinants consist of the sector, firm size, location, and Internet security investment variable. The author separates the model to examine the impact of export intensity on business performance by taking into account the endogeneity issue between a dependent variable and export intensity using an instrumental variable based on model (2) in the 2SLS regressions, as shown in the finding in the model (4). The results show that export intensity is significant at a 10% level to increase productivity. This implies that export outperforms other variables. The finding suggests that a Lao firm can increase competitiveness by concentrating on learning- by-exporting through an e-commerce platform for productivity improvement. Unfortunately, the finding shows that international standard certificate has a negative correlation

with export intensity. This result is required for further studies to find the real situation in case of Lao exporters.

Symbol	Variable description	LnEI	LnEI	LnPR	LnPR
Symoor	variable description	OLS (1)	OLS (2)	OLS (3)	2SLS (4)
С	Intercept	0.318**	- 0.993***	17.980***	18.007***
		(0.132)	(0.357)	(0.138)	(0.120)
InIS	Labor skill	-	0.034	-	-
		-	(0.056)	-	-
InFM	Number of employees	-	0.143*	-	-
	rumber of employees	-	(0.088)	-	-
InFI	Export intensity	-	-	-	0.249*
	Export intensity	-	-	-	(0.144)
	Market innovation	0.562***	0.503***	0.503***	-
DMI	(e-commerce platform)	(0.181)	(0.187)	(0.189)	-
DDCI	Process innovation	0.279	-	0.490**	-
DPSI	riocess innovation	(0.199)	-	(0.209)	-
ופת	Product innovation	0.487**	0.351*	0.221	-
		(0.206)	(0.196)	(0.215)	-
DPN	Organization	-0.100	-	-0.086	-
DIN	innovation	(0.168)	-	(0.176)	-
InFA	Firm aga	-	0.143	-	-
LNFA	I'nni age	-	(0.104)	-	-
DFO	Dummy-Share of	-	0.251	-	-
	foreign ownership	-	(0.330)	-	-
DSM	Dummy-	-	0.530***	-	-
	manufacturing	-	(0.159)	-	-

<u>Table 3</u>: The Role of E-Commerce Platform on Export Intensity and Labor Productivity

DISC	International standard	-	- 1.002***	-	-
DISC	certificate	-	(0.385)	-	-
DLC		-	0.335**	-	-
DLC	Dummy-location	-	(0.162)	-	-
DINC	Dummy-investing on	-	0.312*	-	-
DINS	internet security	-	(0.173)	-	-
Pro	bb (F-statistic)	0.0002	0.000	0.0019	0.000
C	Observations	299	229	299	229
	R-squared	0.0723	0.195	0.056	-
	Root MSE	1.360	1.281	1.426	1.493

Note: *** p < 0.01, ** p < 0.05, * p < 0.1; the standard errors are reported in parentheses; an endogenous (LnEX) and instrument variables are included in Model 2.

CONCLUSION

The ASEAN – Hong Kong Free Trade Agreement (AHKFTA) has been implemented, being in effect for all parties since early 2021; however, trading between Laos and Hong Kong, China, remains smallest compared to the rest of ASEAN members, currently. Therefore, this study aims to assist Lao businesses to adapt to a new business environment and take advantage of AHKFTA, and, as such, this paper attempted to investigate that phenomenon concerning ecommerce platforms (B2B and B2C) under AHKFTA. In addition, it also aims to understand more about a country's current e-commerce development, by assessing the country's readiness in AHKFTA utilization and its impact on cross-border trade, particularly; focusing on ecommerce as a means to promote bilateral trade between Laos and Hong Kong, China. Finally, the study will provide policy recommendations on said issues and challenges impeding Lao businesses from taking advantage of e-commerce on cross-border trade under AHKFTA. The study applied both descriptive analysis through the case studies and empirical studies by utilizing the World Bank Enterprise Survey.

The findings showed that Laos' government has been firmly committed to the ASEAN Work Program on Electronic Commerce 2017. In addition to ASEAN's e-commerce agreement, the Lao government has adopted laws on consumer protection, electronic transactions, cybercrime, information and communications technology, intellectual properties, as well as decrees on electronic commerce. Lao B2C e-commerce is still lagging behind other ASEAN – Hong Kong partner nations despite ongoing infrastructural improvement. E-commerce is still in its infancy and is classified as informal trading in the absence of a comprehensive set of e- commerce rules and regulations.

Following the travel restrictions occurring due to the Covid-19 pandemic, residents choose to order products from different areas or provinces inside Laos. One of the most crucial aspects is the growing importance of private logistics businesses in domestic shipping. Moreover, many individuals in Laos have discovered e-commerce as a new option to purchase desired commodities from abroad, namely Thailand and China, mostly. However, cross-border e-commerce activities continue to rely on informal transportation without a monitoring mechanism, traceability, or protection for buyers-consumers.

The data from the enterprise survey showed that firms that emphasized market innovation (own website) are only at 28.31 percent; however, it played an important role on outstanding business performance and international market access in terms of export intensity. The empirical result showed that market innovation (for instance, when an e-commerce firm has its own website) is significant at the 1% level on export intensity and business performance in terms of firm labor productivity. This implies that the firm with a website is the most vital determinant to engage in the international market, and having own website is associated with business performance (productivity). Other factors, e.g., a business type, firm size, location, and Internet security investment led to an export intensity growth. Simultaneously, the results show that export intensity is significant to increase productivity. The finding insisted that a Lao firm may increase competitiveness by concentrating on learning-by-exporting through an e-commerce platform for productivity improvement. Although the study cannot be estimated directly to generalize the impact of an e-commerce platform as a whole, the outcome can provide an observation for Lao businesses and government in the future to strengthen ecommerce cooperation to promote business-to-business and business to consumers under AHKFTA.

POLICY RECOMMENDATION

From the descriptive and empirical study outcomes, several policy recommendations have been proposed for policymakers as follows:

- i. The government needs to concentrate on the nation's fundamental e-commerce infrastructure development, such as internet connection, postal services, transportation, and other associated issues, to facilitate continual expansion of domestic and cross-border e-commerce;
- ii. The government is obligated to establish e-commerce laws in accordance with the ASEAN Economic Community Blueprint 2025 and the ASEAN Work Programme on Electronic Commerce 2017-2025;
- As a prerequisite for e-banking and e-commerce, the Lao people should register an account with financial institutions. In this sense, the government have to educate Lao people about the necessity and benefits of electronic banking over cash as a medium of exchange;
- iv. As there is a tendency to increase direct online orders from China and Thailand, the government should move forward to develop an appropriate mechanism for collecting

taxes of items ordered from other countries' e-commerce platforms. In particular, shipping rates and tax values need to be clearly stated during the delivery process. As a result, the government could effectively collect tax revenues and protect local businesses that import commodities in accordance with the Lao government's rules and regulations;

- v. The study's findings indicate that outbound logistic prices are much greater than inbound logistic fees, creating a significant barrier for Lao sellers looking to sell their items on foreign online marketplaces. As a result, it is strongly advised that the government needs to create special measures to reduce outbound logistic expenses to adjacent counties. In addition, the government has to utilize the opportunity and potential of the Lao-China Railway to transport e-commerce-related items from Laos to China at competitive prices
- vi. As a short-term strategy, the government should explore possible mechanisms to work with Thailand or other surrounding countries' e-commerce systems to allow the use of Laos-based bank accounts to purchase and sell commodities on these countries' existing e-commerce platforms;
- vii. For long term policies, the Lao government needs to seek out cooperation to develop mutual/regional e-commerce platforms in particular areas such as ASEAN – Hong Kong, China Free Trade Area (AHKFTA), Lancang – Mekong Countries (LMC), new ASEAN members (CLMV countries), Ayeawady – Chao Phraya – Mekong Economic Cooperation (ACMECS) and other regions that ensures a competitive system, effective transactions, and consumer protection;
- viii. The finding showed that there is a distinction between firms located in Vientiane capital and other provinces. Reducing the gap requires the Lao government to encourage the awareness of firms for utilization of e-commerce in their business operations, in particular in the local provinces;
 - ix. The finding insisted that a firm with higher Internet security could promote its export intensity and business outperformance. This encourages the government to further enforce the related laws on e-commerce promotion and awareness of entrepreneurs, for instance, cyber security issues, data protection, business competition, online signatures, and e-payment platforms, etc'
 - x. Recall that there is a relatively small number of issues that occurred during the international transaction between Thailand and Laos; the existence of the MOU between the Department of Internal Trade and Thailand's Office of the Consumer Board needs to be publicized through an advertising campaign to enhance Laos-based consumers' awareness.

This study still has limitations, especially regarding the dataset applied for the case study and estimations. There is no case study regarding business experiences on e-commerce platform applications for purchasing or selling commodities between Laos and Hong Kong. This study used minor dataset based on available information instead of direct cases. To strengthen e-

commerce promotion among ASEAN states, in particular Laos, and Hong Kong, is a prerequisite for further study in order to catch up with other states to implement the agreement effectively.

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Annex 1: Information Retrieved from In-Depth Interview Sessions

Part 1

"...Air transportation is speedy; you can directly go to the airport and ship the items; a couple of hours later, the item will have arrived at the destination. However, the shipping cost is expensive and not suitable for an e-commerce business. Air transportation cost has two parts – shipping cost (paid mainly by senders) and warehouse cost (paid by recipients)..."

(Buyer, female 32 years old)

"... Now there are more and private transportation companies coming into the market, creating a competitive environment. They offer reasonable prices and accurate shipping times. It only takes overnight to ship from one to another province ..."

(Buyer, Male 40 years old)

Part 2

"... Before the Covid-19 outbreak, it is straightforward to go to Thailand and purchase stuff. I still remember buying my new mobile phone in Udon Thani province not long before the travel restriction. Now I have to change the way around by ordering rare items (not available in Laos) in Thailand. As a former student, I still have a Thai debit card and phone number, and it is very easy for me from Thailand's e-commerce platforms such as Shopee and Lazada. However, some websites do not accept debit cards; I have to use a Laos credit card instead. It is worth doing so because the transportation cost is not expensive...."

(Buyers, Female 37, years old)

"... During the travel restriction period, more people are willing to order stuff from Thailand, where goods are cheaper than those available domestically. To be able to do this, they have to have money in their Thai bank account. Hence, more people are coming in to use our transfer services..."

(Staff at an exchange counter, Male 45 years old)

Part 3

"... There are a bunch of rare items available at Taobao. For instance, automobile parts are very expensive at the dealer. We can order those spare parts from Taobao at reasonable prices. With a Lao debit or credit card, you can directly order by using mobile phones; the shipping process takes no more than two weeks to arrive at the logistic firms in Laos ..."

(Buyer, Male 40 years old)

"... We offer preorder services from China's online marketplace such as Taobao, JD, Tmall, 1688, etc. People can pay by cash for the preorder items; with the transportation cost starting at 20,000 LAK/Kg (US\$1.95), we are also responsible for the mismatch items and other issues that may occur during the transportation process.

The Covid-19 pandemic creates both positive and negative impacts on our companies. During the travel restriction period, we have more orders coming in. However, we also receive many complaints from customers because of the delay in the transportation process. The delays were primarily due to the increase in the inspection process..."

(Preorder service provider, Male 33 years old)

Part 4:

"... As a seller, I focus on selling handicraft products at several e-commerce platforms. In terms of payment, I use my Thai bank to apply for the PayPal service because the transaction cost between a local bank and an international bank is very expensive.

High transportation is also a critical issue. However, the Lao products need to be shipped from Laos directly. In my opinion, the transportation cannot be too high, so the transportation costs were always underreported to customers ..."

(Seller, Female 27 years old)

<u>Annex 2</u>: Measures Affecting E-Commerce

Law/Regulation	Objective	Responsible Agencies	Policy Instruments	Products Covered	Nature of Measurements	Scopes of Application
1. Law on Consumer Protection 2010 (No.02/NA)	 To ensure legitimate interests and safety for consumers from negative impacts resulting from the consumption of goods and services. 	 Ministry of Industry and Commerce coordinated with Ministry of Public Health, Ministry of Agriculture and Forestry, the National Science and Technology Authority and other local administration authorities. 	 Label; Services; Contract; Horizontal advertising. 	 Protection for the consumption of goods; The protection for the consumption of services,. 	- Qualitative measurement.	- Domestic consumer protection.
 Law on Electronic Transaction 2012 (No. 20/ NA) 	- To define the principles, regulations, and measures for the formation, use, recognition, management, and inspections of electronic transactions to create reliability and confidence in an electronic transaction.	 Ministry of Technology and Communication 	- Act of making a contract a contract, and the provision and use of electronic government services that are conducted wholly or partly by electronic means such as: Automatic Teller Machines (ATMs), Payments over internet and other similar transaction.	- Applies to individuals, legal, entities, state organizations (and agencies), international organizations, and civil society that use electronic transaction in Laos.	- Qualitative measurement.	- Domestic protection with international cooperation.
3. Law on Competition 2015 (No. 60/NA)	- To determine principles, regulations, and measures for managing and monitoring the competition in business activities.	- Ministry of Industry and Commerce	 Prices of goods and services; Market share and allocating market; Quantity of production; Development of technology and quality of goods and services; Preventing other business operators from entering market. 	- Goods and services	- Qualitative measurement.	- Domestic competition.
4. Law on Cybercrime 2015 (No. 61/NA)	 To define principles, regulations, and measures on managing, monitoring, inspecting the campaign of preventing and combating cybercrime. 	 Ministry of Technology and Communication. 	- Computer system,	 Server system, Computer's data and information, Database system, Computer traffic data, Service provider 	- Quantitative and qualitative measurement	- Domestic and cross border e-commerce
5. Law on Information and Communication Technology 2016 (No. 02/NA)	- To define rules and regulations on monitoring, information technology development.	 Ministry of Technology and Communication. 	- Computer system,	 Software; Hardware; Server Data based Website 	- Quantitative and qualitative measurement	- Domestic and cross border e-commerce
6. Law on Electronic Data Protection 2017 (No. 25/ NA)	- To define a strategy for managing and monitoring electronic data.	- Ministry of Technology and Communication.	- Computer system,	General data protection;Specific data protection	- Quantitative and qualitative measurement	- Domestic and cross border e-commerce

7.	Law on Intellectual Property – Amended Version (No. 38/ NA) 2017	- To determine principles, regulations, measures relating to the management and protection of intellectual property rights to support and promote inventions, creativities.	 Ministry of Technology and Communication. 	 Patent; Petty patent; Industry design; Trademark Integrated circuit layout- design; Geographical indication 	- Goods and services	- Qualitative measurement	- Domestic and cross border e-commerce
8.	Law on Electronic Signature (No. 59/NA) 2018	- To provide digital signature requirements that set out in the electronic transaction law	 Ministry of Technology and Communication 	- Computer system	- E-signature	- Quantitative measurement	- Domestic and cross border e-commerce
9.	The ASEAN Agreement on Electronic Commerce 2019	 To facilitate cross border e-commerce transactions in the ASEAN region; Contribute to creating an environment of trust and confidence in the use of e- commerce in the ASEAN region; To deepen cooperation among the Member States to develop further and intensify e-commerce. 	- ASEAN Secretariat.	- Regional agreement	 Information and Communication Technology (ITC); Education and technology competency; Online consumer protection; E-commerce legal regulatory frameworks; Electronic transaction security, including protection of online personal information; Electronic payment and settlement; Trade facilitation; Intellectual property rights; Competition; Cybersecurity; Logistic to facilitate e- commerce 	- Qualitative measurement	- ASEAN Countries
10.	The Decision on Electronic Commerce (No. 1101/MPT) 2020	- To define the principles, rules, and measures for commitments on the management of services, the use of electronic signatures.	 Ministry of Post and Telecommunications. 	- Electronic signatures	 Digital certificates; Secure Socket Layers; Time stamp; Other services 	- Qualitative measure	- Laos
11.	Decree on Electronic Commerce (No.296/ GOL)	- To define methods, rules, and regulations, monitoring processes in order to promote e- commerce	- Ministry of Industry and Commerce	- Ecommerce business forms	 Selling goods and services through one's own electronic means; Selling goods and services on electronic marketplace; Operating electronic marketplace 	- Qualitative measure	- Laos

CHAPTER 4

STRENGTHENING E-COMMERCE COOPERATION TO PROMOTE B2B AND B2C UNDER THE AHKFTA: A CASE STUDY OF MALAYSIA

AUTHORS

- Saizi Xiao
- Tay Yi Thong

Malaysia Institute of Economic Research (MIER)

ABSTRACT

AHKFTA, which came into force in October 2019 for Malaysia, has enhanced the inclusion of Malaysia into the regional and global economy by accessing to Hong Kong SAR's wide international trade network and well-established global value chains. In past few years, among all Malaysia's top trading partners, Hong Kong SAR has enjoyed the largest increase in bilateral trade flow, indicating the increased importance of Hong Kong SAR in Malaysia's future trade landscape.

Recently, beside traditional trade, e-commerce trade has become a significant component of trade with rising importance in Malaysia. With the boost of government initiatives such as National eCommerce Strategic Roadmap and MyDigital Blueprint, together with the increased consumer demand arised during pandemic, the contribution of e-commerce to the Malaysian GDP has experienced an extreme high growth (70.8%) during last five years.

Although e-commerce has been rapidly growing in Malaysia and has been given strong support by the government, there is a lack of studies which highlights the cross-border e-commerce scene in Malaysia. Malaysia is now an attractive market for e-commerce in ASEAN due to its dynamic economy and developed infrastructure for digital technologies. Hence, it is vital to gauge the readiness of Malaysia to participate in cross-border e-commerce, to maximise the potential of the rising industry, especially with the current global pandemic fuelled by the increase of smartphone penetration in the country. Moreover, none of existing studies has explored the importance of FTAs for cross-border trade, despite having a large number of
FTAs that allow foreign business access. Therefore, this study aims to review the development of e-commerce in Malaysia, and assess the readiness of Malaysian stakeholders to participate in cross-border e-commerce under the AHKFTA. More importantly, to provide some insights to the impact of several regional trade agreements, specifically the AHKFTA, utilizing trade data, PESTLE analysis with recognized global indexes, and qualitative interviews, to shed light on the international e-commerce trade between Hong Kong, ASEAN, and Malaysia.After identifying the key drivers and barriers of e-commerce development in Malaysia based on the quantitative analyses and qualitative case studies, several policy recommendations are provided for reaping potential benefits of cross-border e-commerce under AHKFTA, to benefit not only Malaysia but also both parties in the agreement.

Undoubtedly, digital trade is becoming the next frontier in economic development in ASEAN and also could become another potential engine for significant growth of Malaysia in postpandemic period. Hence, further wider implementation of AHKFTA in the coming years is not only critical for strengthening Malaysia's economic integration into ASEAN but also for turning Malaysia into the regional hub for trade and investment especially in today's fast-paced digital world.

STUDY CONTEXT AND OVERVIEW OF REGIONAL TRADE

Introduction On the 31st ASEAN Summit in Manila, the ASEAN-Hong Kong, China Free Trade Agreement (AHKFTA) was signed, which came into force on 13 October 2019 for Malaysia. The AHKFTA is the sixth FTA among the ASEAN+1 FTAs, after agreements with China, South Korea, Japan, India and Australia–New Zealand. The AHKFTA contains 14 chapters covering broad areas of market access liberalisation, trade facilitation, rules to promote confidence in trade, and cooperation aimed at facilitating trade in goods and services in the region.

The enhanced economic cooperation and integration between ASEAN and Hong Kong SAR was a natural response to the rise of regional developments and important global events during the course of the past decade. The agreement provides an opportunity for ASEAN countries to access the benefits of Hong Kong SAR's international trade networks and elevate its active engagement in global value chains.





Source: Malaysia External Trade Statistics Bulletin, DOSM

The free trade agreement enhances the inclusion of the developing countries, including Malaysia, into the global economy through a reduction in technical barriers to trade. The key benefits of the AHKFTA for merchandise trade includes the simplification of the application process of Certificate of Origin for preferential tariffs into Hong Kong, the expansion of market access in architectural, engineering, education and environment services, as well as free movement of financial flow from Hong Kong to their respective home countries.

In terms of merchandise trade, Hong Kong SAR and China remained Malaysia's main trading

partners despite the disruption in the global supply chain affected by the coronavirus. Strong trade ties during the pandemic are shown in Figure 1, with China accounting for 17.94% of the country's total trading volume (import + export) and Hong Kong SAR accounting for that of4.13%. Malaysia relies heavily on intra-regional trade, with ASEAN contributing approximately a quarter (26.59%) of the total trade flow for 2021 and the first half of 2022.

For the past 5 years, Malaysia has positively engaged with its main trading partners as shown by the increase in trade flows with the respective countries in Figure 2. Among them, Hong Kong SAR enjoyed the largest increase in trade flow of 63.71%, emphasizing the increased importance of Hong Kong SAR as a trade partner for Malaysia over the years, which largely comprises the trade of integrated circuits.

Other notable countries that experienced a rise in trade volume with Malaysia are Taiwan (45.75%), United States (37.55%), South Korea (35.66%), and China (31.57%). However, intra- ASEAN trade experienced a less significant growth at 14.15% despite the intensifying regional value chain.

Trade Partners	Percentage change from 2016 to 2020 (%)					
 1	Malaysia Export To	Malaysia Import From	Trade Flow			
Hong Kong SAR	81.10	12.05	63.71			
ASEAN	18.07	1.82	14.15			
China	35.95	25.24	31.57			
United States	61.52	20.95	37.55			
Japan	-1.85	8.07	2.83			
South Korea	51.55	25.73	35.66			
Taiwan	59.46	38.79	45.75			
India	-4.99	49.26	13.62			
Germany	10.75	-2.34	4.00			
Australia	-9.17	26.12	3.81			
Others	8.96	8.92	4.57			
World	25.02	14.55	20,10			

Figure 2: Percentage change of export, import, and trade volume with the respective trade partners, 2016 and 2020

Note: Green > 50%, Yellow 20% - 50%, Blue 0% - 20%, Grey < 0% Source: Malaysia External Trade Statistics Bulletin, DOSM

In terms of the growth rate of Malaysian exports, Hong Kong SAR tops the list with 81.10% increase from 2016 to 2020. On the other hand, Japan, India, and Australia, faced a negative growth despite having ASEAN + 1 regional trade agreements established with the latter two

economies. Import volume has also increased, although less significantly compared to exports, with Germany being the only exception who experienced a negative growth trend. Imports improved moderately with no country having a growth rate of more than 50%.



Figure 3: Gross Value Added of E-commerce to GDP from 2016 to 2021 (RM bn)

The e-commerce sector in Malaysia is forecasted to expand further, reaching a growth rate of 35 percent by 2023 (Australian Trade and Investment Commission (Austrade), 2020). The optimistic trend is induced by rising income, growing smartphone and internet penetration, and institutional support, while the emerging middle class, increasing foreign direct investments, and evolution of payment infrastructure will be the key drivers for further growth.



Figure 4: The Growth of E-commerce Revenue and GDP 2017 – 2023

Source: Information and Communication Technology Satellite Account, DOSM

Source: Economic Research Institute for ASEAN and East Asia, 2020

Moreover, among the ASEAN Economic Community, the total e-commerce revenue of ASEAN will increase by almost 200%. Together with China and India, i.e. via free trade and market integration, the region could be part of the world's epicenter of e-commerce by 2023, taking over 40% of the world's e-commerce market. As depicted in Figure 4, setting 2018 as the baseline year, by 2023, the annual growth of e-commerce revenue in ASEAN is projected to be four times as much as that of the regional GDP.

<u>Figure 5</u> : Cross-border E-commerce Value and Main	Trading Partners for Hong K	long
SAR and Selected ASEAN Countries, 2020		

Country	Main	Country E-	Count
5	Tradin	commerce	ry
	g	Value (USD	Share
	Partner	bn)	(%)
		, ,	
Hong Kong	CHN	1.736	31
	USA	1.176	21
	JPN	0.896	16
Indonesia	CHN	N/A	41
	USA	N/A	10
	0.5/1	11/21	10
	SCP	N/A	10
	501	1N/A	10
Malaysia	CUN	1 286	62
Malaysia	CHN	1.560	05
	LICA	0 154	7
	USA	0.154	/
	WOD	0.000	
	KOR	0.088	4
Philippines	CHN	0.351	39
	USA	0.207	23
	KOR	0.063	7
Singapore	CHN	0.86	43
	USA	0.4	20
	KOR	0.16	8
			-
	1 1		

Thailand	CHN	1.178	62
	JPN	0.266	14
	USA	0.133	7
Vietnam	USA	N/A	26
	CHN	N/A	25
	JPN	N/A	17

Source: PPRO Financial Ltd, 2020

Interestingly, out of the 40% of total e-commerce trade which involves cross-border elements, it follows a similar trend compared to that of merchandise trade in which China, United States, and Korea remain as the main trading partners, representing 63%, 7%, and 4% of the country share respectively. China also stands out as it contributed the majority trade flow to Hong Kong SAR and all the selected ASEAN countries, which signifies the importance of China for the region. With ASEAN working towards extensive infrastructure development in the coming years under ASEAN Master Plan on Connectivity (MPAC), as well as the mega One Belt One Road (OBOR) Initiative, there is a huge potential for ASEAN to increase the trading volume with Hong Kong SAR and China. Hence, the implementation of AHKFTA could be helpful in strengthening ASEAN's economic integration and stimulating development in the region as Hong Kong SAR is one of the world's leading trade powerhouses.

LITERATURE REVIEW

<u>Figure 6</u>: Systematic Review Table

No.	Reference	Key Research Area	Key Findings	Coverage
1	(2018). E-Commerce Consumer Survey. Malaysian Communications and Multimedia Commission (MCMC).	Survey analysis of consumer behavior and experience with e- commerce with 2,401 respondents	 Percentage of e-Commerce consumers at national level stood at 51.2% Smartphone is the most popular device for shoppers to purchase goods and services online (78.3%) Free delivery also influenced decision of online shoppers to shop online 	MYS
2	Tham, S. Y. (2018). Development of E- Commerce in Malaysia. ISEAS Yusof Ishak Institute.	Barriers and challenges of the Malaysian e- commerce market	 Provides more opportunities for small and medium enterprises to enhance their market access Facilitate the management of fragmented production networks and the operation of global value chains (GVCs). Outstanding challenges include online security, infrastructure support, logistics support, shopping malls and consumer preferences. 	MYS
3	Cassey, L., & Sanchita, B. D. (2018). E-Commerce & ASEAN Economic Integration. ISEAS Yusof Ishak Institute.	ASEAN E- commerce Integration	 The UNCTAD's B2C E-Commerce Index suggests that Singapore and Malaysia are the two leading markets in ASEAN ASEAN cooperation in e-commerce is covered in e-ASEAN Framework Agreement, AEC Blueprints 2015 and 2025, and ASEAN ICT Masterplans 2015 and 2020 	ASEAN

4	He, Y., & Wang, J. (2019). A Panel Analysis on the Cross Border E-commerce Trade: Evidence from ASEAN Countries. The Journal of Asian Finance, Economics and Business.	Panel analysis of determinants of cross-border e- commerce trade in ASEAN	 There is a long-run relationship between cross-border e-commerce trade and the GDP(+) and real exchange rate(-export & +import) However, the population (+) and the terms of trade (-) only have an effect on cross-border e-commerce import. 	ASEAN
5	Duncan, M. (2019). Free Trade Agreements, Digital Chapters and the impact on Labour A comparative analysis of treaty texts and their potential practical implications. International Trade Union Confederation (ITU).	Comparative analysis of free trade agreement provisions and labour implications	 There is an efficiency agreement which holds that in a world of multiple private authentication standards Additional cost due to lack of interoperability and the need to manage multiple systems 	CPTPP, EU, JPN, USMCA
6	Inkyo, C. (2020). A Threshold for Tariff and/or Tax Exemption. Economic Research Institute for ASEAN and East Asia (ERIA).	ASEAN tariff Elimination and threshold	 Further, the low utilisation ratio is subject to an increase by two to three times in the near future. Risk related with customs clearance, addressing tariffs and domestic taxes, the certificate of origin (CoO) and related rules of origin (ROO), the transparency of customs, digitisation of customs procedures, inspections, and others The complexity of ROO in existing FTAs was major bottleneck for FTA use, especially in the textile industry (47.1%), automotive industry (46.7%), and food industry (43.2%). 	ASEAN

7	(2020). At full velocity: Resilient and racing ahead. Google, Temasek, Bain & Company.	E-commerce trends for transport, food, travel, media, and digital finance	 - 40M new Internet users this year - E-commerce new digital customers: groceries 47%, electronics 34%, beauty 32% - Many SMEs moved online as e-Commerce became the only available retail channel. 	VIE, THA, PHP, MYS, SGP, IDN
8	(2020). Asia Pacific eCommerce and Payments Guide 2020. Rapyd Limited.	Survey analysis on consumer behavior and attitude towards payment methods with 4,000 respondents	 Bank transfer by Maybank2u by the largest bank, remains the most popular online payment method e-wallets including Boost, Touch N Go, PayPal, and Grab Pay are all of rising importance cash on delivery remains relevant as debit and credit card do 	IND, IDN, JPN, MYS, SGP, KOR, TWN, THA
9	Chen, L. (2020). Improving Digital Connectivity for E- commerce: A Policy Framework and Empirical Note. Economic Research Institute for ASEAN and East Asia (ERIA).	Data connectivity, logistical connectivity, financial connectivity and offline to online (O2O) connectivity	 E-commerce in ASEAN member states is projected to achieve a double-digit average rate of growth The region needs to facilitate cross-border e-commerce and digital trade along data connectivity, logistics, financial connectivity, and seamless links between cyberspace and the physical parts of the e-commerce network 	ASEAN
10	Arkadiusz, K. (2020). Improving Logistics Connectivity of E- commerce in the ASEAN Region. Economic Research Institute for ASEAN	Logistics overview, ranking, and logistical impediment among ASEAN countries	 A 20% faster clearance of imports and exports can increase ASEAN's cumulative GDP growth rate from 0.2% to 1.5% A 10% improvement in customs clearance and logistics competencies can raise intra-ASEAN trade by 15% Problems in Malaysia: Congested road network, Track and trace only partly implemented, Poor customs service (inefficient clearance process by border control agencies) 	ASEAN

	and East Asia (ERIA).			
11	Noor, A. I., & Muhammad, M. M. (2020). Prospects and Challenges in Improving E- commerce Connectivity in Malaysia. Economic Research Institute for ASEAN and East Asia (ERIA).	Drivers and roadblocks of the Malaysian e- commerce market	 Malaysia's online retail is dominated by the marketplace model, Social e-commerce is popular Of online shoppers in Malaysia, 75% buy locally E-commerce websites still offer a smaller range of products than many other countries 	MYS
12	(2021). 2020 E- commerce Payments Trends Report: Malaysia Country Insights. JP Morgan.	E-commerce payments trends	 -Infrastructure issues persist with outdated payment methods, unreliable delivery and incidences of fraud. - 56 percent of transactions completed on a mobile device - Bank transfers dominate as the primary e-commerce payment method in Malaysia 	MYS
13	Abu, H. A. (2021). E- commerce adoption in ASEAN: who and where?. Future Business Journal.	Regression analysis of e- commerce adoption by individual demographics and national culture	 The profile of e-commerce users in ASEAN has a rather homogenous demographic. Conceptual link between e-commerce behavior and institutions. Socio-cultural values, local government should strive to nurture favorable values in society such as trust and risk tolerance 	IDN, MYS, SGP, THA, PHP, VIE

14	Lim, A. (2021). What's Happening in Malaysian eCommerce in 2021?. Janio Asia.	Drivers and roadblocks of the Malaysian e- commerce market	 Shopee skyrocket to 47 million monthly visits Growth linked to Malaysians' change of lifestyle due to the pandemic 	MYS
15	(2021). Banking and Payments Survey 2020: Finding Consumers Pain Points and Changing Sentiments. Global Data.	Survey analysis on banking and payment preferences with >43,000 respondents	 Malaysian e-commerce is expected to reach MYR51.6bn (US\$12.6bn) by 2024 Malaysia is among the fastest-growing e-commerce markets in Southeast Asia Malaysia payment cards is the most preferred payment method for e-commerce purchases 	44 countries including MYS

Previous research on e-commerce in Malaysia has been conducted by private research institutes, government ministries, and e-commerce platform owners in Malaysia, which utilizes survey responses, internal trade data, and indicators such as payment and logistics systems to gauge the development of the e-commerce sector. A few studies were targeted on the Malaysian market, while the others were region- and global-based.

The government has also commissioned the publication of National eCommerce Strategic Roadmap's (NeSR) which described the overview and outlook of the country's e-commerce scene, alongside strategies to drive the growing market. The NeSR presents the backbone of the future development of the ecommerce sector from an institutional perspective. In addition, in the 12th Malaysia plan, the myDIGITAL initiative is implemented aiming to transform Malaysia into a digitally-driven, high income nation and a regional leader in the digital economy.

Although e-commerce has been rapidly growing in Malaysia and has been given strong support by the government, there is a lack of studies which highlights the cross-border e- commerce scene in Malaysia. Malaysia is now an attractive market for e-commerce in Southeast Asia due to its dynamic economy and developed infrastructure for digital technologies. Hence, it is vital to gauge the readiness of Malaysia to participate in cross- border e-commerce, to maximise the potential of the rising industry, especially with the current global pandemic fuelled by the increase of smartphone penetration in the country.

Moreover, none focuses on the importance of free trade agreements for cross-border trade, despite having a large number of free trade agreements that allow foreign business access. This study provides some insights to the impact of the regional trade agreements, specifically the AHKFTA, utilizing trade data, recognized global indexes, and qualitative interviews, to shed light on the international e-commerce trade between Hong Kong, ASEAN, and Malaysia, which is useful when examining the impact of other regional agreements.

Research Objectives

This report aims to review the development of e-commerce in the country, emphasizing on the current situation of cross-border trade and international e-commerce trade among the countries under the AHKFTA.

Secondly, the report aims to assess Malaysia's readiness to participate in cross-border ecommerce under the AHKFTA, alongside the potential impacts of cross-border e-commerce under the AHKFTA on trade flows of the country. The findings are then consolidated to identify the key drivers and barriers of the e-commerce sector.

The final objective of the report is to provide policy recommendations for reaping potential benefits of cross-border e-commerce under AHKFTA, to benefit both parties in the agreement.

Key Stakeholders in E-commerce

The Malaysian government places a high importance on the national e-commerce sector through the establishment of the National E-commerce Council (NeCC) under the Ministry of International Trade and Industry (MITI). Figure 5 shows the government agencies and ministries that bolster the e-commerce ecosystem in the country.

MITI focuses on elevating Malaysia's competitiveness among the top global trading nations as well as attracting quality investment and further innovate industrial activities. Another central agency that plays a vital role in the e-commerce industry is the Malaysia Digital Economy Cooperation (MDEC) which implements strategies to accelerate the national digital economy growth. Other complementing ministries include the Prime Minister Office (PMO), Ministry of Domestic Trade and Consumer Affairs (MDTCA), Ministry of Finance (MoF), Ministry of Transport (MoT), and Royal Malaysian Customs Department (RMCD), which shape the ecommerce environment in Malaysia by providing incentives and regulating the industry.

<u>Figure 7</u>: Government Ministries and Agencies Supporting the E-commerce Industry in Malaysia



The report consists of 4 chapters, beginning with the introduction of the report, followed by the research design and methodology in chapter 2. Subsequently, chapter 3 consists of the results of the report on the development of e-commerce, readiness to participate in cross-border e-commerce, and potential impacts of cross-border e-commerce on trade in Malaysia via analysis of trade data, case study interviews, and a PESTLE analysis utilizing global indexes. The findings are then consolidated into policy recommendations and a conclusion in the final chapter.

RESEARCH DESIGN AND METHODOLOGY

The research is conducted in three phases, namely the initial preparation phase, intermediate execution phase, and the final strategy drafting phase. The initial phase of desk review consists of reviewing existing trade agreements and e-commerce policies, developing the framework of the paper, and setting the case study protocol. The second phase focuses on key stakeholders identification and qualitative interviews with key government agencies and selected e-commerce players, divided into the local top business-to-business (B2B) and business-to-consumer (B2C) platforms. Based on the literature review on the first phase and the qualitative interview in the second phase, a comprehensive economic analysis is conducted using the PESTLE analysis with supporting policy recommendations produced in the final phase.



Figure 8: Overview of the Research Process

ECONOMIC ANALYSIS OF E-COMMERCE INDUSTRY IN MALAYSIA Development of E-commerce Industry in Malaysia

Over the years, the Malaysian market has grown notably, with a booming 125.1% increase from 2015 to 2020, indicating an explosive growth stage. During the pandemic, the e-commerce industry continues to boom with a growth rate of 32.7% between 2019 and 2020. Hence, merchants new to the country can take advantage of growing regulatory and physical infrastructure designed to ease e-commerce in this exciting market.



Figure 9: E-commerce Income in Malaysia, 2015, 2017, 2019, 2020

Source: Usage of ICT & E-commerce by Establishment, DOSM Note: Data is only available for 2015, 2017, 2019, and 2020

While e-commerce trading has been on the rise in Malaysia, a further analysis on the ecommerce market in Figure 8 has shown that the cross-border e-commerce market has enjoyed a larger increase of 166.6% compared to that of the domestic market at 101.8% from 2015 to 2020.

Figure 10: E-commerce Income in Malaysia by Domestic and International Market



Source: Usage of ICT & E-commerce by Establishment, DOSM Note: Data is only available for 2015, 2017, 2019, and 2020

This can possibly be explained by the larger potential of overseas markets due to larger market sizes. Moreover, e-commerce trade has been receiving increasing attention by the international economies over the years, with specific e-commerce chapters added in some of the FTAs to facilitate the process of cross-border e-commerce trade, allowing an easier access to foreign markets which contributes to the higher increase in cross-border e-commerce trade. Domestic market, however, still dominates the cross-border market, although the gap between domestic and international market has narrowed from 8.6 times to 6.5 times. Furthermore, it is shown in Figure 9 that the e-commerce revenue in Malaysia over the past few years is largely derived from the business-to-business (B2B) market, followed by the business-to-consumer (B2C), and business-to-government (B2G) market. Looking at growth rates, the B2C market experienced an income expansion of 332.7% over the years contributed by changing consumer behavior. The B2G and B2B market have also surged and marked a 438.0% and 58.86% increase respectively due to higher e-commerce adoption.



Figure 11: E-commerce Income in Malaysia by Types of Customer

Source: Usage of ICT & E-commerce by Establishment, DOSM Note: Data is only available for 2015, 2017, 2019, and 2020

Analysis on E-commerce Platforms in Malaysia

The e-commerce market share in Malaysia is largely dominated by the Sea-owned Shopee. The platform is consistently ranked the top app in the Shopping category in Southeast Asia in terms of monthly active users, total time in app on Android, and downloads. Lazada and PG Mall came in second and third respectively by monthly traffic in Malaysia. Third-in- place PG Mall is a home-grown leader in the e-commerce market with cross-border involvement.

Smaller local e-commerce platforms have also begun to surface and gain market share such as Mudah and GoShop.

As shown in Figure 12, e-commerce platforms in Malaysia mainly focus on the business-toconsumer (B2C) model likely due to wider market opportunity. As for the key product sectors, most companies are involved in general home and lifestyle products with some companies specializing in areas such as groceries, vehicles, and fashion. Moreover, local e- commerce players have limited exposure to cross-border trade as compared to regional platforms that provide the option to ship to international addresses.

In terms of cross-border involvement among the e-commerce players, foreign companies have an upper hand compared to local companies likely due to existing foreign networks as compared to local players that need to build their own market entry strategy to set foot in foreign markets. However, the low participation rate in cross-border e-commerce trade among local players indicates that many homegrown companies are not ready to be involved in international e-commerce trade.

As a whole, the e-commerce ecosystem in the country is still less matured, with barriers such as logistical inconvenience for cross-border trade, which are further explored via the PESTLE analysis in Chapter 3.3. Given that the ecosystem is considered in the infancy stage (AT Kearney, 2016), two major forces contributing to low cross-border e-commerce participation includes the low adoption rate of e-commerce for existing cross-border businesses and the low motivation for businesses on e-commerce platforms to participate in cross-border trade due to the immature environment.

<u>Figure 12</u>: E-commerce Platforms in Malaysia

No	Platform	HQ Location/ SEA HQ Location	Local/ Regional	Type of Business	Main Sector	Year of Establishment	Ship to International Address
1	Shopee	Singapore	Regional	B2C/ C2C	Home and lifestyle	2015	Yes
2	Lazada	Singapore	Regional	B2C/ C2C	Home and lifestyle	2012	Yes
3	PG Mall	Malaysia	Local	B2C	Home and lifestyle	2017	Yes
4	Tesco Online	Thailand	Regional	B2C	Household and groceries	2014	No
5	Mudah	Malaysia	Local	B2B/B2C/ C2C	Vehicle, property, others	2007	No
6	Zalora	Singapore	Regional	B2C	Fashion	2012	Yes
7	GoShop	Malaysia	Local	B2C	Home and lifestyle	2015	No
8	Carousell	Singapore	Regional	C2C	Second- hand home and lifestyle	2012	Yes

9	Mydin Online	Malaysia	Local	B2C	Household & groceries	1957	No
10	Presto Mall	Malaysia	Local	B2C	Home and lifestyle	2014	No
11	Lelong	Malaysia	Local	B2B/ B2C/C2C	Home and lifestyle	1998	No
12	HappyFres h	Indonesia	Regional	B2C	Groceries	2014	No
13	Signature Market	Malaysia	Local	B2C	Healthy snacks	2014	Yes
14	Ezbuy	Singapore	Regional	B2C	Home and lifestyle	2010	Yes
15	eBay	Singapore	Regional	C2C	Home and lifestyle	2004	Yes
16	MyGroser	Malaysia	Local	B2C	Household and groceries	2018	No

PESTLE Analysis

Р	Е	S	Т	L	E
Political	Economics	Social	Technology	Legal	Environment
- Institutional support (+) - Government digital adoption(+)	 Covid- 19: Seller (+) Business digital adoption (-) 	- Covid- 19 buyer (+) - People digital adoption(+)	- Internet penetration (+) - Cyber security (+)	- Laws and Regulati ons (+)	 Digital FTZ (+) Logistical connectivity (-) Payment connectivity (-)

Figure 13: PESTLE Analysis of the Development of E-commerce in Malaysia

Note: (+) indicates positive impact and (-) indicates negative impact on the e-commerce market <u>Political</u>

For the past 5 years, the Malaysian government has shown strong institutional support in developing the digital economy in the country through the implementation of the my DIGITAL initiative and the National eCommerce Strategic Roadmap (NeSR). Establishment of councils and steering groups such as the National eCommerce Council and the APEC E-commerce Steering Groups has also contributed to the growth in the e-commerce market in Malaysia. Moreover, government agencies, particularly the MDEC have rolled out multiple programs and policies to promote the growth of e-commerce for both consumption and supply side. During the pandemic, the stimulus package PENJANA has also included initiatives such as PENJANA Shop Malaysia Online and e-Belia program which aim to boost the e-commerce market.

In addition, according to the World Bank Digital Adoption Index shown in Figure 15, Malaysia has performed consistently well over the years in the Government Digital Adoption Sub-index, which measures the efficiency and accountability of service delivery for the government. The strong commitment of the government in promoting the digital economy boosted the growth of the e-commerce market over the years.

Ministry/ Agency	Ministry/ Initiatives Agency		Description
MITI	National eCommer ce Council	2015	Inter-agency council to oversee the National E-commerce Strategic Roadmap
	Regional Trade Partners and Agreement, e.g. APEC E-commerce	-	Trade agreements on preferential tariffs and regional collaboration
	Steering Group		
РМО	Malaysia Digital Economy Blueprint (MyDigital)	2021	National digital economy initiative
MDEC	PENJANA Micro, Small and Medium companies (MSMEs) E-commerce Campaign	2020	MSME on-boarding training, seller subsidy and sales support
	PENJANA Shop Malaysia Online	2020	Co-funded digital vouchers for consumers
	Go-ecommerce	2021	Online entrepreneurial platform with online business toolkits
MOF	e-Belia	2020	Encourage e-wallet usage through distributing RM50 e- wallet

Figure 14: E-commerce Initiatives by Ministries and Agencies in Malaysia

Figure 15: World Bank Government Sub-index of Digital Adoption Index, 2014 and 2016

Year	Government Sub- index
2014	0.85
2016	0.87

Economics

During the Covid-19 pandemic, movement control orders (MCO) were implemented to curb the spread of the virus. Malaysia went into the first MCO on 18 March 2020, followed by a period of Conditional MCO and Recovery MCO before entering a total lockdown again on 1 June 2021. Most businesses were not allowed to operate except for the essentials, resulting in businesses being unable to reach their customers. Many SMEs then moved online as ecommerce became the only available retail channel, leading to a surge in e-commerce growth in the country, aligned with the data provided by MDEC and the qualitative interview with PG Mall.

On the other hand, Figure 16 has shown that Malaysia has not been performing satisfactorily for the business digital adoption index. In terms of increasing productivity and accelerating broad-based growth for business, Malaysia was rated averagely by the World Bank, with little improvement between 2014 and 2016. This can hinder the growth of the e-commerce market if businesses are not digitally savvy to utilize digital business tools and onboard e-commerce platforms. In 2016, the presence of online business was merely five percent (Handley, 2016), although the Internet penetration was as high as 70%, indicating a low adoption of e-commerce among firms. Specifically, Malaysian small and medium travel agencies are still using the conventional methods in their business, with only 28% involved in e-commerce (Shaharuddin et al., 2018).

Year	DAI Business Sub- index
2014	0.52
2016	0.55

T: anna	11.	Wand	Daul	Durating	Cub inda	of Diatal	Adamtian	Indan	2014	and	2017
FIGHTE	101	www.	вялк	BUSINESS	Sub-index		Adoniion	index.	2014	ana	2010
IIguit	10.		Dann	Dusiness	Sub much	of Digital	raoption	Inacas		unu	-010

In addition, business attitude is important in creating an e-commerce-based knowledge society and cashless business environment. Despite the various growth opportunities for on-boarding e-commerce platforms, connecting the online and offline world remains as the prime challenge for Malaysian businesses (Kumar, 2016), which can lead to low motivation in adopting ecommerce channels. One of the challenges, as mentioned by PG Mall, is that e-commerce sellers faced a knowledge barrier in terms of digital skills required to performance an online trade.

On top of that, businesses that wish to embark on e-commerce might encounter problems on product originality, warranty, cheated images, false claimed price, fraud transaction and privacy and security (Mukhtar et al., 2016) which can deter businesses from adopting e-commerce, even though they understand the importance of e-commerce for business survival in the future competitive landscape. Specifically, the issues are crucial to SMEs because they are small in size and possess limited resources.

The AHKFTA, on a positive note, promotes a better business environment for sellers to access a wider market opportunity. On top of the simplified export and import processes, companies will be forced to uphold their business strategies on par with international businesses to not only secure a place in global markets but also to prevent their local market share being possessed by international firms. This healthy competition improves the standard of businesses in the country and allow firms to be more comfortable in conducting electronic transactions are consistent with international model frameworks, which helps develop the e-commerce industry in the medium term.

<u>Social</u>

Covid-19 brought about a disruptive change in consumer behavior due to lockdown and social distancing measures. According to the Covid 19: Google Mobility Trend, time spent at home for Malaysian citizens has increased by 11.86% as of 28 Oct 2021 from 17 February 2020. As people are encouraged to stay at home, many consumers switched from purchasing in physical retail stores to buying from online e-commerce platforms. A survey conducted by Rakuten Insight has shown that 34 percent of respondents made more online purchases online during the pandemic (Statista, 2020). In terms of consumer attitude, similar study stated that 73% of Malaysians said that the outbreak of the Covid-19 pandemic has made them more positive about online shopping (Syahirah, 2020).

The pandemic has accelerated the shift towards a more digital world and triggered changes in online shopping behaviours that are likely to have lasting effects (United Nations, 2020). Hence, it is expected that the consumer shift to digital channels will remain after the pandemic (Google, Temasek, Bain & Co, 2020), further boosting the e-commerce market in the coming years.

Figure 17: World Banl	x People Sub-index	of Digital Adoption	Index, 2014 and 2016
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Year	DAI People Sub-index
2014	0.59
2016	0.64

On the Digital Adoption Index, Malaysians scored fairly for the People Sub-index which

prioritizes expanding opportunities and improving welfare for people. Improvements are observed over the years but there is still room for further developments to compete with other digitally-savvy countries. As shown in Figure 17, the People Sub-index increased from 0.59 in 2014 to 0.64 in 2016, indicating a 8.5% increase in the digital adoption index, beneficial for the growth of e-commerce market as consumers are increasingly used to digital tools and online platforms.

Technology

Internet penetration, vital for e-commerce growth, has been consistently improving from 2016 to 2021. As shown in Figure 18, internet user penetration increased by 25.2% from 2016 to 2021 which indicates that more residents are benefiting from internet coverage and online resources such as the e-commerce market. With JENDELA setting in place, Malaysia is expected to have a wider coverage of quality internet access in future years, boosting the opportunity to access the e-commerce market for a larger audience.



Figure 18: Malaysia Internet User Penetration 2016 to 2021



A vital aspect of e-commerce platforms is gaining consumer trust which highlights the importance of cybersecurity to protect consumer and transaction data. According to the ITU Global Security Index, a cybersecurity measure based on five pillars, namely, legal measures, technical measures, organizational measures, capacity development measures, and cooperation measures, Malaysia has generally improved its cybersecurity scores as cybersecurity risks, priorities, and resources evolve over the years. However, it is evident that some countries are progressing faster, resulting in a drop in the global ranking from 3 to 5 for Malaysia from 2017 to 2020, as shown in Figure 19.

On top of the crucial technology infrastructure to support the cross-border e-commerce trade, the advent of new technology can be utilized to further boost the growth of the industry. For instance, the emergence of blockchain technology introduces a new way of thinking on supply chain management (Duan, Edwards, & Dwivedi, 2019), with applications such as smart contracts and secured data sharing. In cross-border e-commerce context, the core value of blockchain is to establish open and transparent rules based on algorithms, and establish a trust network, to ensure transaction security and achieve information credibility in complex environments (Swan, 2015), as the credit evaluation of participants is the most serious obstacle to complete a trade (Chen, 2017). Hence, the application of technological advancement in the e-commerce industry can lead to a substantial growth in the cross-border e-commerce market.

Year	Overall Score	Global Ranking
2020	98.06	5
2018	89.30	8
2017	89.30	3

Figure 19: Malaysia ITU Global Cybersecurity Index(GCI) 2017, 2018, and 2020

Source: International Telecommunication Union (ITU)

<u>Legal</u>

Malaysia has a comprehensive e-commerce legislation and has regulations for electronic transactions, consumer protection, privacy and data protection, and cybercrime. The adoption of e-commerce legislation is high in Malaysia (UNCTAD, 2020), which provides a safe environment for businesses to venture into the e-commerce market.

However, in terms of cross-border transactions, while international framework applies, some countries have a different approach in certain e-commerce legislations. In this case, the AHKFTA does not have a specific chapter on e-commerce trade but some other FTAs such as the Trans-Pacific Partnership requires its members to allow the cross-border of data to a member or territory without consideration of whether said member or territory maintains an adequate level of protection for the rights and freedoms of individual. However, under the Malaysia's Personal Data Protection Act, it requires that all data about Malaysians to be stored on local servers only. As such, the legislation on Section 129 contradicts with the stipulated frameworks, which can affect the process of cross-border e-commerce trade. Local industry player, PG Mall, is also concern on the absence of laws for protecting or monitoring the data transactions on the e-commerce platforms in Malaysia that are owned by foreign companies for information security reasons.

E-Commerce	Consumer Protection	Privacy and Data Protection	Cybercrime
- Electronic Commerce Act 2006 (ECA) - Trade Descriptions Act 2011 (TDA)	- Consumer Protection Act 1999 (CPA)	 Digital Signature Act 1997 Personal Data Protection Act 2010 (PDPA) 	- Communications and Multimedia Act 1998 (CMA)

Figure 20: E-commerce Legislations in Malaysia

Environment

While the government has been pushing for initiatives and policy implementation to nurture the e-commerce ecosystem, the Malaysian e-commerce environment is still in a nascent phase and requires strong fundamentals to propel growth (AT Kearney, 2019). In 2017, the Digital Free Trade Zone (DFTZ) was implemented to drive seamless cross-border trade through digitalisation and to facilitate access of local SMEs to vast opportunities in the global markets via e-commerce. It has 3 focus areas, namely SME export, border clearance, and logistics.

In general, the DFTZ is forecasted to increase the contribution of e-commerce to GDP to RM211 billion by 2020, (Economic Research Institute for ASEAN and East Asia, 2020), while doubling SMEs exports to RM160 billion (or US\$38 billion) by 2025.

Year	LPI Rank	LPI Score	Customs	Infrastructure	Internationa 1 Shipments	Logistics Competenc e	Tracking & Trade	Timeliness
2018	41	3.22	2.90	3.15	3.35	3.30	3.15	3.46
2016	32	3.43	3.17	3.45	3.48	3.34	3.46	3.65
2014	25	3.59	3.37	3.56	3.64	3.47	3.58	3.92

Figure 21: Malaysia World Bank Logistics Performance Index (LPI) 2018

Source: World Bank

However, in terms of logistical connectivity, Malaysia demonstrated a worsening performance, which may hinder the growth of the e-commerce market. As shown in Figure 21, the Logistics Performance Index of Malaysia has declined from 3.59 in 2014 to 3.22 in 2018.

Moreover, there was a fall in all components of the index including customs, infrastructure, international shipments, logistics competence, tracking and trade, and timeliness. This indicates logistical challenges for Malaysian businesses which can be a major barrier for e-commerce

adoptions among local companies.

Overall Ranking	P1. Regulatory & Policy Environment	P2. Infrastructure	P3. Demand	P4. Innovative Products & Services
10	(3) 80.7	(13) 41.6	(11) 27.4	(11) 38.2

Figure 22: APEC Fintech E-payment Readiness Index 2020, (Rank) Score

Source: Asia Pacific Economic Cooperation (APEC)

As for payment connectivity, Malaysia ranked 10 out of the 21 APEC economies as shown in Figure 22. Based on the APEC Fintech E-payment Readiness Index, Malaysia has a strong regulatory and policy environment for e-payments which are beneficial for the online transactions on e-commerce platforms. However, the country is still lacking in infrastructure, demand, and innovative products and services to further develop the overall e-payment ecosystem to complement the rise in e-commerce market.

Qualitative Interviews with Key E-Commerce Government Agency and Key Local Industry Player

<u>Case Study 1</u>: Qualitative interview with local e-commerce key industry player – PG Mall

About PG Mall

PG Mall is yet another successful milestone by Public Gold Marketing Sdn Bhd, the leading pioneer in ASEAN's precious metal industry. Registered in Singapore (the Financial Hub of Asia), PG Mall is the first online marketplace in the world that passionately missioned to build and grow the local industries of Malaysia and Handicraft to the World.

With the Global Business Center located in Penang, and Headquarters located in Kuala Lumpur, PG Mall is managed by a team (50+ employees in KL office, 30+ employees in Penang office) of passionately-driven workforce to ensure a tip-top performance on the platform, be it to the merchants in expanding their business online through the platform, or to the shoppers in assuring their experience with the platform is a blissful one.

PG Mall offers a terrific platform for each merchant to expand their business through the platform. PG Mall take care meticulously every Marketing Campaign to ensure that while the brand is building fast, they are guiding hand-in-hand the Small and Medium-scaled Merchants to grow the business through continuous educational support with:

- Zero registration fee
- Lowest transaction fee
- Free online and offline marketing campaign
- Free marketing subsidy on products
- Free and passionate support from 18 branches nationwide in Malaysia,

Singapore and Indonesia

After five years of effort, PG Mall has become the No.3 e-commerce platform in Malaysia in terms of sales volume and number of visitors.

Motivation to enter the e-commerce industry

As Malaysia's leading physical gold and silver trading company, Public Gold has realized the benefits of the internet for shopping as early as a decade ago through selling gold and jewelry through the official website of Public Gold. The group believes that if they can run the gold and jewelry business through the online platform, they should be able to expand to other products but still with the online platform very well,

Moreover, Public Gold Group has adopted the Direct-to-Consumer (D2C) model for a long time, which has helped them to accumulate a large number of consumers in the past decade who are loyal to their brand and services. These consumers could be potential buyers of products listed on the e-commerce platform.

Expansion plans to other business models (e.g. C2C/ B2B) from current B2C model

No intention in the near term. As for now, PG Mall is focusing on helping local businesses to sell local goods to more local buyers and also international buyers, offering online trading platforms to local entrepreneurs, as well as promoting local brands.

Sales volume and revenue trend for the past five years since the establishment of PG Mall in 2017

In 2020, PG Mall reached its sales revenue at RM80 million, which has been gradually increased by 8-10 times per year since it was established in 2017. Then for 2021, they are targeting to reach RM500 million for sales revenue.

Sales volume and revenue distribution by domestic buyers and international buyers for the past five years

Before 2021, PG Mall is completely focused on the local market, selling local products to local buyers. On 27th January, 2021, PG Mall started a partnership with JD Worldwide to help the Malaysian local enterprises, especially small enterprises, to directly sell products to Chinese consumers. Next, PG Mall is aiming to bring/promote Malaysian brands and products to other ASEAN countries starting from Indonesia.

Impact of Covid-19 on consumer demand

Surge in consumer demand by more than two times. In terms of the number of sellers, by January 2020, there were 10,000 sellers joining the platform; by the end of 2020, the number has reached 14,000.

Payment methods on PG Mall

In PG Mall, the reliability and security of shopping experience by the shoppers is the platform's

utmost importance. In safe and secure environment, PG Mall provide their shoppers with a broad range of secure payment options including instant online banking (including VISA, MasterCard, FPX, Public Bank, RHB, Maybank, CIMB Bank, HongLeong Bank, Citi Bank, OCBC Bank) and e-wallet payment (including GrabPay, Boost, Qrpay, Touch & Go, KiplePay, Mcash). PG Mall is planning for its own e-wallet as well, namely C-Wallet.

Partnership with JD Worldwide

Prior to the partnership with JD Worldwide, PG Mall was not involved in any cross-border trading/business at all. The partnership with JD Worldwide aims to help Malaysian enterprises to sell local products to Chinese buyers, so export to China only for now. In the near future, they may import Chinese products and sell to Malaysian buyers as well.

Comparative advantage of PG Mall to other e-commerce platforms

The rapid development of PG Mall is contributed by its superb "ConsuMerchant" concept and zero registration fees. The registration fee and the "zero cost" allow merchants to pass on profit sharing to consumers. This model achieves a win-win situation for both consumers and merchants. It also gives customers "double cash back". Registration is free for members, every time you shop today is no accident. Moreover, the platform focuses on helping the SMEs, with 90% of merchants being SMEs and the remaining 10% being big brands.

Awareness on regional trade agreements

Unaware of regional trade agreements including the AHKFTA.

Benefits of government initiatives on supporting the development of domestic and cross-border ecommerce for PG Mall

PG Mall is a beneficiary of the e-TRADE Programme initiated by MATRADE cross-border eCommerce platforms. The programme will continue to assist new companies to onboard cross-border eCommerce platforms for export with incentive up to RM5,000 for any cross-border eCommerce platform(s), for one year subscription. At the same time, a new incentive with a maximum amount up to RM20,000 per company will be provided to companies that are already doing eCommerce to undertake activities that can sustain their participation in the cross border eCommerce platform. The incentive is to be utilized within one (1) year.

This program aims to 1) To accelerate export; 2) To assist Malaysian SMEs to have sustainable and valuable presence on cross-border eCommerce platforms via activities that can help to maintain their online business such as digital marketing, eCommerce training and online export promotions in order to increase their exposure and business opportunities on cross-border eCommerce platforms

Opinion on existing laws and regulations and its suitability in nurturing the development of domestic and cross-border e-commerce in the country

Neutral. A concern from PG Mall is that the government should consider initiating laws for protecting or monitoring the data transactions on the e-commerce platforms in Malaysia that are

owned by foreign companies for information security reasons.

Key barriers for the domestic and cross-border e-commerce development in the country as a key e-commerce industry stakeholder

- Knowledge barrier sellers are not well-educated with digital skills
- Logistics need to be improved significantly, especially for East Malaysia. From September this year, PG Mall has announced their official partnership with GrabExpress, becoming the first local e-commerce platform in Malaysia to do so. This collaboration with GrabExpress aims to meet the increasing need and demand for two- hour delivery of parcels due to prolonged national lockdown to curb the surge of Covid-19 cases nationwide. This two-hour delivery service by GrabExpress is particularly useful for delivery of essential goods as we want to encourage our Malaysian shoppers to stay home as much as possible during the national lockdown period.

Future outlook of the Malaysian domestic and cross-border e-commerce market

Definitely will be very prosperous, more local e-commerce platforms will be able to expand to do cross-border business.

Future strategies post-pandemic

PG Mall aims to expand to other ASEAN countries, first in Indonesia, then Thailand

<u>Case Study 2</u>: Qualitative interview with key e-commerce government agency – MDEC

About Malaysia Digital Economy Corporation (MDEC)

MDEC was established in 1996 as the lead agency to implement the MSC Malaysia initiative. Today, MDEC is an agency under the Ministry of Communications and Multimedia Malaysia (MCMC) with a close to 25-year track-record of successfully leading the ICT and digital economy growth in Malaysia. MDEC's aspiration is to firmly establish Malaysia as the Heart of Digital ASEAN, a regional digital powerhouse launching global champions to lead the Fourth Industrial Revolution, ensuring the digital economy will drive shared prosperity for all Malaysians. MDEC is focused on accelerating Malaysia's digital economy growth, ensuring it is inclusive and rewarding for all. MDEC is committed to rolling out key digital initiatives announced in MyDigital Blueprint through three strategic thrusts – empowering digitally skilled Malaysians, accelerating digitally powered businesses, and attracting digital investments. MDEC will lead the nation into the new decade as the region's preferred digital economy, contributing almost 20% to the country's GDP (highest among ASEAN nations) and 30% to ASEAN internet economy.

Impact of COVID-19 pandemic on e-commerce consumption (consumers) and participation (sellers)

For the participation side, the number of SMEs who adopt e-commerce has increased from

130,000 in 2017, to 240,000 by the end of 2019, then to 489,000 by the end of 2020.

MDEC views this "surge" not a result of pandemic only, but a long-term effort through various digital economy campaigns (e.g. MSME campaign, Shop Malaysia campaign etc) carried out by MDEC and other stakeholders before the pandemic happens, which has helped to increase the readiness of e-commerce for the country.

MDEC's e-commerce programs and policies to promote/support the development of domestic and cross-border e-commerce in Malaysia

Micro, Small and Medium Enterprises (MSME) Campaign, Shop Malaysia Campaign, and PENJANA E-commerce campaign. To further accelerate the e-commerce growth in Malaysia, 6 thrust areas have been identified under the National E-commerce Strategic Roadmap(NeSR) :

- Thrust 1: Accelerate seller adoption of e-commerce
- Thrust 2: Increase adoption of e-procurement by businesses
- Thrust 3: Lift non-tariff barriers (domestic e-fulfillment, cross-border e-commerce, e-payment, consumer protection)
- Thrust 4: Realign existing economic incentives
- Thrust 5: Make strategic investments in select e-commerce player(s)
- Thrust 6: Promote national brand to boost cross-border e-commerce

Key barriers for the domestic and cross-border e-commerce development in the country

- Product product mis-match
- Marketing strong competition against other countries
- Logistics cross-border transportations such as permits, cold chains, and last mile problem
- Payment complicated cross-border payment

Supporting the development of SMEs in Malaysia through e-commerce

With reference to section ii), there was a large number of SMEs adopting e-commerce to connect with their target audience, especially during the pandemic when there was movement restriction. Moreover, other elements of e-commerce platforms such as big data, diversified e-payment systems, and e-invoicing can help boost SMEs digital adoption.

Future outlook of the Malaysian domestic and cross-border e-commerce market in the postpandemic period

In the near future, everything will be "e", not only "e-commerce". E-commerce will be the engine to empower other elements of economic growth.

Case Study Analysis

Based on the interview with PG Mall, as the biggest local e-commerce platform in Malaysia and third largest e-commerce platform in Malaysia (after Shopee and Lazada), PG Mall just started

to engage with cross-border e-commerce trade, indicating that Malaysian firms are in the early stage of adopting international e-commerce trade. In this stage, readiness among local industry players is still low, such as low digital knowledge capability and low ability to overcome logistical barriers within and across country borders.

According to MDEC, Malaysia is currently in the initial phase of e-commerce maturity, and it lags behind other Asian countries such as Singapore, aligned with the study by MCMC (2017), that reported that there is only 48.8% of Malaysian consumer engaged in online shopping and among them 79.9% prefer to go to physical stores, indicating a low consumer attitude towards online shopping.

Recognizing the lag and the importance in cross-border e-commerce trade, many initiatives and programs in Malaysia are carried out by the MDEC to promote e-commerce. One of the industries performed as part of the Malaysian government policy in e-commerce is "making digital tangible" that aims to enable Malaysian businesses to move towards. Pandemic induced e-commerce policies have also been implemented such as the shop Malaysia online, an initiative under the national economic recovery plan (PENJANA) to boost growth of the digital economy digitization.

Hence, although the current readiness for cross-border e-commerce is low, Malaysia is on track to expand the e-commerce sector and exploit the benefits of cross-border trade. Strong institutional support, maturing e-commerce ecosystem, and improving e-commerce connectivity in the country, provides a positive outlook for the cross-border e-commerce industry in Malaysia

Potential impacts of cross-border e-commerce on trade

The AHKFTA grants immediate tariff-free access to all products originating from an ASEAN member for all companies with a preferential certificate of origin (PCO).

Tariff Changes	No. of Entries
Uncertain	1
Reduced	3813
Maintain	1308
NIL	6534
Tariff Rate Quota	27
Total	11683

Figure 23: Changes of the Tariff Schedule for Malaysian Imports from Hong Kong

Source: Schedule of Malaysia, AHKFTA

In return, Malaysia has committed to lowering tariffs in which 86% of the tariff schedule is leveled at 0%, as shown in Figure 23. The reduced schedule includes a variety of Hong Kong commodities, including jewelry, apparel, clothing accessories, watches, clocks and toys, which are Hong Kong's biggest exports to ASEAN. Moreover, the deal was built upon the Asean-China Free Trade Area (ACFTA) agreement by removing barriers to the free-flow of trade between China and Asean through Hong Kong, which is a major conduit for business to and from the mainland. In 2017 alone, around US\$33 billion of Chinese imports of ASEAN's goods were rerouted through Hong Kong. Hence, the implementation of AHKFTA will not only provide ASEAN countries with greater market access to Hong Kong, but also to Mainland China.

Additionally, all parties have agreed to remove or reduce various restrictions on foreign businesses, including types of legal entity, foreign capital participation, number of service providers or operations, value of service transactions and number of persons employed. This will boost foreign investment in Malaysia, which can lead to a rise in cross-border transactions between Hong Kong and Malaysia.

In comparison with other ASEAN+1 free trade agreements, the AHKFTA comprises the smallest market size of 676.12 million people but stands out in terms of committing a 100% tariff elimination for ASEAN countries, as shown in Figure 24. This provides additional opportunities for Malaysian exporting businesses as no tariff cost will be incurred.

As for e-commerce trade, most regional FTAs for ASEAN including the AHKFTA do not have a specific chapter for e-commerce, except for the ASEAN-Australia-New Zealand Free Trade Area (AANZFTA) and the newly signed Regional Comprehensive Economic Partnership (RCEP). Hence, cross-border e-commerce trade between Malaysia and Hong Kong will undergo the same treatment as that of merchandise trade.

Furthermore, the actual utilization rate of the AHKFTA preferential treatment is low in Malaysia. Figure 25 shows the comparison of the number of certification of origin (CO) issued between the AHKFTA, the ATIGA, and the AANZFTA. ATIGA is selected as a base indicator while the AANZFTA is selected as it is the only ASEAN + 1 FTA with E-commerce chapter and a similar market size. Among the three groups, AHKFTA has the lowest number of CO issued with less than 10 CO issued per week throughout the year. The low utilization rate of AHKFTA may be due to unawareness of the new FTA, or the low impact of the FTA on the Malaysian trade flows.

The interview with PG Mall has shown that the even industry leaders are not aware of the FTAs. The impact of FTAs on e-commerce trade, specifically on small value transactions, are harder to capture due to the de minimis rule. Moreover, the cost and effort required to apply for CO might offset the benefit of the FTA if the amount of tariff waived is insignificant due to the smaller value of goods being traded, particularly for business sellers using the B2C business model compared to the B2B firms which usually has a higher volume.

	Market Size (in millions of people)	Date of Entry into Force (EIF)	E-commerce Chapter	Participating Countries	External Partner Commitmen t
AHKFTA	676.12	13-Oct-19	х	ASEAN + HKG	100
ACFTA	2107.94	01-Jul-03	х	ASEAN + CHN	95
AKFTA	719.89	01-Jul-06	х	ASEAN + KOR	90
AJCEP	795.10	01-Feb-09	х	ASEAN + JPN	92
AIFTA	2048.62	01-Jan-10	х	ASEAN + IND	79
AANZFTA	698.94	01-Jan-10	v	ASEAN + AUS + NZL	100
AFTA	668.62	1993	v	ASEAN	-
RCEP	2316.01	18-Mar- 2022	V	ASEAN + CHN + JPN + KOR + AUS + NZL	> 90%**

Figure 24: Comparison between ASEAN + 1 FTAs and RCEP

*Signed but pending ratification and entry into force **Estimated

Source: Ministry of International Trade and Industry (MITI)

The AHKFTA however, provides a higher trust level for cross-border e-commerce trade which increases business confidence. Cross-border e-commerce trade and delivery request collaborations between participants in cross-border supply chain. Building trust between participants in the supply chain networks becomes a critical issue (Koh, Fichman, & Kraut, 2012). Due to the differences on culture and ideology between countries (Sinkovics, Yamin, & Hossinger, 2007), the trust problem cannot be easily resolved, but with the basic framework stipulated in the FTA, business sellers can set mutual expectations when conducting cross-border e-commerce trade which will aid the cross-border transaction processes.

Figure 25: Number of Certificate of Origin Issued by AHKFTA, ATIGA, and AANZFTA

19 July 2020 to 4 Oct 2020



20 June 2021 to 5 Sept 2021



Source: Ministry of International Trade and Industry (MITI)

POLICY RECOMMENDATIONS AND CONCLUSION

Policy Recommendations

Cross-border e-commerce has a pivoting role for the Malaysian SMEs to export products through online channels. A supportive environment is necessary to propel the growth of the e-commerce market in Malaysia and boost the economy. This section provides a few policy recommendations based on the quantitative analyses and qualitative case studies discussed above.

Increase awareness of regional trade agreements including the AHKFTA among e-commerce players

Regional trade agreements have benefited businesses from preferential treatments but the low utilization rate of FTAs for e-commerce trade, particularly the AHKFTA, reduces the impact of the cost reduction effect for Malaysian businesses. Among the case studies conducted, the local key e-commerce industry leader was not aware of the AHKFTA and other FTAs. Stakeholder engagements with e-commerce players can be conducted to further promote the awareness of AHKFTA and other FTAs to increase the utilization rate of the preferential treatment and subsequently reduce the cost of doing cross-border e-commerce trade.

Increase involvement in cross-border e-commerce

A small number of local e-commerce platforms are involved in cross-border e-commerce, with the majority focusing on domestic markets. Contrary to the local platforms, regional e-commerce platforms such as Shopee have actively involved in international e-commerce, providing larger market access to businesses on their platforms. Hence, institutional support and businesses' own effort is required to promote higher engagement in cross-border e-commerce among local ecommerce platform providers to reap the benefits of greater market opportunity for sellers and greater product diversification for buyers.

Stronger digital, logistical, and payment connectivity

Based on the PESTLE framework analysis, three key areas are deemed for improvements, namely the business digital adoption, payment connectivity, and logistical connectivity. Digital adoption among private sectors, particularly for SMEs, can improve productivity and accelerate growth for business. Hence, institutional support such as digitization grants, workshops and matching of digital solution providers can be implemented to encourage business digital adoption. On payment connectivity, more innovation in the payment systems alongside stronger infrastructure development is vital to ensure stability and boost demand for e-payment adoption among consumers. In addition, the structural challenges of logistical connectivity in Malaysia needs to be alleviated to ease the distribution process including cross-border clearance for e-commerce exports.
Conclusion

For the past five years, strong trade ties between Hong Kong SAR and Malaysia have been developed with increased trade flows between the countries. The trade relation has been forged closer through the implementation of the AHKFTA, hence inducing the expectation of rising trade volume in the future. In addition, there is a huge potential for cross-border e-commerce trade among the countries as the e-commerce adoption has been propelled to new heights during the pandemic due to lockdown and social distancing measures. The new digital trend is expected to stay, and there is a promising outlook for cross-border e-commerce trade in Malaysia, presenting a pivoting role for e-commerce to be the next major channel.

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CHAPTER 5

STRENGTHENING E-COMMERCE COOPERATION TO PROMOTE BUSINESS TO BUSINESS AND BUSINESS TO CONSUMERS UNDER AHKFTA: A CASE STUDY OF MYANMAR

AUTHORS

- Myint Myint Kyi,
- Hlaing Hlaing Moe
- Zin Zin Shwe

Yangon University of Economics (YUEco)

ABSTRACT

This study examines the importance of strengthening E-commerce cooperation to promote business to business and business to consumers under AHKFTA for Myanmar. Although there are numerous structural challenges in Myanmar, in order to catch up with other ASEAN countries, it is important to be able to benefit from e-commerce which in turn enhances trade flows between as well as within countries. This study aims to review the development of ecommerce in the country, to assess the country's readiness to participate in cross-border ecommerce under AHKFTA, to explore the potential impacts of cross-border e-commerce under AHKFTA on trade flows in the country, and to generate policy recommendations for reaping the prospective benefits of cross-border e-commerce under AHKFTA. analysis. Through conducting SWOT analysis, this study evaluates the readiness to participate in cross-border ecommerce. The quick development of the online market in neighboring countries empowers greater demand for cross-border e-commerce in Myanmar. However, Myanmar still has a deprived logistics system and infrastructure, especially in cross-border logistics. The unique geographical location of Myanmar is one of the opportunities to link the Belt and Road Initiative (BRI) between South Asia and Southeast Asia with respect to digital connectivity. It could be suggested that the whole economy would benefit from the development of ecommerce, including growth in the distribution and communication sectors. This study suggests that the government of Myanmar should implement digital inclusion measures relating to people and business in rural and remote areas.

BACKGROUND AND RATIONALE

With Information Technology proliferating across the world, Myanmar has experienced significant economic opportunities while these opportunities nevertheless make immune to the challenges of a growing economy. Compared to the Southeast Asian countries, Myanmar was hampered distinctly in globalization and economic growth due to international sanctions which were compounded by condemnations during the military regime. After democratization and partially removing business sanctions in 2011, economic activities burgeoned, and economic and political liberties have grown drastically. The nation strived to accelerate trade integration at both regional and global levels, preparing to join the ASEAN Economic Community (AEC) in 2015 to boost its economic growth. According to the investment agreement between Hong Kong and ASEAN, there will be legal certainty, better market access, and fair and equitable treatment in trade and investment among the regions. This ensued in creation of novel business opportunities and improvement in trade and investment flows between Hong Kong and ASEAN. Moreover, this agreement incorporates Hong Kong's Free Trade Agreements (FTA) and investment agreement network to cover all major economies in Southeast Asia. Although the agreement promulgated only in 2019 for Vietnam, Laos, Myanmar, Singapore, and Thailand, it takes more protracted period to include all members of ASEAN. Since the reduction of tariffs will ease the trading process, being a key export market for Myanmar as well as the rest of all ASEAN members, Hong Kong's potential increases the importance of the ASEAN-Hong Kong, China Free Trade Agreement (AHKFTA)¹.

From 1988 to 2020, Hong Kong was an important trading partner for Myanmar, as it was the fifth largest export market for the nation as well as the third largest investor in Myanmar. Accordingly, Hong Kong's investors expressed their economic interests in looking for new opportunities in Myanmar even during the Covid-19 pandemic (Directorate of Investment and Company Administration, DICA). At the Fourth "Belt and Road Summit 2019" in Hong Kong which was held on September 11th to 12th, the previously successive governments committed that Myanmar is committed to cooperate with Hong Kong along with other countries for China's Belt and Road Initiative. Hong Kong is a major economic entrance to China, a central area for logistics, and is also a center for financial services. On the other hand, Myanmar is a fast-growing country and so will cooperate with Hong Kong and other countries for the Belt and Road project.² To catch up with its ASEAN neighbors and to accelerate trade with its major trading partners at regional and global levels, the government of Myanmar expresses growing interest in taking advantage of the digital revolution. Myanmar is at a crossroads in its trade development. It initiates the coordination for the development of a digital economy, considering e-commerce opportunities. The Department of Trade, Ministry of Commerce, acts

¹ Association of Southeast Asian Nations, 2019. ASEAN-Hong Kong, China Free Trade Agreement enters into force, <u>https://asean.org/asean-hong-kong-china-free-trade-agreement-enters-into-force/</u>

² Htwe, C. M., 2019. The Hong Kong Special Administrative Region (HKSAR) will work with Myanmar on BRI projects. <u>https://www.mmtimes.com/news/myanmar-collaborate-with-hong-kong-bri-projects.html</u>

as the principal of in negotiating and coordinating for national e-commerce issues. Since ecommerce is considered a negotiating element in ASEAN and RCEP, the Ministry of Commerce is responsible for leading e-commerce negotiations on behalf of the government. According to the e-ASEAN Framework Agreement, which was concluded in 2000, the competitiveness of the ICT sector in ASEAN has been enhanced, the digital gap within and among individual ASEAN members has been narrowed, and trade in ICT goods and services as well as in investments has been liberalized to support the e-ASEAN initiative. Moreover, the ASEAN Economic Community (AEC) Blueprint 2025 proposes strengthening cooperation on e-commerce aiming at facilitating cross-border e-commerce transactions within all ASEAN member states which have reached an advanced stage of negotiations for the RCEP and ecommerce remains as a negotiation issue³. However, the e-commerce system in Myanmar is not full-fledged yet since the government has not been able to develop regulations to cope with the impact of digital platforms on the local economy and civil society and the cross-border outflow of local data at present. The significant characteristics of the digital economy are the dominance of digital platforms, their control of data, and their capacity to create and capture the resulting value. These result in emphasizing concentration and consolidation instead of reducing inequalities between and within countries. Although there are numerous structural challenges in Myanmar, to keep up the growth momentum with other ASEAN countries, it is crucial to be able to benefit from e-commerce, which in turn enhances trade flows between as well as within countries. Thus, this study aims to review the development of e-commerce in the country, to assess the country's readiness to participate in cross-border e-commerce under AHKFTA, to explore the potential impacts of cross-border e-commerce under AHKFTA on trade flows in the country, and to generate policy recommendations for reaping the prospective benefits of cross-border e-commerce under AHKFTA. This study attempts to answer what factors impede e-commerce in Myanmar, whether Myanmar is or is not ready to participate in cross-border e-commerce under AHKFTA, and what consequences Myanmar could experience from cross-border e-commerce. To answer these questions, this study will conduct a SWOT analysis. In this study, there are four sections.

RESEARCH METHODOLOGY

The research is conducted by qualitative approach. Both secondary and primary data are used. While collecting secondary data, this research draws on information from credible websites, such as the data from the Ministry of Commerce (MoC) and the Union of Myanmar Federation of Chambers of Commerce and Industry (UMFCCI), and the pertinent publications including but not limited to books, research papers and academic theses.

³ Japan-ASEAN Integration Fund, 2019. "Assessment of the Legal and Regulatory Frameworks on Electronic Commerce in Cambodia, Lao PDR, Myanmar, and Viet Nam", Assessment Report. <u>https://myanmar.gov.mm/</u> <u>documents/20143/24755509/Assessment+of+the+Legal+and+Regulatory+Frameworks+on+Electronic+Commerc</u> <u>e+in+CLMV-Eng.pdf/bc18410a-256c-7e5d-641b-b11f6f6368e7?t=1599031413071</u>

The required primary data for e-commerce are collected by using focus group discussions. A focus group discussion is a reliable method to gather in-depth information about participants' perceptions, attitudes, beliefs, and thoughts regarding Myanmar's e-commerce. Therefore, this paper emphasizes the role of Focus Group Discussion (FGD) as a technique for e-commerce research, including the FGD procedure, size of participants with appropriate criteria, and moderator's outlines. There are 39 participants for FGD, who were divided into four groups, each with eight members, and one group with seven members. As a recruitment criterion for participants, executive levels from the Ministry of Commerce (MoC) and Ministry of Transport and Communication (MoTC) and top positions at the Myanmar Computer Federation (MCF), Myanmar Computer Industry Association (MCIA) and Myanmar Computer Professionals Association (MCPA) are requested to partake.

Since each group has one moderator, there are five moderators who involved in this research work. Each moderator discusses with participants in the group to get information concerning e-commerce. In FGD, the following outlines are mainly discussed:

- Success factors of e-commerce in Myanmar
- Barriers to e-commerce in Myanmar
- Readiness level to engage in e-commerce
- Action plans of e-commerce in Myanmar

At the office of UMFCCI, each group takes part in four days discussions based on the above outlines, respectively. Each discussion takes two hours per day. Each moderator records the received information by note-taking. According to the received information, the SWOT analysis method is used to investigate the strengths, weaknesses, opportunities, and threats faced by Myanmar e-commerce and to assess the potential benefits of Myanmar e-commerce. Also, this paper could answer whether Myanmar is or is not ready to participate in cross-border e-commerce under AHKFTA.

RESULTS OF THE STUDY

Development of E-commerce

E-commerce has been phenomenally altering our society. Economic activities using the tools of the internet to purchase goods and services or conduct business online are rapidly expanding. Global cross-border e-commerce has become increasingly important in the international economy. Various factors, such as high-speed internet, use of smartphones, facilitation of online payments, changes in consumer behavior, service sector liberalization have laid a solid foundation for thriving cross-border e-commerce. Global retail e-commerce sales have been gaining tractions than traditional retail sales since 2014.

In 2019, Myanmar's e-commerce market value was just \$6 million and its retail market is worth nearly \$10 billion⁴. E-commerce in the country has potential, and many are optimistic despite its small size. The government of Myanmar is currently supporting e-commerce. The government created a digital trade and e-commerce development sub-committee (DTECD). The DTECD's purpose is to create an enabling environment for the private and public sectors to collaborate to encourage small businesses and enterprises to digitalize. The committee will make fundamental decisions on regulations with private sector feedback and input. One of the main goals of the committee is to increase the income of the rural population through e-commerce in Myanmar. Many believe that digital development will intensify overall development of the country.⁵

In Myanmar, 85% of all internet traffic is transacted on Facebook (Gupta, 2020). Most of the online shopping in Myanmar is performed through the social network's platform. The ease of becoming a seller on Facebook, paired with the ease of becoming a buyer, makes it a popular choice. The Facebook application allows quick and streamlined communication between buyers and sellers. Additionally, many physical shops in Myanmar have created Facebook pages to reach online buyers during the coronavirus pandemic.

Year	Active media penetration (%)
2016	20%
2017	28%
2018	34%
2019	39%
2020	41%
2021	53.1%

Table 1: Percent Distribution of Active Social Media Users from 2016 to 2021

Source: https://www.statista.com

The dominance of Facebook has been challenged by niche e-commerce start-ups unique to Myanmar, but some of these shopping platforms have struggled because many producers, sellers, and consumers depend on Facebook and are reluctant to switch platforms. By utilizing Facebook groups and live videos, shop owners and others can efficiently earn profit. The percent distribution of active social media users in Myanmar from 2016 to 2021 are shown in

⁴*McKnight*, M., 10 September 2020. Borgen Magazine, <u>https://www.borgenmagazine.com/e-commerce-in-myanmar/#:~:text=As%20of%202019%2C%20Myanmar's%20e,Myanmar%20is%20supporting%20e%2Dcommerce-in-ce</u>

⁵ Greene, C. 2020, The Future of E-Commerce in Myanmar II, Myanmar Insider, <u>https://www.myanmarinsider.com/ the-future-of-e-commerce-in-myanmar-ii/</u>

Table 1 and Figure 1. In comparison to 2016, the number of active media users nearly tripled in 2021.



Figure 1: Percent Distribution of Active Social Media Users from 2016 to 2021

Source: https://www.statista.com

Myanmar people prefer cash payment. Over 74% of citizens do not have a bank account, only 5% have debit cards, and less than 1% have credit cards, but online payment is becoming more prevalent (Meng, 2020). According to Statista, 6.06 million users in Myanmar use mobile POS payments (transaction value: 151 million US dollars) and 13.36 million users use digital commerce (transaction value: 1,152 million US dollars) in 2021. According to a survey conducted from December 2018 to February 2019, about 97.7% of the respondents stated that they used mobile money transfer and e-payment because of the ease of depositing and withdrawing cash, resemblance of using traditional banks. In addition, most of the respondents stated that e-commerce was convenient as goods were delivered to their doorsteps.⁶

In Myanmar, the number of new users using the online payment method has grown exponentially by 20%. Myanmar users have many choices, such as these five mobile money services licensed by the Central Bank, including Wave Money, M-Pitesan, OK \$, My Money, and MPT Money. Commercial banks, in addition to these five non-banks, are active and market leaders in online payment and have established their own digital wallets. KBZ Pay which is operated by KBZ Bank, CB Pay by CB Bank, OnePay which is a group company of AGD Bank, and Ongo which works in partnership with MOB Bank. All these institutes work in a similar way. They have mobile wallets that enable deposit or withdrawal, pay for goods and services, and payment transfer. These are the top five places for cashless payment in

⁶ Surakitphanichkul, M. 2021. Myanmar Media Landscape 2021, <u>https://blog.happioteam.com/myanmar-media-landscape-2021/</u>

Myanmar (66% of hypermarkets and supermarkets, 52% of restaurants, 47% of transportation, 57% of shopping malls, and 50% of convenience store purchases)⁷.

Myanmar's e-commerce was in ascendency even prior to the pandemic. The country jumped seven spots from 133 to 126 out of 152 countries in the 2019 UNCTAD B2C e-commerce index – a marker of its e-commerce progress in recent years⁸. Businesses in Myanmar are still mostly cash-based, but the COVID-19 pandemic has forced individuals, employers, and businesses to shift to online platforms, which has bolstered the growth of e-commerce and e-services. Accordingly, the authorities have started to set new regulations in alignment with the digital economy. Myanmar's e-commerce firms have seen a spike in sales during lockdowns because COVID-19 encourages consumers to stock up on hand sanitizers, dried foods, canned goods, and other essential items. Since 2020, online food delivery has flourished with the aid of motorbikes or bicycles. In 2020 and 2021, shop.com.mm, citymall.com.mm, spree.com.mm, rgo47.com, direct2umyanmar.com, ict.com.mm, anymart.com.mm, mzonlinemarket.com, sunny.com.mm, barlolo.com, ssshopping.com.mm, baganmart.com, 365myanmar.com, and mmezshop.com become the well-known e-commerce sites in Myanmar, which are shown in Appendix Table 1 (Buii, 2021).

Cross-border e-commerce is currently a nascent form of foreign trade with the fastest developing speed, the greatest potential, and the strongest driving force. Since 2015, the State Council has set up 105 cross-border e-commerce comprehensive test areas in five batches, which essentially cover the whole country, forming a development pattern of land, sea, domestic and foreign linkages, and east-west mutual assistance⁹.

Myanmar and China anticipate promoting cooperation on digital economies and cross-border e-commerce systems in 2020, allowing trade and economic activity to continue smoothly during pandemics. According to a press release from the Chinese Embassy, Yunnan province will provide the training for cross-border e-commerce operators from Mandalay Region to help export agricultural products such as rice, beef, bananas, and pineapples to Yunnan or to China's domestic market through Yunnan¹⁰.

Yunnan Province and Mandalay Region signed a Memorandum of Understanding (MOU) establishing local cooperation under the framework of jointly implementing the China-Myanmar Economic Corridor (CMEC). Mandalay plays a crucial role in the CMEC. As a part

⁷ Nang Lao Wann Si, 2020. Myanmar Digital Economy Profile, The Centter of Digital Technology and Society, https://digitaltechsociety.org/2020/01/30/myanmar-digital-economy-profile/

⁸ Surakitphanichkul, M. 2021. Myanmar Media Landscape 2021, <u>https://blog.happioteam.com/myanmar-media-landscape-2021/</u>

⁹ THT Lekangan chemical technology Co., LTD, 2021. Cross-border e-commerce continues to lead new forms of foreign trade. <u>http://lekangan.com/article_1629946775000011.html</u>

¹⁰ Nan Lwin, 2020. Myanmar, China to Promote Cross-Border e-Commerce Systems. <u>https://www.irrawaddy.</u> com/news/burma/myanmar-china-promote-cross-border-e-commerce-systems.html

of the CMEC, Myanmar and China agreed to build cross-border economic cooperation zones in Kachin and Shan states. In these zones, China dedicates to focus on establishing import, export, and processing zones and on the development of e-commerce, trade, finance, and tourism sectors¹¹. In 2020, China's cross-border e-commerce import and export volume reached 1.69 trillion Yuan, an increase of 31.1%. This year continued to maintain double-digit high-speed growth, achieving 886.7 billion Yuan in the first half of the year, a growth rate of 28.6%.¹²

In 2021, a China-Laos-Myanmar-Vietnam cross-border e-commerce online training course cosponsored by the Yunnan Provincial Department of Commerce and the Foreign Affairs Office of the Yunnan Provincial People's Government operated in Kunming. Officials, companies, and chambers of commerce from Laos, Myanmar, and Vietnam, and e-commerce practitioners participated in the training¹³.

Readiness to Participate in Cross-Border E-Commerce

Economic Factors and Conditions

Myanmar has high potential for rapid growth and development given its lavished natural resources, abundant labor force, and strategic location between the region's two economic giants, such as the People's Republic of China and India. The experience of Myanmar's neighbors can facilitate its economic transition to achieve robust growth. According to the DataReportal (2021), there were 23.65 million internet users (43.3% as a percentage of the total population) in Myanmar in January 2021, increasing by 2.5 million (+12%) between 2020 and 2021. Currently, internet penetration in Myanmar stands at 43.3%.

It is also reported that in terms of financial inclusion factors, 26.0% of the population aged over 15 has an account with a financial institution, 0.06% has a credit card, 0.7% has a mobile money account, and 3.6% make online purchases and/or pay bills online.

According to the World Bank's collection of development indicators, it is reported that secured internet servers (per 1 million people) in Myanmar were at 14.06 in 2020. Officials of the Myanmar Information Security Association (MISA) and Myanmar Payment Union (MPU) underscored that if digital adoption supported by digital systems is rated on a scale of 1 to 5,

¹¹ Nan Lwin, 2020. Myanmar, China to Promote Cross-Border e-Commerce Systems. <u>https://www.irrawaddy.</u> com/news/burma/myanmar-china-promote-cross-border-e-commerce-systems.html

¹² Kuiwen, L. 2020. The State Council Information Office (SCIO) held a press conference in Beijing on Thursday about China's import and export in 2020. <u>http://english.scio.gov.cn/pressroom/node 8021563.htm#</u> :~:text=According%20to%20preliminary%20statistics%2C%20China's,%2C%20an%20increase%20of%2016.5 %25.

¹³ Yunnan Provincial Department of Commerce and the Foreign Affairs Office of the Yunnan Provincial People's Government, 2021. China-Laos-Myanmar-Vietnam cross-border e-commerce opens up imagination. <u>https://inf.news/en/economy/a8020bee24897d04267407c73a0a893a.html</u>

Myanmar is still lower than 2. Since MPU cards can enable payments only in kyat, they are still inconvenient for international payment interfaces. Moreover, they stated that to develop the digital payment sector in Myanmar, cyber security upgrades are essential to be carried out in accordance with international norms. To match international standards, the digital payment systems in Myanmar should implement the payment card industry data security standard (PCI Security) by strengthening three pillars: educating about cybersecurity, generating more exports in the field, and implementing international standards.¹⁴



Figure 2: Overview of Internet Use in Myanmar (2021)

Source: DataReportal, https://datareportal.com/reports/digital-2021-myanmar

To speed up e-commerce development, it is crucial to expand document delivery and parcel shipment. Thus, postal services in Myanmar necessitate to stimulate economic activity from aspects of logistics and communication. In Myanmar, universal postal services are provided by Myanmar Post (MP), under the Ministry of Transport and Communications, as the sole public entity. However, the postal delivery network is still underdeveloped, triggering delivery delays and accidents that hinder smooth logistics and an active economy as repercussions. To enhance its logistic capacity through improvements in delivery speed, delivery rate, and delivery quality, MP requested a technical cooperation project from the government of Japan (Aung & Kageshima, 2019).

¹⁴ Aung, H. L., 2020. Security upgrade on the cards for Myanmar's digital payments. <u>https://www.mmtimes.</u> com/news/myanmar-collaborate-hong-kong-bri-projects.html

Figure 3: Financial Inclusion Factors in Myanmar (As a percentage of population aged over 15, 2021)



Source: DataReportal, https://datareportal.com/reports/digital-2021-myanmar

Year	Rank	Share of individuals using Internet	Share of individuals with credit card	Secure Internet servers per 1 million people	UPU postal reliability score (2013-14)	UNCTAD B2C e-commerce Index value	Geographic Coverage / Total Economies
2016	133	2	0	25	21	12.0	137
2017	123	25	23	24	20	23	144
2018	125	25	26	26	32	27.4	151
2019	126	31	26	24	26	26.8	152
2020	130	31	26	22	17	24.0	152

Table 2: UNCTAD B2C E-commerce Index of Myanmar (2016-2020)

Source: UNCTAD (2016-2020)

Table 2 shows the UNCTAD B2C E-commerce Index of Myanmar (2016-2020), which can be employed as a benchmark of the readiness of countries to conduct online commerce. It is composed of four indicators: Internet use penetration, secure servers per 1 million people, credit card penetration, and a postal reliability score. As e-commerce readiness could vary by economy, this index allows countries to compare how they operate in different fields and assists policy makers assess to what extent their economies are e-commerce ready and what areas are in the greatest need of improvement (UNCTAD, 2016-2020).

Legal and Institutional Environment

For cross-border e-commerce, it is central to have one country's law on e-communication consistent with international standards. This will permit foreign participants in cross-border e-commerce to find it more comfortable and easier to comply with Myanmar's law, and Myanmar traders will find a familiar legal environment when they trade abroad. Accordingly, on April 30th, 2004, **the Myanmar Electronic Transactions Law** was enacted to govern any kind of electronic record and electronic data message used in the context of commercial and non-commercial activities, including domestic and international dealings, transactions, arrangements, agreements, contracts, exchanges, and storage of information. Then, it was first amended on February 25th 2014, to stipulate criminal punishments for violating any of the following prohibited actions:

- Sending, hacking, modifying, altering, destroying, stealing, or causing loss and damage to the electronic record, electronic data message, or the whole or part of the computer programme dishonestly;
- Intercepting of any communication within the computer network, using or giving access to any person of any fact in any communication without permission of the originator and the addressee;
- Communicating to any other person directly or indirectly with a security number, password, or electronic signature of any person without permission or consent of such person; or
- Information or distributing information created, modified, or altered by electronic technology in a way which is detrimental to the interests of or lowers the dignity of any organization or any person,

Whereby, upon conviction, a person shall be liable to a fine of MMK 5,000,000 to MMK 10,000,000 and, in default of such payment of fine, shall be punished with imprisonment for a term ranging from a minimum of one year to a maximum of three years (the original position was that such a person shall be punished with imprisonment for a term ranging from a minimum of one year to a maximum of five years or with a fine or both).

Recently, on February 15th 2021, Myanmar Electronic Transactions Law was amended through the Law Amending the Electronic Transactions Law 2021 by inserting provisions relating to

the management of personal information into the Myanmar Electronic Transactions Law and providing a basic framework for personal data and information protection in Myanmar.

Concerning consumer damages resulting from e-commerce transactions, it is critical to act in accordance with the Consumer Protection Law. Aiming to ensure that consumers obtain fair remedies for damages and to solve difficulties faced by consumers before, during, and after an online purchase, the Consumer Protection Law (2014) was enacted on March 14th, 2014 in Myanmar. Then, it was amended and enacted into a new Consumer Protection Law on March 15th, 2019 to be compatible with modern age.

E-commerce service providers, manufacturers, and traders of goods shall comply with the laws and rules in force concerning data security to protect consumers' best interests and to respect consumers' privacy. Although there are still no dedicated laws or regulations related to privacy and data protection, applicable laws on privacy and data protection could be found in various legislation such as Financial Institutions Law (2016), Telecommunications Law (2013), Notification 116/97 of the Ministry of Finance and Revenue, and Law Relating to Private Health Care Services (2007).¹⁵ Furthermore, the recently amended Electronic Transactions Law on February 15, 2021 introduced the protection of personal data. One of the serious concerns in e-commerce businesses is cybercrime, which hinders the success of online businesses. However, a cybercrime bill is still in progress in Myanmar.

SWOT Analysis of Readiness to Participate in Cross-Border E-Commerce (Myanmar)

Strengths of Readiness to Participate in Cross-Border E-Commerce

Together with the surge in globalization, cross-border e-commerce business activities have been promoted as businesses in many countries practice online sales of goods to customers. Therefore, the evolution of e-commerce businesses across the world is incredible and is thus driving the growth of the cross-border B2C e-commerce market over coming years. If cross-border e-commerce is defined as digitalization in international trade, then any individuals who participate in cross-border e-commerce would need to have access to the internet. In 2019, it is estimated that about 31 percent of the population in Myanmar had access to the internet. It highlights the dramatic increase from 2011, in which less than one percent of the population of Myanmar could access the internet. In the trading community, both private and public-sector stakeholders ensure adequate and high computer literacy because of their organizations' having automated systems for their business activities.

In border trade, the e-commerce giant of China offers a great demand for Myanmar's export of agricultural products, providing training for cross-border e-commerce operators from Myanmar. There has been a consensus between China and Myanmar to build cross-border economic cooperation zones in Kachin and Shan states as a part of the China-Myanmar

¹⁵ Data Protection Laws of the World, <u>https://www.dlapiperdataprotection.com/index.html?t=law&c=MM</u>

Economic Corridor (CMEC).¹⁶ Moreover, the quick development of the online market in neighboring countries empowers greater demand for cross-border e-commerce.

Weaknesses of Readiness to Participate in Cross-Border E-Commerce

There are some major barriers to cross-border e-commerce in Myanmar. Among them, the biggest challenge is fragmented and incomplete systems as many other government agencies and permit issuing agencies are lagging in terms of full implementation of their e-system for applications and approval. Moreover, ICT infrastructure is limited by the implemented e-system and very few cross-border e-commerce measures are implemented in Myanmar. Under MoTC, a new IT security policy has not yet been provisioned, although the outdated cyber-security and e-transaction regulations were passed more than 10 years ago. Besides, Myanmar has limited exclusive rules for particular documents, as some countries do.

As in some other countries, Myanmar experiences a lack of bank capacity or infrastructure. Payment by exporters or importers to Customs is not performed by electronic payment. Although transactions at each stage can be done electronically, there is no inter-bank transfer. Most of the domestic payments are made by a common banking payment protocol, the Myanmar Payment Union (MPU). Regarding payment security, concerns over lack of security and regulations loom over e-commerce users in Myanmar as it may lead to a financial or economic loss to a party.

Myanmar still has a deprived logistics system and infrastructure, particularly in cross-border logistics. Currently, the main cross-border e-commerce logistics channel used in Myanmar is only international express delivery, with higher logistics costs and longer distribution time.

Opportunities of Readiness to Participate in Cross-Border E-Commerce

A legal regime promising e-commerce based on internationally recognized criteria would help cross-border e-commerce in a variety of ways. As a result, businesses, consumers, and governments will be able to conduct cross-border electronic transactions with less difficulty in obtaining approvals and verification. Potential trading partners would consider the legal regime familiar and principled without having to dispense overloaded paper-works in dealing with Myanmar.

In the preparatory stages leading to the signing of the ASEAN Single Window Agreement in 2005, Myanmar has implemented facilitation of cross-border paperless trade. And Myanmar has attempted to allow cross-border e-commerce and data exchange with the implementation of the Myanmar Automated Customs Clearance System (MACCS) in 2016, and with the full capability to receive, process, and issue documents electronically for cross-border data exchange components. In 2019, the data from the UN Global Survey on Digital and Sustainable

¹⁶ Lwin, N., 2020. Myanmar, China to promote cross-border e-commerce. https://www.irrawaddy.com/news/burma/myanmar-china-promote-cross-border-e-commerce-systems.html

Trade Facilitation shows that Myanmar has made significant progress in implementing trade facilitation measures over the past two years. Myanmar has also achieved a higher level of implementation in cross-border paperless trade than in the previous two years, as part of these trade facilitation measures.¹⁷

Because of the country's unique geographical location, Myanmar appears to be only one of the many hosts of the Digital Silk Road and a critical node to link the Belt and Road Initiative (BRI) between South Asia and Southeast Asia with respect to digital connectivity. In addition, Myanmar's participation in both ASEAN and the BCIM Forum can further strengthen its position as a potential collaborator and base for new-age projects such as inter-smart cities for countries in this region.

Threats of Readiness to Participate in Cross-Border E-Commerce

Although development purposes of the cross-border e-commerce propose to support domestic production and export, there may be concerns that e-commerce platforms in Myanmar will mainly result in higher imports. At a global scale, innovation platforms remain at the technological frontiers by providing the greatest relevance and payoffs. However, Myanmar experiences the lack of digital innovation platforms due to which the nation is prone to implications of significant development. It is the biggest concern of cross-border e-commerce in Myanmar that cross-border data flows (CBDFS) could disrupt the growth of local SMEs and terminate local economy.

With no international profile, domestic payment platform has only a local market usage and has no international market usage compared to world's online payment companies, such as Alipay and Paypal. Most small business owners in Myanmar have meager capabilities, skills, and awareness to acknowledge benefits of the digital economy. Although they have access to the Internet, they may not recognize how to engineer these tools for preceding their business operations. Moreover, having the IT giant and e-commerce giant neighbors, such as India and China, Myanmar may face intensifications in the risk of advantages from e-commerce being unequally distributed.

Cross-border e-commerce would be ideal if transactions are more transparent, and the complications of information asymmetry are reduced. However, in 2019, the utmost challenge of online shopping among consumers in Myanmar is that consumer received goods dissimilar to their pre-ordered items. (Statista Research Department, Jul 21, 2021). The efficiency gap between foreign logistics companies and domestic logistics companies is excessive. As a result, consumers are tilted towards using foreign logistics companies.

¹⁷ UN Global Survey on Digital and Sustainable Trade Facilitation. Data forthcoming at: <u>https://untfsurvey.org</u>

Measures

Logistics and Transportation Measures

The operational capability of Myanmar Post needs to be strengthened by obtaining operational efficiency of the postal network to support e-commerce. Such improved operational capability will lead to increased e-commerce inclusion for all citizens and businesses. It will also improve Myanmar Post's strategic positioning in relation to the opportunity provided by e-commerce. This measure could be undertaken by MoTC or by Myanmar Post in conjunction with MoC.

Development of partnerships between private sector couriers and Myanmar Post should be fostered to strengthen Myanmar's logistics and technology infrastructure. Such partnerships will provide a broader set of options for the shipment of parcels outside urban centres, reaching out to new, currently inaccessible segments of the population. This measure could be implemented by Myanmar Post with support from the MoTC.

Currently, IT is being deployed to enable post offices and agents to access Post Office applications, including those associated with express mail. This action is aimed at covering village post offices using mobile phones for access and creating a new system for post office agents. Approval for the system will be provided by MoTC. Once fully implemented, end-to-end parcel delivery services for domestic and international parcels will be possible, including tracking and tracing services. This measure is being undertaken by Myanmar Post.

Payment Measures

The Myanmar Police Department and CBM will develop a programme to audit e-payment systems to ensure that they are secure. All e-payments system providers will cooperate with them to maintain and improve the level of security of their systems, considering changes in the threatening environment. This measure will be implemented by CBM, Myanmar Police Department MMCERT, and Cyber Security Operation Centre. The involvement of all e-payment service providers will also be requested.

Charges for making mobile payments can be exorbitant. This action will stimulate the use of micro payments. The Merchant Discount Rate applied by e-payment service providers is high in relation to the value of the goods purchased, discouraging sellers from accepting payments online. This action will reduce the charges paid by sellers to an affordable level, taking account of the risk that may be incurred by financial institutions, thereby encouraging use of micropayments. The overall aim is for charges levied on mobile money transactions and merchant discount rates to be cost-oriented. This measure will be implemented by CBM and MoTC in conjunction with MPU. The contribution of banks and other financial services businesses, as well as that of the mobile operators Telenor, Ooredoo, and Mytel will be encouraged.

Having well-trained financial services staff in e-commerce and e-payments, individual banks, other financial institutions, and mobile operators will launch awareness campaigns to educate

merchants on the value of cashless payments and the costs of handling cash, and to educate consumers on the use of e-payments and the benefits that arise. Trainings will be provided through E-Commerce Hubs, equipping the programmes to reach across Myanmar. Special attention will be paid to groups, including the agricultural sector and women. The outcome will be increased in confidence and adoption of cashless transactions, including mobile payments, by merchants and consumers.

The purpose of developing an e-commerce escrow service is to boost trust in the parties to an e-commerce transaction. A secure and trusted escrow service would hold an electronic payment and release the funds only when a transaction has been satisfactorily completed, for example, when a purchase has been received. Such a service would provide protection for both buyers and sellers. The service would need to be provided by an intermediary trusted by both the buyer and seller, and service charges would need to be minimal. Therefore, the feasibility of such a service will need to be tested before implementation. CBM would carry out the feasibility study and make any necessary regulatory changes if implemented. Since e-commerce businesses are experiencing transformation and enhancing growth in Myanmar, the barriers to adoption of e-commerce must be eliminated form an internationalized e-market.

Legal and Regulatory Measures

From a legal perspective, Myanmar has restricted legal rules aimed specifically at cross-border e-commerce. The lack of proper regulations on intellectual property rights and cyber laws for personal data breaches have resulted in the limited expansion of e-commerce platforms. Therefore, there is an urgent need for laws for protection of private data on the internet in Myanmar.

Potential Impacts of Cross-Border E-Commerce on Trade

With the development of the e-commerce industry in Myanmar, MSMEs, in parallel, can enjoy increased margins on sales, jettison geographical limitations, and integrate their business into the global market. In addition, e-commerce has numerous benefits, including low entry costs, reductions in transaction costs, easier access to the global market, and secured market share. Furthermore, it is expected that the facilitation of e-commerce will likely increase the overall market size, tourism flows, access to raw materials and markets, cross-border investment and participation in production chains, and employment opportunities. For these reasons, cooperation on e-commerce systems for trade and economic ties between the two countries will not only allow them to function at their normal pace but also reduce expenditure, make financial management easier, expand market opportunities, and reduce time and labor for carrying out tasks. Moreover, it helps to overcome the challenges of the pandemic and facilitate new tasks and progress to increase economic cooperation between the two countries. Crossborder e-commerce provides great opportunities for reducing trade costs and increasing trade volumes.

CONCLUSION AND POLICY RECOMMENDATIONS

The e-commerce strategy will be realized by achieving a number of strategic priorities, including e-commerce platforms, ICT infrastructure and services, transportation, logistics, and trade facilitation, payments, a legal and regulatory framework, skills and awareness, business facilitation, and trade agreements. These strategic priorities can be attained through measures taken by public and private sector stakeholders. By 2025, businesses of all sizes, sectors, regions, and states will have been increasingly trading electronically and accepting electronic payments, yielding in significant benefits for each business and the economy. This strategy ensures that the whole economy benefits from the development of e-commerce, including growth in the distribution and communication sectors (transport, storage, and telecommunications, as well as wholesale and retail trade). In addition, enhanced growth in agriculture, fisheries, manufacturing, transport, and tourism is expected from greater use of e-commerce in these sectors.

The government of Myanmar has continuously sought plans to issue a longer-term Myanmar Economic Recovery and Reform Plan (MERRP) which should build on the CERP and should include additional measures targeting e-commerce regulations and promoting the transfer of more government services online. The government of Myanmar should implement digital inclusion measures relating to people and businesses in rural and remote areas, women, and lower income groups.

In addition, policymakers should ponder measures applicable to the development of ecommerce that promote the use of mobile financial payments (i.e., use of available mobile payment services including by the government itself); invigorate the use of e-commerce and social-commerce systems (i.e., reinforcement to retail businesses to sell their products on existing local/overseas e-commerce or social commerce websites; promotion of delivery services to online customers by delivery/logistic firms; development of a central e-commerce website where retail businesses can sell online; and the organization of a "Challenge Grant" competition amongst Myanmar's ICT/e-commerce community for innovative ideas to combat COVID-19).

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<u>Appendix Table 1</u> : Popular E-Commerce S	ites in Myanmar
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Business name	Year of	Firm	Key products	Sales (B2B vs
	establishment	size		B2C)
shop.com.mm	2014	201-	Variety of products (mobile phones, electronics, fashion, home appliances, kid's items,	B2C
		500	household goods, beauty, sports equipment and more)	
spree.com.mm	2019	201-	Various categories of goods (electronics, household items, travel accessories, beauty	B2C
		500	and skincare, healthcare, consumer goods, luxury, home and living appliances, fashion,	
			baby products, sporting goods, etc.)	
direct2umyan	2011	11-	The premium products, US brands products (office equipment, latest in-house brand of	B2C
mar.com		50	office furniture system, bedroom, bathroom and kitchen accessories, automobile	
			accessories, the latest console gaming and many more)	
baganmart.co	2016	11-	Products by categories (machinery and industrial parts, building and decoration,	B2B
m		50	electrical equipment, health and medical equipment, business services, beauty and	
			personal care, textile, garment and fashion, packaging, advertising and office, food and	
			beverage, etc.)	
citymall.com.	2017	80-	Various products (groceries, Meat, Fresh Fruits and Vegetables, Baby Needs, Books,	B2C
mm	0014	200	Beauty, Electronic, Medicines, etc.)	DAG
rgo47.com	2014	11-	Many products (clothes, children, groceries, mobile phone gadgets and many others)	B2C
265	2015	50		Dac
365myanmar.c	2015	50-	Products by categories (fashion, computers, mobile phones and tablets, beauty and	B2C
om		200	personal care, electrical equipment, Kid's items, IV, camera and related items, cars and	
			industrial parts, building and book and stationary, decoration, health and medical	
1 1 1	2016	11	equipment, and home kitchen appliances, etc.)	Dac
barlolo.com	2016	11-	Various products (women's fashion, men's fashion, home appliances and furniture,	B2C
		50	mobiles, laptops and gadgets, mom and baby, books and prints, beauty and personal	
1 (2015	11	care, Jewelry and accessories, travel and luggage, sports and outdoors and food, etc.)	C2 C
onekyat.com	2015		10 sell and buy new or pre-loved items.	020
		50	New items (motorbikes, cars, mobile phones, computers and electronics, beauty, real	
			estate, furniture or fashions items)	

Source: <u>https://ecomeye.com/top-ecommerce-sites-myanmar-online-shopping/</u>

<u>Appendix Table 2</u>: List of Participants in FDG

Sr.	Name of Institution	Number of	Level of Participants
		Participants	
1	Ministry of Commerce (MoC)	8	Executive
2	Ministry of Transport and Communication (MoTC)	8	Executive
3	Myanmar Computer Federation (MCF)	8	Top positions
4	Myanmar Computer Industry Association (MCIA)	8	Top positions
5	Myanmar Computer Professionals Association (MCPA)	7	Top positions

CHAPTER 6

STRENGTHENING E-COMMERCE TO PROMOTE BUSINESS TO BUSINESS AND BUSINESS TO CONSUMERS UNDER AHKFTA: A CASE STUDY OF THE PHILIPPINES

AUTHOR

- Tereso Tullao
- Paulynne Castillo
- Maria Zunally Rapada

De La Salle University Angelo King Institute for Economic and Business Study

ABSTRACT

The digitalization of trade that streamlined production and distribution processes created network effects and economies of scale effects that reduced the cost of transactions substantially and prompted the gradual, but steady, shift from the traditional brick and mortar to e-commerce transactions. While the potential benefits of e-commerce have created value added and employment that propped economic growth, particularly during the COVID health crisis, they are matched by challenges and risks, which must be effectively and efficiently addressed in the light of the economic significance of e-commerce in many economies, including the ASEAN and the Hong Kong, and the responsibility to explore every opportunity to propel economic recovery.

Using e-commerce trade indicators from government and select private databases, the paper reviewed and analyzed developments in and the nuances of the Philippine e-commerce industry. Among others, the findings revealed the present economic factors and conditions pertaining to the country's e-commerce industry, key changes in consumer and producer/seller behavior, and scope of Philippine e-commerce legal and institutional framework and reforms. In addition, the research profiled the Philippine e-commerce industry with emphasis on the structure, key players, and emerging market trends and niches. Pieced together, the result of the study contributed to the formulation of strategies to address e-commerce hazards (i.e., trade

measures, domestic regulations and regional trading arrangements) that policymakers can employ to promote the growth of e-commerce trade locally and within the region; whilst, independently or through regional cooperation, guarding against its unintended effects, particularly on privacy and national security issues, market power of global players, asymmetric information, and many others.

BACKBROUND AND RATIONALE

What used to be an unbundling process of the tight link of production and consumption of services to make it globally tradable has been dramatically transformed through digital services trade in more recent years. The early developments in ICT in the past provided an avenue for services to be transferred across territories through electronic means as in the case of cross-border transactions of Mode 1 (Tullao, 2021). Digital services trade altered Mode 1 with the provision of services through platforms by connecting various players in a value chain that facilitates multiple and variable transactions.

The transformation of cross-border transactions is due to the development of platforms, which are facilitating mechanisms covering a system of digital procedures, whose algorithms link various players to several transactions efficiently (Kenney, Zysman, & Bearson, 2020 as cited by Serafica & Oren, 2020). The three main elements in digital services trade include the following: linkages of numerous participants, facilitation of transactions, and the use of digital mechanism. Thus, digital services trade goes beyond Mode 1 as it covers transactions of physical goods and digital data that both domestic and external transactions. In addition, it has merged Mode 1 with Mode 3 where key global players establish commercial presence to exploit opportunities in the local markets.

The digitalization of trade that transforms analog data into digital trade* has streamlined production and distribution processes, enabled firms to introduce new products and services, and altered the global value chains (Parviainen, Tihinen, Kääriäinen, & Teppola, 2017). These changes, in turn, created network effects and economies of scale effects that reduced the cost of transactions substantially. The low costs of transactions are drawing more consumers and producers to participate in digital services trade, which, in turn, further enhance the network and economies of scale effects. This virtuous cycle makes digital services trade even more attractive to players.

Various platforms in electronic or e-commerce are specific examples of digital services trade. These platforms serve the new business model for the purchase and sales of local and global products. Because of the network and economies of scale effects, these platforms can offer various upgrades and discounts to consumers and to suppliers at low participation costs. In Southeast Asia, Lazada and Shopee are the major players. Although there are other platforms developed by domestic players, even with the support of the government, they cannot compete because of the reduced transaction costs brought about by network and economies of scale effects. This becomes a major issue in the development of e-commerce in the region. Can the RTA like AHKFTA address this edge of global players that create monopoly power?

Owing to the magnitude of e-commerce and digital trade in the region and its growing significance, as shown in the responses to the Covid-19 pandemic, it is projected that digital trade in services specifically e-commerce will further grow.

In this light this paper will cover the following objectives:

- 1. To review the development of e-commerce in the country;
- 2. To assess the country's readiness to participate in cross-border e-commerce under AHKFTA;
- 3. To assess the potential impacts of cross-border e-commerce under AHKFTA on trade flows of the country; and
- 4. To provide policy recommendations for reaping potential benefits of cross-border ecommerce under AHKFTA.

The potential benefits of e-commerce—derived from network effects and economies of scale effects—have created value added and employment that ushered the growth of the economy. However, these benefits and opportunities are matched by challenges and risks. This backdrop should be considered in the light of the economic significance of services in many economies, including the ASEAN and the Hong Kong economy. Thus, the growth e-commerce may propel recovery and economic growth in the region.

Given this significance of e-commerce, the paper will be useful to policy makers in several ways:

- 1. identifying the role of e-commerce for economic recovery, employment generation, economic growth and regional integration;
- 2. identifying the sectors that have potentials in expanding e-commerce;
- 3. measures on how the government can address challenges, constraints and risks in ecommerce so the country can reap the potential opportunities in this specific digital services trade;
- 4. addressing the unintended effects of e-commerce to society including privacy and national security issues, breaches of intellectual property, market power of global players, asymmetric information, and many others;
- 5. addressing these risks policy makers should refrain from restricting e-commerce; and
- 6. addressing these risks may likewise involve regional cooperation not only domestic responses.

RESEARCH METHODOLOGY

In order to achieve the above-mentioned objectives of the research, e-commerce trade indicators from secondary sources, specifically government and select private databases. For the Philippine report, they are used to present economic factors and conditions pertaining to the country's e-commerce industry, to underscore key changes in consumer and producer/seller behavior, and to describe the Philippine e-commerce legal and institutional environment.

Section 3.1 utilizes qualitative and quantitative data from the Euromonitor International, Statista and Jobstreet to lay out the development of e-commerce in the Philippines. The discussions focus on the profile of the Philippine e-commerce industry with emphasis on the structure, size, key players, and emerging market trends and niches. In 2019, the Department of Information and Communications Technology (DICT) conducted a national survey, with the goal of—among others—gathering ICT data at the household level to serve as bases for national ICT planning and policy-making to improve public service delivery and to support the "growth of potential markets in the digital economy (i.e., e-commerce)" (DICT, 2019). Hence, the results of the DITC's 2019 National ICT Household Survey are presented in Section 3.2 to assess the Philippines' readiness to participate in cross-border e-commerce.

Lastly, Section 3.3 draws the salient points from Section 3.1 and Section 3.2 in putting forward the potential impacts of cross-border e-commerce on trade—stressing the potential benefits of cross-border e-commerce under AHKFTA.

Development of e-commerce

The Asia Pacific region was referred to as the most economically robust region in 2020 and is expected to steer the global recovery (Euromonitor, 2021). With the diverse consumer market and preferences, trade agreements such as ASEAN-Hong Kong China Free Trade Agreement (AHKFTA) will play a crucial role in facilitating trade flows and creating new business opportunities.

The table below shows the trade flows between Hong Kong, China and the Philippines from 2016-2021. Despite the slowdown in 2020, Hong Kong was the Philippines' 4th largest trading partner, 4th biggest export market, 11th import supplier, and 16th investment source in 2020 (Philippines Department of Trade and Industry, 2021). Last May 12, 2020, AHKFTA took effect in the Philippines which eliminated and reduced tariffs on specific good and services from Hong Kong, China. Both countries agreed to promote and develop activities in priority areas such as customs co-operation, professional services, small and medium enterprises co-operation, trade facilitation/logistics, and e-commerce co-operation (Hong Kong Trade and Industry Department, 2021).

The Philippine e-commerce ecosystem has been steadily growing throughout the years. This can be attributed to the increase in efforts of businesses finding ways to strengthen partnerships and expanding the reach and services of these e-commerce platforms from 2015-2020. Despite the growth, reliable logistics and low usage of credit card are the primary reasons why the country is still trailing behind neighboring countries (Rappler, 2017).

Research group Statista (2021) reported that 52 percent of online shoppers are within the age range of 25 to 34 years old. Accessibility through mobile phones encouraged consumers to get used to these e-commerce platforms (Euromonitor, 2020). Latest figures show that there around 82.3 million mobile subscribers in the Philippines (Statista, 2021). According to a 2020 E-commerce Report conducted by the IPrice group, the typical consumer in the Philippines spends around \$23 dollars or 1,444.00 pesos on online transactions and largely purchase fashion merchandise on these platforms

	2016	2017	2018	2019	2020	2021	2020-2021 Growth Rate
Hong Kong, China Exports (fob) to Philippines <i>(in USD millions)</i>	3275.9	3303.1	3607	4314.5	3435.4	4260.5	19%
Hong Kong, China Imports (cif) from Philippines <i>(in USD millions)</i>	8134.8	10450.5	10498.5	9545.3	9656.3	11226.2	14%
Philippine Exports (fob) to Hong Kong, China (in USD millions)	6732.8	9409.5	9812.5	9632	9399.8	9468.1	1%
Philippines Imports (cif) from Hong Kong, China (in USD millions)	2323.4	2710.9	3109	3461	2738.8	3325.8	18%
Source: Euromonitor International							

Table 1: Trade flows between Hong Kong, China & Philippines

Between the year 2015 and 2020, there has been a seven-fold increase in value of cross-border e-commerce grew the despite being a laggard in terms of e-commerce access in Asia Pacific (Euromonitor, 2021). The consistent growth of cross-border e-commerce can be attributed to increasing population growth, growing middle class, increasing internet subscribers and increase in the number of internet mobile subscribers (Euromonitor, 2020). In addition, the increasing trend is due to more diverse products available in mature international e-commerce platforms (Department of Trade and Industry, 2018).



Figure 1: Total value of e-commerce for goods and services

Figure 2: Value of cross-border e-commerce



From 2015-2020 the trends for various goods and services show a steady increase in the adaptation e-commerce platforms. However, the Covid-19 outbreak in 2020, forced these platforms to respond to the situation in different ways. There was staggering decline in tourism-related industries, specifically, lodging, transport, and ticketed attractions due to the different levels of lockdowns and suspension of domestic and international travels. Most had to shift their services to remain operational and counteract the deficit in sales. Many traditional travel agencies had to close their physical office spaces (Euromonitor, 2021). Airline companies had to provide cargo flights, "sweeper flights' for returning Filipino and support the government

with its efforts to contain the virus (i.e. transporting vaccines) (Euromonitor, 2021). Lodging served as quarantine facilities and partially opened for leisure purposes when the lockdown was eased (Euromonitor, 2021). A number of four-star and five-star hotels needed to apply for a Certificate of Authority to Operate as Staycation (Euromonitor, 2021).



Figure 3: Value of food services e-commerce

On the other hand, other goods and services took advantage to continuously improve on their services and customer engagement. Major improvements are worth mentioning, specifically, food services e-commerce (Figure 3), retailing e-commerce (Figure 4), and other goods and services (Figure 5). These platforms played a crucial role in providing opportunities for growth and bringing convenience while staying at home

Estimated figures last 2020 revealed that there around 2.4 million users of platform to consumer food delivery and 7.8 million users of restaurant to consumer delivery (Statista, 2021). A sharp increase in demand for foodservice delivery compelled bars, restaurants, and other meal providers to register to online apps, invest more on their online presence and improve on their delivery services.

The lockdown also presented consumers to the advantages of online shopping with just a fingertip. It forced reputable retailers to capitalize on concierge services, personal shopper initiatives and create online communities using different social media & communication platforms to enrich customers' shopping experience, preserve loyal customers and prevent loss in sales (Euromonitor, 2020). On the other hand, most small retailers enhanced their presence in e-commerce platforms and social media marketplaces to be able to attract consumers (Euromonitor, 2020).

Figure 4: Value retailing e-commerce



Other e-commerce good and service services which customers were not accustomed bolstered last year as individuals became cautious going out of their homes. Grocery stores revamped their business models, implemented personal grocer programs, online services which were not previously popular. According to a study conducted by Iprice, a Filipino spends around PHP 2,437 on grocery items, the lowest in Southeast Asia. In addition, the were also significant improvements on other services such as cash-in application/ mobile wallets, health cards, insurance, and e-learning related products (Euromonitor, 2020).

Figure 5: Value of other e-commerce goods and services



Table 2 shows the market shares of major -commerce players in the country from 2015-2020. The goal of these major players is to position the Philippines to be one of the top countries around the world in terms of e-commerce penetration (Rappler, 2017). The changes in the market shares were prompted by shifts in investment strategies of globally- dominant third-party merchants taking up stakes in Shopee, Lazada and Zalora, the top three most visited online platforms in the country. In 2016, Alibaba Group took over ASEAN Lazada worth \$1billion (Rappler, 2017). Additionally, according to LinkedIn, an online employment company, the recent estimate number of employees for the top 2 platforms are around 5001-10000.

	Model	Base Location	2015	2016	2017	2018	2019	2020
Alibaba Group Holding Ltd	B2C	International	n/a	17%	16.30%	15%	16.4%	19.2%
Sea Ltd	B2C	International	0	0.7%	4.60%	8.7%	13.3%	18.8%
Rocket Internet AG	B2C	International	23.10%	5.60%	4.90%	4.6%	5.0%	5.1%
Amazon.com Inc	B2C	International	1.80%	1.40%	0.9%	0.6%	0.5%	0.3%
Ayala Corp	B2C	Domestic	1.10%	0.9%	0.6%	0.4%	0.3%	0.2%
eBay Inc	C2C	International	0.50%	0%	0.3%	0.2%	0.1%	0.1%
Others	Mixed	Mixed	73.50%	74%	72.40%	70.50%	64.4%	56.3%
Total			100%	100%	100%	100%	100%	100.0%

Table 2: Percentage of e-commerce market shares, location and business model

Note: Euromonitor International

Readiness to participate in cross-border e-commerce

Infrastructure

While reported as having "the fastest growing internet population in the world" in 2016 (Sector Planning Bureau/E-commerce Office of Department of Trade and Industry, 2016), the National ICT Household Survey 2019 revealed that the Philippines has limited infrastructure and internet-enabled devices to support e-commerce. Table 3 shows that five percent and more than 80% of the respondents have no access to power and internet service, respectively. The varying degrees of infrastructure deficiency peak at 15.3% and 95.5%, respectively, in the Bangsamoro Autonomous Region in Muslim Mindanao (BARMM).

Table 3: Access to electricity and internet service

	Philippines with access (in %)	Region without access – Minimum (in %)	Region without access – Maximum (in %)
Electricity	95.0	0.9 (Region III)	15.3 (BARMM)
Internet	17.7	66.8 (NCR)	95.5 (BARMM)

Note: Department of Information and Communications Technology (National ICT Household Survey 2019).

https://dict.gov.ph/ictstatistics/nicths2019/

Total Survey Respondents: 23,360,960

BARMM: Bangsamoro Autonomous Region in Muslim Mindanao with 521, 349 respondents

NCR: National Capital Region with 3,009,545 respondents

Region III: Central Luzon with 2,823,200

A closer look at the data reveals that the cost of internet subscription (32.5%) and equipment (21%) as the primary obstacles to securing internet service among the survey respondents (refer to the Appendix, Section A.2, Table A.2.2). Indeed, per the results of Cable.co.uk 2020 survey of 211 countries, the Philippines ranks 6th in terms of cost and 5th in mean download speed among the ASEAN member states—at \$0.75 average cost of broadband per megabit per month and 16.84 mbps, respectively. Singapore—which has the lowest cost and fastest internet service in the region at \$0.04 per megabit per month and 97.61 mbps, respectively—offers internet service at one-twentieth of the cost and, almost, six times the speed as compared to the Philippines (Cable.co.uk, 2020).

With respect to the cost of complementary equipment to get online, per the Philippine Statistics Authority (2020), 56.6% of Filipino households earned less than PHP250,000 in 2018. Budget desktops and laptops are priced at no less than PHP5,000 (iPrice Group Sdn Bhd, 2021a; iPrice Group Sdn Bhd, 2021b) or, at least 2% of the annual income of majority of Filipino households. Consequently, at most, only 30.9% of the 23.4 million individuals who answered the survey confirmed ownership of devices capable of connecting to the internet. Majority have laptops, 50.6%, and tablets, 30.3%. Cellphone ownership, on the other hand, is reported at 24% nationwide (refer to the Appendix, Section A.2, Table A.2.3).

	Philippines	Region	Region	
Enabling Factor	"Yes" (in %)	Minimum (in %)	Maximum (in %)	
Aware of online business transactions ¹	48.4	10.9 (BARMM)	65.4 (CAR)	
With online bank account ²	6.8	2.1 (Region IV-B)	12.2 (NCR)	
With online selling or buying account ³	10.0	1.6 (BARMM)	20.7 (NCR)	

<u>Table 4</u>: Online business transaction enabling factors

Note: Department of Information and Communications Technology (National ICT Household Survey 2019).

https://dict.gov.ph/ictstatistics/nicths2019/

Total Survey Respondents: 73,539,783¹; 45,046,841²; 73,539,783³

BARMM: Bangsamoro Autonomous Region in Muslim Mindanao

CAR: Cordillera Administrative Region

NCR: National Capital Region

Region IV-B: Southwestern Tagalog

Likewise, per the National ICT Survey 2019, the most popular reasons for using the internet are social activities, access to information, and leisure at 42.3%, 19.3%, and 15.9%, respectively (refer to the Appendix, Section A.2, Table A.2.4). Online transactions, to which digital trade may be categorized, account for 3.5% of internet use (refer to the Appendix, Section A.2, Table A.2.4). In fact, per the survey results, less than half of the respondents are aware of online business transactions, 48.4%. Moreover, respondents who confirm that they have online bank accounts and those who have online selling or buying accounts are also minorities at 6.8% and 10%, respectively, (refer to Table 4).

Market demand

Bondoc (2020) verified that more than 80% of Filipinos prefer in-store shopping over online shopping—even after the imposition of the lockdown and despite having online shopping experience. In fact, notwithstanding "having one [of] the highest internet penetration in the region and being the most active on social media" statistics reveal that a mere "2% of Filipino netizens have purchased goods or services online" prior to the pandemic (Masigan, 2020). The results of the National ICT Household Survey 2019 explain the predilection for onsite shopping through the responses in Table 3.2.6—with majority of the replies upholding the conclusion that Filipinos are "not interested" in buying goods and services online, 42.7%; "prefer to shop in person", 27.1%; and "lack the knowledge or skills" to engage in online shopping, 23.4%. Masigan (2020) proposed that, in general, Filipinos may not be comfortable "divulging financial information online or [have] misgivings over the reliability of e-merchants".

The lockdown, however, prompted a rapid shift from in-store to online shopping with a 2019 sales turnover of \$3 billion—six times that of the 2015 level of \$500 million. Online markets continued to expand at an accelerated rate in 2020 with the number of buyers and peso value of purchases doubling relative to the 2019 figures (Masigan, 2020).

Reason	Philippines (in %)	Minimum (in %)	Maximum (in %)
Not interested	42.7	25.8 (Region II)	54.4 (BARMM)
Prefer to shop in person	27.1	9.3 (Region VIII)	38.2 (Region II)
Lack of knowledge or skills	23.4	14.5 (Region IV-A)	36.5 (Region X)
Trust concerns	3.2	0.5 (BARMM)	6.8 (Region III & Region XI)
Privacy concerns	1.4	0.1 (Region V)	3.4 (Region VI)

Table 5: Top five reasons for not buying goods and services online

Note: Department of Information and Communications Technology (National ICT Household Survey 2019). https://dict.gov.ph/ictstatistics/nicths2019/

*Multiple responses, one respondent may have volunteered more than one reason for not buying goods and services online BARMM: Bangsamoro Autonomous Region in Muslim Mindanao

Region III: Central Luzon Region IV-A: Southern Tagalog Mainland Region V: Bicol Region VI: Western Visayas Region VIII: Eastern Visayas Region X: Northern Mindanao Region XI: Davao

Per Bondoc (2020), female online shoppers in the Philippines are likely to be: 1) 21 to 30 years old; 2) single; 3) have no dependents; 4) have a PHP20,000 to PHP40,000 monthly income; and 5) prefer cash on delivery as the mode of payment. Male shoppers, on the other hand, are typically: 1) 31 to 40 years old; 2) married; 3) have one or two dependents; 4) have a PHP40K to PHP60K monthly salary; and 5) prefer cash on delivery as the mode of payment. In 2019, majority of the goods and services bought online are clothing, footwear, sporting goods and accessories, 39%; consumer electronics, 13.6%; cosmetic fragrances, 13%; household goods, 10.2%; and food, groceries, alcohol, or tobacco, 4.3% (refer to Table 6). Owing to the lockdown in March 2020, online shopping trends swung in favor of essentials, specifically food and groceries—66% of products frequently purchased online by both female and male

Region II: Cagayan Valley

customers (Statista, 2021). Purchases of other goods, per Masigan (2020) are ranked as follows: 1) clothing; 2) home appliances and devices; 3) home furniture and accessories; 4) electronic gadgets; and 5) smart phones. As previously mentioned, some 6.8% of the National ICT Household Survey 2019 respondents have online bank accounts (refer to Table 4). Consequently, online transactions in 2019 relied mostly on the cash on delivery mode of payment—with 81.3% of answers (refer to the Appendix, Section A.2, Table A.2.8). A second preferred means of payment, at 7.9%, is the over-the-counter option in which buyers of online goods and services deposit the amount due into the bank accounts of sellers. The goods are shipped/delivered by the seller once the buyer sends a proof of deposit (i.e., photo of the verified bank deposit slip/receipt). Online banking (i.e., payment made through bank transfers) and electronic/mobile wallet (i.e., GCash, PayMaya, PayPal, etc.) tie for third place at 5.1%.

Furthermore, depending on the buyer and seller, goods change hands—from sellers to buyers—through courier service delivery (i.e., LBC, Lalamove, Grab Express, etc.), 35.1%; buyer-seller meet-up (i.e., agree on a schedule and physical site to exchange payments and goods), 9%; payment is made online and buyers pick-up the goods at an appointed place (i.e., department store, convenience store, etc.), 4.3%; and vendor delivery (i.e., seller delivers goods to an appointed venue and so on, 51.6% (refer to the Appendix, Section A.2, Table A.2.9).

Table 6:	Top	five types	s of goods	and services	bought online

	Reason	Philippines (in %)	Minimum (in %)	Maximum (in %)
	Clothing, footwear, sporting goods, & accessories	39.0	31.6 (Region IV-A)	55.1 (BARMM)
	Consumer electronics and accessories	13.6	0.0 (BARMM)	22.2 (Region X)
	Cosmetic fragrances	13.0	4.0 (Region XI)	44.9 (BARMM)
Household goods		10.2	0.0 (BARMM)	17.9 (CAR)
	Food graceries alcohol or tobacco	43	0.0 (BARMM & Region V)	14.4 (Region XI)

Note: Department of Information and Communications Technology (National ICT Household Survey 2019). https://dict.gov.ph/ictstatistics/nicths2019/

*Multiple responses, one respondent may have volunteered more than one type of goods and services bought online

BARMM: Bangsamoro Autonomous Region in Muslim Mindanao

CAR: Cordillera Administrative Region Region IV-A: Southern Tagalog Mainland

Region XI: Davao

Lastly, the results of the National Income Household Survey 2019 reveal that 84.5% of the respondents use cellphones to buy goods and services online (refer to the Appendix, Section A.2, Table A.2.10). Consequently, e-commerce mobile applications top the list of sites/applications used in digital trade at 45.4% (refer to the Appendix, Section A.2, Table A.2.11). Social media sites and e-commerce websites are, likewise, preferred online shopping sites in 2019 at 29.2% and 21.2%, respectively (refer to the Appendix, Section A.2, Table A.2.11). Based on website visits and mobile app users, Lazada, Shopee, Amazon, Zalora, and Aliexpress are among the country's most popular digital shopping sites/apps in 2019 (Kemp & Moey, 2019).

Region V: Bicol

Region X: Northern Mindanao

Market supply

Prior to the March 2020 lockdown, the National ICT Household Survey 2019 results identify the most popular reasons to sell goods and services online in the Philippines as: perception that online selling is a good source of income, 42.3%; e-commerce efficiency, 32.8%; sufficient opportunities to sell, 13.9%; and security, 11% (refer to Table 7). With the imposition of restrictions on onsite transactions in 2020, Barreiro (2020) reported that individuals who lost their jobs and small business owners affected by COVID-19 lockdowns, in particular, turned to e-commerce as a source of livelihood. Using social media sites, they established a presence in the emerging digital market. Most offered essential products such as food (i.e., fruits, meat, baked goods, etc.), medicines, nutritional supplements, and so on.

Table 7: Popular reasons to sell goods and services online

Reason	Philippines (in %)	Minimum (in %)	Maximum (in %)
Selling goods/services online is a good income source	42.3	31.8 (Region IV-A)	100.0 (BARMM)
Selling goods/services online offers fast transaction	32.8	0.0 (BARMM)	43.1 (Region IV-B
There are enough channels for selling goods and services online	13.9	0.0 (BARMM & Region I)	32.9 (Region XI)
It is safe to sell goods/services online	11.0	0.0 (BARMM, Region I, & Region XI)	24.4 (Region II)

Note: Department of Information and Communications Technology (National ICT Household Survey 2019). https://dict.gov.ph/ictstatistics/nicths2019/

*Multiple responses, one respondent may have volunteered more than one reason to sell goods and services online BARMM: Bangsamoro Autonomous Region in Muslim Mindanao

Region I: Ilocos

Region II: Cagayan Valley

Region IV-A: Southern Tagalog Mainland

Region IV-B: Southwestern Tagalog

Region XI: Davao

According to the National ICT Household Survey 2019 results, online businesses tap social media sites to advertise and to sell their products, 72.5% of the respondents (refer to Table 8). "Low overheads, ease of setting up, and a readily available consumer base" make social media platforms "an attractive marketplace for merchants" (Marcelo, 2018). Particular social media sites are best suited for the type and nature of products sold online. For instance, Facebook, ranked first in the list of popular social media sites, "provides a platform for sharing news and interesting content, gaining customer feedback, promoting and more" (onlinephilippines, 2020). Indeed, Facebook is home to the top brands in the food, travel, and restaurant industries in the country. Instagram, ideal for posting photos, mainly hosts food and restaurant, hotel, sports, media, automobile brands. Owing to the "emphasis on video output being tied with their product", YouTube is favored by gaming companies (onlinephilippines, 2020).

Finally, Philippine online sellers—by virtue of the Revenue Memorandum Circular (RMC) No. 55-2013—are subject to the same tax obligations as in-store sellers. Hence, online sellers are required "to register with the Bureau of Internal Revenue (BIR); secure an Authority to Print (ATP) invoices/official receipts; register books of account for use in the business; issue registered invoices or receipts; withhold required creditable/expanded withholding tax, final tax, withholding tax on compensation and other withholding taxes; and file the applicable tax
returns on due dates and pay the corresponding taxes" ("Taxes on buying and selling goods online", 2016). Like in-store merchants, goods sold online are subject to value-added taxes— if applicable (i.e., imported goods).

Platform	Philippines (in %)	Minimum (in %)	Maximum (in %)
Social media site	72.5	31.8 (Region VI)	85.1 (Region X)
E-commerce mobile application	10.3	0.0 (BARMM, Region I, Region V, Region X, & Region XI)	26.5 (Region VI)
E-commerce website	9.0	0.0 (Region I & Region II)	58.2 (Region V)
Own website	5.8	0.0 (BARMM, CARAGA, Region	178 (Region XI)

Table 8: Platforms used to sell goods and services online

Note: Department of Information and Communications Technology (National ICT Household Survey 2019). https://dict.gov.ph/ictstatistics/nicths2019/

*Multiple responses, one respondent may have volunteered more than one platform used to sell goods and services online BARMM: Bangsamoro Autonomous Region in Muslim Mindanao

CARAGA: Caraga Administrative Region Region I: Ilocos Region II: Cagayan Valley

Region III: Central Luzon

Region V: Bicol

Region VI: Western Visayas

Region X: Northern Mindanao

Region XI: Davao

Online business transaction security

In 2019, per the National ICT Household Survey 2019, about 42% of the respondents have fallen victim to at least one type of hoax—the most common of which are various versions of SMS fraud/text scams (refer to Table 9). Scammers typically try to convince their mark to send money or "load" to facilitate the release of a prize (i.e., cash, car, travel package, etc.) that the mark supposedly won. Another common scheme is sending a text message or calling a potential victim claiming to be a family member in trouble (i.e., involved in an accident). The hustler then asks for prepaid credits or "load" to pay back the credit/amount used from a "borrowed" cellphone (Arellano, 2019). Reports of hacking, phishing, and cyber bullying/libel occur relatively less frequently at 2.8%, 0.5%, and 0.5%, respectively (refer to Table 8). Majority of the replies, 58.4%, however, indicate that respondents have not been defrauded online and/or via SMS.

Online scams, however, have been rising since the 2020 lockdown. Per Cudis (2021), "the Philippine National Police (PNP) Anti-Crime Group reported [...] 869 online scam cases from March to September 2020", which is "higher by 37 percent" relative to the 633 cases during the same period in 2019. Notable is the increase in phishing incidents, wherein sensitive and private information are obtained from the unsuspecting public. The data, in turn, are used to illegally access debit and credit cards, digital banking accounts, and other financial accounts (Cudis, 2021).

Cyber security issues	Philippines "Yes" (in %)	Region Minimum (in %)	Region Maximum (in %)
Aware of cybersecurity/data privacy	44.5	31.7 (Region IX)	62.7 (Region VI)
SMS fraud/Text scam*	37.7	5.1 (Region II)	87.0 (BARMM)
Hacking*	2.8	0.4 (BARMM & Region X)	7.6 (Region IV-A)
Phishing*	0.5	0.0 (Region I & Region VI)	0.8 (Region III)
Cyber bullying/Cyber libel**	0.5	0.0 (BARMM, CAR, Region VI, Region VII, Region IX, Region X, & Region XI)	2.4 (CARAGA)
Have not been a victim	58.4	12.3 (BARMM)	93.8 (Region II)

Table 9: Cybersecurity awareness and reported cyber scam incidents

Have not been a victim 58.4 12.3 (BARMM) 9. Note: Department of Information and Communications Technology (National ICT Household Survey 2019). https://dict.gov.ph/ictstatistics/nicths2019/

*Multiple responses, one respondent may have reported more than one cyber scan incident

BARMM: Bangsamoro Autonomous Region in Muslim Mindanao

CAR: Cordillera Administrative Region

CARAGA: Caraga Administrative Region Region I: Ilocos Region II: Cagayan Valley Region II: Central Luzon Region IV-A: Southern Tagalog Mainland

Region VI: Western Visayas

Region VII: Central Visayas

Region IX: Zamboanga Peninsula

Region X: Northern Mindanao

Region XI: Davao

Cyber scams, particularly those related to financial institutions (i.e., credit card fraud, debit card fraud, digital banking, etc.), when reported, are typically brought to the attention of the concerned banks. In general, key players in the Philippine banking industry maintain a 24-hour customer service phoneline to which, among others, clients are encouraged to report possible fraud—including lost cards and account security breaches. Per the National ICT Household Survey 2019, less than 30% of cyber scam victims, therefore, approach the police and barangay and government agency officials to file official reports of cybercrimes (refer to the Appendix, Section A.2, Table A.2.15).

A number of breaches in digital security may, however, go unreported. The United Nations Office on Drugs and Crime (2013) identified the following reasons why cybercrimes are not brought to the attention of the authorities: 1) shame and embarrassment at being a victim; 2) risks to one's reputation in reporting the incident (i.e., where the victims are companies); 3) the victim may not be aware that the cybercrime occurred; 4) lack of confidence in law enforcement; 5) time and effort required to report cybercrimes; and 6) lack of awareness on where to report cybercrime.

Legal and institutional environment

The Philippines has enacted a number of e-commerce and e-commerce-related laws and policies for the past three decades—dating back to the early 1990s with the Consumer Act of the Philippines of 1991. The subsequent section discusses the Philippine laws and policies that pertain to: e-commerce and business regulations; consumer protection; data privacy and security; and cybercrime.

RA 8792, the Electronic Commerce Act, implemented in 2000, paved the way for the recognition of electronic data messages, electronic documents, electronic signatures, and so on—subject to conditions on authenticating such documents; thus, electronic contracts legally enforceable (Department of Trade and Industry, 2020). Switching to online transactions, especially during the COVID-19 pandemic, RA 8792, among others, made it possible for firms to coordinate and comply with business documentary requirements (i.e., certificates, updating of reports, licenses, etc.) with most government offices such as the Board of Investments, Bureau of Internal Revenue, and the Securities and Exchange Commission (Molleno-Placido, 2020). Laws and policies under e-commerce and business regulations also govern the procurement of goods/supplies by the national government, provide guidelines on securing incentives for e-commerce business under the Philippine Economic Zone Authority (PEZA), and legislate electronic banking services and other electronic operations—such as Executive Order No. 262, PEZA Guidelines, Bangko Sentral ng Pilipinas (BSP) Circular No. 1033, and so on (Department of Trade and Industry, 2020).

Consumer protection laws and policies in the Philippines, as outlined and enforced under the Consumer Act of the Philippines 1991, primarily address issues and concerns arising from brick-and-mortar transactions (UNCTAD, 2013). With the overall objective of safeguarding the interests of the consumer, the law, per the Department of Trade and Industry Consumer Policy and Advocacy Bureau (Department of Trade and Industry Consumer Policy and Advocacy Bureau, n.d., as cited by the ASEAN Committee on Consumer Protection) includes provisions on: 1) protection against hazards to health and safety; 2) protection against deceptive, unfair and unconscionable sales acts and practices; 3) provision of information and education to facilitate sound and proper exercise of rights by the consumer; 4) provision of adequate rights and means of redress; and 5) involvement of consumer representatives in the formulation of social and economic policies.

The country, however, does not have legislation that solely pertain to e-commerce consumer protection—with the exception of the following: 1) Executive Order No. 264 on Consumer Protection for Electronic Banking; 2) NTC Memorandum Circular No. 05-06-2007 on Consumer Protection Guidelines for end-users of telecommunications, broadcast, and CATV; 3) BSP Circular No. 857 on BSP Regulations on Financial Consumer Protection; and 4) Insurance Commission Circular Letter No. 2014-47 on Guidelines on Electronic Commerce of Insurance Products. Instead, embedded in the Electronic Commerce Act, 2000, is a provision that "notes that violations of the Consumer Act 1991 and other 'relevant or pertinent laws' committed using electronic data messages or electronic documents are to be penalized according to the same penalties available under those laws" (UNCTAD, 2013, p.35). Hence, the Joint DTI-DOH-DA Administrative Order No. 01, series of 2008, cemented the inclusion of online shopping in the coverage of the Consumer Act of the Philippines (RA 7394).

In addressing online privacy, per UNCTAD (2013, p. 35), the Philippines—with the implementation of the Philippine Data Privacy Act (2012)—has "one of the most modern privacy laws in the region, incorporating a mix of guidance from the European Union, APEC and OECD". Unlike most privacy regulations, however, the Philippine law classifies privacy violations as criminal offenses rather than civil infractions (UNCTAD, 2013). Furthermore, Republic Act 10175, the Cybercrime Prevention Act of 2012, is a comprehensive legislation that "focuses on the pre-emption, prevention and prosecution of cybercrimes such as offenses against the confidentiality, integrity and availability of computer data systems, computer-related offenses, and content-related offenses" (Council of Europe, 2018). Lastly, the Electronics Commerce Act of 2000 lists as offenses online activities such as hacking, cracking, or unauthorized access with the intent to defraud or damage electronic data (UNCTAD, 2013).

Moving forward

The Department of Information and Communications Technology National ICT Household Survey 2019 results clearly point to two very important areas for improvement in promoting the expansion and development of digital trade in the Philippines: infrastructure and security. The lack of internet service experienced by more than 80% of the population (refer to Table 3.2.1), per the results of the DICT survey, is currently being partly addressed by the expansion and service improvement projects of the two dominant Philippine telecommunications service providers, Globe and PLDT (Marasigan, 2020; Dela Cruz, 2020), as well as the services offered by DITO Telecommunity, the new entrant to the Philippine telecommunications industry.

DITO Telecommunity, which started operation in March 2021, has "committed to cover 51.01% of the national population and render a minimum average broadband speed of 55 mbps in its second year of operations" (Balinbin, 2021). As of September 2021, DITO claimed a three million subscriber base and a daily subscriber rate of 33,000 per day within 286 service areas (Abadilla, 2021). Whether or not the increased competition from the third telecommunications company will reduce the cost of internet service in the Philippines, the concern of 32.5% of the DICT survey respondents (refer to Table 3.2.2), will depend on DITO's pricing strategy and success in expanding coverage and market share (Venzon, 2021).

The rapidly rising rate of cyber scams is a major stumbling block to digital trade growth. News of online fraud erodes consumer confidence and tarnishes brand reputation; resulting in e-commerce revenue losses not only in the present, but, more likely, in the future as well (Piad, 2021). Cyber security, while strengthened by country laws, can be reinforced by the private sector. Information campaigns to promote awareness of the various types of cyber scams and extol the virtues of practicing good cyber hygiene (i.e., using only trusted Wi-Fi networks, enabling two-factor authentication, etc.) raise vigilance and provide consumers with the means to reduce the risk of falling victim to online scams (Patterson, D.). Online merchants, on the other hand, can increase online platform security by—among others—employing in-house fraud teams to review transactions (Piad, 2021).

Moreover, the perception of weak online security may be a factor in the popularity of cash-ondelivery transactions in the Philippines. Hence, measures to further safeguard digital trade could attract more participants in the e-commerce sector—both buyers and sellers—and entice participants, particularly buyers, to choose cashless transactions (i.e., use online payment systems)—significantly broadening the scope and scale of digital trade.

POTENTIAL IMPACTS OF CROSS-BORDER E-COMMERCE ON TRADE

Spurred by mobility constraints imposed by the COVID 19 lockdown in March 2019 to the present, online shopping in the Philippine skyrocketed. Per Department and Industry (DTI) Secretary Ramon Lopez, e-commerce accounted for 3.4% (\$12 billion) to the country's GDP in 2020. The sector's contribution to national income in 2021 and 2022 are expected to go up to 4.3% (\$17 billion) and 5.5% (\$24 billion), respectively (Cahiles-Magkilat, 2021). In fact, the Global Web survey confirmed that "48% of Filipinos plan to do more online shopping after the pandemic is over" (Global Web as cited by Masigan, 2020). Clearly, the Philippines has a potentially lucrative market for e-commerce goods and services that both domestic and foreign merchants could serve. Indeed, "DTI [] intends to increase the number of e-commerce businesses from 500,000 in 2020 to 750,000 in 2021 and one million in 2022" (Hani, 2021).

Accordingly, the Philippine government has committed to address key e-commerce concerns to pave the way for the industry's expansion and development, specifically (Sector Planning Bureau/E-commerce Office of Department of Trade and Industry, 2016; Ken Research, 2021):

- infrastructure supply chain, communications, and applications infrastructure (i.e., internet access, eGovernment systems, eBanking, ePayment, tax systems, consumer protection, and logistics);
- 2. investment promote and support foreign direct investments and capital flows; and
- 3. innovation protect innovation and investment in research and development

Certainly, Philippine government efforts in these areas can be aided/complemented by the opportunities offered by the ASEAN-Hong Kong China Free Trade Agreement (AHKFTA). Preferential tariffs on agricultural and non-agricultural goods, which numerous research findings confirm generate increased trade between the Philippines and its trading partners (Wignajara, Lazaro, & De Guzman, 2010; Navarrete & Tatlonghari, 2018; Patalinghug, 2020), are instrumental in reestablishing supply chains.

In addition, these studies uphold that the subsequent trade diversification and trade creation outcomes benefit producers through greater access to raw materials and consumers through relatively lower goods and services prices.

In the case of the AHKFTA, for example, tariff reductions can significantly contribute to promoting e-commerce trade via the import of more office machine parts, telephones, and integrated circuits—goods primarily traded between Hong Kong and the Philippines in 2019 (Philippines, 2019)—to the country. Thus, resulting in higher electronics goods production (i.e., laptops, computers, etc.) at a possibly lower cost for domestic firms and, in turn, to

Filipino consumers. Likewise, the Investment Agreement signed by Hong Kong, China and the ASEAN member states (AMS) provides avenues not only for Philippine firms to expand their markets but also for these establishments to be integrated into the global value chain (Lopez as cited in Crismundo, 2021). Lastly, similar to the impact of previously implemented FTAs, AHKFTA can fuel service sector growth--through "legal certainty in market access"— among all country signatories (ILO, 2019; Trade and Industry, 2022a), particularly in the areas critical to digital trade such as telecommunication services, financial services, and energy services (Trade and Industry, 2022b).

Presently, pioneer online sites (i.e., Lazada, Shopee, Zalora, etc.) dominate the domestic digital trade market. Keeping up with the changing retail landscape, major retailers in the country have been shifting to and/or establishing online presence and, per DTI, new businesses have been entering the online market in record numbers. For instance, 73,276 new online businesses registered with the DTI from March to August 2019 as compared to a mere 1,753 new firms in January to March 2019—for a total number of new online business registration of 75,029 in January to August 2019 (Conoza, 2020).

According to Masigan (2020), e-commerce transactions more commonly occur in Metro Manila (38% of the total number of purchases); Cavite and Laguna (9% of the total); Cebu, Pampanga, and Bulacan (6% per province); Davao and Rizal (3% per province); and Iloilo and Batangas (2% per province). Given the still rising number of digital consumers, cross-border e-commerce trade can contribute to addressing the growing appetite for a variety of online goods and services.

Driving forces for short- and medium-term e-commerce growth includes: 1) Filipino penchant for social media and internet usage, which topped the world in 2021, at 4 hours and 15 minutes and 10 hours and 56 minutes (Chua, 2021); 2) e-commerce adoption among internet users at 80.2% in 2021—up from 76% in 2020 and higher that the global average of 76.8% (Chua, 2021); 3) the expected shift in preference for online shopping fueled by the continued imposition of health protocols post-pandemic (Bondoc, 2020); 4) likely improvements in infrastructure that could offer internet service and payment and delivery options to a larger proportion of the Philippine population; and 5) the projected Philippine economy recovery at 4.5% an 5.5% increases in the gross domestic product in 2021 and 2022, respectively (Asian Development Bank [ADB], 2021).

CONCLUSION

In this report we have reviewed the extent of e-commerce in the Philippines in terms of the commodities purchased online, platform utilized, reasons for participation and non-participation, and readiness, among others. Consumer goods including clothing, footwear, sporting goods and accessories constitute almost 40 % of commodities traded online using mostly social media sites as platforms. From the supplier perspective, most of the participants of e-commerce consider these platforms as efficient avenues for selling their commodities that

provide them an adequate of source of income. However, from the consumer's view a substantial majority of the respondents are still reluctant to use the e-commerce mode for several reasons including their preference for purchasing in person and lack of knowledge.

The acceptance of e-commerce platforms can provide employment opportunities to those in the informal sector particularly in the logistical and delivery segment of e-commerce. It can also provide small enterprises a market venue to start their business given the low transaction costs due to network and economies of scale effects.

However, given these positive contributions and opportunities there are challenges and risks in e-commerce similar to other digital services trade including the inadequate of ICT infrastructure of the country and limited access of some households to engage in e-commerce. To a great extent this drawback is a function of the limited investments of the government on physical, logistical and cyber infrastructure. Aside from ICT infrastructure, there is a need to improve human capital since digital services trade including e-commerce is dependent on the quality of human resources that will develop and manage various Apps and platforms. Relatedly, there is a need to invest in innovation that will craft Apps and platforms. Another important impediment to the development of e-commerce in the country are the risks associated with e-commerce including privacy issues and cyber security risks. These risks arise with the huge data, personal and otherwise, on participants accumulated by the developers and managers of various platforms. Moreover, the network and economies of scale effects can also provide substantial market power to big players mostly, foreign companies at the expense of emerging local players. Aside from privacy, intellectual property issues may also be encountered as the cost of replication is substantially low for digitalized products.

Addressing these issues can be done through three ways: trade measures, domestic regulations and regional trading arrangements. Trade measures can either be facilitative or restrictive. Liberalization of importation of ICT equipment and allowing foreign players to participate in e-commerce can enhance e-commerce in the country. On the other hand, high tariff rates as well as various restriction on FDI can prevent the development of e-commerce. Domestic regulations can be done through the crafting and implementation of cybersecurity measures, protection of privacy and intellectual property, disclosures for asymmetric information, and government support in the establishment of local platforms, localization of data, prohibition of electronic payments, among others. Although these are measures are already in place in the Philippines, they are either inadequate or not fully implemented and thus deem to be ineffective because e-commerce can transit boundaries and very difficult to implement domestic rules. Thus, the third option is the use of regional trading arrangements (RTA) like AHKFTA as an avenue for the convergence of domestic regulations through mutual recognition arrangements. In addition, RTAs like AHKFTA can be venues in creating regional platforms that can complete and reduce the market power of big players in e-commerce in the region. AHKFTA can also a tool for the development of human capital at the regional level with the establishment of regional centers for e-commerce innovations.

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Appendix

The tables and illustration below are the supporting document documents of the study:

Section A.1

Country	Average Spending (in dollars)	Top Category
Philippines	\$23	Fashion
Singapore	\$62	Fashion
Malaysia	\$41	Fashion
Thailand	\$29	Electronics
Indonesia	\$21	Sports/Outdoors
Vietnam	\$17	Electronics

Table A.1.1. – Average Spending on E-commerce Platforms and Top Shopping Categories











	2 nd Quarter Number of Web Visits			Number	
	(2019-2021)			of Employees	
	Q2 2019	Q2 2020	Q2 2121	2021	Specialties
Shopee Headquarters:	25,149,100	30,745,300	62,226,700	5,001- 1,0000	internet, mobile commerce
Singapore					
Lazada Headquaters: Singapore	15,408,500	29,950,100	37,773,300	5,001- 10,000	internet, retail, ecommerce, Warehousing & Distribution, Online payments, Fashion, Consumer electronics, m- commerce, online retail, consumer goods
Zalora Headquaters: Singapore	1,462,500	1,056,500	1,733,300	1,001- 5,000	fashion e-commerce, fashion, retail
Ebay Headquaters: San Jose CA, USA	863,600	767,400	790,200	10,0001+	e-commerce, retail, internet, technology
Note: Mapping	Philippines' L	eading E-commer	ce Players deve	elopd by IPric	e Group

Table A.1.3: Number of Web Visits, Employees and Platform Specialties

Section A.2

Infrastructure

Table A.2.2 Top five reasons for not having internet service

Reason	Philippines (in %)	Minimum (in %)	Maximum (in %)
High cost of internet subscription	32.5	3.2 (BARMM)	45.0 (Region IV-A)
High cost of equipment	21.0	9.9 (Region IX)	31.8 (Region X)
Internet service is not available in the area	12.0	3.3 (Region VII)	31.0 (BARMM)
Don't know how to use it (internet)	10.0	3.1 (Region IV-A)	19.8 (Region II)
Members have individual/personal connection	5.5	0.2 (BARMM)	13.4 (CAR)
Don't need internet	5.5	1.0 (BARMM)	12.9 (Region V)

Note: Department of Information and Communications Technology (National ICT Household Survey 2019). https://dict.gov.ph/ictstatistics/nicths2019/

*Multiple responses, one respondent may have volunteered more than one reason for not having internet service BARMM: Bangsamoro Autonomous Region in Muslim Mindanao

CAR: Cordillera Administrative Region

Region II: Cagayan Valley

Region II: Cagayan Vancy Region IV-A: Southern Tagalog Mainland Region V: Bicol Region VII: Central Visayas Region VIII: Eastern Visayas Region IX: Zamboanga Peninsula Region X: Northern Mindanao

Table A.3.2.3 Access to internet-enabled device by type

Type of	With access (in %)				
internet-enabled device	Philippines	Minimum	Maximum		
Desktop*	19.0	8.5 (Region IV-B)	26.7 (NCR)		
Laptop*	50.6	39.0 (Region IV-A)	67.8 (Region II)		
Tablet*	30.3	16.2 (Region II)	44.4 (Region IV-A)		
Cellphone	24.0	7.8 (Region VIII)	75.4 (CARAGA)		

Note: Department of Information and Communications Technology (National ICT Household Survey 2019).

https://dict.gov.ph/ictstatistics/nicths2019/

*Multiple responses, one respondent may have more than one device

CARAGA; Caraga Administrative Region

NCR: National Capital Region

Region II: Cagayan Valley

Region IV-A: Southern Tagalog Mainland

Region IV-B: Southwestern Tagalog

Region VIII: Eastern Visayas

Reason	Philippines (in %)	Minimum (in %)	Maximum (in %)
Social activities	42.7	34.5 (Region IV-A)	78.7 (BARMM)
Access to information	19.3	11.7 (BARMM)	24.3 (Region V)
Leisure/Lifestyle	15.9	5.7 (BARMM)	24.5 (Region I)
Access to government websites	6.5	2.7 (BARMM & Region I)	9.6 (Region VII)
Learning	5.8	0.4 (BARMM)	14.4 (Region VI)
Online transactions	3.5	0.5 (BARMM)	7.0 (Region IV-B)
Personal life	2.9	0.2 (BARMM)	4.8 (Region IV-A)
Online transportation	2.5	0.0 (BARMM &Region V)	4.1 (NCR)

Table A.2.4: Popular reasons for using the internet

Note: Department of Information and Communications Technology (National ICT Household Survey 2019). https://dict.gov.ph/ictstatistics/nicths2019/

*Multiple responses, one respondent may have volunteered more than one activity for using the internet

BARMM: Bangsamoro Autonomous Region in Muslim Mindanao

NCR: National Capital Region

Region I: Ilocos

Region IV-A: Southern Tagalog Mainland Region IV-B: Southwestern Tagalog

Region V: Bicol

Region VI: Western Visayas Region VII: Central Visayas

Market demand

Table A.2.8: Payment type used to buy goods and services online

Mode of Payment	Philippines (in %)	Minimum (in %)	Maximum (in %)
Cash on delivery	81.3	53.1 (Region XI)	93.3 (Region V)
Over-the-counter	7.9	1.5 (CAR)	42.4 (BARMM)
Online banking	5.1	0.0 (BARMM)	20.7 (Region XI)
		0.0 (BARMM, CARAGA, Bagion V. & Bagion XII)	
Electronic/Mobile Wallet	5.1	Region V, & Region AII)	17.9 (Region XI)

Note: Department of Information and Communications Technology (National ICT Household Survey 2019).

https://dict.gov.ph/ictstatistics/nicths2019/

BARMM: Bangsamoro Autonomous Region in Muslim Mindanao

CAR: Cordillera Administrative Region

CARAGA: Caraga Administrative Region

Region V: Bicol Region XI: Davao

		0	
Mode of Delivery	Philippines (in %)	Minimum (in %)	Maximum (in %)
Delivery	35.1	0.0 (BARMM)	41.1 (NCR)
Meet-up	9.0	2.8 (CARAGA)	14.4 (CAR)
Pick-up	4.3	2.6 (NCR)	16.8 (BARMM)
Others	51.6	47.3 (CAR)	73.3 (CARAGA)

Table A.2.9: Mode of delivery of goods and services bought online

Note: Department of Information and Communications Technology (National ICT Household Survey 2019).

https://dict.gov.ph/ictstatistics/nicths2019/

BARMM: Bangsamoro Autonomous Region in Muslim Mindanao

CAR: Cordillera Administrative Region

CARAGA: Caraga Administrative Region NCR: National Capital Region

Table A.2.1: Devices used to buy goods and services online

Device	Philippines (in %)	Minimum (in %)	Maximum (in %)
Cellphone	84.5	63.1 (CARAGA)	100.0 (BARMM)
Computer	15.4	0.0 (BARMM)	35.7 (CARAGA)

Note: Department of Information and Communications Technology (National ICT Household Survey 2019).

https://dict.gov.ph/ictstatistics/nicths2019/

Total Survey Respondents: 7,695,801

BARMM: Bangsamoro Autonomous Region in Muslim Mindanao

CARAGA: Caraga Administrative Region

Table A.2.11: Site/Mobile application used to buy goods and services online

Site/Mobile Application	Philippines (in %)	Minimum (in %)	Maximum (in %)
E-commerce mobile application	45.4	14.1 (CAR)	58.4 (Region I)
Social media site	29.2	12.4 (Region VIII)	59.3 (CAR)
E-commerce website	21.2	13.6 Region I)	34.3 (CARAGA)
Official store website	4.5	0.0 (BARMM)	20.2 (Region XI)

Note: Department of Information and Communications Technology (National ICT Household Survey 2019). https://dict.gov.ph/ictstatistics/nicths2019/

*Multiple responses, one respondent may have volunteered more than one site/mobile application used to buy goods and services

online

BARMM: Bangsamoro Autonomous Region in Muslim Mindanao

CAR: Cordillera Administrative Region

CARAGA: Caraga Administrative Region

Region I: Ilocos

Region VIII: Eastern Visayas Region XI: Davao

Table A.2.15: Reported cyber scam by authority

	Philippines	Region	Region
Government unit	(in %)	Minimum (in %)	Maximum (in %)
Police	7.8	0.0 (BARMM, CAR, CARAGA, Region I, Region IV-A, Region IV-B, Region VI, Region VIII, Region IX, & Region XII)	45.3 (Region VII)
Barangay	9.3	0.0 (BARMM, CARAGA, Region I, Region II, Region IV-A, Region VI, Region VIII, Region IX, Region X, & Region XII)	54.7 Region (VII)
Government agency/official	9.4	0.0 (BARMM, Region I, Region II, Region IV-B, Region V, Region VII, Region IX, Region XI, & Region XII)	68.1 (Region VIII)
Others	73.5	0.0 (BARMM, Region VII, & Region IX)	100.0 (Region I)

Note: Department of Information and Communications Technology (National ICT Household Survey 2019).

https://dict.gov.ph/ictstatistics/nicths2019/

*Multiple responses, one respondent may have reported more than one cyber scan incident

BARMM: Bangsamoro Autonomous Region in Muslim Mindanao

CAR: Cordillera Administrative Region

CARAGA: Caraga Administrative Region

Region I: Ilocos

Region II: Cagayan Valley

Region IV-A: Southern Tagalog Mainland

Region IV-R: Southern Tagalog Man Region IV-B: Southwestern Tagalog Region V: Bicol Region VI: Western Visayas

Region VII: Central Visayas

Region VIII: Eastern Visayas Region IX: Zamboanga Peninsula

Region X: Northern Mindanao

Region XI: Davao

Region XII: SOCCKSARGEN Region

CHAPTER 7

AN OVERVIEW OF SINGAPORE'S E-COMMERCE DEVELOPMENT

AUTHORS

- Say Jye, Quah
- Kway Guan, Tan

Le Kuan Yew School of Public Policy Asia Competitiveness Institute

ABSTRACT

The digital economy presents ASEAN with a possible new engine for growth with the potential to add US\$1 trillion to the regional GDP, and e-commerce plays a key role within it. Singapore, as part of the region, has made efforts to enable this growth through an extensive raft of policies that result in high social acceptance of e-commerce and the digital economy in general. This paper looks at some factors behind the development of Singapore's e-commerce industry, breaking them into three components – digital infrastructure, physical infrastructure, and the wider institutional framework. It then explains Singapore's Free Trade Agreements (FTAs) and Digital Economy Agreements (DEAs), and how Singapore has benefitted from them, as well as how the city-state plans to further develop its e-commerce landscape. These FTAs include the ASEAN-Hong Kong Free Trade Agreement (AHKFTA), which builds on prior agreements. The paper concludes with brief policy recommendations on both the regional and domestic level.

INTRODUCTION

The growth of the digital economy presents ASEAN with a potential new engine for growth. Southeast Asia has a large and mostly young population of over 600 million. The represents a large and growing market that is generally comfortable with using digital services with growing purchasing power. Some reports estimate that ASEAN's digital economy could potentially add US\$1 trillion to regional GDP by 2025 (Bain & Company 2018). This is a trend that has been accelerated as a consequence of COVID-19, where physical interactions have been forced online.

E-commerce, defined as "the sale of goods or services through electronic networks such as the internet", brings benefits that separate it from traditional retail (Ministry of Trade and Industry, Singapore 2019). Firstly, e-commerce allows firms to scale up beyond its geographical boundaries, which in turn allows it to reach a wider market. Secondly, e-commerce potentially lower barriers to entry for new businesses, as compared to traditional retail. Thirdly, e-commerce also has the potential to be more productive, as firms generally require a slimmer workforce.



Figure 1: Infocomm Usage by Enterprises 2016 – 2020 (%)

Source: IMDA Annual Survey on Infocomm Usage by Enterprises 2016 - 2020

In order to take advantage of the digital economy, Singapore has deployed an extensive raft of policies resulting in high social acceptance of e-commerce. Figure 1 presents a picture of infocomm uptake by Singapore-based enterprises. Most notably, usage of E-payments by enterprises experienced a high uptake in 2019. This key data point underlines the broader social acceptance of e-commerce as demonstrated in Figures 2 and 3. It is clear that the COVID-19 pandemic has engendered a step increase in e-commerce adoption in Singapore. In terms of value of spending, the growing proportion of low value purchases demonstrated in Figure 4 is indicative of broader usage of e-commerce for day to day transactions.



Figure 2: Individuals who Made Online Purchase by Age Group (%)



Figure 3: Online Retail Sales Proportion, Monthly (%)



Source: Authors Calculations based on Singapore Department of Statistics Data

Singapore has a small population of 5.7 million, and this limits the domestic market despite relatively high individual purchasing power, driving it to adopt an entrepôt economy. Singapore thus looks to position itself as an e-commerce hub, leveraging on its strengths as a traditional trading hub. Its progress thus far in developing e-commerce cannot be isolated from wider economic institutions and structures, as well as the regulatory environment. This paper will examine some of the key factors and initiatives driving the progress of e-commerce in

Singapore. It should be noted that this paper presents only certain key parts of the overall picture, a full representation will require extensive in-depth study into each component.



Figure 4: Composition of Online Purchases by Value (% of Online Shoppers)

Source: IMDA Annual Survey on Infocomm Usage in Households 2006-2019, accessed via Data.gov.sg

Singapore's Ministry of Trade and Industry noted than in 2018, B2B transactions mostly dominated the e-commerce market. For example, 87% of total e-commerce revenue within the service sector was from B2B transactions, while the remaining were from B2C transactions. While retail trade, food services, and accommodation were dominated by B2C transactions, in total B2B transactions were larger than B2C ones. Yet, the department also noted that B2C transactions were growing faster, due partially from increased usage of smartphones (Ministry of Trade and Industry, Singapore 2019).

This paper's research was primarily based on analysing official statistics and data and will proceed as follows. Section two looks at some factors behind Singapore's e-commerce industry, breaking them into three components – digital infrastructure, physical infrastructure, and the wider institutional framework. Section three looks at Singapore's Free Trade Agreements (FTAs) and Digital Economy Agreements (DEAs), and how Singapore has benefitted from them. These FTAs include the ASEAN-Hong Kong Free Trade Agreement (AHKFTA), which builds on prior agreements. Section four highlights some of the areas where Singapore plans to move ahead in the realm of e-commerce. The paper then concludes by looking at some of the challenges faced by Singapore, as well as brief policy recommendations on both the regional and domestic level.

FACTOR THAT SHAPE SINGAPORE'S E-COMMERCE INDUSTRY

Singapore's e-commerce industry has been growing. Out of a population of around 5.7 million, around 3.4 million Singaporeans shopped online in 2018, on e-commerce platforms like Lazada and Carousell (Cybersecurity Authority of Singapore 2019b). These e-commerce giants were primarily founded in the early 2010s, with SEA founded in 2009, Lazada in 2012, and Shopee in 2015. While commercial sensitivities mean that statistics are not always available, we may also observe from statistics from the Orbis database that these companies have been steadily growing in firm size and assets. Singapore-founded company SEA Limited has seen its total assets increase almost tenfold from the end of 2017 till the end of 2021, from 2 million to 18.8 million, while its number of employees increased from 10,200 to 67,300 in the same period. Shopee and Lazada's total assets have similarly exploded since their founding, according to their annual reports, the latter surpassing 4 trillion in March 2020 (Bureau van Djik 2022).

According to a report by Google, Temasek and Bain (2021), the e-commerce industry is expected to grow to US\$9.8 billion by 2025. This section will explain how Singapore's e-commerce developments thus far are underpinned by three factors – the digital infrastructure, physical infrastructure, and wider institutional factors. All three come together to create an eco-system where e-commerce can flourish. Components of the digital economy, including business to business, business to consumer, or consumer to consumer e-commerce, cannot be seen in isolation from this wider eco-system.

Digital infrastructure

While there is no widely accepted definition of "digital infrastructure", the United Nation's Conference on Trade and Development's (UNCTAD) proposes a tiered definition of digital infrastructure as follows: (i) ICT networks (the core digital infrastructure for connectivity); (ii) data infrastructure (data centres, submarine cables and cloud infrastructure); (iii) digital platforms; and (iv) digital devices and applications (UNCTAD 2019). Therefore, the digital infrastructure of any country in question includes not just the internet backbone and broadband connectivity, but also cloud services and software, as well as data centres, amongst other things.

A strong digital infrastructure underpins Singapore's e-commerce industry, allowing both businesses and consumers smooth transactions and access to e-commerce. Two key aspects of the Singapore's digital infrastructure are discussed here – smooth and fast internet access, and reliable financial transactions. E-commerce, and the digital economy in general, requires strong and reliable internet access. It is through internet and broadband access that users can go online to access e-commerce businesses, and that a market is created for the businesses. A high usage of smartphones, which hosts e-commerce applications, also creates a larger market for e-commerce businesses.

Singapore has had consistently smooth internet access and as Figure 5 demonstrates, high smartphone and internet usage. Smartphone penetration rate in 2020 in Singapore is 88.4%, while there were 8.4 million mobile subscriptions in 2019 – around one and a half times the population size (Müller 2021). On top of broad access to the internet, speed may also be an important factor for consideration - an August 2018 test found that Singapore had the fastest broadband speed in the world, with a speed of 181.47Mbit/s (Meek 2019). High internet speed and accessibility to smart phones and digital gadgets in general allows Singaporeans to spend an average of over 12 hours of each day on digital gadgets, including smartphones and computers, with the former taking over 3 hours a day on average (Yangchen and Toh 2017).



Figure 5: Digital Connectivity in ASEAN

Source: World Bank World Development Indicators

Singapore's e-commerce industry also relies on smooth financial transactions. This has many components. Firstly, the population of Singapore is highly banked, Figure 6 demonstrates the prevalence of banking and financial institution accounts by country. Broad access to banking and finance is fundamental to the development of trusted digital payment systems. Singapore hosts various reliable digital payment systems and digital wallets, from those linked to local banks like DBS' PayLah!, to other systems like Apple Pay and Samsung Pay. Importantly, digital payments in Singapore work across all the different wallets and banks in the market. In September 2018, the Singapore Payments Council established a common standard for QR code payments, which means that consumers can pay any merchant with this QR-code-based service. This allows for effective interoperability and ease of digital payments which has translated to the high usage rates observed in Figure 6. There is also a high rate of credit and debit card penetration, with a 2020 JPMorgan study showing that around two thirds of all e-commerce transactions in Singapore are through credit or debit cards, while cash only takes up 4% (JPMorgan 2020).



Figure 6: Banking and Digital Payments in Asia – 2017

Source: Demirgüç-Kunt et al. 2018, Global Findex Database 2017

Secondly, Singapore's National Digital Identity, SingPass, a key part of Singapore's Smart Nation Initiative (SNI), allows "Singapore residents and businesses to transact digitally with the Government and private sector in a convenient and secure manner" (Smart Nation Singapore 2021). Launched in 2003, SingPass, also allows citizens to access a range of government services online. Digital transactions that involve sensitive information also go through a 2-step Verification (2FA), providing an additional barrier against cybercrime.

All of this facilitates smooth cross-border e-commerce for both retailers entering the Singaporean market as well as Singaporean businesses looking for markets abroad. This also allows for higher use of digital payments in daily consumption.

Supportive physical infrastructure

Physical infrastructure is essential to ensure that there are little logistical delays, ensuring connectivity and the smooth transfer of goods both cross-border as well as within borders. As observed in Figure 7, Singapore's physical infrastructure and logistics providers are world class, which allows for a strong e-commerce industry.

A key part of Singapore's physical infrastructure is its airport_(Economic Development Board 2018b). Utilising its key geographical location, Singapore has become a logistics hub for goods moving through the region. Based on ASEANStat data, Singapore handled the largest volume of international air cargo unloaded in the region in 2019 at 1084 thousand tons. This can be attributed to a confluence of factors including the high level of services at its airport, high degree of international connectivity in the world with air-links to over 400 cities in around 100 countries and also because of the smoothness of its cargo logistics. The area in which Changi

Airport is situated is a 24-hour Free Trade Zone, where cargo from across the world passes through with minimal customs formalities. Furthermore, in 2017, the eCommerce AirHub was established. The result of over S\$21 million of spending, the Airhub uses technology to fully automate a mail sorting system, increasing the processing capacity of sorting mail by over three times. This greatly improves productivity, as the turnaround time for mailbag processing is reduced from six to three hours, allowing much faster deliveries for international ecommerce mail.

Singapore's seaports similarly support e-commerce. Singapore is now one of the world's largest container transhipment hub, and a key player in facilitating global trade (Economic Development Board 2018b). The multiple terminals in the country operate in an integration fashion, and the Port of Singapore Authority (PSA) is also working with Changi Airport group and other industry stakeholders to ensure connectivity between air-sea operations is seamless.

Figure 7: Logistics Performance Index, Singapore- 2018 (1=low to 5=high)



Source: World Bank Logistics Performance Index 2018, accessed via World Development Indicators

Singapore also has key logistics and postal service providers that support e-commerce. One example is Singapore Post's (SingPost) ecommerce logistics hub - eComm Log Hub. The result of over S\$182m of investment, since November 2016, SingPost has around 150 loading bays, allowing it an end-to-end automated sorting capacity of 100,000 parcels daily (Economic Development Board 2018b). This works together with the "PostStation" locker system, where customers can collect goods that they have ordered at their own convenience once they have been delivered. This works to both reduce the rate of delivery failures, as well as consolidate orders on pickup.

Wider institutional framework

Besides digital and physical infrastructure, Singapore's e-commerce industry is also founded on a supportive institutional framework. This includes a steady stream of skilled labour and a supportive regulatory environment. As mentioned, while these institutions might not be directly digital, they are essential for providing the habitat from which the digital economy and e-commerce thrives.

Skilled labour is a key component that ensures the success of the digital economy and ecommerce. Given the disruptive effects that technology has on labour markets, a consistent effort at re and up-skilling is needed to make sure that Singaporean workers can remain competitive and flexible in a dynamic environment. This is going to be more of an issue as the digital economy and e-commerce matures – surveys from Amazon Web Services found that Singapore would need over a million more digitally skilled workers by 2025 to address future challenges – an over 50 percent increase from the present number (Lim 2021). The research also estimates that digitally skilled workers currently represent 63% of Singapore's workforce. It estimates that the average Singaporean worker will need to develop seven new digital skills by 2025 to keep pace with technology advancements and demand, while the number of workers requiring digital skills could increase by 55%. This means that Singapore's workforce needs a total of 23.8 million digital skills training sessions from 2020 to 2025.

Singapore's strategy towards ensuring skills for the digital economy and e-commerce is threepronged – firstly, a strong education system that produces graduates with strong digital skills. Secondly, policies and facilities that allow for up and re-skilling of workers. Thirdly and lastly, a pragmatic immigration policy that allows skilled foreign labour to come into Singapore to complement the local workforce. These three strategies allow the achievement of two goals – the digital literacy of Singaporeans as consumers which companies can tap into when considering regional markets, as well as competitive and productive workers, who are less likely to be displaced and become unemployed.

Singapore's universities perform well by international standards, especially in the fields of Science, Technology, Engineering, and Mathematics (STEM), as well as Computer Science. The number of STEM graduates have been increasing, as seen in Figure 8. Singapore produces a steady stream of graduates with the skills to find employment in digital and e-commerce industries. As such, this would both attract multinational corporations looking for a skilled workforce, as well as ensure that the employment created by these multinational corporations entering Singapore can be largely absorbed. However, there are important challenges on this front, as the same figure shows. The proportion of STEM graduates has declined from 2010 to 2020, as more business degrees became more popular.

To counter these challenges, Singapore ensures that it is not just fresh graduates that are equipped with the skills that underpin Singapore's e-commerce industry. There are also numerous policies that aim at the up and re-skilling of the Singaporean population. This allows not just students but mid-career workers the opportunity to gain new skills, and become competitive in other industries, including tech and e-commerce. This approach has been emphasised by the government as a key element of the country's overall strategy (Ang 2020).

Figure 8: STEM Graduates in Singapore



Source: Census of Population 2010 & 2020, Department of Statistics Singapore.

For example, the SkillsFuture programme, considered as a "national movement", is overseen by the Future Economy Council, which is currently chaired by the Deputy Prime Minister (SkillsFuture 2021a). It has four key thrusts as follows:

- 1. Help individuals make well-informed choices in education, training and careers
- 2. Develop an integrated high-quality system of education and training that responds to constantly evolving needs
- 3. Promote employer recognition and career development based on skills and mastery
- 4. Foster a culture that supports and celebrates lifelong learning

Under schemes like SkillsFuture Credit, all Singaporeans aged over 25 are given S\$500 credit with additional top-ups to pursue a course to develop their skills, including digital skills. This allows them to up or re-skill and become both competitive workers as well as potential consumers within the e-commerce markets. They can take lessons from vendors that offer lessons in both English and Mandarin, and also offer lessons that target different digital skills. To raise one example, workers can take classes at the IP Academy, which teaches digital skills at a foundational level, and helps students familiarise themselves with digital tools. Besides teaching students how to use popular digital platforms and e-payment methods, there are also classes specifically on e-commerce, where one is taught to "how to be a more effective online shopper" (SkillsFuture 2021b). Workforce Singapore (WSG), a statutory board under Singapore's Ministry of Manpower, noted that a total of 533,000 Singaporeans have utilised SkillsFuture Credit since 2016 (WSG 2020).

Other parts of Singapore's up and reskilling programme for mature workers include the School of Continuing and Lifelong Education (SCALE) at the National University of Singapore,

which offers training and certificates in a multiple areas of digital skills. SCALE is a \$12 million initiative that partners NUS with the Employment and Employability Institute (e2i) of the National Trades Union Congress and the Workforce Singapore (WSG) government agency to identify and address skills gaps. All programmes will be designed with NUS faculties and schools, and in close consultation with WSG, the Economic Development Board and employers, to ensure they are aligned to market demand and industry needs (National University of Singapore 2016).

Lastly, Singapore complements its local workforce with foreign talent who meet the digital talent needs that Singapore's relatively small population cannot completely provide. Singapore's immigration policy is pragmatic, there is no free flow of migrants entering Singapore. Instead, those entering are those chosen by the government to fill a specific skill gap that locals are unable to completely fill. In 2019, over one third of the residents in Singapore were immigrants. Out of a total population of around 5.7 million, over 2.16 million were not born in Singapore (Hirschmann 2021). Singapore also manages to attract talent from abroad because it is considered a highly liveable city (Meah 2021). Skilled individuals from abroad are attracted to the city-state because it is considered a place that is safe, secure, and can meet their basic needs – offering them a degree of comfort that they might not have in their home cities.

Another key part of Singapore's wider institutional framework that supports its e-commerce industry is the regulatory environment. Singapore has developed a reputation as a country that bases itself on the rule of law (Vijayan 2020). This rule of law also applies to the digital space, where there are clear laws that allow for arbitration and prevention of cybercrime, as well as a mature intellectual property (IP) arbitration and mediation system. This, in turn, allows for strong consumer and businesses confidence, which sets the basis for the e-commerce industry.

Cybercrime is an emerging problem around the world, and Singapore is not an exception. There were over 9,000 cases of cybercrime reported in Singapore in 2020, a statistic that threatens to destabilise consumer confidence that underpins e-commerce (Cybersecurity Authority of Singapore 2019b). Consumers might feel disincentivised from using e-commerce platforms out of fear of being scammed. Singapore's commitment to rule of law works towards assuaging these fears.

Institutions have been set up to uphold this commitment. The Cyber Security Agency of Singapore (CSA) works closely with stakeholders, including the cybersecurity industry, private businesses, and universities, to spur innovation and employment in cybersecurity. This is done to ensure that services within the digital landscape, including banking and e-commerce, are smoothly delivered, assuring consumers of the safety of e-commerce. Under the CSA, the Singapore Computer Emergency Response Team (SingCERT), was also set up to "facilitate the detection, resolution and prevention of cybersecurity related incidents on the Internet" (Cybersecurity Authority of Singapore 2019a). The SingCERT bulletin also posts reminders and tips for how consumers can "practise good cyber hygiene and take the necessary

precautions to secure your online transactions", including reminders to enable 2FA for all online transactions (Cybersecurity Authority of Singapore 2019b).

Singapore also passed the Cybersecurity Act 2018 in March 2018, which allows the government to "require or authorise the taking of measures to prevent, manage and respond to cybersecurity threats and incidents, to regulate owners of critical information infrastructure, to regulate cybersecurity service providers" (Republic of Singapore 2018). These policies and institutions allow for the societal buy-in that the e-commerce industry requires to flourish.

SINGAPORE'S FREE TRADE AGREEMENTS AND DIGITAL ECONOMY AGREEMENTS

Singapore as a trade reliant economy, has consistently reaffirmed its commitment to free trade as party to many free trade agreements (FTAs) over the years, including with the United States, China and regional agreements such as the ASEAN-Hong Kong Free Trade Agreement (AHKFTA) (Tang 2021). Singapore has recently extended this approach to the digital economy with its Digital Economy Agreements (DEAs). This section looks more closely at Singapore's FTAs and DEAs as a whole, and how they allow for smooth digital trade, including in ecommerce.

Singapore has signed two DEAs and are in the process of negotiating more. The two presently signed are the Digital Economy Partnership Agreement (DEPA) – with Chile and New Zealand; and Singapore-Australia Digital Economy Agreement (SADEA), which was in force from 8 December 2020. Singapore has also launched negotiations with the Republic of Korea on a Korea-Singapore Digital Partnership Agreement (KSDPA) and the United Kingdom on a UK-Singapore Digital Economy Agreement (UKSDEA). The Singaporean government has also stated that they are on the lookout for more such arrangements in the future (Ministry of Trade and Industry 2021).

The Ministry of Trade and Industry (2021) notes that DEAs are aimed towards the following:

- 1. Align digital rules and standards, and facilitate interoperability between digital systems;
- 2. Support cross border data flows and safeguard personal data and consumer rights; and
- 3. Encourage cooperation between Singapore's economic partners in nascent areas such as digital identities, Artificial Intelligence (AI) and data innovation. This gives organisations the scope to trial use-cases and technologies across different countries.

The DEAs have different modules, including Artificial Intelligence and E-Invoicing. Overall, they have the effect to "lower the cost of operations, increase business efficiency and create more seamless and easier access to overseas markets." These are aimed to allow for the seamless, trusted connection of digital businesses, and a common data infrastructure to address inefficiencies. These result in data exchanges that allows for the more efficient tracking of cargo, and helps to optimise supply chain logistics (Tham 2021). This supplements Singapore's

numerous FTAs that work towards simplifying customs and import duties. This supports crossborder trade of goods and services, and has direct implications for e-commerce. Thus far, Singapore has managed to benefit from FTAs and DEAs, largely avoiding the pitfalls that some scholars have described (see e.g. Kelsey 2020). Singapore's capabilities in the digital economy, borne out of policy choices as shown in previous section, allows it to take advantage of larger markets and trade liberalisation.

As a small country, Singapore has a small internal market, where e-commerce firms quickly meet limits if they are kept within borders. DEAs and FTAs works towards mitigating this issue but opening up access to larger markets for local firms to expand and increase their scale. Digitalisation also opens up new possibilities as it allows businesses to access markets overseas without establishing a physical presence in that region. FTAs and DEAs allow for the smoothness of this process by ensuring that parcels and data flow without encumbrance. EntepriseSG explicitly listsone of the key benefits of the AHKFTA is how it "reduces technical barriers to trade" (EntepriseSG 2022), with the AHKFTA committing Singapore to "customs duties on all originating goods of the other Parties under this Agreement." (AHKFTA 2019)

This especially helps Small and Medium Enterprises (SMEs), who benefit from the ability to scale up their businesses. They are supported by government initiatives, which also allow the SMEs protection from being displaced by incoming large global tech players. An example is the SMEs Grow Digital programme launched by the Infocomm Media Development Authority (IMDA) and Enterprise Singapore (ESG) in June 2020. This scheme allows for SMEs, especially in e-commerce, to tap into overseas markets, through smart matching or optimised listening on overseas e-marketplaces (Infocomm Media Development Authority 2020). SMEs that use digital solutions that have been approved by IMDA can receive funding from the Productivity Solution Grant (PSG) to cover expenditure costs – a program that has reached around 15,000 SMEs (Lim et al. 2020).

These SMEs will also benefit from the AHKFTA, which aims at economic and technical cooperation. The AHKFA states how it is aimed at "creating new opportunities for trade and investment and promoting competitiveness and innovation through the involvement, where appropriate, of the private sector including the small and medium enterprises (SMEs) by, inter alia, facilitating the integration of SMEs into Global Value Chains" (AHKFTA 2019). Given Singapore's small internal market, FTAs like the AHKFTA greatly help Singaporean SMEs by allowing them to be part of the global supply chain, and to in the process find markets abroad, whether in e-commerce or other fields.

Being equipped with the appropriate skills, the Singaporean labour force has worked to absorb employment created by digital companies entering Singapore. For example, Singapore provides global e-commerce giant Amazon both a digitally literate population that is comfortable with e-commerce and also, more importantly, skilled labour to help the corporation operate and innovate. Coupled with strong infrastructure, Amazon greatly benefits from Singapore, while on the other hand, Amazon not only provides its digital and retail services, but also helps create good jobs for Singaporeans. There are also technology and skill transfers which ultimately help the development of Singapore's digital economy. Also, by locking-in trade partnerships, FTAs/DEAs also mean that Singapore diversifies its supply chains, minimizing the risk of disruptions.

FUTURE DEVELOPMENT PLANS

The digital economy and e-commerce are fields that are rapidly moving and evolving. Any country that wants to retain its competitiveness cannot slacken and must instead take active measures. This section details two upcoming initiatives that Singapore that intends to use to ensure that its digital economy and e-commerce industry remains robust. They are the development and deployment of 5G networks and further developing its skilled workforce.

The development of 5G networks and infrastructure is key to Singapore's digital economy plans. A 5G networks allow for ultra-fast speeds and connections, going up to 1.2Gbps, which will allow Singapore to increase the bandwidth and capacity of its digital infrastructure in order to facilitate a large amount of e-commerce orders from across the globe. Further allowing Singaporeans smooth access to markets worldwide, and allowing businesses to scale up. Singapore plans to have 50% coverage by 2023 and full coverage with two nationwide 5G networks by 2025 (IMDA 2020).

As highlighted in earlier sections, Singapore faces a looming skills gap. Singapore is working to ensure that its universities and educational centres continue to up and re-skill its population so that they are comfortable with using digital services, and that the workforce remains competitive and productive. For example, the Singapore University of Technology and Design (SUTD) is also hosting the Future Communications Research and Development Programme (FCP), where the Singaporean government is investing around S\$70 million. This program will help to support cutting-edge research in communications technologies, as well as facilitate the industry adoption of these technologies. There will also be funding for post-graduate scholarships in these areas (Spencer 2021). The program also importantly pursues international collaboration to develop 6G networks with Finland.

CONCLUSION – RECOMMENDATIONS

This essay has provided an overview of Singapore's e-commerce development, focusing not only on its domestic policies and institutions, but also the FTAs and DEAs that it has signed. These all contribute to Singapore's e-commerce development. The AHKFTA is one of the latest moves that Singapore has taken on this front, with the agreement strengthening trade ties around the region by liberalising trade and loosening relevant barriers. These will all contribute to the development of Singapore's e-commerce, including the SMEs in this industry.

However, there are more challenges moving forward that Singapore has to tackle beyond signing FTAs like the AHKFTA. The AHKFTA should consider adding a dedicated e-commerce chapter to boost e-commerce development in the region and to keep it in line with

other regional FTAs. The geopolitical environment presents challenges to ASEAN. ASEAN leaders have raised that tech decoupling is a possibility, which would adversely affect the digital economy by creating issues of interoperability. To try to mitigate this issue, at the regional level, Singapore should strive to ensure that ASEAN centrality and unity is preserved. For ASEAN member states, ASEAN can act like a "multiplier" for its interests beyond Southeast Asia, as well as a platform to ensure that the major powers are socialised into ASEAN's norms of non-interference – thereby retaining their autonomy (Laksmana 2021).

Part of how to pursue this includes ensuring that ASEAN remains inclusive, where the technology gap between different member states is not too wide, and no one is left behind.

This is in line with one of the AHKFTA's objectives to "strengthen, diversify and enhance trade, investment and economic links among the Parties" (AHKFTA 2019). To work towards this, Singapore should assist in the diffusion of technical skills and technology into the rest of the region, as well as assist with the construction of relevant infrastructure, both physical and digital. The level of infrastructure across ASEAN member states varies greatly, and more investments need to be channelled into different parts of the region to ensure that the regional grouping remains inclusive.

While Singapore is currently the largest source of Foreign Direct Investments (FDI) in the region, and intra-ASEAN investments into the digital industry are already on-going, there are other steps that Singapore can consider. One would be to propose the revival of common funds like the ASEAN Development Fund (ADF), which all ASEAN member states can tap on to fund the development of their digital economies and e-commerce industries (Asian Development Bank 2012). In order to ensure that these funds are channelled to the development of the digital economy and e-commerce, stipulations could be put into place, where funds can only be withdrawn if a relevant purpose is given. The main contributors to the fund should not only be the more well-off nations in ASEAN, but also external stakeholders that would like to see the regional grouping flourish. This could include both private and government entities from abroad, including big tech companies who would like to see the development of a more internet savvy market.
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CHAPTER 8

STRENGTHENING E-COMMERCE TO PROMOTE BUSINESS TO BUSINESS AND BUSINESS TO CONSUMERS UNDER AHKFTA: A CASE STUDY OF THAILAND

AUTHOR

Punpreecha Bhuthong

Thailand Development Research Institute (TDRI)

ABSTRACT

Under the economic cooperation between Hong Kong and ASEAN, the work program for exchanging knowledge and experiences in e-commerce has been established which are all in line with Thailand 4.0 development policy to promote modern economic development through e-commerce. The main objectives of the research are to review the development of e-commerce in Thailand as well as to assess the country's readiness to participate in cross-border e-commerce under AHKFTA

The study used a descriptive data analysis to gain an understanding of e-commerce in Thailand. Main data collection techniques were desk research and in-depth interviews with key informants.

This paper described e-commerce landscape, key players in e-commerce market as well as key drivers of e-commerce sale in Thailand. The paper also assessed the country's readiness to participate in cross-border e-commerce under AHKFTA in 4 aspects: internet accessibility and reliability, payment services in Thailand, legal and institution environment, and customs and tax regulations. In addition, the research assessed the potential impacts of cross-border e-commerce under AHKFTA on trade flows of the country and to provide policy recommendations for reaping potential benefits of cross-border e-commerce under AHKFTA.

BACKGROUND AND RATIONALE

The advancement in science and technology has played an important role in human daily life. The development of computers and the Internet has transformed a model of buying and selling goods and services as well as changing consumer behavior. The technology has also altered the way sellers and buyers interacted and has resulted in a wider and more complex business model. Likewise, traditional international trade is affected by technological changes.

As e-commerce can be defined as the use of the computer networks to conduct business transactions¹, hence, cross-border e-commerce is generally just an extension of traditional international trade through electronic means. Cross-border e-commerce helps breaking down boundaries between countries, promoting borderless trade (Wang, 2018). Trade-related activities, such as collecting information, are usually costly and can be high that can be considered substantial barrier to trade. The use of electronic means can make the trade process a lot easier, faster, and less expensive, thus, it will likely promote trade (Terzi, 2011).

Recent years, we have seen rapid growth in e-commerce business around the world. According to Statista survey, over 2 billion people purchased goods and service through online channels and e-retail sales has surpassed 4.2 trillion US dollars worldwide in 2020. Meanwhile, cross-border e-commerce market size was valued at US\$ 578.57 billion in 2019 and is expected to grow 17.4% annually and reaching a market value of US\$ 2,248.57 billion in 2026 (All the research, 2021). China is among the largest e-commerce market in the world. In 2020, e-commerce sales in China had the value of US\$1.3 trillion and it is anticipated to increase to almost \$2 trillion by 2025 (Buchholz, 2021).

ASEAN has been continuously Thailand largest trading partner, while Hong Kong is Thailand's 8th largest trading partner. In 2020, the total trade value between Thailand and Hong Kong was US\$13.297 million. In this regard, Thailand exports to Hong Kong at US\$11,292 million while Thailand imports from Hong Kong only at US\$2,005 million. With its complete infrastructure, together with its proximity to Chinese manufacturing hubs, Hong Kong is considered as a strategic location as an e-commerce hub and gateway to mainland China (ASEAN Today, 2019).

As the rise of China cross-border e-commerce, most previous studies on the topic of crossborder e-commerce available in Thailand mainly focus only on China to seek out opportunities and challenges. The enforcement of AHKFTA was expected to improve Thailand's welfare by US\$157 million with trade balance surplus over US\$28 billion (Suntavaruk, Huvanandana, Taraseina, & Thammapithak, 2013). Yet, there are also potential business opportunities through cross-border e-commerce to further enhancing trade flows between Hong Kong and ASEAN. In this regard, under the economic cooperation between Hong Kong and ASEAN, the work program for exchanging

¹ By OECD definition of e-commerce, an e-commerce transaction is the sale or purchase of goods or services, conducted over computer networks by methods specifically designed for the purpose of receiving or placing of orders.

knowledge and experiences in e-commerce has been established which are all in line with Thailand 4.0 development policy to promote modern economic development through ecommerce. The main objectives of the research are to review the development of ecommerce in Thailand as well as to assess the country's readiness to participate in crossborder e-commerce under AHKFTA. In addition, the research will try to assess the potential impacts of cross-border e-commerce under AHKFTA on trade flows of the country and to provide policy recommendations for reaping potential benefits of crossborder e-commerce under AHKFTA.

The paper is divided into 4 sections. Section 2 describe research methodology and data collection techniques using. Section 3 provides results of the study including the development of e-commerce in Thailand and readiness analysis to participate in cross-border e-commerce for Thailand. Section 4 provides conclusion and policy recommendations.

RESEARCH METHODOLOGY

This study used a descriptive data analysis to gain an understanding of e-commerce in Thailand and assess the country's readiness to participate in cross-border e-commerce under AHKFTA. The study reviewed relevant documents to formulate research questions and key stakeholders in cross-border e-commerce studies. Main data collection techniques were desk research and in-depth interviews with key informants. Purposive sampling methods was adopted to select key informants as the method is widely used in qualitative research for identification the relevant cases related to the study. The study has interviewed 5 representatives from private sectors including related e-commerce associations and key giant e-commerce platforms.

Primary data was gathered through the interviews from various key informants including firms and related government agencies. Secondary data was collected from desk review of the articles, journals, reports, and information obtained from government and non-government sources. Based on the data collected, general inductive approach was mainly used for the analysis.

RESULTS OF THE STUDY

Development of E-commerce in Thailand

Trading through e-commerce or selling through online channels has been around quite some time in Thailand in the form of Consumer-To-Consumer (C2C) e-commerce through online marketplace website operated by Thai owners (Ratchatanont, Sanlekanan, Klinsukhon, Poongam, & Sirithana, 2020). Though in the past 5 years, e-commerce marketplace has been on the rising trend since the entry of large foreign e-marketplace, especially from China.

From the national survey, Electronic Transactions Development Agency (ETDA) estimates that the value of national e-commerce market in 2020 was about 3.8 trillion baht (US\$120 million), decreasing from the value of 4.05 trillion baht (US\$130 million) in 2019 (Figure

1). This decrease is due to lock down measures under the Covid-19 pandemic which limits international and domestic travel, hence, has a negative impact on the manufacturing, accommodation and transportation services. In this regard, the value of e-commerce in 2021 is expected to have a continuous growth trend after recovering from the Covid-19 epidemic to 4.01 trillion baht, or 6.11 percent growth from 2020, with the expected cumulative average growth rate at 9.4% from the period 2016-2021 annually. It is also observed that the growth rate in 2018 was very high. According to ETDA, the online platforms had been growing following an increase in number of internet users which has grown threefold over the past decade, along with increased confidence in electronic payment and faster logistics and delivery services.



Figure 1: Value of e-commerce in Thailand, 2016-2021

Source: Value of e-commerce survey in Thailand 2021, Electronic Transactions Development Agency (ETDA)

Note: (f) – forecast

When considering the value of e-commerce by category, it was found that in the past, most of it was contributed from the value of Business-to-Business (B2B) e-commerce. In 2016, the proportion of the value of B2B e-commerce was 1.54 trillion baht or accounted for 60.4% of the total value of e-commerce, followed by the value of Business-to-Consumer (B2C) e-commerce in the amount of 0.7 trillion baht, or 27.5%, and the value of Business-to-Government (B2G) e-commerce in the amount of 0.31 trillion baht, or 12.1%, respectively (Figure 2). However, it is worth noting that the B2C growth rate has been growing at average 23.7% annually and is higher than that of B2B in every year since 2016, resulting in the proportion of B2C value to the total e-commerce value has surpassed the proportion of B2B value since 2019. This change is a result of B2B entrepreneurs adapted themselves from the COVID situation by shifting the sale of goods and services more directly to consumers, causing B2B value to move into the B2C sector. Henceforth, ETDA forecasts that B2C ecommerce value in 2021 will remain the highest value for the third year in a row, with a value of 2.03 trillion baht (50.6%), while B2B is predicted to have a value of online sales of 1.09 trillion baht (27.2%) and B2G worth 0.9 trillion baht (22.2%).

In addition, compared to major ASEAN members, Thailand has the highest value in B2C in ASEAN for the sixth consecutive year with a value of USD 55.92 billion in 2019, followed by Malaysia with USD 46.19 billion, Indonesia with USD 17.52 billion, Vietnam. \$10.08 billion, the Philippines \$2.36 billion, and Singapore \$2.16 billion.



Figure 2: the value of e-commerce by category, 2018-2021

Source: Value of e-commerce survey in Thailand 2021, Electronic Transactions Development Agency (ETDA)

Note: (f) - forecast



Figure 3: Value of B2C E-commerce in major ASEAN members, 2019

Source: Value of e-commerce survey in Thailand 2021, Electronic Transactions Development Agency (ETDA)

Considering the e-commerce value of each industry in 2019, the industry with the highest e-commerce value was wholesale and retail industry, which has valued at 1.3 trillion baht or accounted for 38.08% of total e-commerce value, excluding the B2G. This was followed by accommodation industry at 28.79%, manufacturing industry at 14.65%, information and communication industry at 12.76%, transportation industry at 4.57%, and others (Figure 4). It can be seen that wholesale and retail industry has grown significantly during 2018-2019 due to the government policy to support SMEs in online business, together with the

expansion of the leading online platforms by launching sale promotion and improving delivery services to meet their customer needs. In 2020, COVID-19 pandemic has further enhanced wholesale and retail industry as people spend more time online to keep the social distance to avoid the spread of disease. The value in transportation sector also increased accordingly to serve an online purchase.



Figure 4: The value of e-commerce by industry, 2015-2020

Source: Value of e-commerce survey in Thailand 2021, Electronic Transactions Development Agency (ETDA)

E-commerce landscape in Thailand

Business operators in the e-commerce market can be divided into four main categories: marketing tools, e-commerce channels, payment system, and logistics and fulfillments (see figure in Appendix).

Marketing tools

Digital marketing is important as it helps connect a business with its customers when they are online. There are currently several marketing platforms in Thailand such as search engines (google), social media (Facebook, Twitter, Instagram), social media ad platform (Tiktok ads, Youtube ads, line ads), retargeting platform (banner advertising), content marketing (Facebook live, Youtube), etc.

From the survey from Priceza (Priceza, 2020), 53% of online shopping comes from product learning through social media, youtube, and 35% comes from people searching for products themselves through e-marketplace platform and search engine.

E-commerce Channels

E-commerce channels can be also categorized into 3 channels. First, e-marketplace is the online platform that connects buyers and sellers by allowing third-party sellers to market and sell their products on the platform such as Lazada, Shopee, JD Central. Second, social commerce is an online sale via social media such as Facebook, Instagram, Twitter, or Line Official, etc. Third, e-tailer is a retailer or product brands that sells their products and services to customers using an online store. According to the survey from ETDA, buyers

prefer to buy products through e-marketplace the most, while sellers mostly choose to sell their products through social commerce (Figure 5).

Payment System

An indispensable part of the ecommerce process is a payment system. An e-commerce payment system facilitates the acceptance of electronic payment for online transactions. As Thailand has begun to step into a cashless society, payment systems are now more competitive both from the bank sector and non-bank sector. Payment system service providers can be further divided into 2 major groups: payment gateway and e-wallet.

A payment gateway is a technology used by merchants to accept debit or credit card purchases from customers, such as Paypal, Omise, and 2C2P, etc.

An e-wallet is an application or online platform that allow buyer to make immediate online transaction. This includes mobile banking application such as SCB easy, KPlus, Krungthai NEXT and pure wallet such as true money wallet and rabbit line pay.

Logistics and fulfillments

E-commerce logistics system refers to the processes involved in storing and shipping inventory for an online store or marketplace. The Thai freight and logistics market was valued at USD 61.87 billion in 2020, and it is expected to grow 6% annually to reach around USD 100 billion by 2026 (Mordor Intellegence, 2021).

Figure 5: Buyers and Sellers behavior, 2021



Source: Thailand Internet User Behavior 2021, ETDA

Key players in e-commerce market in Thailand

Thailand's e-commerce market is dominated by global giants. The top two e-commerce sites, Shopee and Lazada, accounted for over 70% of total monthly visits (Figure 6). Thai e-commerce firms only take small share in the market, but it is slowly growing.

Figure 6: Monthly visits of Thailand's E-commerce websites



Lazada

Lazada was founded in 2012 by the German group named Rocket Internet, launching an ecommerce platform targeting 6 ASEAN countries, namely Thailand, Singapore, Malaysia, the Philippines, Indonesia and Vietnam. It was later taking over by Alibaba group in 2016. After being acquired by Alibaba, the Lazada platform is crammed with more and more Chinese products.

Lazada was first launched as website selling inventory to customers from its own warehouses. It was later added a marketplace model that allowed third-party retailers to sell their products through Lazada's site. Lazada then later launched mobile application in 2013-2014 to reach out more customers.

Products available in Lazada are divided into basic categories such as fashion products, children's toys, electrical appliances, food, cosmetics, etc. More importantly, Lazada has also created variety of campaigns to please its customers on a regular basis including a campaign that plays with numbers such as (9-9, 11-11), and big day campaign including the Lazada Birthday Sale campaign, etc.

Shopee

Shopee was first launched in Singapore in 2015, and later expanded to ASEAN member states including Thailand. Shopee started as a consumer-to-consumer (C2C) marketplace but has since moved into a C2C and business-to-consumer (B2C) hybrid model.

Kaidee.com

Kaidee, established in 2011, offers both website and application services. Kaidee sells all types of products, however, it focuses on selling second-hand products. Kaidee is a classifieds site only, not a web-based e-commerce model, and serve only intermediary to help matching between buyers and seller. Kaidee use premium business model. While posting on Kaidee is free of charge, customers can purchase premium services to move up the advertisement reaching the targeted customers.

The top 5 best products on Kaidee are second-hand cars, amulets, second-hand mobile phones, second-hand motorcycles and second-hand real estate.

Thailand's participation with cross-border e-commerce

As the value of e-commerce in Thailand continues to expand, the number of merchants in Thailand has increased by as much as 50%. At the same time, according to Priceza data, in 2020, the number of products on three platforms like Lazada, Shopee and JD CENTRAL has also increased by more than 32%. However, the increase in the number of products is not the result from the increasing number of Thai entrepreneurs but rather an increase in products coming from abroad. As a matter of fact, foreign products currently take up more than 63% share of these platforms, with only small share for domestic products. Most cross-border e-commerce products imported from China, which accounted to 52%, followed by Japan and US (Figure 7).-Some of these products are imported in advance and store in the warehouse waiting for the orders and some are imported directly from abroad after receiving the orders. This issue raises concerns in the future that small and mediumsized enterprises will be affected by the high influx of cheap goods from China because they cannot compete in price with Chinese products with high economies of scale. Not to mention, these large foreign platforms also take advantage of "algorithm" technology, using by many international giants, to check the prices of competitor platforms and automatically setting a lower price for the product on its own platform or to reduce the visibility of competitors' posts in the market.

Moreover, increase number of cross-border e-commerce products also raises concern over consumer protection including payment fraud, scams, lack of data security and privacy, etc. Thus far, Thailand has no specific laws and regulations that govern and create a fair online business environment for both businesses and consumers.



Figure 7: Market share of cross-border e-commerce in Thailand, 2020

Source: Statista

On the other side, it is worth noting that Thai business still has very little participation in outbound cross-border e-commerce. Thai e-commerce operators still focus mainly on selling goods and services online domestically. According to the ETDA survey, it was

found that in 2018, Thai business sell 91.29% of all online sales of goods and services went to domestic consumers, while only 8.71% went to consumers in the international market.

So far, from the interview with several e-commerce associations, there are only a few businesses able to participate in outbound cross-border e-commerce. These businesses are mostly large corporates with experiences in oversea marketing. Though it's still a minority, but it tends to grow steadily. The main market for these businesses is the Chinese market as it is the largest e-commerce market and has continued to expand, while there are only a few participate in outbound cross-border e-commerce with ASEAN market.

Key drivers of e-commerce sale in Thailand

Intensive use of mobile phones and social networks

Globally, e-commerce growth is primarily being driven by consumers using their mobile devices, phones and tablets, to purchase goods and services. According to eMarketer (via Statista), e-commerce through mobile device accounts for roughly 73%percent of all e-commerce sales in 2021, up from 52.4 percent in 2016 (Porcelli, 2021). The obvious reason is that shopping through mobile device is more convenience and safe. People can carry around mobile phone anywhere and can search for the products they want any time. Additionally, payment applications are developed to be faster and more secure the same time.

In Thailand, the number of smartphone users in Thailand have reached around 53.6 million in 2020, accounted to around 80% of the population. There are intensive use of mobile phones and social networks especially among Gen Y and Gen Z. Consumers in Southeast Asia spend averagely 3.6 hours per day on mobile internet, while Thais lead with an average of 4.2 hours spent per day. According to We are social, 83.4% of Thai people owning mobile phone uses shopping application and 68.1% use banking and financial services application. This reflects the growing trend of e-commerce in Thailand.

High competition in e-marketplace platform

Giant online platforms, Shopee and Lazada, have been in fierce competition over the past years in 6 ASEAN markets, namely Thailand, Indonesia, Vietnam, Malaysia, the Philippines and Singapore. Recently, Shopee has surpassed Lazada's downloads in ASEAN. This also happens in Thailand where Shopee has overtaken Lazada and become a leader in e-marketplace platform. As of now, Shopee and Lazada have the largest number of users compared to all online retailers in Thailand, with an average monthly web visit of 51 million and 33 million, respectively (Figure 6).

On one hand, competition encourages businesses to create innovation, supply diversity, and provide affordable prices for consumers. On the other hand, competition also offers choices to consumers with comparing prices and quality services, thus an incentive for consumers to buy more online products. As a result, competition promotes e-commerce growth.

COVID-19 is changing consumer behavior

Covid-19 epidemic situation is a significant turning point that has completely changed people in society into new lifestyle or to be called "New normal". Due to the COVID-19 pandemic, the implementation of lockdown, social distance, work from home policy, and other measures began in early 2020, prompting customers to shift their behavior to online purchasing, social media use, internet teleconferencing, and streaming of videos and films.

As there has been a huge increase in demand for online purchases of goods and services, the number of entrepreneurs in online channels has also increased exponentially to serve these demands. Business Development Department data showed that e-commerce, especially for retail business, increased significantly. The department reported in the first 7 months of 2021, there were 794 new business registrations for e-commerce, up from 576 businesses in the same period of last year, with registered capital of 1.04 billion baht, on par with figures for the whole of 2020 (Arunmas, 2021).

Moreover, more consumers choose cashless payments to reduce the risk of exposure to infection. According to Bank of Thailand, in 2020 Thai people use e-payment on average 151 times per person, a three-fold increase from 2016.

Readiness to participate in Cross-border E-commerce

Readiness to participate in e-commerce in general can be measured by observing ecommerce ecosystem including information technology and digital infrastructure, logistics system, electronic payment system, related law and regulations. In terms of cross-border e-commerce, there are additional factors to consider including taxation, trade barrier, and security concerns.

Internet accessibility and reliability in Thailand

Thailand has been using the Internet since 1987, starting with computer networks between universities (ANET, 2019).



Figure 8: Internet users to total population

Source: World Bank

The use of internet later expanded to government agencies and the private sector. There have been established companies for providing internet services to general public, commonly known as ISPs (Internet Service Providers), such as Internet Thailand Service

Center, KSC Commercial Internet Co., Ltd. (Internet KSC), Loxley Information Service Co., Ltd. (Loxinfo), etc.

Thailand's internet and mobile usage has skyrocketed in the last two decades. The World Bank estimated that internet users in Thailand are accounted for 77.8% of the population in 2020, compared to that in 2001 with less than 10%, as the cost of accessing the internet today has dropped and the internet service is more comprehensive and faster (Figure 8). Mobile phones were the most often utilized devices to access the internet among Thai users, followed by laptops and desktops. According to We are social, 99% of all people aged 16-64 owns mobile phone, and almost all of this are smartphone with internet access. In addition, there are 90.7 million mobile subscribers in 2021, accounted for 129.7% to the total population, which means Thai people have more than one mobile with connection. Thai internet users spent around 10 hours on a daily basis using the internet (ETDA, 2021).

The internet connection speed in Thailand has improved significantly in all aspects. Average download speed for fixed internet connection in 2021 is at 308.35 Mbps, which increased 146.4% from previous years. Thailand is ranked second fastest among ASEAN member states after Singapore. In the field of 4G or 5G, the internet connection via mobile phones in Thailand has almost doubled from the previous year with the speed of 51.75 Mbps. In 2021, Thailand is among the first countries in ASEAN to adopt 5G technology.

Through government support, governments have begun to adopt policies to reduce the digital gap by focusing on creating more internet access points. Since 2012, in the auction of 3G (2100 MHz) and 4G (1800 MHz/900 MHz) telecommunications spectrum, the National Broadcasting and Telecommunications Commission (NBTC) has begun to set requirements to private companies to build a telecommunication network to cover in all provinces. and cover the large number of people (Sangsuriyong, 2018)

According to the Ministry of Digital Economy and Society (MDES), the MDES Action Plan (2018-2022) and Office of National Digital Economy and Society Commission (ONDE) Action Plan (2022-2027) have five key targets related to the development of fixed broadband networks. The targets include, by 2022, all villages in Thailand must have access to fixed broadband with speed over 100Mbps, 70% of household fixed broadband penetration, and reduction of fixed broadband service prices to 2.5% of GNI per capita.

Payment and Banking Services in Thailand

In the past years, the form of payment in Thailand has clearly shifted towards electronic payment or Digital Payment. Followed up the National E-payment master plan, "Promptpay system" was launched in 2016. The system allows transactions to take place using only national ID or phone numbers instead of banking account through electronic channels, i.e. internet banking, mobile banking, etc. This is the game changer for Thai electronic payment as the Promptpay transaction fee is very low. Previously, interbank transfers may have incurred fees of up to 120 baht but transaction fees under Promptpay range only from 0-10 baht per transaction depending on transfer amount. Transaction under 5,000 baht will be free of charge. So far, PromptPay has reached 56.7 million registered numbers at the beginning of 2021.

The great success of PromptPay in Thailand leading to the enhancement of international payment connectivity through cooperation with ASEAN member countries. It has developed QR code payment services with Japan in 2018, Lao PDR in 2019, Cambodia in 2020, and most recently with the Vietnam March 2021. In addition, the Bank of Thailand (BOT) and the Monetary Authority of Singapore (MAS) has launched the linkage of Thailand's PromptPay and Singapore's PayNow real-time retail payment systems in 2021. Customers of participating banks in Thailand and Singapore will be able to transfer funds of up to \$\$1,000 or THB25,000 daily across the two countries, using just a mobile number, with the transfer fee of 150 baht/transaction. This is considered the world's first instant international money transfer and important achievements of the ASEAN payment connectivity cooperation.

According to J.P. Morgan, credit/debit cards still one of the major payment methods through e-commerce in Thailand. Debit card is preferred over credit card (Figure 9). Cash on delivery remains a feature of the Thai e-commerce market, as for some customers still lack confidence in the payment system, but its use is in decline trend. Bank transfers are used at the same rate as cards, at 26 percent but it is on the rising trend as Bank account penetration in Thailand which now stands at 81 percent. This method is expected to become the dominant payment method by 2023. Digital wallets are also becoming more popular, because to the widespread adoption of smartphones (J.P. Morgan, 2020).



Figure 9: Payment methods on E-commerce

Legal and Institution Environment

In general, Thailand provides adequate legal provisions to support electronic trade both direct and indirect related to electronic e-commerce. The Electronic Transactions Act (ETA) enacted in 2001, set basic principle for any data in the form of electronic data shall be deemed as such information is made in writing (Electronic Transaction Act B.E. 2544, 2001). So, basically this act supports the legal effects of electronic and commercial electronic transactions conducted electronically. The act was further amended in 2019 on Digital Identification (Digital ID) which aim to eliminate the repetition of the verification process needed to be performed by the users for each transaction with each service provider, hence build confidence in electronic transaction and reduce cost for both users and service providers.

There are several laws concerning consumer protection, though they are not directly related with e-commerce, but they can be adapted to the context. First, the Consumer Protection Act (CPA) first came into force in 1979 and was amended in 1998 and 2013 (Consumer Protection Act B.E. 2522, 1979). The Act perform as a mediator in disputes between consumers and sellers when the case cannot be addressed between the two parties alone. the CPA has specific provisions to protect consumers in relation to advertising and labelling of goods, sales contracts, and consumer product safety.

Second, Direct Sale and Direct Marketing Act (DSDMA) enacted in 2002 and was amended in 2007 and 2017, concerns in general the sale of goods and services which are sold directly at consumer's place of work or residence (Direct sale) or sold via other non-face-to-face sale methods (Direct Marketing) such as website or social media (Direct Sale and Direct Marketing Act B.E. 2545, 2002). With regard to e-commerce, the act stipulates that business operators selling online products that fall under the scope of "direct marketing" must register their business operations with the Office of the Consumer Protection Board (OCPB) before trading. The customer has the right to terminate the contract by sending a letter of intent within seven days of receipt of the goods or services and the sellers need to give a full refund the customers within 15 days after receiving the letter. In addition, the Thai government established an E-Commerce Complaint Center to handle complaints and enquiries from Thais about online transactions.

Third, the Personal Data Protection Act was enacted in 2019 (Personal Data Protection Act B.E. 2562, 2019). The PDPA aims to fortify control on the use of personal data. The PDPA governs the collection, use, and disclosure of personal data by a data controller or data processor based in Thailand, even if the collection, use, or disclosure takes place outside of Thailand. Thailand's PDPA was originally scheduled to come into effect on June 1, 2020 but it was postponed twice to June 1, 2022. As the PDPA's scope and requirements are extensive and complicated, it will take time for businesses to fully comply. According to the survey by ETDA, 73.4% of large companies are ready to comply with PDPA laws, while only 13.5% of small and medium-sized companies are ready to comply. So far, large businesses have been preparing 60-70%.to comply with the law. However, due to the delay of the secondary legislation due to the COVID-19 pandemic, businesses are concerned about whether what has been done will meet the standards set by the Personal Data Protection Board. Regarding cross-border e-commerce, Thailand has no direct law and regulations concerned in this issue.

Customs and tax regulations

Thailand's government is enacting a series of regulations aimed at digitizing the country's tax and social security systems. Under the current customs regulations, goods imported to Thailand by air through express consignment are divided into 5 categories and given the following treatments (Table 1).

No.	Type of Goods	Customs Declaration	Import Duty
1	Documents (i.e., mail)	No	No
2	Goods that are exempted from import duty by law	Simple declaration	No
3	Goods with value not exceeding 1,500 Baht	Simple declaration	No
4	Goods, not falling into Type (3), with value not exceeding 40,000 Baht	Consolidated entry declaration	Yes*
5	Goods with value exceeding 40,000 Baht or which are subject to import permits	Full customs entry declaration	Yes*

Table 1: Customs requirement for express consignment goods

Source: (Mahitivanichcha, 2018)

Note * The applicable duties vary subjected to Thailand's tariff schedules.

Importing goods worth less than 1,500 Baht into Thailand does not require submission of formal import declaration entries with the Customs Department, nor does it necessitate payment of import duty or VAT. This category is appropriate for e-commerce transactions since it provides an ideal customs environment. The issue is getting complicated when the price of the products being transacted exceeds 1,500 Baht (about 45 USD) where the e-commerce operator or the consumer must file customs declarations for the goods, which can be cumbersome, expensive, and time consuming.

Another related regulation is e-service law, enforced in 2021. This law stipulates that foreign electronic service providers and electronic platforms which receive income of more than 1.8 million baht per year from providing electronic services to non-VAT registered customers in Thailand are obliged to register for VAT, file VAT returns and pay VAT by calculating output tax. So far, 120 foreign e-service providers have registered with the Revenue Department.

Potential impacts of cross-border e-commerce on trade

Because cross-border e-commerce studies are relatively new, Thai government does not systematically collect relevant information. It is therefore difficult to assess the potential impacts of cross-border e-commerce on trade on international trade at this time.

Under this study, express consignments² under categories 2 and 3 are used as a proxy to estimate cross-border e-commerce imported volume as mostly e-commerce trade are

Cutegories of en	press consignment
Category	Description
Category 1	Non-dutiable Documents
Category 2	Non-dutiable Consignments. This category comprises of following.
	1. Any consignment not subjected to duties and taxes by Customs regulations
	2. Consignments with CIF value under 1,500 Baht
	3. Trade samples of no commercial value
Category 3	Dutiable consignment imported though a Customs airport with value under 40,000 Baht

² Categories of express consignment

processed through express shipments. According to the Customs Department, online purchase order (e-commerce) imported from abroad to Thailand through Suvarnabhumi Airport have significantly increased since 2018 (Figure 10). There were over 15 million packages imported in 2018. This number has increased more than 2-fold in 2020 and 2021 to around 39 million and 37 million packages.



<u>Figure 10</u>: Statistics on the import express consignment at Suvarnabhumi Airport, 2018-2022p

Conclusion and policy recommendations

Conclusion

This study used a qualitative research methodology to gain an understanding of ecommerce in Thailand and assess the country's readiness to participate in cross-border ecommerce under AHKFTA.

Though in the past 5 years, e-commerce marketplace has been on the rising trend since the entry of large foreign e-marketplace. The value of national e-commerce market in 2020 was about 3.8 trillion baht (US\$120 million). Business-to-Consumers (B2C) has the largest share to the total e-commerce value in Thailand, following by Business-to-Business (B2B) and Business-to-Government (B2G). In addition, compared to major ASEAN members, Thailand also has the highest value in B2C in ASEAN.

Thailand's e-commerce market is dominated by global giants. The top two e-commerce sites, Shopee and Lazada, accounted for over 70% of total monthly visits. Thailand mainly participates with inbound cross-border e-commerce, while only minority participate with outbound cross-border e-commerce. The main market outbound cross-border e-commerce

Source: Suvarnabhumi Airport Cargo Clearance Customs Office, Thai Customs Department Note: The data for 2022 is preliminary from January to April only

is the Chinese market, while there are only a few participate in outbound cross-border ecommerce with ASEAN market.

Key drivers of e-commerce sale in Thailand are intensive use of mobile phones and social networks, high competition in e-marketplace platform, and change in consumer behavior from pandemic.

Thailand has to some extent adequate e-commerce ecosystem. The internet accessibility and digital payment system in Thailand has been developing steadily over years and internet connectivity in Thailand is certainly among the best in the region. Thailand provides adequate legal provisions to support electronic trade both direct and indirect related to electronic e-commerce, however, Thailand has no direct law and regulations concerned with cross-border e-commerce.

Policy recommendations for policymakers

The government can play an important role in supporting the country's online retail and digital economy to enhance productivity in the service sector as following.

- Promote the development of logistics quality in the country, by improving the infrastructure and supporting the establishment of a modern integrated warehouse.
- Promote transparent and systematic electronic payment and tax collection on online businesses. to support the expansion of online retail transactions in the future
- Expand online retail market to go beyond the domestic market through the simplification of trade procedures and regulations to enable Thai e-commerce businesses to reach out for larger market in ASEAN and Hong Kong.
- Expedite secondary legislation on the PDPA to give the private sector more time to adapt. There can have some exceptions or deferrals for small businesses that are not yet ready to comply.

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<u>Appendix 1</u>: E-Commerce Landscape



Source: (Priceza, 2020)

CHAPTER 9

STRENGTHENING E-COMMERCE TO PROMOTE BUSINESS TO BUSINESS AND BUSINESS TO CONSUMERS UNDER AHKFTA: A CASE STUDY OF VIETNAM

AUTHORS

- Pham Minh Thai
- Vu Hoang Dat
- Vu Thi Van Ngoc

Centre of Analysis and Forecasting (CAF)

ABSTRACT

The primary data collection from in-depth interviews and secondary data from published journal articles shows that Vietnam's e-commerce has had a vigorous development with an annual growth rate of 25.9%/year from 2014-to 2021. Among many factors enhancing the e-commerce market development in Vietnam, there are five most influential vital drivers, including the boost of the pandemic, promotion of legal documents; explosion of mobile devices; strong FDI inflow; and the development of logistics services. However, there is an imbalance between businesses providing services for B2C and B2B e-commerce in Vietnam. The top e-commerce trading floors listed on the B2B side are most of the B2C category or mainly serve B2C e-commerce. Vietnam does not have a large-scale and reputable B2B exchange. Furthermore, e-commerce development in Vietnam faces two main obstacles: low rate of having banking accounts and low utilization of e-wallets.

BACKGROUND AND RATIONALE

The world recently has witnessed the booming of e-commerce and its remarkable contribution to the economy and society. From the initially traded products as used computers (by Boston Computer Exchange in 1982) and books (by Book Stacks Unlimited in 1992 and Amazon in 1995), e-commerce primarily covers all tradable goods and services. Especially in the context of the Covid-19 pandemic, e-commerce channels skyrocketed when millions of people around the world were stuck at home. Chevalier (2021) presents the total global retail sales of \$4.28 trillion in 2020 and is expected to be \$5.4 trillion by 2022. The e-commerce market in the Asia-Pacific region is now growing faster than in other world regions. This can be partly explained that the context of the digital era with technological advancements provides an excellent opportunity for Asia, especially as countries like China, Indonesia, and India are taking a shortcut and fostering innovations (Lau et al., 2016).

USD million	2019	2020	CAGR	2024	
China	862,239	1,057,967	8.6%	1,474,102	
India	33,198	43,489	13.1%	71,049	
Indonesia	20,339	28,597	15.4%	50,662	
Thailand	5,104	6,921	13.0%	11,266	
Vietnam	4,428	5,770	9.0%	8,158	

Table 1: Rapid growth of Asian B2C e-commerce market

Source: Chevalier, 2021

As a part of e-commerce, cross-border e-commerce is developed based on traditional international trade combined with e-commerce. It requires fewer intermediate links between sellers and buyers but higher demand for services, especially information, payment, and logistics. Thus, cross-border e-commerce presents outstanding advantages over traditional commerce in compressing the space and time distance, lowering transaction costs, improving transaction efficiency (Gomez-Herrera et al., 2014), optimizing the system, simplifying the trade process, and increasing commercial opportunities (OECD, 2019) as well. In the context of the 4.0 Industrial Revolution, cross-border e-commerce is rapidly becoming a core element of the global economy and an inevitable trend that no country can stand aside. Cross-border e-commerce can be mainly classified into B2B and B2C. According to a report by Accenture, in 2020, global B2C gross merchandise value makes up \$3.4T by an annual growth rate of 27.4% in the period 2014-2020 (Figure 1).



Figure 1: Global Cross-border B2C and Shoppers 2014-2020

Source: Accenture

B2B cross-border e-commerce has grown steadily since the 1990s and still constitutes the dominant of cross-border e-commerce. It relates more to global value chains. Recently, B2C has grown stronger and faster than B2B transactions (UNCTAD, 2016). In the long term, B2B keeps overwhelming B2C.

<u>Figure 2</u>: Worldwide e-commerce revenue B2C vs. B2B



Source: Keenan (2021)

By the simple definition that cross-border e-commerce means the cross-border commerce execute via the internet, determinants of cross-border e-commerce can cover the cross-border commerce-related issues and the internet-related issues. However, the factors are beyond this simple summation since this modern way of shopping changes institutions, the economy, and society with the participation of different stakeholders. Literature shows some common factors influencing e-commerce. Generally, the e-marketplace consists of three pillars of institutions, economic and social acceptance (UNESCAP, 2018).

Economic factors name (i) affordability and access to ICT, (ii) bandwidth availability, (iii) availability of online payment options, (iv) delivery infrastructure, and (v) economies of scale. Legal and institutional factors refer to institution bodies, existing laws, and rules influencing an individual's or organization's e-commerce-related behavior and value systems of national cultures. Social acceptance and awareness, including confidence, knowledge, trust, perception, etc., cover firm-level and consumer levels. The occurrence and degree of influence of these factors in each country and region depend on the level of development.

Previous studies by Kawa and Zdrenka (2016) and Heel et al. (2014) reveal the same barriers to cross-border e-commerce, including unreliable and prolonged shipping times, complicated and unclear return process, customs-related procedures, limited transparency on delivery, price opacity, and limited ability to change delivery time and location. In addition, Kawa and Zdrenka (2016) also present problems of language, payment currency, and legal and tax conditionings.



Figure 3: Factors affecting the development of e-marketplace

Sources: UNESCAP and ADB (2018)

In terms of drivers for trade flows, Ngo at el. (2020) confirm the positive impacts of free trade agreements, including AHKFTA, on the trade balance, mainly Vietnam's export. Viet Nam exports to Hong Kong increased from 2009-to 2020 while the imports declined (Figure 4). Hong Kong has become the fifth- export market of Vietnam's products.



Figure 4: Export and Import from Vietnam to Hong Kong 2009-2020 (million \$US)

Source: Authors' calculation from UN Comtrade data

Apart from the facilitator from the signed agreement, Viet Nam holds some favor conditions to becoming the potential market for Hong Kong lifestyle products as a young consumer market, rising middle class, and the ongoing urbanization in the context of more attention to the e-commerce platforms (Yuen, 2019).

On the other side, Vietnam businesses have started considering the entrance of Hong Kong with attractive conditions as nearly 5 million people shop online daily, the market penetration rate of the e-commerce industry is expected to be 72.6% (in 2022) and reach a value of \$11.3 billion (by 2025). Individual customers account for about 60% of all e-commerce sales. When comparing e-commerce and traditional commerce, this is undeniably the future for setting up a company in Hong Kong. Moreover, 61% of transactions in the e-commerce industry are done through the website or phone application of the selling company, and 22% are done through third-party intermediaries. Popular e-commerce platforms in Hong Kong are Taobao, Amazon, JD, Alibaba, and eBay. With a 32% compound annual growth rate, e-wallet payments are expected to top this year. The major e-wallets are PayPal and AliPay.

Cross-border e-commerce has become an inevitable trend that countries expand their markets to the world and benefit from increased trade flow. However, it suffers two-side effects from institutional, economic, and social acceptance depending on the development level and globalization. Some previous studies and articles on cross-border e-commerce in Vietnam mainly focus on general development and policy-related issues rather than the emerging market like Hong Kong. There is a research gap that needs to be filled. Vietnam and Hongkong share great opportunities for e-commerce facilitation via AHKFTA, and they need more understanding and consideration for a proper participation strategy.

Given that context, the current paper seeks to exploit the current status of Viet Nam's ecommerce market and the readiness of its infrastructure both in terms of complex infrastructures to facilitate e-commerce and regulations. Furthermore, we shall discuss the potential impacts of the AHKFTA on the e-commerce between Viet Nam and Hong Kong. Indeed, there have been no records across border e-commerce in Viet Nam. Therefore, we can only indirectly assess the potential impacts with reported official trade data.

THE FRAMEWORK OF AHKFTA

The AHKFTA was signed between ASEAN members and Hong Kong in 2017, and it came into force for Viet Nam, Thailand, and Malaysia in June 2019.

The ASEAN-Hong Kong free trade agreement mainly follows conventional trade agreements with WTO's coverage and disciplines. The tariff reduction commitments have depended on the levels of development of ASEAN's members, but a majority are eliminated with a ten-year scheme. Other aspects of the trade, such as technical barriers, custom valuation, and procedures, are also committed to following WTO's disciplines. For trade in services, market access and national treatment are the main areas in the agreement.

Tariff reduction of Viet Nam on Hong Kong China. Currently, an applied tariff is relatively high as some tariff lines reach 25 to 30%. Therefore, the elimination of tariffs would be expected to boost the export of Hong Kong to Viet Nam.

For Viet Nam, tariff reduction is comparable to commitments in its other trade agreements. About 48% of tariff lines would be zero within three years after the agreement's effect in January 2019. An additional 24% of the tariff lines would also be zero within ten years. Meanwhile, 19% of the tariff lines are not subject to tariff reduction commitments. Certain articles on plastics.

Some tariffs on clothes products such as T-shirts, singlets, and other vests, knitted or crocheted, and jewellery will be eliminated by 2027, from the current tariff of 20%. Meanwhile, footwear is still applied 30% without any commitments to reductions.

As predicted, formalization and simplification of export and import procedures would positively affect trading between the two partners in general and e-commerce in particular. However, there are no specific commitments on e-commerce, such as tax concessions or payment and recognization of e-commerce platforms. Consequently, procedures of ecommerce still follow what is applied to conventional trade.

RESEARCH METHODOLOGY

The article uses qualitative research methods to gain an in-depth understanding of e-commerce in Vietnam. Qualitative research is a method for the meaning of the research object's concepts, characteristics, and properties. Essentially, qualitative research is interpretive. On the other hand, data interpretation involves describing the context, analyzing the situation into themes, and interpreting and drawing conclusions. The article uses the following data collection and data processing methods:

Data collection method: The research team uses the primary data collection method, secondary data from published journal articles, conference proceedings, reference books, monographs, and specialized reports. Publications and internet sources to inherit the views of previous studies for the report's analysis. In addition, the research team also conducted in-depth interviews with several organizations directly related to e-commerce in Vietnam, such as the E-commerce Development Center (Department of E-commerce and Digital Economy-Ministry of Industry and Trade); National payment gateway; Vietnam E-commerce Association (VECOM); Lazada Vietnam; Shopee Vietnam; Tiki Vietnam, etc. to get more primary data as well as record direct assessments of difficulties, challenges, and development prospects of e-commerce in Vietnam.

As a separate assessment, we also employ trade data from UN Comtrade to exploit current trade patterns between Viet Nam and Hong Kong to derive potential impacts of the AHKFTA on cross-border e-commerce between the two.

RESULT OF THE STUDY

Development of e-commerce in Vietnam

Trend of e-commerce sales and e-commerce platforms

Since 1998, Vietnam's e-commerce market has gone through three stages of development. The period from 1998-to 2005 is considered the period to build infrastructure for e-commerce. The next phase, from 2006-to 2015, is the period of e-commerce popularization with the issuance of the Master Plan for e-commerce development. Approximately half of the population has access to the Internet, and the majority of the population, especially urbanites and young people, shop online. The e-commerce market has made a mark with its development steps and has become one of the three fastest-growing e-commerce markets in Southeast Asia, with an average growth rate of about 30%. From 2016 until now, e-commerce has entered a new stage of development at a fast and stable pace (VECOM, 2021). The total transaction value in the e-commerce market is increasing rapidly (Table 2). Along with the stable development of Vietnam's economy with an average GDP growth rate of over 7%/year, e-commerce has had a vigorous development. In 2021, the total revenue in the e-commerce market reached 13.7 billion USD, an increase of 16% compared to 2020 (accounting for 5% of the total retail sales of consumer goods and services in Vietnam).

	2014	2015	2016	2017	2018	2019	2020	2021	2022*
E-Commerce Revenue (bil. USD)	3.0	4.1	5.0	6.2	8.1	10.1	11.8	13.7	16.4
Growth rate (%)	35.0	37.0	22.9	24.0	30.0	25.1	17.1	16.1	19.7

<u>Table 2</u>: Transaction value on the e-commerce market in the period 2014 - 2022

Sources: MOIT, 2022 * is estimated

The achieved results confirm outstanding achievements in the period 2014-2022. Compared to 2014, the scale of e-commerce in 2021 increased more than 4.5 times. This period recorded a high and stable annual growth rate, averaging 25.9%/year. Estimated data for 2022 showing that the growth rate in 2022 will be 19.7% compared to 2021 with the Ecommerce revenue is around 16.4 billion USD. With this steady growth, the size of the e-commerce market will reach 43 billion USD by 2025 and rank 3rd in Southeast Asia after Thailand and Indonesia (Google, Temasek, Bain Bain& Company, 2019).

Year	2015	2016	2017	2018	2019	2020	2021	2022 (est.)
Estimated number of people participating in online shopping (million people)	30.3	21.7	33.6	39.9	53.8	49.3	54.6	57-60
Estimated purchase value of a person (USD)	160	170	186	202	225	240	251	260- 285
Proportion of e-commerce revenue to total retail sales of consumer goods and services nationwide, (%)	2.8	3	3.6	4.2	5	5.5	7	7.2-7.8
Percentage of people using the Internet (%)	54	54.2	58.1	60	66	70	73	75

Table 3: Size of Vietnam's e-commerce market in the period 2015-2022

Sources: MOIT, 2022

Along with the increase in revenue, in 2021, the indexes of online shopping participants, shopping value per person, and the proportion of B2C e-commerce revenue compared to the total retail sales of goods and business. Vietnam's consumer service revenue has increased rapidly (Table 3).

Table 3 shows that in 2015-2021, the number of people participating in online shopping increased continuously from 30.3 million people to 54.6 million people, an average increase of 13.7% per year. The value of a person's online shopping also increased from 160 USD to 251 USD, an average increase of 7.8% per year.

Online platforms

The two online sales platforms are business-to-business (B2B) online wholesale and businessto-consumer (B2C) online retail. B2B transaction size is much higher than B2C[i]. However, there are very few B2B e-commerce platforms born and successful. Since the beginning of the new millennium, when e-commerce began to take shape in Vietnam, several organizations and entrepreneurs have pioneered the construction of B2B e-commerce platforms, including Gophatdat.com, Vnemart.com.vn, Ecvn.com. Except for Ecvn.com, which is operated by a state-owned unit, which is still operating at a moderate level, most of the other exchanges have closed after a few years of operation. In addition to reasons such as the immaturity of the online market, the uncreative business model, and the weak management team, one of the fundamental reasons is that these exchanges only rely on small domestic investment capital. tiny and utterly absent of foreign investment capital.ⁱIn that context, Telio.vn floor attracted considerable attention. Starting operation at the end of 2018, Telio.vn has had a successful start. Firstly, Telio.vn has chosen a model of connecting small, traditional retailers with brands and wholesalers on a centralized platform. By aggregating the needs of many retailers, Telio.vn can provide them with a wide selection of products at reasonable prices and more efficient logistics. Second, unlike most B2B exchanges born before, Telio.vn has received a second round of investment capital of up to 25 million USD from many foreign investors, including investors in B2B exchanges. other in the world, such as Tiger Global, Sequoia Capital, GGV Capital.ⁱⁱ

In contrast, the most popular online sales digital platforms are e-commerce exchanges in the retail sector. Today's leading retail platforms (B2C) such as Shopee.vn, Lazada.vn, Tiki.vn, Sendo.vn all belong to foreign investors or have a high foreign capital contribution ratio. The potential for the e-commerce platform model is great, but the competition is also fierce. Many domestic and foreign investors jumped into this field but had to leave quite quickly. For example, in December 2019, Vingroup's Adayroi.com floor announced its closure after entering the market for a few years. Previously, the fashion business e-commerce platform Robins.vn of Central Group closed in March 2019. In January 2020, Lotte.vn floor of Lotte Group stopped working. A few years ago, many e-commerce platforms had to leave or resell after a relatively short period of operation, such as Lingo.vn, Deca.vn, Beyeu.com, Lamdieu.com, Foreva.vn, Zalora, Foodpanda. Most of these exchanges are owned by foreign investors or receive investment from foreign venture capital funds.ⁱⁱⁱ

E-commerce businesses (or websites) include three groups: a group of sales websites, a group of websites that provide e-commerce services, and a group of websites that assess the credibility of e-commerce websites. As of 2019, the number of sales websites announced (to the Ministry of Industry and Trade) reached 29,370 websites, the number of registered e-commerce service websites was 1191, of which there were 999 e-commerce trading floors, 145 online promotion websites. And 47 online auction websites (Vietnam E-commerce White Paper, 2021). However, the total number of e-commerce websites in Vietnam can reach about

60 thousand because the number of e-commerce websites (especially sales websites) announced/registered is only about half of the actual number of e-commerce websites.

Sales websites are the largest group of websites. Typical representatives of this group are FPTShop.com, dienmayxanh.com, thegioididong.com, nguyenkim.com, and cellphones. com, lotte.com, etc.

Website providing e-commerce services, including e-commerce trading floor services: Shopee, Lazada, Tiki, Sendo, Vatgia, Chodientu etc.; Online promotional services: Nhommua.com, hotdeal.vn, Cungmua. com, muachung.vn, etc. and online auction services: chilindo.com, sohot.vn, chodaugia.com, bidy. vn, daugianhanh.vn, etc.

Regarding the website of e-commerce website credit rating, there are currently no websites providing this type of activity in the Vietnamese e-commerce market. E-commerce website credit rating is an important activity to create a basis for improving the trust of consumers and businesses in the e-commerce environment. In the developed e-commerce markets in the world, some businesses/organizations carry out this activity. Therefore, the absence of businesses providing website credit rating services can be considered a gap in Vietnam's e-commerce ecosystem structure.

In short, the problem is that there is an imbalance between businesses providing services for B2C and B2B e-commerce in Vietnam. The top e-commerce trading floors listed on the B2B side are most of the B2C category or mainly serve B2C e-commerce. Vietnam does not have a large-scale and reputable B2B exchange. Vietnamese businesses mainly have to use the services of foreign B2B exchanges such as Alibaba or other exchanges.



Figure 5: B2C e-commerce revenue, 2014-2022, \$US Billion

Sources: Vietnam e-commerce white paper 2020

E-commerce in Vietnam has undergone a period of development and achieved specific results, becoming an excellent potential for the economy. B2C retail e-commerce sales increased from 4.07 billion USD to 10.08 billion USD, accounting for 4.9% of the total retail sales of consumer goods and services nationwide in 2019 (figure 5).42% of the population participates in online shopping. As a result, Vietnam has one of the top 3 e-commerce growth rates in Southeast Asia. Vietnam's e-commerce in 2020 will increase by 16% and reach a scale of over 14 billion USD. In which the field of online retailing of goods increased by 46%, ride-hailing and technology food increased by 34%, online marketing, entertainment, and games increased by 18%, and the online travel sector alone decreased by 28% (Google, Temasek, Bain & Company, 2019). With a scale of more than 10 billion USD, an online shopping value of 225 USD/person, and a stable growth rate of 30%/year in the period 2016-2020, Vietnam's e-commerce can reach 35 billion USD in sales, and shopping online value reaches 600 USD/person by 2025.

In conclusion, the e-commerce market in Vietnam is becoming a popular business form of enterprise and substantially impacts the community. Especially in 2020, before the impact of the Covid-19 pandemic, many businesses have difficulty in doing business; the e-commerce market has become an effective business channel to help businesses both transact with customers and ensure their safety. ensure the requirements in epidemic prevention.

Key drivers of e-commerce sales

The pandemic gives a big boost to e-commerce growth

The pandemic created momentum and boosted the e-commerce activities of Vietnamese businesses when customers in many parts of the world and Vietnam had no choice but to be forced to sit in front of a computer screen to search for products, and perform purchase and sale transactions, payment via electronic devices. Such changes are a good condition for Vietnam's e-commerce market to accelerate its comprehensive development with a more significant number and value of e-commerce transactions.

The report Vietnam E-commerce accelerates after Covid 19 of the Vietnam E-commerce Association - VECOM shows that Vietnamese businesses have quickly adapted and changed their operating habits, organization, and management. Many businesses have implemented many training programs to improve the operational skills of businesses and employees, exploit online platforms in internal operations, and connect with customers. In addition, most businesses require employees to work online from home to ensure the community's safety and themselves while ensuring business operations. Solutions for running businesses remotely and managing employees working from home are shared through many online forums.

Vietnam has the highest growth rate of new digital customers compared to total service customers in Southeast Asia.



Figure 6: New digital customers among some ASEAN countries, 2019

Sources: Adsota and SOL Premier (2021)

Figure 6 shows that the number of new users from e-commerce platforms in Vietnam has grown by more than 41%, the highest in Southeast Asia in 2020. More surprisingly, 91% of them decide to continue using these e-commerce platforms, even after the world has overcome the pandemic (Adsota and SOL Premier, 2021). During the outbreak of the pandemic, Vietnam's e-commerce achieved impressive growth of 18%, the market size reached 11.8 billion USD, accounting for 5.7% of the total retail sales of goods and service revenue of national consumption (Figure 7).

This breakthrough growth is due to strict social distancing regulations from the Government that has forced consumers to find ways to adapt to shopping remotely without having to leave their homes.

Laws and decrees promoting e-commerce development

A significant factor in the development of the e-commerce market in recent years is that the Vietnamese Government has created a very favorable legal environment. The Government of Vietnam has issued many policies such as Decree No. 52/2013/ND-CP on e-commerce (establishing a legal corridor for e-commerce transactions to be conducted transparently, based on fair competition); Decree No. 124/2015/ND-CP amending and supplementing several articles of Decree No. 185/2013/ND-CP providing for penalties for administrative violations in commercial activities, production and sale of goods counterfeit, banned goods and protect the interests of consumers; Decision No. 689/QD-TTg approving the E-commerce development program for the period 2014 - 2020.
Figure 7: Trends in e-commerce development between countries during the Covid-19 epidemic season



Sources: https://powersell.com/

In addition, from 2005 to now, the Government of Vietnam has had long-term and consistent policies to develop e-commerce with A master plan every five years. Specifically, the most recent Decision No. 645/QD-TTg, dated May 15, 2020, the Government approved the National E-commerce development master plan for 2021- 2025. This is considered an important policy document with comprehensive solutions and specific resources as the basis for developing the e-commerce market in the next five years. The plan also sets out a specific target that by 2025, 55% of the population will participate in online shopping, with the average value of buying goods and services online reaching 600 USD/person/year; B2C e-commerce sales (for both online consumer goods and services) increased by 25%/year, reaching 35 billion USD, accounting for 10% of the total retail sales of consumer goods and services nationwide; non-cash payment in e-commerce reached 50%; 80% of e-commerce activities on mobile applications; 1,000,000 turns of businesses, business households, State managers, and students participating in training courses on e-commerce application skills

The explosion of mobile devices

The third reason for the boom in e-commerce in Vietnam in recent years is that handheld mobile devices have become the primary means of purchase in the development of Vietnamese e-commerce. Statistics of the US Economic and Financial Information Channel (CNBC) and emarketer have shown that most customers and online shoppers in Vietnam now tend to use handheld mobile devices. mobile phones, tablets...) to buy and sell products online, more than the number of people who shop through laptops or desktop computers.



Figure 8: Equipment to support online shopping, 2016-2021 (%)

The Vietnam E-commerce white paper 2019- 2021 announced the results of a survey of 1002 people participating in e-commerce activities nationwide on the use of electronic means to order online, showing that: if in 2018, the percentage of the population using mobile devices to order online accounts for 81%, this rate will be even higher in 2021 when the population using mobile devices to make purchases accounts for 91%. Meanwhile, the proportion of the population using laptops and desktop computers for online shopping accounted for 61% in 2017, but in 2019 this rate decreased to only 36%.

Q&Me's Vietnam EC market 2019 - 2020 report surveying 535 users in Hanoi and Ho Chi Minh City shows that the role of smartphones in increasing online retail sales in Vietnam is reflected in the number of shoppers making purchases through mobile applications, accounting for 79% and using mobile browsers accounted for 51% in 2019 (Figure 8). This makes mobile devices the dominant means of online shopping. online in Vietnam and help users repeat shopping as they have more contact with sellers.

The strong FDI in the e-commerce market in Vietnam

The fourth reason for the growth of Vietnam's e-commerce market in recent years is the more profound and broader participation with the substantial investment of foreign enterprises in the Vietnamese e-commerce market. Specifically, in 2018, Japan's SBI Holdings poured an additional USD 51 million into Sendo; Next, Alibaba invested another 2 billion USD in Lazada Southeast Asia, and SEA increased by 1,200 billion VND, equivalent to 50 million USD in charter capital for Shopee Vietnam. The fact that large foreign enterprises pour capital into the market shows the attraction and development potential of Vietnam's e-commerce market.

Sources: Vietnam EC market 2019 – 2021, Q&Me

In addition, the fact that large foreign enterprises invest in the e-commerce market also creates competition for market share between domestic enterprises and foreign enterprises. The deeper participation of foreign businesses and organizations in Vietnam's e-commerce market, such as Amazon, Google, Alibaba, SEA, and SBI Holdings, is also a significant signal showing the market's potential for growth. Vietnam's e-commerce market in the following years.

Vietnam became the third-largest investment recipient market in the region, with \$600 million in investment from 2018 to the first half of 2019. The number of investment deals was smaller, but the value was higher in 2019. The number of investment deals in MoMo, Sendo, and Topica from international investors contributes to making Vietnam an investment destination. Over the past four years, Vietnam's Internet economy has attracted nearly \$1 billion in funding, with 2019 being considered a record year for e-commerce in terms of attracting foreign investment (Google, Temasek and Bain Company, 2019)

Logistics services develop strongly

Finally, the growth of the e-commerce market over the past time has significantly contributed to the strong development of logistics services, last-mile delivery, and order fulfilment. Vietnam has more than 50 large and small fast delivery units. This number has increased tenfold over the past five years. The transport and logistics network for e-commerce covers all provinces and cities. The number of postal enterprises participating in the e-commerce supply chain is increasing. By the end of 2018, the total number of postal service points in the whole market was over 16,400 points, of which approximately 13,000 points belonged to the public postal network (Vietnam E-commerce White Paper 2020).



Figure 9: Growth rate of Vietnam logistics service market (mil. EUR)

Sources: EVBN (2019)

In 2019, Vietnam had 362 companies registered for express delivery services, including 198 international companies and 164 domestic companies. Typically, Vietnam Post companies (VNPost), Viettel Post, Nhat Tin Logistics, DHL, Kerry, Giaohangnhanh, EMS. Most of the delivery companies in the market have deployed this service to support e-commerce businesses in buying and selling.

The E-Commerce Industry in Vietnam - Edition 2018 report of EVBN in 2019 cites research by Ken Research 2018 showing that the E-logistics market in Vietnam is worth EUR 90 million, equivalent to about USD 103 million in 2018, and is predicted to have an average annual growth rate of about 42.1% until 2022. This fact proves the development and potential of the logistics service market for e-commerce activities and through it. Therefore, he contributed significantly to the growth of e-commerce in Vietnam in the past and the future.

Key players in cross-border e-commerce

The six countries that stand out in the booming e-commerce market are Indonesia, Thailand, Malaysia, Vietnam, Singapore, and the Philippines. With information from we are social & Hootsuite and iPrice Group, Boxme has compiled general information about each market, from demographics to best-selling categories and top e-commerce platforms (Figure 10)

Figure 10: The Top 10 Most Visited E-commerce Websites in Southeast Asia (Total average visits obtained by each platform in 2020)



Source: https://blog.boxme.asia

Three Vietnamese platforms (thegioididong, Tiki, and Sendo) remained in the 5th, sixth, and eighth positions among the top e-commerce site web visits from the first quarter to the fourth one in 2020.

Tiki

Starting as an online website for selling books and stationery, Tiki has become one of the leading e-commerce sites in Vietnam. With a meticulous product inspection process and a professional logistics system, Tiki has become Vietnamese consumers' most reliable brand. Tiki's two major investors are Vietnam's VNG and China's JD.com.

It was established in March 2010 Tiki. vn is currently the top 2 e-commerce site in Vietnam and the top 6 in Southeast Asia. In addition, Tiki was in the Top 1 best place to work in Vietnam in the Internet/E-commerce industry in 2018 (Anphabe voted) and the Top 50 best places to work in Asia in 2019 (HR Asia voted).

Sendo

Sendo is an e-commerce platform under the management of Sen Do technology's joint-stock company. Born in September 2012, initially as a project of FPT Online developed, and on May 13, 2014, it was transferred to Sen Do technology joint-stock company until now.

After the capital increase in May 2020, foreign shareholders now account for 65.05% of Sen Do. Currently, FPT[i]¹ no longer owns any shares in SenDo. Currently, Sendo's charter capital is VND 114.169 billion.

Foreign investors currently investing in Sendo include eContext Asia, SBI, Digital Garage, Beenos, Beenext... with 65.05% of shares being foreign investors. It can also be said that Sendo is no longer an e-commerce platform "in" Vietnam anymore.

Sendo operates under the primary model of B2C2C (business-to-consumer-to-consumer). That is, for other businesses to sell to B2C users and for users to sell to C2C users. So, whether you are an individual or a business, you can open a store and sell on Sendo.

Lazada

As a Southeast Asia-focused e-commerce platform from Alibaba Group, Lazada stands with Shopee as the region's other most prominent e-commerce platform.

Lazada Vietnam was established in March 2012 as an e-commerce exchange, providing products in many different categories such as furniture, phones and tablets, fashion and accessories, and personal care products. Health care, beauty, toys, and sporting goods. Lazada Vietnam is a part of Lazada Group, owned by Alibaba Group - a multinational e-commerce corporation and currently has branches in Indonesia, Philippines, Singapore, Thailand, and Malaysia.

¹ FPT is one of the largest multi-industry corporations in Vietnam. Therefore, FPT has invited a lot of external shareholders.

Lazada's direction is a marketplace model - an intermediary in online buying and selling. Thus, except for some instances (such as receiving customer complaints, etc.), Lazada will not have much control over the quality of sellers' and sellers' products.

Shopee

Founded in 2015 by SEA Group and despite having only entered the Vietnamese market in mid-2016, latecomer Shopee has completely taken the lead in the e-commerce race in Vietnam and the region. With over 34 million website views in the third quarter of 2019, Shopee is also the e-commerce platform with the most monthly app downloads and active users.

Shopee is an online marketplace, an intermediary between buyers and sellers, making online business more manageable. There, the seller posts information about products and services without consulting or shipping, and the buyer can access that information visually without going to the store.

Shopee Vietnam is one of the first E-Commerce companies in Vietnam to provide online buying and selling services via mobile phone applications. It was established in early 2015.

Shopee app is the first C2C (customer-to-customer) mobile shopping application where users can surf, shop, and sell

Readiness to participate in cross-border e-commerce

To participate in e-commerce in general and cross-border e-commerce in particular, an economy should have physical and "regulation" infrastructures. The physical infrastructure covers communication and payment systems. Meanwhile, the "regulation" infrastructure mentions regulations on movements of goods and services and information to allow transactions to be executed effectively and protect all partners engaging in the related activities.

Physical infrastructure

Viet Nam has a high proportion of adults accessing to internet. By 2020, 70.2 % of the population in Vietnam will have access to the internet, a drastic increase from 30.6% in 2010^{iv}. The high proportion of internet users in Vietnam is mainly caused by the high coverage of mobile internet and a high ratio of smartphone owners in Vietnam. The coverage 4G network covered almost parts of the country in 2020. However, mobile phone with 4G connections are somewhat limited as most people use an economical mobile phone; only 40 percent of mobile phone owners are connected to the internet via the 4G network.

The widespread free Wi-Fi also causes a high ratio of internet users in Vietnam in public places in Vietnam. Free Wi-Fi is almost available in coffee shops in Viet Nam. Therefore, people can easily access the internet via phone or laptop without accessing the mobile data network. Indeed, this method of connection raises the question of regular and quality access to the internet among users in Vietnam. However, a low rate of banking usage is the main obstacle to developing e-commerce in Viet Nam, although Viet Nam set a high target for the proportion of adults having a banking account. Indeed, figures are contrasted against each other from different sources. One source states that 43 million out of 71 Vietnamese people aged 15 or above have a banking account^v, or the ratio is 60%. However, another source reports that only 30 percent of adults in Vietnam have a banking account^{vi}. Furthermore, the frequency of using banking accounts is another problem. According to Standard Chartered Report (2019), more than 70% of the payment for online purchases in Vietnam was made in cash (Figure 11). This is the highest ratio among ASEAN economies.



Figure 11: Payment method, 2019-2021

Sources: E-commerce white book MOIT, 2022

Therefore, there are two main obstacles to e-commerce in Vietnam regularity and quality of internet access and having banking accounts and usage.

Besides banking payment, there are several alternative payment methods for e-commerce, such as e-wallets or cryptocurrencies. Cryptocurrencies are not allowed in Vietnam. Meanwhile, e-wallet is relatively popular in Viet Nam. In 2021, Viet Nam has about 13 million active e-wallet accounts, and ratio of e-commerce customers using payments via e-wallet is about one-third, the third-highest ratio in Asia economies^{vii}. It is considerably higher than in developed economies. However, there are several limitations; the growth of using e-wallets has been mainly driven by promotion. Value per payment is low compared with other economies (World Bank, 2019). The average value which is available for payment per e-wallet in Vietnam is only 4.34USD^{viii}.

Security of internet servers in Viet Nam

There is a lack of overall assessment of the security of internet servers in Viet Nam. However, discrete evidence implies that the situation has improved over time. As standard, there are several reported cases of data leaking from some service providers, mainly in retailing, in Viet Nam. For example, there were leakages of 5.4 million customers of Mobile World (The gioi Di dong), the largest mobile retailer in Viet Nam, or 275 thousand accounts of Vietnam Collective Bank in 2018 (Nguyen, 2021). However, cybersecurity in Vietnam has been improved and ranked among the top-performing economies. Vietnam ranked 25th on Global Cybersecurity Index in 2021, an increase of 25 ranks compared with 2019.

However, the serious problem is the cybersecurity of customers, as 60% of the computer of organizations or enterprises are infected by malware for cryptocurrencies mining (Nguyen, 2021). 94 % of Vietnamese enterprises are infected by data leakage[i]². These high ratios raise a question of cybersecurity of individual computers in Vietnam as they are easily attached for other purposes or data and be easily and illegally accessed. Recently, data from global social networks such as Facebook or LinkedIn have also been leaked, which also included users from Viet Nam.

Legal and regulation framework

Regulations for online business in general and e-commerce, in particular, are somewhat sufficient in Viet Nam. Viet Nam had the first Law specializing in online business in 2005, the Law on Online Business dated 14 June 2005. It set a basic framework for this type of business regulation in Vietnam. Over time, the framework has been detailed or modified to better capture practices, as a collection in the E-commerce White Book of Vietnam 2020, 22 laws and 70 decrees and circulars relating to online business and e-commerce.

There are several under-law documents for implementation, including Decrees No. 52/2013/NĐ-CP dated 16 May 2013 and 85/2021/NĐ-CP dated 25 September 2021 for modification of Decree No.52. These set a basic framework for entities to engage in e-commerce activities such as information disclosure, price, specification, transaction, and payment. Several other laws, such as Law on Cybersecurity dated 12 June 2018, Law on competition dated 12 June 2018; Civil Law dated 24 November 2015, Law of Information Technology date 29 June 2006, and Law on commerce dated 14 June 2005, also have articles directly regulate e-commerce.

Customer Protection Law

Vietnam has no separate Law or under-law documents for customer protection under ecommerce. The customer has been protected by Law on Customer Protection and articles in legal documents for e-commerce such as Law and under-law documents as listed above. In

² https://vietnambiz.vn/diem-lai-cac-vu-ro-ri-du-lieu-nam-vua-qua-tu-mang-xa-hoi-nen-tang-giao-hang-tmdt-cho-toi-trung-tam-lam-dep-20210206122126026.htm

these documents, customers are protected by information from sellers regarding product specifications and other commercial conditions of prices and delivery. Furthermore, the Decree No. 85/2021/NĐ-CP on e-commerce dated 25 September 2021 also has more detailed responsibilities for e-commerce platform providers.

Privacy and data protection law

Vietnam does not have a unified legal framework for regulating data privacy. In principle, data collection, processing, or use must be agreed upon by the people whom data is collected. Furthermore, the user must follow the purposes transparently stated and consented to by the owners. Since 1st January 2019, with the law on Cybersecurity, data collection and storage must be in Vietnam. Put differently, the personal data of customers of international goods and service providers must be stored in Vietnam. However, there is no regulation on data cross-border transferring for other purposes such as processing or analyzing.

The first regulation for e-commerce of data privacy is the Law on E-commerce dated 29/11/2005 and two key decrees for detaining, "prohibition on using, providing or revealing private information of other organization, individuals gaining from e-commerce transaction without their consensus." Furthermore, organizations and individuals who collect and use customers' personal information have to construct a plan and publish all their collecting and using plans for customers, and all data-related activities must be consented to by the customers.

Regulations of cross-border e-commerce

Indeed, regulations on e-commerce in Vietnam impose on transactions in general. Put differently; there is no difference between domestic and cross-border e-commerce. Meanwhile, cross-border transactions of goods or services under e-commerce are still regulated the same as conventional transactions.

Accordantly, payments across the border are an obstacle as International Credit Cardholder is limited in Vietnam. Meanwhile, physical movements of goods and services must follow regulations with customs and other procedures the same as conventional cross-border movements. Vietnam also set a de minimis of 40 USD for free tax, but it is pretty low. Therefore, goods and services whose value are beyond the de minimis are imposed tariff as the same as conventional international trade.

Indeed, Vietnam is a founder of cross border e-commerce facilitation framework under APEC in 2017 and a member of CPTPP, which set a high level for facilitating cross-border e-commerce. However, there is a waiver of five years in implementing provisions in these agreements.

Potential impacts of cross-border e-commerce on trade

There is no consensus on the potential impact of e-commerce on international trade. Some earlier studies argue that e-commerce would not follow conventional economic rules. However, other works emphasize that new technologies offer new opportunities, but they are technologies, and e-commerce is just a part of a trading system (Yousefi, 2018). Indeed, players in the e-markets are still human, and their behaviors and expectations do not change in the e-markets. Therefore, conventional economic rules are still effective.

To assess the impacts of cross-border e-commerce on international trade, we may first consider e-commerce as an "integral part" of international trade by helping the digital economy as a trade facilitator. This argument is supported by a study by Goldfarb and Tucker (2019), who emphasize that digitalization reduces costs of (1) search, (2) replication, (3) transportation, (4) tracking, and (5) verification.

Therefore, the prediction of cross-border e-commerce on trade may follow the potential impacts of improvements in trade facilitation. In turn, impacts of improvement in trade facilitation on international trade comprise two potential channels. The first channel is to boost international trade in general, and the second is dependent on trading patterns between partners.

Current trading status between Viet Nam and Hong Kong³

Indeed, both Vietnam and Hong Kong are not major trade partners. For Viet Nam, the share of export to Hong Kong have gradually decreased, and the share of import from Hong Kong have been stable. However, the import only accounted for about 1% of the total, and export did not exceed 5% every year from 2009-to 2020. Therefore, Viet Nam ran a trading surplus with Hong Kong during the period. From Hong Kong's perspective the trading shares with Viet Nam are even smaller. However, imports from Vietnam have more and more accounted for larger shares since 2009. Meanwhile, exports to Viet Nam increased up to the year 2015 and then fluctuated.

As e-commerce would be more prevalent in selected product groups such as non-food consumer goods, it would be helpful to analyze trade patterns in more detail.

For Viet Nam, rakings of the highest-value trading group products at the two-digit level have not changed much between the 2011-2015 and 2016-2020 periods. In terms of imports, the top seven highest trading value product groups have not changed between 2011-2015 and 2016-2020. They include electronic machinery, knitted or crocheted fabrics, cotton, iron and steel, plastics, and articles. Meanwhile, for export aspect, electronic machinery, optical, photographic, cinematographic, footwear and nuclear reactors, boilers, machinery, and mechanical appliances are top value export of Viet Nam. On the other hand, natural or cultured pearls, precious or semi-precious stones, and a decrease in cereals and raw skin have emerged. The change is understandable as the rise of the former as inputs for the jewelry industry. Meanwhile, low

³ Analysis of this sub-section is based on data from UN Comtrade.

technology manufacturing industries have collapsed in Hong Kong, and demand for raw materials of cereals and raw skin decreased.

For Hong Kong, rakings of products exported to Viet Nam changed between 2011-2015 and 2016-2021. For 2011-2015, tobacco, iron and steel, and stone or peal for the jewelry industry are listed as the top three most valuable export products from Hong Kong to Viet Nam. Meanwhile, machinery, electrical equipment, and fabric accounted for the most valuable export in 2016-2021. In addition, meat and plastic products also emerge as the top export of Hong Kong to Viet Nam. Indeed, Hong Kong is no longer a manufacturing production hub in Asia. Therefore, the changes in export composition to Viet Nam might be caused by re-export activities. Meanwhile, the import composition does not change much between the two periods; machinery and electrical equipment, followed by meat, footwear, and clothing, are the top import from Viet Nam.

Indeed, we have somewhat inconsistencies in rankings regarding the value of groups of products reported by Viet Nam and Hong Kong. For example, nuclear reactors, boilers, machinery, and mechanical appliances are the second most valuable export to Viet Nam reported by Hong Kong. However, it only ranks fourth in the value of imports, as reported by Viet Nam.

As import data is often cited to be more reliable, top export groups of products of Hong Kong to Viet Nam would be benefited from the AHKFTA, except iron and steel. Other groups in the top five of the most value are often eligible for e-commerce, and the effectiveness of the AHKFTA would boost export from Hong Kong to Viet Nam.

Export of Viet Nam (as an import for Hong Kong) would also be expected to benefit from the AHKFTA in e-commerce. Except for the fish and crustaceans, mollusks, and other aquatic invertebrates, other groups in the top five of the most value are eligible for e-commerce.

Another aspect that would be expected to boost the trade in general and e-commerce, mainly, is the re-import and re-export of Hong Kong for China's products. Currently, Viet Nam has already reduced most tariff lines for products from China under the ASEAN-China free trade agreement. As we already mentioned, Hong Kong companies would export directly from their factories in China to Viet Nam to get lower tariff lines. If Hong Kong is also granted preferential tariffs, the export to Viet Nam may be moved to Hong Kong. Therefore, it would increase the export of Hong Kong to Viet Nam in general and e-commerce in particular.

CONCLUSION AND POLICY RECOMMENDATIONS

Conclusion

Using qualitative research methods to gain an in-depth understanding of e-commerce development in Vietnam, this report shows that since 1998, Vietnam's e-commerce market has gone through three stages of development 1998-2005; 2006-2015, and 2016-2021. Compared to 2014, the scale of e-commerce in 2019 increased four times. This period recorded a high and stable annual growth rate, averaging 32.6%/year. With this steady growth, the size of the e-

commerce market will reach 43 billion USD by 2025 and rank 3rd in Southeast Asia after Thailand and Indonesia (Google, Temasek, Bain Bain& Company, 2019)

Among many factors enhancing the e-commerce market development in Vietnam, there are five most influential vital drivers, including the boost of the pandemic, promotion of legal documents; explosion of mobile devices; strong FDI inflow; and the development of logistics services.

Viet Nam already has a somewhat sufficient physical and "regulation" infrastructure. However, regular and quality access to the internet and a low ratio of having banking accounts or low utilization of e-wallets are the main obstacles to e-commerce participation. In addition, low cybersecurity is a risk encountered by enterprises and individuals. Meanwhile, specific regulations for cross-border e-commerce need to promote this kind of trade as cross-border movements of goods and services under e-commerce are still the same as those of conventional international trade.

There are potential and positive impacts of cross-border e-commerce given the facilitation effects of e-commerce on international trade. The effects are boosted by the significant trading volume and complementary trading patterns between Viet Nam and Hong Kong (China). However, the lack of agreements on e-commerce in the ASEAN-Hong Kong (China) trade agreement limits boosting cross-border e-commerce between Viet Nam and Hong Kong (China).

Policy recommendations for policymakers

In order to promote the development of the e-commerce market and achieve the goal of the National E-commerce Development Master Plan between 2021 and 2025 in the coming time, it is necessary to focus on the following suggestions.

- Continue to improve mechanisms and policies, review, supplement, amend, and issue new policies and legal documents to facilitate, encourage, and support e-commerce application activities and new business models based on digital technology.
- Promote a cashless payment process.
- Improve capacity to manage and organize e-commerce activities, fight against commercial frauds, infringement of intellectual property rights, and unfair competition in e-commerce.
- Build markets and improve consumer confidence in e-commerce through propaganda and training in e-commerce skills for people and businesses.
- Organizing annual e-commerce events to stimulate demand for the domestic market and expand cross-border e-commerce activities, creating an environment for organizations and businesses to demonstrate the latest technologies and e-commerce models advanced for consumers to experience and build new e-commerce habits and skills.
- Strengthen the capacity of infrastructure systems and support services for e-commerce with the improvement of delivery and logistics service infrastructure for e-commerce, application of new technologies in logistics activities; encourage piloting and

deploying the application of new means of transport to support the transportation and delivery of goods in e-commerce; Building an online management system for shipping, forwarding and order fulfillment services for e-commerce covering all provinces and cities across the country.

- Promote e-commerce applications to support key export industries, expand consumption for domestic goods and promote e-commerce development in localities.

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CHAPTER 10

STRENGTHENING E-COMMERCE TO PROMOTE BUSINESS TO BUSINESS AND BUSINESS TO CONSUMERS UNDER AHKFTA: A CASE STUDY OF HONG KONG SAR

AUTHORS

Heiwai Tang

HKU Business school and Asia Global Institute

ABSTRACT

Digitalization is an unstoppable trend facing all economies. Many countries' governments have been deploying advanced digital technologies and investing in the related infrastructure to enhance their economies' production efficiency, consumption convenience, and smart city development. The Covid-19 pandemic further incentivized many nations to speed up their digital transformation in the ways people work, interact, live, consume, and conduct businesses.

This study presents evidence about Asia-Pacific economies' and in particular Hong Kong SAR's performance in Internet connectivity and E-commerce. Based on existing research, it illustrates the potential benefits of AHKFTA on member economies. It then present results of a simple regression analysis to study the determinants of *potential* cross-border E-commerce, in particular, about how a country's Internet infrastructure and adoption will enhance overseas visits of their websites. Based on these analyses, this paper comes up with four specific policy recommendations for member countries to reap the most benefits of cross-border E-commerce under AHKFTA, namely (1) streamlining the cumulative rules to maximize the benefits from tariff reduction; (2) standardizing customs and intellectual property rules; (3) optimizing cross-border logistics; and (4) safeguarding the markets for small-medium enterprises.

INTRODUCTION

Digitalization is a prevailing trend facing all economies, especially since the outbreak of the Covid-19 pandemic. One silver lining of the pandemic is that many countries were forced or incentivized to accelerate their digital transformation in the ways how people work, interact, live, consume, and conduct businesses. Economies that fared better during the pandemic appeared to be the ones that either had a higher degree of economic digitalization or managed to successfully turn crises into opportunities by expediting the transition. Such transformations will certainly affect the trends, patterns, and modes of international trade, due to reduced transaction costs, increased tractability of trade and financial transactions, and improved enforcement of regulations and taxation on cross-border movement of goods and capital flows.

The global number of Internet users has accelerated during the pandemic. The fastest growing region among all continents is Asia. The fraction of people using the Internet in Asia has jumped by 24% between 2019 and 2021 (ITU, 2021). Another ongoing trend in international commerce is the digitalization of global trade and its financing. Asia once again is at the forefront of global E-commerce. With the increase of Internet penetration and as other conditions gradually mature, E-commerce in Asia has enjoyed fast growth. As Figure 1 shows, Asia's E-commerce revenue has grown at an 8.1% annualized rate between 2017 and 2022 (Statista, 2021). Asia accounted for over 57% of global business-to-consumer (B2C) E-commerce sales in 2019, which is predicted to continue to grow until at least 2024 (Eastspring, 2020). Such increased dependence on trade on digital technology and big data is widely expected to enhance the efficiency of resource allocation, especially from large to small-medium enterprises (SMEs) that typically face financial and other constraints.



Figure 1: E-commerce Revenue in Asia

Data source: Statista, 2021

In Asia, Hong Kong Special Administrative Region (HKSAR) economy and its government have been actively promoting the development of digital trade and FinTech. For instance, the Hong Kong Monetary Authority (HKMA) has been in the forefront of such developments. Since 2018, it has facilitated the use of the so-called eTradeConnect, a blockchain-based trade finance platform codeveloped with various major banks in the city and other central banks in Asia; and since 2021, it also launched the ambitious plan called Fintech 2025, which aims to promote the provision of fair and efficient financial services through adopting various of Fintech technologies in the city's banking and financial systems. The expected expansion of the use digital trade finance and other FinTech products and services in Hong Kong and will certainly promote its trade and financial connectivity with other countries, and serve as a digital gateway between Mainland China and the rest of the world.

Against this backdrop, the HKSAR government has been proactive in collaborating with other economies in the region to enhance its role as an international trade and financial hub. Of note, on 12 November 2017, at the 31st Association of Southeast Asian Nations (ASEAN) Summit, Economic Ministers from the ASEAN Member States (namely Brunei Darussalam, Cambodia, Indonesia, Lao PDR, Malaysia, Myanmar, Philippines, Singapore, Thailand, and Viet Nam) and the Secretary for Commerce and Economic Development of Hong Kong, China signed the ASEAN – HKC Free Trade Agreement (AHKFTA) and the ASEAN – HKC Investment Agreement (AHKIA). The AHKFTA is ASEAN's sixth free trade agreement with external partners. Through this Agreement, the parties wish to minimize barriers to trade in goods and services and investment flows, deepen and widen economic linkages among different signatory economies, lower business costs, and expand markets and more opportunities in order to achieve greater economies of scale and efficiency.

The main objectives of this study are as follows:

- 1. To review the development of E-commerce in HKSAR;
- 2. To assess the economy's readiness to participate in cross-border E-commerce via AHKFTA;
- 3. To evaluate the potential impacts of cross-border e-commerce under AHKFTA on trade flows of the country;
- 4. To provide policy recommendations for reaping potential benefits of cross-border e-commerce under AHKFTA.

BACKGROUND OF AHKFTA

On 12 November 2017, at the 31st ASEAN Summit, Economic Ministers from the ASEAN Member States (namely Brunei Darussalam, Cambodia, Indonesia, Lao PDR, Malaysia, Myanmar, Philippines, Singapore, Thailand, and Viet Nam) and the Secretary for Commerce and Economic Development of Hong Kong, China signed the ASEAN – HKC Free Trade Agreement (AHKFTA) and the ASEAN – HKC Investment Agreement (AHKIA).

The AHKFTA is ASEAN's sixth free trade agreement with external partners. Through this Agreement, the parties desire to minimize barriers to trade in goods and services and investment flows, deepen and widen economic linkages among the Parties, lower business costs, increase trade, enhance economic efficiency, and create a larger market with more opportunities and greater economies of scale for business.

More specifically, the objectives of the Agreement are to: (a) progressively liberalize and facilitate trade in goods among the Parties through, inter alia, progressive elimination of tariff and non-tariff barriers in substantially all trade in goods among the Parties; (b) progressively liberalie and facilitate trade in services among the Parties, with substantial sectoral coverage; (c) promote and enhance investment opportunities; (d) strengthen, diversify and enhance trade, investment and economic links among the Parties; and (e) provide special and differential treatment to ASEAN Member States, especially to the newer ASEAN Member States, to facilitate their more effective economic integration.

The parties are confident that the establishment of AHKFTA will strengthen economic partnerships, serve as an important building block towards regional economic integration, and support sustainable economic development. There are several important contents of the agreement that are worth discussing.

Trade in Goods

Reduction and/or Elimination of Customs Duties: Except as otherwise provided in this Agreement, each Party shall progressively reduce and/or eliminate customs duties on originating goods of the other Parties in accordance with its schedule of tariff commitments as follows:

Elimination of non-tariff barriers: Hong Kong and the AMS commit to strengthening cooperation in i) sanitary and phytosanitary measures, ii) Standards, technical regulations and conformity assessment, and iii) customs matters.

Trade in Services

In similar circumstances, service providers of both sides can enjoy national treatment i.e. being treated equally with local service providers of the other party.

The two sides commit to removing or reducing various restrictions, including on types of legal entity, foreign capital participation, number of service providers or operations, value of service transactions, and number of persons employed, etc.

The sectors liberalised for Hong Kong by the AMS include commitments exceeding those made under the multilateral Agreement of the World Trade Organization.(Brunei Darussalam opens construction and related engineering services; Thailand opens arbitration services and electronic mail services; Singapore opens technical testing and analysis services and adult education services; Malaysia opens urban planning and landscape architectural services and maritime freight forwarding services; the Philippines opens construction services for mining

and manufacturing; Laos opens specialty design services, retailing services, and certain services of trading for own account or for account of customers under financial services; and Myanmar opens a significant number and wide range of services sectors.)

Hong Kong also makes commitments to the AMS on a wide range of service sectors, such as computer and related services, specialty design services, and spa services.

Other Areas

Economic and Technical Co-operation: Both sides have agreed to conduct Economic and Technical Co-operation (ECOTECH) activities in certain priority areas, such as customs co-operation, professional services, small and medium enterprises co-operation, trade facilitation/logistics, and e-commerce co-operation. In addition, the FTA and the Investment Agreement provide for a regular review mechanism which paves the way for future negotiations to broaden the scope of liberalization, and further strengthen and enhance the trade, investment and economic ties between Hong Kong and ASEAN. Moreover, a dispute settlement mechanism is established for consultations and settlement of possible disputes.

ASEAN ECONOMIES' READINESS TO EXPAND E-COMMERCE TRADE VIA AHKFTA

Many Asian economies are global forerunners in digitalization of international trade, specifically in terms of E-commerce activities. Both the Internet and E-commerce penetration rates in the region have been accelerated by the Covid-19 pandemic.¹ Although Mainland China remains the market leader in E-commerce transactions, its growth was the fastest in other Asian countries, such as Indonesia and Thailand, which are expected to continue their current growth trajectories in the next few years. HKSAR's online sales has almost doubled from HKD 27.3 billion in 2017 to HKD 49.3 HK\$ billion (i.e., an increase in the share of retail sales from 5.5% to 13.3%).

Besides domestic E-commerce trade, cross-border E-commerce trade has also blossomed among ASEAN economies. According to Rakuten (2020), 66% of ASEAN online shoppers have made an online purchase from an international retailer in 2020; and among them, 38% prefer to shop from Chinese retailers, followed by those from the U.S., Japan and South Korea. That said, cross-border E-commerce trade in Asia-Pacific remains low and still have tremendous room to grow, as the Internet penetration remains very low in many economies in the region.

E-commerce in Asia is expected to continue booming. Despite the rapid growth of Ecommerce in Asia in recent years, the internet penetration still remains among the lowest globally in 2021 (Figure 2) and the E-shopper penetration rate is 20% lower than the level in

¹ Between 2019 and 2021, the fraction of individuals in the Asia-Pacific region using the Internet has jumped by 24%, the fastest growth in the world. About 21% of the E-commerce customers (about 60 million) during the pandemic were new, with existing customers increasing their online purchases in terms of volume, frequency and product diversity.

North America and Europe (Figure 3). That means the Asian market still has significant potential to be explored (Eastspring, 2020). Despite the rapid growth of E-commerce in recent years, gaps persist in digital infrastructure and legislation, which have prevented many Asian countries from fully reaping the potential benefits of E-commerce (Kinda, 2019).



Figure 2. Percentage of individuals using the Internet (2021)

Source: Estimates by Ecommerce Foundation



Figure 3. Percentage of E-shoppers (2019f)

Source: ITU, 2021

Regarding Southeast Asian economies, Baijal et al. (2021) offers a great summary of the development of digital economy. They reveal that the digital consumption in Southeast Asia continues to surge after the Covid-19 pandemic, with 21% new consumers (about 60 million) joining the Internet economy and existing consumers making more purchases in a more frequent and more diverse pattern. About 60% consumers believe that e-commerce makes their life easier, and 40% consumers have accepted it as a new way of life.

In a digital economy, platforms play a vital role in boosting merchants' development. According to Baijal et al. (2021), 1 in 3 merchants in Southeast Asia believe that they would not have survived COVID-19 if not for digital platforms and 88% merchants agree digital platforms bring positive benefits and opportunities for their companies. However, there is still room for platforms' improvement. 1 in 3 merchants cited "too expensive" as the top barrier for digital platform adoption; besides, UI design, ability to resolve issues with customers, and integrated service for sellers (e.g. logistics, payment processing) are other areas that need to be improved in platforms. E-commerce in SEA is predicted to continue to boom. In 2021, the search volumes for merchant- and seller- related queries has increased by 3 to 18 times in SEA countries comparing with 2017 levels. As SEA is entering the "Digital Decade", most momentum drivers, such as payments, funding, logistics, internet access, and consumer trust, have observed significant progress; however, the shortage of technical talents remains an important challenge for digital market to grow, along with new enablers around data regulation, infrastructure, and equitable development of the digital economy.

Despite the promising opportunities and other governments' initiatives, there are obvious challenges facing many countries to digitalize their economy, trade, and finance. There is tremendous variation in the quality of the infrastructure and ecosystem for an economic digitalization across countries. Some economies have much more scope for improvement than others. In the development of cross-border e-commerce, platforms play an important role for boosting transactions.² Platform can magnify the potential benefits of e-commerce through various network effects. While on the other hand, potential issues around E-commerce platforms could not be neglected. For example, competition issues, information safety, or other issues could be serious, particularly when the platforms become larger (Kinda, 2019).

Of note, the lack of online marketing and E-commerce skills in Asian economies are the biggest stumbling block for SMEs to succeed in the digital economy (Hazim (2021)). Moreover, in the area of digitalized trade finance, new technologies can enhance financial inclusion by serving traditionally under-banked businesses (especially SMEs), but they will also expose the trade finance network to nonnegligible risks. It is also important to note that there is no "one-size-fit-all" policy recommendation for all members that are at different stages of economic development.

² Hui (2020) found that the launch of eBay's Global Shipping Program in 2013, a platform that could help ship sold items to a domestic shipping center for free, could significantly increase exports from small firms on eBay.

BENEFITS OF E-COMMERCE AND DIGITAL TRADE IN THE REGION

Enhancing E-commerce and trade finance connectivity will bring about significant economic and social benefits for Asian economies. There shall be positive impact on participating economies'/ countries' various macroeconomic performance (e.g., GDP, GDP growth, consumption share in GDP, labor share in GDP, dispersion in prices within and across regions, firms' profits and their concentration, etc.). At the firm level, participation in E-commerce is associated with higher productivity and more exports, and this is particularly true in Asia.³ Research has also shown that traditional merchandize trade and E-commerce cross-border trade may not be substitutes and can be complementary.

Existing research has highlighted that increased Internet connectivity, possibly due to the resulting information exchange and reduced transaction costs, will increase both cross-border trade and investment. There are clear benefits of implementing E-commerce trade, such as faster customs procedures, easier tracking of frauds and tax evasion, and automation of warehouse and inventory management. Consumers' and producers' welfare can be enhanced by more E-commerce development in Asia. Studies by McKinsey on China (Indonesia) show that for every US\$100 increase in Internet spending, 40% (30%) represents new consumption, while the remaining 60% is diverted from traditional offline retail channels (Dobbs et al., 2013; Das, 2018). According to Baijal et al. (2021), about 60% of the surveyed consumers in Southeast Asian countries thought that E-commerce improves their standard of living, with 40% of them considered it as a new way of consumption. Research has long confirmed that E-commerce trade will enhance consumer surplus (Brynjolfsson et al. (2003)). Similarly, E-commerce platforms have played an important role in boosting firms' resilience and expansion into new markets.⁴

However, increased Internet connectivity, digitalized trade finance, and cross-border data exchange may harm SMEs. According to the International Data Corporation's (IDC, 2018) survey of more than 1,500 business leaders in the Asia Pacific region, the priorities of digital transformation of an economy include increasing profit margins, productivity, and customer loyalty and retention, along with cost reduction, ability to offer new products and services, and increased revenue (IDC, 2018). Larger firms tend to have capacity to invest to enhance their competitiveness and leverage on the dividends offered by the economic digitalization than small ones. However, research has shown that Internet connectivity can enhance firms' exports

³ According to Kinda (2019), participation in E-commerce in Asia is associated with more than 30 percent higher total factor productivity, twice the world level; and e-commerce firms export 50% more than other firms, 10% higher than the world level.

⁴ According to Google et al. (2021), 1 in 3 merchants in SEA believe that they would not have survived COVID-19 if not for digital platforms and 88% merchants agree digital platforms bring positive benefits and opportunities for their companies. In 2021, the search volumes for merchant- and seller-related queries has increased by 3 to 18 times in SEA countries comparing with the 2017 levels.

and productivity, especially those in low and middle-income countries in Asia (Clarke (2008); Kinda (2019)).⁵

Another important benefit of E-commerce trade and other digital transformation in the region is that it can contribute to combating climate change risks. According to GenerationIM (2020), E-commerce in the U.S. is 17% more carbon-efficient than traditional retail sales. Similar research based on data from eight European nations also shows that online shopping generates 1.5-2.9 times less greenhouse gas emission than in-person shopping, due to reduced land use (e.g., physical retail stores, storage, parking lots), as well as consumer car traffic to go shopping. ⁶ Another way e-commerce can become more environmentally-friendly is by eliminating paper waste through more mobile phone delivery of coupons, product information, shipping updates, and so on.

HKSAR'S READINESS TO EXPAND E-COMMERCE TRADE VIA AHKFTA

The HKSAR's E-commerce market size was estimated to be worth USD 6.3 billion in 2020 (see Figure 4), of which 75% were purchases made on local retail sites, implying that cross-border E-commerce takes up 25% of the HKSAR E-commerce market. Thanks to the Covid-19 pandemic and related government policies, E-commerce share of retail sales in HKSAR has been rising rapidly to 13.3% in 2020 since 2017 (see Figure 5). Despite its relatively small market size represents one of the smaller E-commerce markets by value, Hong Kong is notable for its advanced E-commerce infrastructure and growth potential. It was ranked 10th globally in the UNCTAD B2C E-commerce index 2020, indicating the great potential of its e-commerce market. Internet penetration is high, at 89.4 percent.



Figure 4: HKSAR E-commerce market size

Source: KPMG 2020, as cited in Luo, 2021

⁵ Kinda (2019) shows that firms' E-commerce participation is associated with more than 30 percent higher total factor productivity and 50% more exports than other firms.

⁶ IKEA's Southeast Asian Sustainability and Communications Director, Lars Svensson said that E-commerce has helped reduce customer transportation to and from their stores, which accounted for 14 percent of its carbon footprint (Ismail, 2018).

Hong Kong's online shopping market is projected to expand at a compound annual growth rate of 10.2% by 2021. The high growth rate is partly due to the low consumers' reliance on E-commerce. Only a quarter of Hong Kong's citizens currently shop online, and E-commerce accounts for just 11 percent of Hong Kong's total retail spending. In 2020, E-commerce sales in Hong Kong grew 27%, and 50% of consumers prefer online shopping. It is forecasted to grow at a 13% annualized rate for the next five years.



Figure 5: E-commerce share of retail sales in HKSAR

Source: Euromonitor international, as cited in Luo, 2021

HKSAR online consumers on average spent about USD 1,992 annually. The small Ecommerce market in HKSAR also implies a huge potential for growth. Given that the GDP per capita in HKSAR was over USD 42000 in 2020, E-commerce expenditure only takes about 5% of HKSAR's total income. As a comparison, the 2018 average monthly amount spent on E-commerce by families in Mainland China was 1,138 CNY (Chen, 2019), while the 2018 annual GDP per capita in mainland China was only 64,520 CNY, meaning that the Ecommerce expenditure takes 21.2% of total income in Mainland China.

The top three E-commerce categories in HKSAR are travel, health and beauty, as well as consumer electronics. Since domestic retailers have so far been reluctant to expand their businesses on E-commerce platforms, HKSAR's E-commerce space is significantly smaller than its neighboring E-commerce giant – Mainland China. As such, HKSAR cross-border E-commerce spending is high -- 75 percent of HKSAR's online shoppers have purchased from overseas retailers, while the USD 2.2 billion cross-border spending constitutes 60% of HKSAR's total E-commerce spending. The largest regional sales markets include Mainland China, Singapore, and Japan (J.P.Morgan, 2020).

E-commerce has been used by more individuals and more business establishments. According to a report by Census and Statistics Department of HKSAR (*Hong Kong as an information society (2021 Edition)*, 2021), individuals whose major purposes of using the Internet includes online purchase/finance transactions as a percentage of all persons aged 10 and over who had

used the Internet have also surged in the past four years; on the other hand, the proportions of business establishments using the Internet and placing or receiving orders online also significantly increased.

The E-commerce business market in HK could be disaggregated by 60% B2C, 39% B2B and 1% B2G. The B2C market in HK is experiencing a high growth. B2C E-commerce value has increased from \$3.7 billion in 2017 to \$4.5 in 2019, and the forecasted CAGR of B2C e-commerce value for 2019-2023 is 7.8% (J.P.Morgan, 2020). The average daily order quantity of HKTV mall, one of the biggest B2C online marketplaces in Hong Kong, has increased from 18,700 in Dec 2019, to 36,300 in Dec 2020 (Fung, 2021).

E-commerce platforms are receiving large Internet traffic in Hong Kong. According to Alexa, among top 50 websites in Hong Kong, 20% are E-commerce websites, including Amazon.com, Myshopify.com, Taobao.com, Tmall.com, and price.com.hk, among others.

	Switzerland	Singapore	HKSAR	East, South & Southeast Asia
Global ranking out of 152	1st	4th	10th	
economies		-		
Overall scores	95.9	94.4	91.8	57
Share of individuals using the	07	80	02	57
internet	91	69	94	57
Share of individuals with				
financial or mobile wallet	98	98	95	60
account				
Postal reliability	97	97	92	58
Secure internet servers	92	94	88	54

<u>Table 1</u>: Readiness to support online shopping (2020)

Source: The UNCTAD B2C E-commerce Index 2020

Hong Kong has prepared well in the infrastructure conditions believed to be necessary to support online shopping. As presented in Table 5, HKSAR ranks 10th out of 152 global economies (and 2nd out of Asian economies) in the overall preparedness to support online shopping. Specifically, HKSAR has comparative advantage in financial infrastructure and slight weakness in secure Internet servers, but generally HKSAR still performs much better than most other countries in the region. The legal and institutional environment in HKSAR is not a big concern for E-commerce development, either: HKSAR has enacted Electronic Transactions Ordinance (Chapter 553) since 2000 to accord electronic record and electronic signature the same legal status as that of their paper-based counterparts, and to establish a voluntary recognition scheme for certification authorities to enhance public confidence in

electronic transactions⁷; HK does not have a special consumer protection law, but has a series of laws or regulations to protect the benefits of consumers, like Sale of Goods Ordinance (Chapter 26), Trade Descriptions Ordinance (Chapter 362), Consumer Goods Safety Ordinance (Chapter 456), and so on; ⁸ HKSAR has also enacted Personal Data (Privacy) Ordinance (Chapter 486) since 1996 to protect privacy and data; and about cybercrime, under the existing laws of HKSAR, most of the ordinances targeting crime prevention in the real world apply also in the cyber world of the Internet⁹.

HKSAR's E-commerce market potential can also be seen from the comparisons of readiness and actual E-shoppers' penetration rate. Although the city ranks high in terms of readiness to support online shopping in the world, the actual E-commerce penetration ranks relatively lower. Only about 59% HKSAR internet users have had made online purchases or financial transactions in 2020, while the number is 84% in Netherlands in 2019 (ranks 9th in UNCTAD B2C E-commerce Index List 2020) and 73% in New Zealand (ranks 11th in UNCTAD B2C E-commerce Index List 2020).

BOTTLENECKS FOR E-COMMERCE EXPANSION IN HONG KONG SAR

The reasons why E-commerce in HK did not achieve a significant development in previous years could be partly found from both businesses and consumers. Based on surveys and reports from Hong Kong Census and Statistics Department in 2019, businesses didn't adopt E-commerce mainly because there is a lack of practical use for a sound business case, and E-commerce is not popular in the industry (see Figure 6).

<u></u>	opting e-commerce purchases in Tix
Lack of practical use for a sound business case of making e-commerce purchases	76.20%
Not popular in the industry	30.5%
Goods or services required not available for e-commerce purchases	10.0%
Lack of personnel who are familiar with making e-commerce purchases	6.1%
Lack of know-how for beneficial use of e-commerce purchases	2.8%
Concern about information security issue in making e-commerce purchases	0.9%

Figure 6: Major reasons of business for not adopting e-commerce purchases in HK

The Covid-19 pandemic is a turning point, pushing many retail and wholesale companies to create online platforms to substitute for the traditional face-to-face transactions. The major reasons why consumers are reluctant to shop more online is related to their worry about product

0.0%

20.0%

40.0%

60.0%

80.0%

⁷ https://www.ogcio.gov.hk/en/our work/regulation/eto/

⁸ http://xf.wenweipo.com/content_qy1.php

⁹ https://www.police.gov.hk/ppp_en/04_crime_matters/tcd/legislation.html

quality and the convenience of offline shopping (see Figure 7). That said, Covid-19 provided many opportunities for consumers to try online purchase and enjoy the benefits from e-commerce.

In sum, given its small size, consumer shopping habits, and well-developed digital infrastructure, HKSAR is generally well prepared to develop cross-border E-commerce. The pandemic and corresponding government policies, such as its government's distribution of digital consumption vouchers to HKSAR citizens as part of its stimulus package, has also increased consumers' habit to shop more online.



Figure 7: Top 5 reasons HK consumers are not buying products/services online

Data source: KPMG (2017), as cited in Luo, 2021

POTENTIAL IMPACTS OF CROSS-BORDER E-COMMERCE UNDER AHKFTA ON TRDE FLOWS OF HONG KONG SAR

The key to facilitate cross-border trade is to effectively lower trade barriers and integrate markets. The AHKFTA aims to achieve those. Many sellers face resource constraints and suffer from information asymmetry, especially regarding selling to foreign customers. Under AHKFTA, many regulations on E-commerce trade in the region will be streamlined and harmonized. Together with scheduled reduction in trade barriers E-commerce trade between HK and ASEAN countries will increase.

For sellers attempting to expand cross-border e-commerce, brand building and localization are two important strategies. Such strategies will create new jobs and investment opportunities. Beside increased trade flows, cross-border data and capital flows will also increase.

AHKFTA reduces technical barriers to trade and simplifies the Certificate of Origin requirements for applying preferential tariffs into HKSAR. It also increases market access in

the e-commerce industry. We expect that FTA will provide both HKSAR ASEAN countries with more business opportunities and bring more beneficial synergies through economic and trade cooperation in the Asia-Pacific region.

SIMPLE EMPIRICAL ANALYSIS

In this section, we will conduct a regression analysis to understand the determinants of a country's connectivity to the Internet based on the frequency of overseas visits to the country's websites. The goal is to provide indirect evidence about how Internet Expansion connectivity can enhance digital trade. They should be interpreted as the first step towards a more rigorous empirical analysis about how digital infrastructure and related policies will enhance different types of trade and trade-related investment and financing. The results should also not be taken as causal at all.

Model

We use the percentage of domestic sites in the most visited sites (Pct_d_i) of a country (i) as the dependent variable, and use the country's economic level $(lnGDP_i)$, population size $(lnPOP_i)$, internet development index $(Internet_i)$, and its geographic size $(Area_i)$ as explanatory variables in our regression analysis. The regression model can be seen from equations (1) and (2). We then compute the unexplained part as the difference between the data of Pct_d_i and the predicted dependent variable $\widehat{Pct_d_i}$ $(i.e., Pct_d_i - \widehat{Pct_d_i})$ as the proxy for domestic e-commerce development level.

$$Pct_{d_{i}} = \alpha_{i} + \beta_{1} * lnGDP_{i} + \beta_{2}lnPOP_{i} + \beta_{3}Internet_{i} + e_{i} (1)$$
$$Pct_{d_{i}} = \alpha_{i} + \beta_{1} * lnGDP_{i} + \beta_{2}lnPOP_{i} + \beta_{3}Area_{i} + e_{i} (2)$$

Data

We first calculate the percentage of domestic sites in most visited sites by country from Alexa, a company under Amazon which tracks the website traffic for business use and publishes the lists of most visited sites by country on its website, and other sources¹⁰. The sites in the top lists are ordered by their recent 1-month Alexa traffic rank¹¹. We collected the lists of top 500 websites for 97 countries on 2 Dec 2021, so the rankings are based on traffic from 2 Nov 2021 to 2 Dec 2021 (see Figure 8).

After obtaining a consistent list of websites, we uncover many non-commerce websites in the lists in each country in our sample. For example, search engines, news, social media, websites are consistently among the top 10 most visited websites in many countries. As the

¹⁰ <u>https://www.alexa.com/topsites/countries</u>. We subscribed a free trial of Alexa and obtained access to whole lists of top 500 websites by country in Dec 2021. Without subscriptions, only top 50 websites by country are available. By the time we collected data, it published website lists for 97 countries. (Unfortunately, Alexa is going to fully retire in May 2022 and has stopped receiving new subscriptions since Jan 2022, so it might be hard to get data after then. And the number of countries with available data is also decreasing when we wrote this report.)

¹¹ According to Alexa, the 1-month rank is calculated using a combination of average daily visitors and pageviews over the past month. The site with the highest combination of visitors and pageviews is ranked as #1.

focus of our analysis is on cross-border E-commerce trade flows, we exclude them from the list of websites. To make the process manageable, we review the top 50 websites globally, select those non-commerce websites, as highlighted in Figure 8, and remove them from the top 500 website lists, country by country¹².

Rank	Website	Туре	Rank	Website	Туре
1	Google.com	Search Engine	26	Google.com.hk	Search Engine
2	Youtube.com	Video watching	27	Alipay.com	E-commerce
3	Tmall.com	E-commerce	28	Csdn.net	Social Media
4	Qq.com	Social Media	29	Bing.com	Search Engine
5	Baidu.com	Search Engine	30	Myshopify.com	E-commerce
6	Sohu.com	Search Engine	31	Canva.com	E-commerce
7	Facebook.com	Social Media	32	Vk.com	Social Media
8	Taobao.com	E-commerce	33	Microsoftonline.com	Others
9	360.cn	Search Engine	34	Yahoo.co.jp	Search Engine
10	Jd.com	E-commerce	35	Twitter.com	Social Media
11	Amazon.com	E-commerce	36	Naver.com	Search Engine
12	Yahoo.com	Search Engine	37	Bongacams.com	Others
13	Weibo.com	Social Media	38	Yy.com	Video watching
14	Wikipedia.org	Search Engine	39	Force.com	E-commerce
15	Sina.com.cn	Social Media	40	Huanqiu.com	News
16	Live.com	Others	41	Ebay.com	E-commerce
17	Zoom.us	Social Media	42	Chaturbate.com	Others
18	Netflix.com	Video watching	43	Twitch.tv	Video watching
19	Reddit.com	Social Media	44	Tianya.cn	Social Media
20	Panda.tv	Video watching	45	Linkedin.com	Social Media
21	Microsoft.com	Others	46	Sharepoint.com	Others
22	Zhanqi.tv	Video watching	47	Adobe.com	Others
23	Instagram.com	Social Media	48	Amazon.in	E-commerce
24	Office.com	Others	49	Aliexpress.com	E-commerce
25	Xinhuanet.com	News	50	Amazon.co.jp	E-commerce

Figure 8: The Top 50 Websites Globally

(Highlighted are non-commerce websites. We exclude them from the top sites lists by country)

¹² For those sites that have different domains in different country, we exclude all the related sites. For example, Google.com is in the top 50 sites list globally, and we exclude not only Google.com, but also Google.jp, Google.fr, and all other sites that start with "Google." from the top sites lists by country.

We then assign countries of origin to the websites. Previous scholars have adopted different approaches to assign an origin to a website, for example, using the country corresponding to website IP address, the country corresponding to website country code top-level domains (or ccTLDs in abbreviation), or the country with the most audience, as the origin of the website. However, it's worth to mention that we want to look at the domestic e-commerce development, and the target market of a website mainly decides whether it is a domestic e-commerce website or not. The audience origin could largely represent the market where a website targets at, and ccTLDs are often used for websites to show up in the search results of those living in the target country (Grey, 2021).

While on the other hand, IP address stands for where the servers locate. Some websites are hosted on servers in other countries, especially when cloud services became increasingly prevalent. Large websites will use many servers and IP addresses located in a variety of countries (Alaveras & Martens, 2015). Some websites may also be hosted in different jurisdictions for legal and tax reasons. Based on these reasons, we follow Alaveras and Martens (2015) and mainly use audience origin and ccTLDs to assign origins. The detailed process of assigning can be shown as followed. After assigning, we could easily get the percentage of domestic websites in most visited sites by country.

- 1. We use the country that ranks the highest in the visitors' geographic ranking gathered by Alexa as the country of origin of a site. For example, from Figure 8 we can find United States ranks the highest in the visitors' geography of Google.com so we assign United States as the origin country of Google.com.
- 2. For those websites that cannot be assigned by the first step (some websites' visitors' geographic information is missing in Alexa), we use the country corresponding to the ccTLDs as the origin.
- 3. For those websites that cannot be assigned by the first or the second step (many websites use ".com", ".org" or other domains that are not ccTLDs), we use socket and ipinfo (two Python packages) to find the IP address of each website, get the country corresponding to the IP address, and use it as the origin.

The explanatory variables are collected from other sources. GDP and population data are from world bank using the most recent data (2020), and geographic area are collected from CEPII. Internet development level is proxied by inclusive internet Index (2021), which is commissioned by Facebook and developed by The Economist Intelligence Unit¹³. The overall Index score is based on the scores of the Availability, Affordability, Relevance and Readiness categories for 120 countries.

RESULTS

Using the available data, we run regressions on the sample of all countries and Asian countries separately. As reported in Table 2, we find that while population of a country usually

¹³ Full dataset and compilation method of the index can be found from https://theinclusiveinternet.eiu.com/.

determines whether the percentage of visitors mostly come from the same country, as expected, the GDP level of the country is not a significant determinant after population is included as a control. More importantly, the Internet development, as proxied by inclusive internet Index, has a positive and significant impact on the percentage of the domestic sites visited by the country's own people.

We then then calculate the predicted values of dependent variable (Pct_d_i) and the unexplained parts $(Pct_d_i - Pct_d_i)$, and make rankings of the unexplained part as shown in Table 2. As shown in Table 3, we can find that Iran, China, Mongolia, Azerbaijan, and Vietnam always rank among the highest in terms of the percentage of domestic visitors on their own websites. These are the countries with the highest fraction of domestic visitors, rather than foreign visitors, on their websites. There are many reasons behind why their websites are not more visited by foreigners. For instance, perhaps of their websites are usually not in English. Perhaps there are stronger regulations on data transfer and Internet usage. But what should be taken from this analysis is that these are the countries which have the highest potential to be further integrated in cross-border E-commerce should their harmonize their regulatory frameworks in digital economy with other countries.

Dependent Variable:	Percentage of domestic sites in the most visited sites		
	All sample countries	Asian economies only	
ln (GDP)	-0.042	-0.102**	
	(0.026)	(0.048)	
ln (Population)	0.107***	0.163***	
• • •	(0.022)	(0.040)	
Internet Index	0.012**	0.019***	
	(0.003)	(0.007)	
Constant	-1.106***	-0.968**	
	(0.242)	(0.406)	
R-squared	0.562	0.580	
Number of obs	78	31	

Table 2: Regression Results

Rank	(4)	(5)	(6)
1	IRN	IRN	IRN
2	CHN	AZE	MNG
3	MNG	VNM	AZE
4	TUR	CHN	CHN
5	QAT	KOR	GEO
6	NPL	NPL	VNM
7	JPN	GEO	ARM
8	AZE	ARM	KOR
9	KOR	JPN	NPL
10	LKA	MNG	TUR
11	LBN	TUR	JPN
12	KAZ	QAT	QAT
13	SAU	THA	THA
14	THA	BHR	IDN
15	IDN	IND	ISR
16	VNM	LKA	KGZ
17	KHM	ISR	LKA
18	ISR	IDN	KHM
19	BHR	KHM	KWT
20	UZB	KWT	KAZ
21	OMN	SGP	IND
22	KWT	UZB	UZB
23	BGD	KGZ	BHR
24	ARE	LBN	OMN
25	MYS	HKG	SAU
26	SGP	BGD	MYS
27	IND	MYS	LBN
28	JOR	KAZ	SGP
29	PAK	OMN	BGD
30	HKG	SAU	HKG
31	PHL	JOR	JOR
32		ARE	ARE
33		IRQ	PSE
34		PAK	IRQ
35		PHL	PAŘ
36			PHL

<u>Table 3</u>: Country Rankings of Domestic E-commerce Development (Sample only Asian countries)

CONCLUDING REMARKS WITH POLICYRECOMMENDATION

Digitalization is an unstoppable trend facing all economies. Many countries' governments have been deploying advanced digital technologies and investing in the related infrastructure to enhance their economies' production efficiency, consumption convenience, and smart city development. The use of digital technologies will certainly affect the trends and patterns of international trade, due to reduced transaction costs, increased tractability of trade and financial transactions, and improved enforcement of regulations and taxation on cross-border movement of goods and capital flows. The Covid-19 pandemic that ravaged individual and global economies since 2020 had one silver lining – many countries were forced or encouraged to speed up their digital transformation in the ways people work, interact, live, consume, and conduct businesses.

The increased dependence on digital technology and big data are widely expected to enhance the efficiency of resource allocation, especially to small-medium enterprises (SMEs) that typically face financial and other constraints. In this area, Hong Kong economy and its government have been actively promoting the development of digital trade and FinTech.

This study first presents evidence about Asia-Pacific economies' and in particular HKSAR's performance in Internet connectivity and E-commerce. Based on existing research, it illustrates the potential benefits of AHKFTA on member economies. It then present results of a simple regression analysis to study the determinants of *potential* cross-border E-commerce, in particular, about how a country's Internet infrastructure and adoption will enhance overseas visits of their websites.

Based on these analyses, this paper comes up with the following policy recommendations member countries to reap the most benefits of cross-border E-commerce under AHKFTA:

Streamlining the cumulative rules to maximize the benefits from tariff reduction

Fundamentally, the most important economic benefit of the AHKFTA for cross-border ecommerce exporters lies in the *cumulative rules* – when domestic content of exports is computed based on the cumulative value added from all member economies, but not from an individual economy. Because free trade agreements already exist between HKSAR and ASEAN countries, the preferential tariff treatment under AHKFTA has not been significantly upgraded compared to existing free trade agreements. This will help companies to be more flexible in organizing their global supply chains, establish a more efficient production networks, and reduce incentives to distort their global sourcing choices. All these will increase profits and efficiency of firms and enhance a finer division of labor in the region. As such, production costs will be reduced, which benefit both firms and consumers. This will also increase trade and related economic activities among the AHKFTA members.

Standardization of Customs and Intellectual Property Rules

By raising the efficiency of supply-chain arrangement of firms in the region, companies can be more focused on innovation and R&D activities. Thus, AHKFTA should work on forming a more standardized and unified regulatory framework to protect intellectual properties in the region. For Southeast Asian cross-border E-commerce businesses, one of their biggest challenges to satisfy local policy restrictions. Moreover, multinational firms are reluctant to source some of the more patent-intensive input production from the less developed economies, which in turn reduce the efficiency of firms' regional supply chains and lower technological development of emerging markets. Thus, amore unified regulatory framework under AHKFTA will let firms tackle contractual frictions and heterogeneous local policies, increasing crossborder trade, investment, and innovation.

Cross-border logistics optimization

AHKFTA should also aim to help firms in the member economies to tackle logistic challenges in cross-border E-commerce. Shipping and logistic costs have increased significantly in recent years, especially since 2020, driving inflation pressure in both advanced and emerging economies. AHKFTA member economies should form task forces to harmonize custom procedures and other non-tariff trade barriers. While tariffs among AHKFTA member economies are already very close to zero, especially for HKSAR which has zero tariffs against most Asian economies, the focus should be on lowering transport, logistic, insurance, and financial costs within the region.

Safeguarding the markets for small-medium enterprises (SMEs)

AHKFTA member governments may also want to study the impact of economic and financial digitalization on SMEs. According to the International Data Corporation's (IDC) survey of more than 1,500 business leaders in the Asia Pacific region, the priorities of digital transformation of an economy include increasing profit margins, productivity, and customer loyalty and retention, along with cost reduction, ability to offer new products and services, and increased revenue (IDC, 2018). Research has shown that market integration enhance resource allocation for the country as a whole, but some time at the cost of the smaller firms, which face different types of constraints to expand in the short run, but possess potentially greater potential to drive innovation and economic growth in the long run. Equity considerations aside, there should be strong economic cases to discuss about how SMEs' interests should be protected from the expansion of the larger companies. Guidelines should be provided to SMEs to enhance their participation in digital trade under AHKFTA. Special policy and financial supports should be allocated to SMEs and start-ups. For SMEs that have limited information or resources to penetrate into the digital trade networks, specific cross-country networks and platforms should be created for their use.

There are still tremendous room for policy discussions about how member economies can implement complementary policies to enjoy the dividends arising from AHKFTA. This paper serves as a first step of a bigger policy research agenda.
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APPENDIX

Table 1. Country Rankings of Domestic E-commerce Development (Sample All Countries)

Rank	(1)	(2)	(3)
1	GRC	IRN	IRN
2	IRN	GRC	GRC
3	MNG	MKD	MKD
4	CHN	AZE	MNG
5	USA	VNM	RUS
6	NPL	RUS	AZE
7	RUS	CHN	VNM
8	AZE	MNG	CHN
9	TUR	NPL	GEO
10	GTM	GEO	NPL
11	FRA	POL	POL
12	CZE	ARM	BRA
13	VNM	BRA	ROU
14	CMR	BIH	ARM
15	ITA	FRA	BIH
16	JPN	CZE	USA
17	QAT	ALB	ALB
18	URY	USA	FRA
19	ROU	KOR	CZE
20	DOM	ITA	TUR
21	BRA	TUR	SRB
22	SEN	THA	ITA
23	KOR	ESP	CHL
24	POL	CHL	KOR
25	LKA	IND	ESP

26	THA	JPN	THA
27	PAN	MUS	JPN
28	IDN	IDN	URY
29	KHM	KHM	KGZ
30	CIV	LKA	IND
31	KAZ	MDA	KHM
32	DEU	KGZ	IDN
33	TTO	URY	MDA
34	ESP	UZB	MUS
35	LBN	QAT	UZB
36	GHA	CRI	LKA
37	CRI	GTM	SWE
38	CHL	SLV	CRI
39	SLV	UGA	QAT
40	UZB	DOM	ARG
41	SAU	SWE	GTM
42	TZA	ARG	UGA
43	UGA	DEU	NZL
44	JAM	BHR	SLV
45	SWE	PAN	KAZ
46	EGY	ISR	DOM
47	CHE	UKR	PAN
48	ISR	SEN	UKR
49	ARG	KWT	SEN
50	NZL	NZL	DEU
51	BHR	GHA	CMR
52	ETH	TTO	COL
53	IND	EGY	KWT

54	OMN	CMR	BLR
55	KWT	KAZ	ISR
56	BGD	COL	GHA
57	TUN	LBN	EGY
58	PER	BLR	TTO
59	NLD	JAM	TZA
60	MEX	BGD	BHR
61	AUS	TZA	TUN
62	ECU	TUN	ZAF
63	MYS	MYS	MYS
64	NGA	ZAF	JAM
65	COL	ECU	OMN
66	UKR	CIV	LBN
67	ZAF	MEX	ECU
68	GBR	OMN	PER
69	JOR	PER	SAU
70	ARE	CHE	CIV
71	SGP	NGA	MEX
72	DZA	NLD	AUS
73	PAK	SAU	BGD
74	KEN	SGP	CHE
75	MAR	GBR	NGA
76	HKG	AUS	BOL
77	CAN	KEN	NLD
78	PHL	JOR	LBY
79		BOL	GBR
80		HKG	KEN
81		PRI	JOR

82	LBY	PSE
83	MAR	SGP
84	PAK	PRI
85	ARE	MAR
86	IRQ	HKG
87	ETH	IRQ
88	CAN	ARE
89	PHL	ETH
90	DZA	PAK
91		CAN
92		DZA
93		PHL

(Those highlighted are Asian Countries)

Authors and Affiliations

Countries	Authors	Institutes
Cambodia	 Dr. Teng Delux Pen Socheata 	Cambodia Development Resource Institute (CDRI)
Indonesia	 Nailul Huda Dhenny Yuartha Junifta Nur Komaria 	Center of Innovation of Digital Economy (CIDE)
Laos	 Viengsavang Thipphavong Dr. Chanhphasouk Vidavong Dr. Somdeth Bodhisane 	Institute for Industry and Commerce (IIC)
Malaysia	 Dr. Saixi Xiao Tay Yi Thong 	Malaysian Institute of Economic Research (MIER)
Myanmar	 Dr. Myint Myint Kyi, Dr. Hlaing Hlaing Moe Dr. Zin Zin Shwe 	Yangon University of Economics (YUEco)
The Philippines	 Dr. Tereso Tullao Jr Paulynne Castillo Maria Zunally Rapada 	De La Salle University, Inc
Singapore	 Say Jye, QUAH Kway Guan, TAN 	National University of Singapore (NUS)
Thailand	1. Punpreecha Bhuthong	Thailand Development Research Institute (ITD)
Vietnam	 Pham Minh Thai Vu Hoang Dat Vu Thi Van Ngoc 	Centre of Analysis and Forecasting (CAF)
Hong Kong	1. Heiwai Tang	Hong Kong Institute of Business and Strategy (HIEBS)

Cambodia

Cambodia Development Resource Institute (CDRI)

- **Dr. Teng Delux** earned a Ph.D. of World Economy from Southern Federal University and Diploma of State and Municipal Management from Belgorod State National Research University, Russia. He has experience working in both public and private sectors. He is currently a research fellow at Centre of Development Economic and Trade, CDRI. His areas of research interests are labour market, macro-economic policies, Investment and Trade;
- **Pen Socheata** obtained a bachelor degree from the Department of International Studies, Institute of Foreign Languages with an International Relations major in 2020. Currently, she is a research assistant at CDET.

Indonesia

Center of Innovation of Digital Economy (CIDE)

- **Nailul Huda** Nailul Huda is a Digital Economist with more than 6-years of working experience with the Institute for Development of Economics and Finance. His expertise is in public policy, business competition, business cycle, business strategy, and digital economy.
- Dhenny Yuartha Junifta Dhenny is an expert on Resource Economics, Digital Economy, and Public Policy. He has experience in Research for more than 6 years. In 2018-2019, Dhenny was a team of Special Staff to the President of Indonesia as Deputy Assistant of Economic. His interests are development and digital economy research.
- Nur Komaria- Ria is a researcher from the Center of Digital Economy and SMEs in INDEF. Previously, she started her career as a research assistant in INDEF. Her research interests are SMEs, management, public policy, digital economy, and financial technology.

Laos

Institute for Industry and Commerce (IIC)

- Viengsavang Thipphavong is a Deputy Director General at the Institute for Industry and Commerce (IIC), Ministry of Industry andCommerce, Lao PDR. He supervises two research divisions in the IIC namely, Trade Policy Research, andIndustrial and Handicraft Policy Research. He has a Master of Development Economics (Advanced) from Queensland University, Australia and completed an advanced course on Training of Trainer on International Trade and Competitiveness, organized by Estey Centre.
- Dr. Chanhphasouk Vidavong- is a Director of Trade Policy Research Division at the Institute for Industry and Commerce (IIC), Ministry of Industry and Commerce (MOIC), Laos. He graduated Doctoral Degree from Graduate School of International Development (GSID), Nagoya University, Japan, in International Trade and Economic Development that

he specialized on Global Value Chains, SMEs development and Pro-poor. For his master, he graduated at Graduate School of International Cooperation (IDEC), Hiroshima University, Japan. His papers were published in international journals and book chapters on global value chains and local SME development. He has been invited to be an adviser for master study at Faculty of Economic and Business Administration, University of Laos, currently. He is also a senior trainer at IIC who has experience on Training of Trainer Program (TOT).

• **Dr. Somdeth Bodhisane** - is a Deputy Director of Division at the Institute for Industry and Commerce (IIC), Ministry of Industry and Commerce (Laos). A postdoctoral research fellow with extensive experience and demonstrated expertise in data collection and field study surveys, which involve qualitative and quantitative analytical processes. He has published a series of top-impact journals and book chapters on health economics and trade policies. He is currently a visiting lecturer at Chulalongkorn University.

Malaysia

Malaysian Institute of Economic Research (MIER)

- Dr. Saizi Xiao is currently an Assistant Professor at the School of Economics, Nottingham University Malaysia, she is also a Non-Resident Fellow at Malaysian Institute of Economic Research. She obtained PhD and MSc in Development Economics from University of Malaya and Glasgow University respectively. Her research interests include development economics, labour economics, micro-econometric modelling and digital economy in East Asia and Southeast Asia. She has been leading multiple research projects for Malaysian government agencies e.g. Ministry of Higher Education, Ministry of Women, Family & Community Development and Communications & Multimedia Commission, and international organizations e.g. OIC, UNDP and ASEAN Secretariat.
- Tay Yi Thong is currently an Economics student at University College London. She is passionate about development economics, gender studies, and international trade. She led multiple student research projects on national social issues and student welfare for the UCL Centre for Teaching and Learning in Economics, and student organizations, e.g., MSGA and UKEC. She supported research projects on international trade and industry transformation during her internship period at Deloitte Consulting, Department of Health and Social Care UK, IDEAS Malaysia, and the Ministry of International Trade and Industry Malaysia. She was a research intern at Malaysian Institute of Economic Research.

Myanmar

Yangon University of Economics (YUEco)

• Dr. Myint Myint Kyi, Professor & Head, Department of Management Studies: Dr. Myint Myint Kyi received her B. Com (Hons:), and M. Com degrees from the Yangon

Institute of Economics in 1992 and 1996 respectively. She also got a Post Graduate Diploma in Computer Sciences from University of Computer Studies (Yangon) in 2000. And she obtained M.Sc degree specialization in Project Management from University of Greenwich (IK)I 2007. She got her Ph.D (Commerce) from Yangon Institute of Economics in 2012. Her teaching and research experiences are Creativity and Innovation Management, Project Management, Marketing Management and Marketing Research.

- Dr. Hlaing Hlaing Moe, Professor & Head, Department of Applied Statistics:Dr. Hlaing Hlaing Moe is a Professor and Head of Department of Applied Statistics in Yangon University of Economics. She obtained her B.Econ Honours (Statistics) degree in 2004, M.Econ (Statistics) degree in 2007, Ph.D (Statistics) degree in 2019. She also attained the Academy Award of her Ph.D thesis from Myanmar Academy of Arts and Science. She has also written research publications related to tourism, poverty, demography, gender equality and environmental problems. Her specialized fields are Multivariate Analysis, Demography, Sampling Theory and Techniques and Research Methodology.
- Dr. Zin Zin Shwe, Professor, Department of Economics:Dr. Zin Zin Shwe is currently
 a Professor at the Department of Economics, Yangon University of Economics. She
 obtained her B.Econ (Qualified) (Economics) in 2003 and M.Econ (Economics) in 2006
 from Yangon University of Economics. During 2006-2008, she attended graduate program
 at International University Japan and she achieved M.A (International Development
 Program) degree. And she achieved her Ph.D (Economics) degree from Thammasat
 University, Bangkok, Thailand, in 2020. Her main interests are Development Economics,
 Computable General Equilibrium Model, Input-Output Analysis, Econometric Modeling
 and Quantitative Analysis

Philippines

De La Salle University, Inc

- **Dr. Tereso S. Tullao, Jr.** is a University Fellow and Professor Emeritus of Economics at De La Salle University-Manila (DLSU). He held several positions at DLSU in the past including Dean of the College of Business and Economics, Director of the Angelo King Institute for Economic and Business Studies and Editor-in-Chief of the DLSU Business and Economics Review, among others. He was educated at DLSU, Stanford University and Tufts University. He has published several articles, monographs, and books in Filipino and English in the fields of economics of education, trade in services, movement of natural persons, migration and remittances
- **Paulynne J. Castillo** has been a faculty member of the De La Salle University School of Economics since 1998. She earned her undergraduate degree, BS Economics, from the University of the Philippines and Masters degree in Economics from the California State University Long Beach. Her research interests include, but are not limited to, international trade and foreign direct investments, the digital economy, and income distribution and

poverty. She has also written a number of papers that reviewed the economic, political, social factors that influence the development of Philippine industries

 Maria Zunally Rapada is currently an Assistant Professorial Lecturer at De La Salle University School of Economics where she obtained her Bachelor of Science in Applied Economics and Master of Arts in Economics. She is also the Project Coordinator of DLSU-Angelo King Institute for Economics and Business Studies and a Committee Member of the Lasallian Social Enterprise and Economic Development Center. Her research interests include behavioral economics, social innovation, ESG, and industry analysis.

Singapore

National University of Singapore (NUS)

- QUAH Say Jye is a Research Assistant at the Asia Competitiveness Institute (ACI), Lee Kuan Yew School of Public Policy, National University of Singapore. He holds a Master of Science in Asian Studies from the S. Rajaratnam School of International Studies, and a Bachelor of Social Science (Honours) from the National University of Singapore. At ACI, he focuses on understanding ASEAN and energy trade in Southeast Asia. His current research interests include Southeast Asian politics, history, and political theory.
- **TAN Kway Guan** is a Research Associate at the Asia Competitiveness Institute, Lee Kuan Yew School of Public Policy, National University of Singapore. Kway Guan graduated from the University of Western Australia with a Master of Economics and a Bachelor of Commerce, double major in Economics. His research focuses on economic development in ASEAN. His recent research include the impact of COVID-19 on the economies of ASEAN, Hong Kong and Taiwan, digital economy and digital trade policy. His research interests include development economics and applied econometrics.

Thailand

Thailand Development Research Institute (ITD)

• **Punpreecha Bhuthong** is a Senior Researcher in the International Economics and Development Policy Program at Thailand Development Research Institute (TDRI). He received Master's degree in Economics from the University of Illinois at Urbana-Champaign. He has years of research experience. His research interests include international trade and development, global/regional economic integration, and agricultural economics.

Vietnam

Centre of Analysis and Forecasting (CAF)

• **Dr. Pham Minh Thai** is Principal researcher of the Centre for Analysis and Forecasting (CAF) under the Vietnam Academy of Social Sciences (VASS). He obtained a MA in Development Economics (Vietnam-Netherlands Master in Development Economics

Programme) in 2008 and a Ph.D. degree in Political Economics from Hanoi National University in 2018. His research focuses on the labor market and trade. He has extensive experiences on both qualitative surveys such as focus group discussion/in-depth interviews and quantitative research with international publications in Children & Society Journal, Children and Youth Services Review and large numbers of Vietnamese Journals.

- Dr. Vu Hoang Dat, PhD in Economics, LEDa, Paris Dauphine University, PSL University; MA in Development Economics (Vietnam-Netherlands Master in Development Economics Programme). Currently, he is the head of Division of Development Issues, the Centre for Analysis and Forecasting (CAF) under Vietnam Academy of Social Sciences (VASS). His research focuses on livelihoods and poverty, labour market, productivity, and innovation. He has extensive experiences of consultancies for international development agencies such as the World Bank, UNDP, ILO as well as working with Development Research Institutes of countries in the Greater Mekong Sub-Region.
- Vu Thi Van Ngoc, MA in economic Management, is a researcher of Centre for Analysis and Forecasting (CAF), under Vietnam Academy of Social Sciences (VASS). Her research focuses on informal sector, agricultural economics, trade and labour market. She has extensive experiences on qualitative survey with focus group discussion and in-depth interviews.

Hong Kong

Hong Kong Institute of Business and Strategy (HIEBS)

Dr. Heiwai Tang is Victor and William Fung Professor in Economics, Director of the Asia Global Institute, as well as Associate Director of the Institute of China Economy and the Hong Kong Institute of Economics and Business Strategy at the University of Hong Kong (HKU). Prior to joining HKU, he was tenured Associate Professor of International Economics at the School of Advanced International Studies (SAIS) of Johns Hopkins University. He is also affiliated with the Federal Reserve Bank of Dallas (U.S.), the Center of Economic Studies and Ifo Institute (CESIfo, Germany), the Kiel Institute for the World Economy (Germany) and the Globalization and Economic Policy Center (U.K.) as a research fellow. He has been a consultant to the World Bank, the International Finance Corporation, the United Nations, and the Asian Development Bank; and held visiting positions at the IMF, Stanford, MIT, Harvard. He is currently Managing Editor of Pacific Economic Review, and Associate Editor of the Journal of Comparative Economics and the China Economic Review.









Ministry of Industry and Commerce Institute for Industry and Commerce P.O.Box 4107 ,Vientiane Capital, Lao PDR Telephone: + 856 21 452948 Fax: +856 21 417084 http://iic.moic.gov.la/