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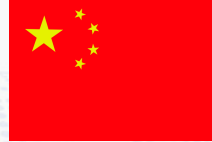
RESEARCH ON DIGITAL CONNECTIVITY IN MICRO, SMALL AND MEDIUM ENTERPRISES (MSMES) IN THE LANCANG–MEKONG COUNTRIES

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1. Overview Background and Introduction

Digitalization is the use of digital technologies to change a business model and provide new revenue and value-producing opportunities (Gartner, 2022). It holds enormous potential to support growth, promote innovation and facilitate connectivity. COVID-19 has acted as a catalyst for digital transformation. Digital connectivity has proven to be a crucial factor, allowing economies to successfully contain the spread of the virus and enabling business continuity across the globe, saving millions of jobs. For instance, digital cash transactions through mobile phone platforms have reduced the risk of COVID-19 spread associated with physical cash transactions.

Studies have shown that technology adoption has enhanced the competitiveness of Micro, Small, and Medium-sized Enterprises (MSMEs) (UNCTAD, 2020). As diverse as they are, emerging digital technologies offer MSMEs a range of applications and solutions to improve performance and overcome the size-related limitations they face in doing business compared to large firms. Digital tools such as e-commerce platforms, resource management, and collaboration software have helped small companies and startups leverage their networks and employees (The Network Readiness Index 2021, 2021).

Despite potentially significant benefits, MSMEs still lag in digitalization (OECD, 2021). Since over 95% of all firms in many countries and regions are MSMEs, their digitalization is critical for innovation, economic growth, and job creation. It plays a crucial role in creating sustainable societies (OECD, 2021). MSMEs' failure to adapt to technological changes may further entrench digital inequalities vis-à-vis large firms. Enabling MSME digitalization has become a top policy priority for most countries because the MSME digital gap has increased inequalities among people, places, and firms. There are concerns that the benefits of the digital transformation could accrue to large firms broadening these inequalities.

Further, the digital transformation of MSMEs does not distribute equally across countries. The digital divide is evident across countries. MSMEs in high-income economies with more digital skills and greater access to resources continue to leverage technology better than emerging and lower-income nations with limited skills and access to fewer resources. Therefore, it is essential that emerging and low-income countries overcome developmental challenges, structural limitations, and fragmented regulatory environments in this new era of accelerated digital transformation. Like any country and region, MSMEs in Lancang-Mekong countries face several challenges that delay their adoption of digital technology and its application.

2. Study Aims and Objectives

To foster digitalization and adoption of innovative technologies in MSMEs, Mekong Institute (MI), with the support of the People's Government of the People's Republic of P.R. China, is implementing the project on "Fostering Digital Connectivity in the Lancang-Mekong Countries."

The project seeks to identify challenges and opportunities in digital connectivity in the MSMEs sector and enhance the key stakeholders' capacity to adopt digital platforms and technologies, contributing to enhanced digital connectivity among LMC member countries.

This study looks at the current status of MSMEs' digital uptake, including in the context of the COVID-19 crisis in Lancang-Mekong countries. This research aims to be an evidence-based study to understand the current status, issues, challenges, and opportunities of digital connectivity for MSMEs in LMC. The specific objectives of this study are as follows:

> ❖ Examine the current status of the adoption of digital technology by MSMEs in the Lancang-Mekong countries
> ❖ Identify the primary enablers and benefits of digital technology adoption for MSMEs in the Lancang-Mekong countries
> ❖ Examine the main challenges and barriers facing MSMEs for digital technology adoption in the Lancang-Mekong countries
> ❖ Provide recommendations for future actions that will enhance the digitalization and digital connectivity of MSMEs in the Lancang-Mekong countries

3. Overview of Lancang-Mekong Cooperation

The Lancang-Mekong Cooperation mechanism (LMC) was formally launched in March 2016 at a gathering of heads of government from P.R. China, Cambodia, Lao PDR, Myanmar, Thailand, and Vietnam. LMC has been hailed by many as a vital next step in deepening cooperation, boosting connectivity, enhancing sustainable development of sub-regional countries, improving people's well-being, and narrowing development gaps. As part of the broader connectivity objective, LMC has been proactively working towards enhancing digital connectivity in the region. Digital connectivity is one of the priority areas of the LMC framework to provide opportunities for the region to cope with the current COVID-19 crisis and overcome long-term development challenges. The total population of the six countries reached 1.643 billion in 2019 and constituted 36.2% of the ASEAN people. The total area of the six countries is 11.54 million square kilometers, making up 25.9% of the total area of Asia. The GDP of the six countries stands at 15.3 trillion U.S. dollars, accounting for 48.35% of the GDP of Asia. A brief summary of these countries is provided in the box below:

P.R. China - With a population of 1.4 billion and an annual growth rate of 0.33%, P.R. China covers a land area of 9.6 million square kilometers (official statistic of P.R. China). Its urbanization rate is 60.6%, and its GDP is 14362.87 billion U.S. dollars, up by 6.1% year-on-year. P.R. China's GDP per capita is 10,276 U.S. dollars, up by 5.8% year-on-year. Its total volume of export and import is 4.58 trillion U.S. dollars.

Cambodia - With a population of 16 million, Cambodia is 180,000 square kilometers in area. Its GDP is 26.8 billion U.S. dollars, up by 7.1% year-on-year. Cambodia's GDP per capita is 1679

U.S. dollars. Bilateral trade between Cambodia and P.R. China is 9.43 billion U.S. dollars, up by 27.7% year-on-year.

Lao PDR - With a population of 7.23 million, Lao PDR is 236,800 square kilometers in area. The country's GDP is around 19 billion U.S. dollars, and its GDP per capita is 2765 U.S. dollars. Bilateral trade between Lao PDR and P.R. China is 3.92 billion U.S. dollars, up by 12.9% year-on-year.

Myanmar - With a population of 54.58 million, Myanmar is 676,600 square kilometers in area. Its GDP is 76 billion U.S. dollars. Its bilateral trade volume with P.R. China is 18.7 billion U.S. dollars, up by 22.8% year-on-year.

Thailand - With a population of 69 million, Thailand is 513,100 square kilometers in area. Its GDP is 523.7 billion U.S. dollars, up by 2.4% year-on-year. Bilateral trade between Thailand and P.R. China is 91.75 billion U.S. dollars, up by 4.8% year-on-year.

Vietnam - With a population of 96.2 million, Vietnam is 329,600 square kilometers in area. Vietnam's GDP is 262 billion U.S. dollars, up by 7.02% year-on-year, and its GDP per capita is 2800 U.S. dollars. Its total export and import volume is 517.3 billion U.S. dollars, up by 7.6% year-on-year. Bilateral trade between Vietnam and P.R. China is 162 billion U.S. dollars, up by 9.6% year-on-year.

Source: Lancang-Mekong Cooperation (2021)

4. Nature and Definition of SMEs

The definition of MSMEs varies across countries. According to the World Bank, Micro, Small, and Medium Enterprises (MSMEs) are defined based on the firm's number of employees as follows; Micro enterprises are made up of 1-9 employees, Small enterprises are made up of 10-49 employee, and medium made up of 50-249 employees (OECD, 2005; 2022). According to OECD, micro, small and medium-sized enterprises (MSMEs) are non-subsidiary, independent firms that employ fewer than a given number of employees. This number varies across countries and also across industries. Micro-enterprises have at most 10, or in some cases 5, employees. Small firms are generally those with fewer than 50 employees. The most frequent upper limit designating an SME is 250 employees, as in the European Union. However, some countries set the limit at 200 employees, while the United States considers SMEs to include firms with fewer than 500 employees. Financial turnover is also used to define SMEs. In the European Union, the turnover of medium-sized enterprises (50-249 employees) should not exceed EUR 50 million; that of small enterprises (10-49 employees) should not exceed EUR 10 million, while that of micro firms (less than 10 employees) should not exceed EUR 2 million (OECD, 2005). In ASEAN and LMC countries also, the definition of MSMEs varies across countries and depends on various factors, including the number of employees, the sector in which they operate, the value of investments and assets, and legal basis (ADB, 2020). The MSME definition and contribution by each country in LMC are given below.

Thailand

In Thailand, MSMEs definition is defined based on the size of the enterprises. The total number of MSMEs was 3,105,096, accounting for 99.53% of all enterprises in 2019 and contributing to 35.3% of the national GDP (OSMEP, 2020). The Office of Small and Medium Enterprises Promotion (OSMEP), established in 2000, is the foremost organization providing support and other mechanisms to promote MSMEs in Thailand. The definition for MSMEs for Thailand is given below.

| Type of Business | Micro and Small Enterprise | | | | Medium Enterprise | |
| | Micro Enterprise | | Small Enterprise | | | |
	Annual Income (Miliion baht)	Employment (Person)	Annual Income (Miliion baht)	Employment (Person)	Annual Income (Miliion baht)	Employment (Person)
Manufacturing	≤ 1.8	≤ 5	≤ 100	≤ 50	≤ 500	≤ 200
Service and Merchandising	≤ 1.8	≤ 5	≤ 50	≤ 30	≤ 300	≤ 100

Figure 1: Definition of MSMEs

Source: (OSMEP, Thailand)

According to the OSMEP (2020) report, in Thailand, Micro Enterprises make the largest percentage, 84.7%, followed by Small and Medium enterprises, 13.33% and 1.42%, respectively. However, considering GDP by enterprise size, it was found that Micro Enterprise accounted for only 2.9%, while Small and Medium Enterprise accounted for 15.3% and 17.1%, respectively. The remaining 64.7% come from Large enterprises. The number of MSMEs in the business sector in Thailand is given below.

Digital Connectivity in Micro, Small and Medium Enterprises (MSMEs) in the Lancang-Mekong Countries

Total Number of MSMES 3,105,096 Enterprises

Trading Sector 1,280,741 Enterprises (41.25%)

Service Sector 1,244,464 Enterprises (40.8%)

Manufacturing Sector 530,698 Enterprises (17.09%)

Agribusiness Sector 49,193 Enterprises (1.58%)
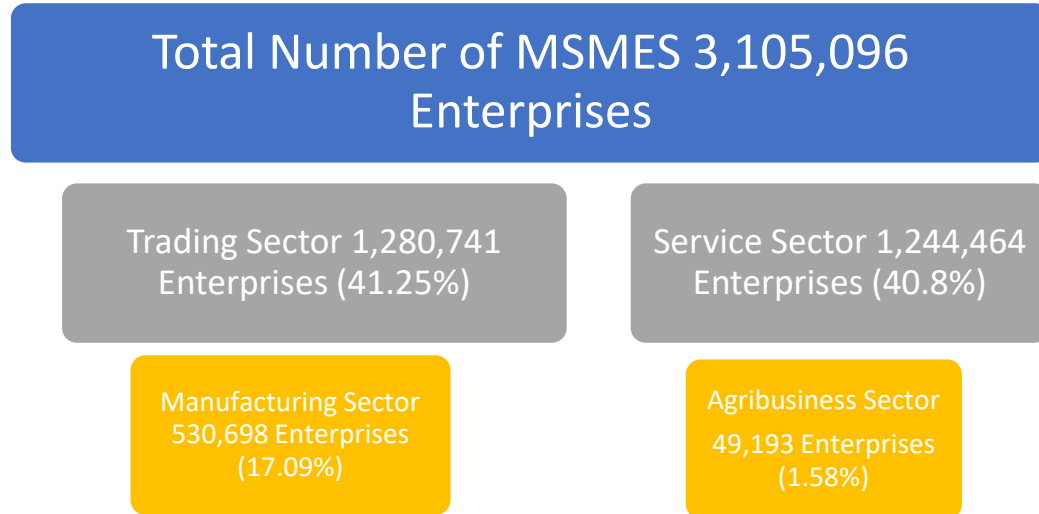
Figure 2: MSMEs by Business Sector in Thailand

Source: (OSMEP, Thailand)

P.R. China

MSMEs are defined by the number of employees and operating income in P.R. China. It is characterized by enterprises with less than 300 employees or less than 100 million yuan operating income. From 2016 to 2020, the number of total enterprises nationwide has increased from approximately 87 million to 138 million enterprises, and the proportion of MSMEs has increased from 94.1% to 96.8% during this period. MSMEs in P.R. China contributed to more than 60% of GDP in 2021 (www.chyxx.com/industry/202112/989592.html). The main sectors of Chinese MSMEs are the industrial and commercial market segments, followed by technological innovation and urban labor employment. The Southern region in P.R. China has the highest number of MSMEs, accounting for 57% of total MSMEs, especially in Guangdong, Jiangsu, and Zhejiang provinces.

Vietnam

The government has defined SMEs as Micro, Small, and Medium Enterprise based on the number of employees less than 200 and either have a total investment capital that is not more than 100 VND billion (approximately 4.4 Million USD) or a previous year's total revenue of not more than 300 VND billion. This law is applied to SMEs in agriculture, forestry, fisheries, construction, trade, and service. Currently, in Vietnam, MSMEs represent approximately 97% of the total number of enterprises, or 593,629 enterprises. The most significant portion is Micro Enterprise 74%, followed by Small and Medium, 24%, while Large enterprises only accounted for 2%. MSMEs contribute to the country's total GDP is 40%. The largest sector of MSMEs in Vietnam is the wholesale,

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retail, and service sector, which account for 63%. The rest are in the manufacturing, construction, and transport sector.

Cambodia

MSMEs represent 99.8% of total enterprises in Cambodia, which is a total of 512,870 enterprises. In 2018, MSMEs provided over 70 percent of employment opportunities (UN-DESA, 2020). The majority of MSMEs are in the food and food production industry contributing approximately 70%, manufacturing 16%, and the rest are in the service sector 16%. MSMEs contribute 58% of the total GDP (Open Development Cambodia, 2020). The enterprises are classified into four categories i.e., micro, small, medium, and large enterprises. Micro enterprises have less than ten employees or a start-up capital of less than USD 50,000. Small enterprises have 11 to 50 employees or start-up capital of USD 50,000 to USD 250,000. Medium enterprises employ 51 to 100 employees or with startup capital from USD 250,000 to USD 500,000. Large enterprises are those with more than 100 workers with start-up capital of more than USD 500,000 (Open Development Cambodia, 2020).

Lao PDR

The total number of MSMEs is 124,567 enterprises, accounting for about 99% of total enterprises. In terms of classification, micro-enterprises have less than five employees; small have 6-50 employees, and medium has 51-99 employees. In other words, firms with less than 100 employees are classified as MSMEs (ADB Asia SME Monitor, 2020). MSMEs contribute about 20% of the total country's GDP and 80% of employment in the country (ILO, 2021, World Bank Group, 2019). MSMEs proportion is as follows: Micro Enterprise 16%, Small Enterprise 58%, Medium Enterprise 21%, the remaining Large and others 5%. It can be seen that more than 90% of MSMEs own family businesses. In terms of sector, the largest industry of MSMEs is wholesale and retails 62.9%, followed by other services 16.2%, manufacturing 12.4%, Agricultural 4.9%, Transportation and construction 4%.

Myanmar

The number of MSMEs in Myanmar is 75,116 enterprises, accounting for 90% of total enterprises. MSMEs in Myanmar contributed 42.2% of the GDP (http://msmemm.org/en). The largest sector of MSMEs is in the food and beverages and service sector, accounting for 82%, and the rest are in construction and mineral and petroleum products.

Table 1: General Statistics of MSMEs in LMC

Country	Number of MSMEs (% of total)	Employment by MSMEs (% of total)	MSMEs' contribution to GDP (%)
Cambodia	99.8	70	58
Lao PDR	99.8	82	20
Myanmar	89.9	-	42

Country	Number of MSMEs (% of total)	Employment by MSMEs (% of total)	MSMEs' contribution to GDP (%)
Thailand	99.8	86	35
Vietnam	97.2	38	40
P.R. China	96.8	-	60

Source: Compiled by Authors

5. Research Methodology

The study framework is presented in Figure 1. As seen in the figure, the research study consists of three sequential phases involving secondary and primary data collection.

5.1.   *Secondary Desk-Based Review (Phase 1)*

This included a review of both qualitative and quantitative information and data sources. The qualitative part reviewed relevant reports, including project reports and reports from leading inter-governmental and governmental organizations such as World Bank, OECD, Asian Development Bank, non-profit organizations, think tanks, industry, and consulting firms. In addition, government websites, company websites, policy documents, and news articles were reviewed to develop a critical understanding of the current status, challenges, and opportunities in the Lancang-Mekong Countries and other regions. In terms of qualitative analysis, thematic analysis, which involves identifying, analyzing, and interpreting patterns of meaning (or "themes"), was employed. The qualitative data drawn from the various secondary sources were assembled, coded, and analyzed.

The quantitative review and analysis were conducted primarily on data gathered from statistical databases of the World Economic Forum, UNCTAD, World Bank, and other relevant sources and reports. In terms of quantitative data analysis, suitable statistical analysis (frequencies, percentage growth, percentage shares, comparisons and relationships between indicators, etc.) was performed using Microsoft Excel. The qualitative and quantitative analysis results were then combined to construct a clear and comprehensive picture.

Overall, the qualitative and quantitative desk-based review phases facilitated the identification of key informed the primary research phase. The insights derived were used to develop the workshop, interviews, case study protocols, and develop the survey instrument.

Research Aims and Objectives

Secondary Desk-based research on Digital Connectivity in MSMEs (Qualitative and Quantitative)

Challenges and opportunities from digital connectivity in general and in the region

Current state of digital connectivity in Lancang-Mekong Countries (LMC)

Phase 1

Development of Interview/Focus Group and Case Study Protocols and Survey Instrument (From Phase 1)

Primary Research

Online workshop with key stakeholders

Online Survey

Interviews and Learning Case Studies

Phase 2

Results - Synthesis of findings from Phase 1, 2 and 3 to develop comprehensive understanding in line with research aims and objectives

Phase 3

Figure 3: Study Framework

5.2. Primary Research (Phase 2)

A sequential multi-phase mixed-method research design involving both qualitative and quantitative methods was adopted in this study, as shown in Figure 4.
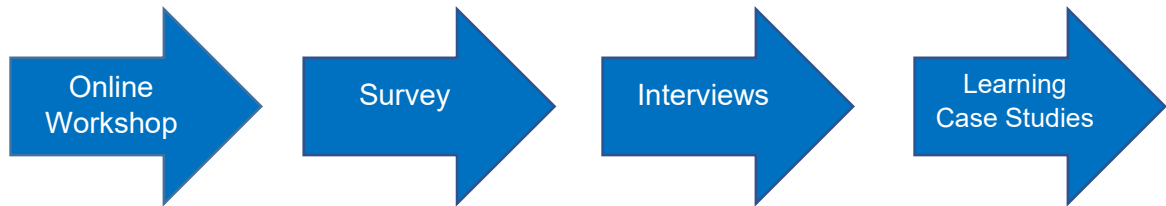
Figure 4: Sequential Multi-Phase Mixed-Method Research Design for Primary Research

5.2.1. Online Workshop

The workshop provided a forum and platform for key stakeholders in LMC to discuss and share their ideas, proposed initiatives, and experiences of ongoing and completed projects to foster digital adoption. The workshop aimed to equip, deepen, and stocktake issues related to digital connectivity among MSMEs from various key stakeholders to ensure that digitalization benefits everyone and advances the SDGs despite the pandemic in the Lancang-Mekong countries. The 3-day online workshop was held from December 20-22, 2021. The workshop featured discussions on best practices- what works & what does not in digital connectivity and platforms. The workshop also featured experts who gave a snapshot of how global digital connectivity has been addressed thus far during COVID-19. Specifically, the workshop focused on the following:

- Highlights on the current condition, issues, and challenges associated with the digital connectivity in Lancang-Mekong countries' MSMEs
- Exchange of views on the barriers to adoption and enhancement of digital connectivity by MSMEs in Lancang-Mekong countries
- Identify potential future actions to be launched to facilitate regional cooperation

A total of 36 participants, including government officials who are involved in promoting innovative technologies in MSMEs development, development practitioners, representatives of MSMEs, digital service providers, financial service providers, development organizations, non-governmental organizations working on the areas of digital and MSMEs development and experts in the areas of the digital economy and MSMEs development from Cambodia, P.R. China, Lao PDR, Myanmar, Thailand, and Vietnam participated in the online workshop.

5.2.2. Online Survey

An online survey using a structured questionnaire was conducted to explore the current state, issues, and challenges associated with the digital connectivity of MSMEs in LMC countries. This method facilitated structured data collection from a large representative sample population, which is critical for enhancing the generalizability of the findings to a larger population. Moreover, the

survey is a valuable approach to reducing subjectivity bias. They obtain straightforward information from respondents and can easily be distributed to large groups of respondents, including distant ones.

Thailand was chosen as the case country to conduct the survey, given that Thailand is in the in-between state wherein the country has seen adoption and, at the same time, facing challenges. The extent of digitalization in Thailand is below P.R. China but above Vietnam, Myanmar, and Cambodia

The scales used in the survey will include five-point Likert scales such as the Agree-Disagree scales, Satisfied-Dissatisfied scale, and High Extent-Low Extent scale measured from 1-to 5 to capture the opinions/perceptions of various respondents. The stakeholders targeted for the survey will include the following key stakeholders from Thailand:

❖ Government
❖ Third-party digital service provider (digital/ financial/ marketplace)
❖ MSMEs

Qualtrics, a leading survey research platform, was used to develop and share the online survey. The links will be shared with the participants through email and other electronic means. The respondents will have the opportunity to complete the survey at their own convenient time, thereby increasing wide participation. A total of 807 participants started the survey. After removing incomplete responses, 585 usable responses were obtained for analysis. Most respondents who participated in the survey were business owners, CEOs, COOs, Managing Director, and those at senior manager levels. The demographic details of the survey participants, their firms, and their industry is given below.
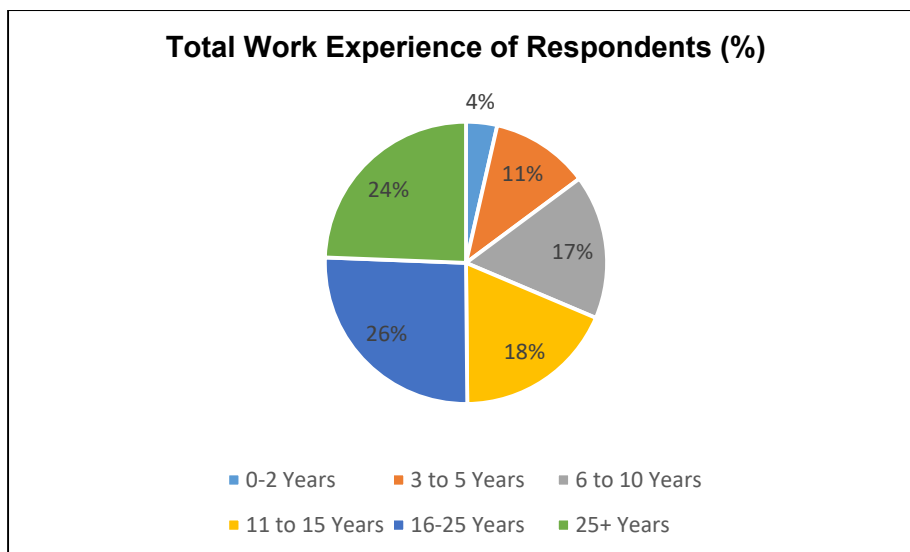
Figure 5: Total Work Experience of Respondents
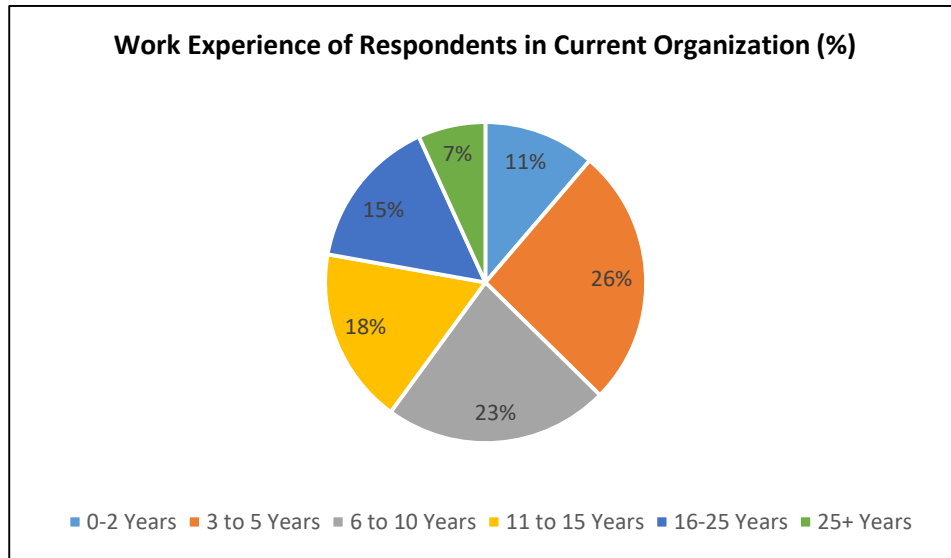
Figure 6: Work Experience of Respondents in Current Organization
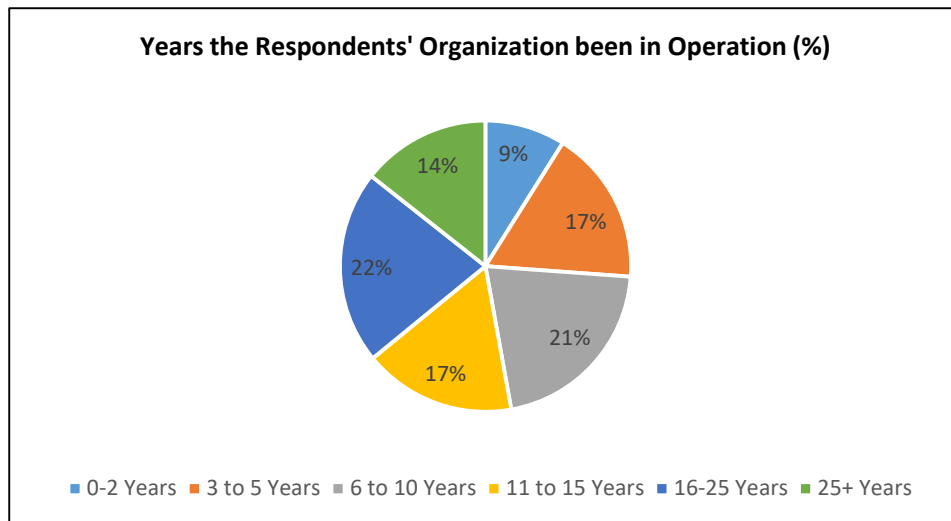
Figure 7: Years the Respondents' Organization been in Operation

Firm Size (Employees)

Category	Percentage
0-9	50.3%
10 to 25	28.9%
26-50	9.7%
51-100	5.1%
101-250	3.7%
251-500	1.2%
501-1000	0.9%
1001+	0.2%
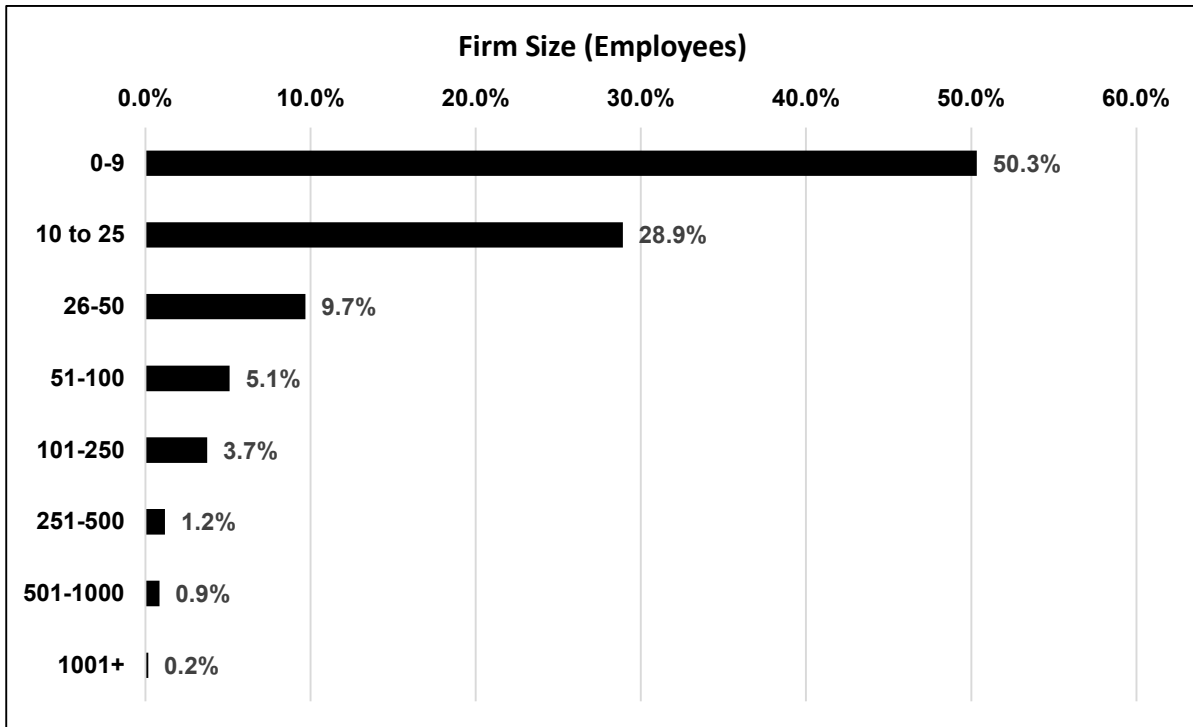
Figure 8: Firm Size (Employees)

Annual Turnover (% Firms)

Category	Percentage
Less than 250,000 USD	49.83%
250,000 - 500,000 USD	21.03%
500,001 - 1 Million USD	10.34%
1 Million - 5 Million USD	11.90%
5 Million - 10 Million USD	3.62%
10 Million - 50 Million USD	2.41%
Above 50 Million USD	0.86%
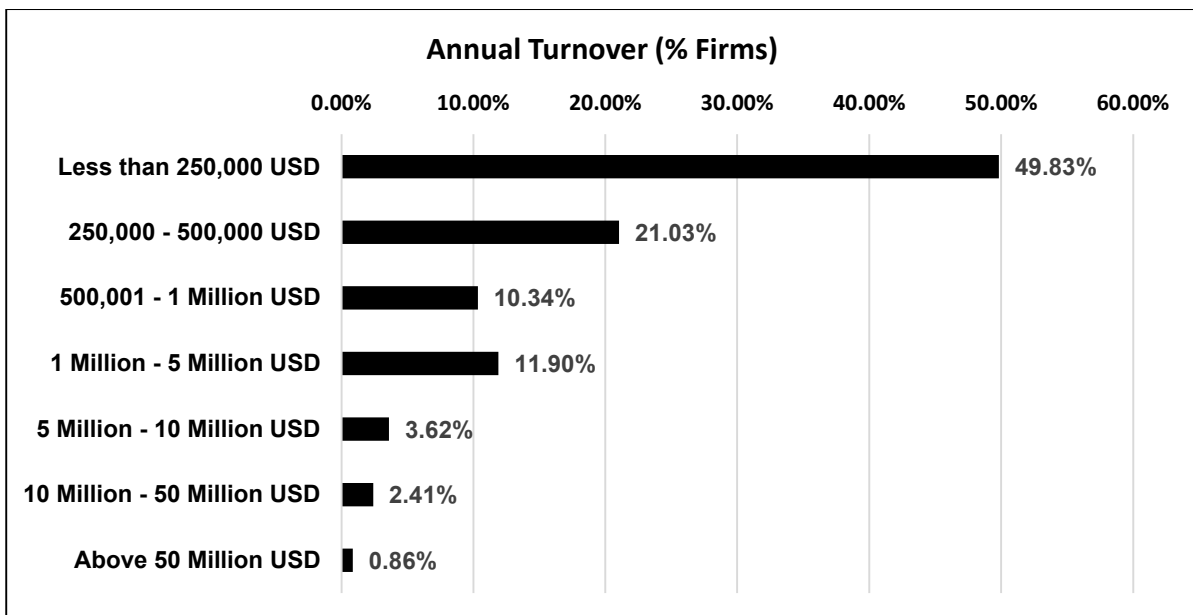
Figure 9: Annual Turnover (% Firms)

Industry/Sector of MSMEs

Industry/Sector	Percentage
Retail and Trading	22.9%
Construction and Real estate	14.5%
Manufacturing	10.8%
Information Technology (IT)	10.8%
Tourism and Hospitality	8.8%
Food and Agriculture	7.0%
Media, Entertainment and Recreation	4.2%
Transportation, Logistics and Supply Chain	2.6%
Healthcare	2.4%
Public Administration/Services	2.4%
Educational services	1.8%
Banking and Finance	0.6%
Airline/Aviation	0.2%
Others	11.2%

Figure 10: Industry/Sector of MSMEs

Export or Cross-border Transactions

Yes: 25%
No: 75%
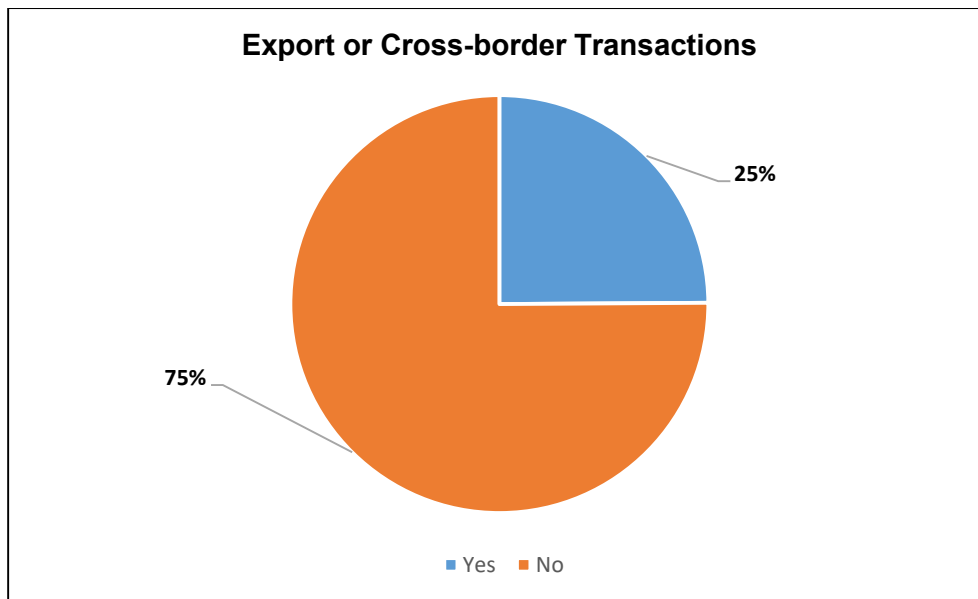
Figure 11: Export or Cross-border Transactions

5.2.3. Interviews

The interviews are helpful to obtain a more in-depth understanding and for the participants to elaborate on examples and case studies that they may not have included in their written response to the questionnaire. Due to the COVID-19 restrictions, interviews were mainly conducted online. The questions were shared with participants in advance to enable them to come prepared. The details of interview participants, including their position, and the organization they represent, are provided in Table 2. For interviews, a semi-structured interview approach was preferred because the scope of the discussions revolved around the current status, issues, and challenges associated with digital connectivity in LMC's MSMEs. The detailed interview protocol used in this study is given in Appendix 3. A purposive sampling, a non-probability sampling technique, will be used to recruit the participants. This is because, to get quality, in-depth information from participants, it was impossible to recruit any professional at random for interviewing; instead, it was necessary to ensure the designation and experience of the interviewees were relevant to the posed questions. Also, purposive sampling ensured that interview participants represented cross-sections of the stakeholders (i.e., government, digital service provider, and MSMEs) across LMC countries. The details of the interview participants are given below.

Table 2: Interview Participants

Country	Organization	Participant Profile
Government and Associations		
Thailand	Digital Economy Promotion Agency (DEPA)	Vice President, Northern Region
	The Office of Small and Medium Enterprise Promotion (OSMEP),	Director, SME Knowledge and Service System Department
Myanmar	Ministry of Cooperate and Rural Development	Director, Department of Small Scale Industries
	Ministry of Transport and Communications	Assistant Director
	Myanmar International Freight Forwarder's Association	Joint Secretary
Vietnam	Vietnam Chamber of Commerce and Industry	Director
Cambodia	Ministry of Industry, Science Technology and Innovation	Director, Small and Medium Enterprise Department
Lao PDR	Department of SMEs Promotion	Director, Entrepreneur Development Division
	The Lao ICT Commerce Association (LICA)	Director
	Ministry of Technology and Communication	Director, Technology Promotion and Transfer Center
	Lao National Chamber of Commerce and Industry	Director
P.R. China	Kunming Federation of Industry and Commerce	Assistant Chairman
	SME Service center of Kunming High Tech Industrial Park	General Officer
Internet/Mobile Platform provider		
Thailand	LINEMAN Wongnai (Food Delivery Application)	Head, Public Affairs

Country	Organization	Participant Profile
	Purple Ventures Co., Ltd (Robinhood) (Food Delivery Application)	CEO, Robinhood
Vietnam	Lazada Vietnam (E-Commerce Platform)	Marketing Director
	Sen Do Joint Stock Company (E-Commerce Platform)	Senior Supply Chain Manager
	Lalamove Vietnam (Last-Mile delivery)	Director
P.R. China	Yunnan Qingzhong Digital Management Co., Ltd (Digital Marketing service)	Deputy Director
	Kunming Sigma Internet Technology Co., Ltd) (E-Commerce Platform)	Managing Director

5.2.4. Learning Case Studies

Three learning case studies were conducted. The aim of the learning cases studies was to obtain a more in-depth understanding of the supportive digital ecosystem available in public and private sectors for MSMEs to succeed. This includes a case study of a popular E-commerce marketplace in which MSMEs rely upon to sell their products and two public sector entities that have undertaken the digitalization drive to make their process efficient and timely, which has helped MSMEs that rely on them for their services. The details of the case studies are given below.

Case study 1: Robinhood Thailand (Private Sector – Platform Provider)

Case study 2: Digital Economy Promotion Agency (DEPA), Thailand (Public Sector)

Case study 3: The Office of Small and Medium Enterprise Promotion (OSMEP), Thailand (Public Sector)

The following in-depth interviews were conducted with each case company as part of the learning case studies.

Table 3: Case Study Participants

Organization	Position
Digital Economy Promotion Agency (DEPA)	Vice President, Northern Region
The Office of Small and Medium Enterprise Promotion (OSMEP)	Director, SME Knowledge and Service System Department
Purple Ventures Co., Ltd (Robinhood) (Food Delivery Application)	CEO, Robinhood

5.3. Synthesis of Results (Phase 3)

Thematic analysis, which involves identifying, analyzing, and interpreting patterns of meaning (or "themes"), was employed for analyzing the secondary and primary qualitative data. The qualitative data were assembled, coded, and analyzed to identify emerging themes and sub-themes in line with the study objectives. Descriptive and inferential statistics will be used to analyze the survey results. The findings derived from the multiple phases (Phase 1 and 2) were then combined to develop a comprehensive picture of the various facets of digital connectivity in micro, small and medium enterprises (MSMEs) in the Lancang-Mekong Countries (LMC).

The study findings are expected to help LMC countries and regional programs develop concrete policy action to speed the MSME digital transformation and raise a series of considerations to advance the digital economy.

6. Research Findings

6.1. The Digital and Business Landscape in Lancang-Mekong Countries

Before we examine the specific digitalization opportunities, benefits, and challenges of MSMEs, it is crucial to examine the generic digital and business ecosystem of the Lancang-Mekong countries. This is because having a supportive digital and business ecosystem is critical for the digitalization drive of MSMEs. Numerous nations cannot access the full advantages of digital technologies due to ongoing developmental challenges, structural limitations, and fragmented regulatory environments. Barriers such as geographical restrictions, lack of physical infrastructure, and digital illiteracy contribute to the digital divide among countries. LMC can take steps to help bridge the current gaps and increase access to digital technologies at the country level, especially in the LMC countries that are lagging. For instance, it is sobering to note that more than 40% of the world's population does not currently have usable access to the Internet (ITU 2020). Lack of high-speed internet access directly impacts the E-commerce and other digitalization success of MSMEs, such as digital and social media marketing.

Similarly, a high-speed broadband connection is a prerequisite for using other digital technologies. Uneven access to high-speed broadband is also one main factor associated with digital gaps across MSMEs. Much will depend on government policies to bring down universal and affordable internet access barriers, including inadequate physical infrastructure, inoperability between systems, and the lack of a supportive policy and business environment.

6.1.1. Information and Communication Technology (ICT) Readiness Index

Launched in 2002 with the World Economic Forum, The Network Readiness Index (NRI) captures the impact of digital technologies at a country level. It is one of the leading global indices on the application and implications of information and communication technology (ICT) in economies

worldwide. In its latest version of 2021, the NRI Report maps the network-based readiness landscape of 130 economies based on their performances in four different pillars: Technology, People, Governance, and Impact. Each of these pillars comprises three sub-pillars (see Figure 12) that have been populated by a total of 60 variables (The Network Readiness Index 2021, 2021).
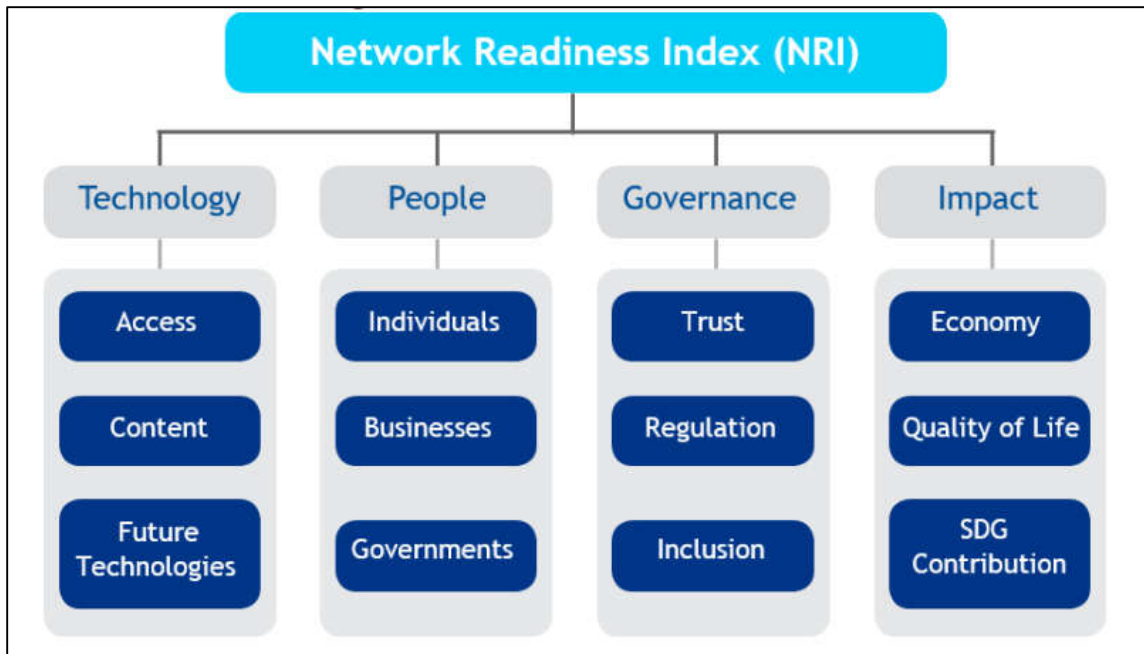
Figure 12: Network Readiness Index Pillars

The description of each of the technology pillars is as follows:

Table 4: Technology Pillars

Pillars	Description
Technology	Technology is at the heart of the network economy. It is the primary category of NRI. Three sub-pillars accomplish the Technology pillar's purpose:
	Access: The fundamental access level to ICT in countries, including issues about communications infrastructure and affordability.
	Content: The type of digital technology produced in countries and the content/ applications that can be deployed locally, including research on the subject derived from scientific and technical articles.

Pillars	Description
	Future Technologies: The extent that countries have prepared for the future of the network economy and new technology trends such as Artificial Intelligence (AI) and the Internet of Things (IoT).
People	The prevalence and quality of technology reflect countries' (and any organization's) skill, access, and ability to utilize technology resources in productive ways. Therefore, the People pillar measures how people apply ICT at three levels of analysis: individuals, businesses, and governments. **Individuals:** how individuals use technology and leverage their skills to participate in the network economy. **Businesses:** How businesses use ICT and participate in the network economy. **Governments:** How governments use and invest in ICT for the benefit of the general population.
Governance	Governance refers to the structures that uphold an integrated network for the safety and security of its users. Therefore, the Governance pillar concerns the establishment and accessibility of systems that promote activity within the network economy across three levels: **Trust:** The safety of individuals and firms in the context of the network economy, reflected in an environment conducive to trust and the trusting behavior of the population. **Regulation:** The extent to which a government promotes participation in the network economy through regulation, policy, and planning. Inclusion: The digital divides within countries where governance can address issues such as inequality based on gender, disabilities, and socioeconomic status. **Inclusion:** The digital divides within countries where governance can address issues such as inequality based on gender, disabilities, and socioeconomic status.
Impact	Readiness in the network economy is a means to improve the growth and well-being of society and the economy in general. Therefore, the Impact pillar seeks to assess the economic, social, and human impact of participation in the network economy across three levels: **Economy:** The economic impact of participating in the network economy.

Pillars	Description
	Quality of life: The social impact of participating in the network economy.
	SDG contribution: The impact of participating in the network economy within the context of SDGs. ICT has a critical role within the network economy and receives particular focus with indicators integrated across health, education, and the environment.

The 2021 NRI score and rank for Lancang-Mekong countries except Myanmar is given in Table 5.

Table 5: NRI Score and Rank for Lancang-Mekong Countries

Country	2021 Overall Score (100)	2021 Overall Rank	2011 Overall Rank	10 Year Improvement in Ranking
P.R. China	65.6	29	36	+7
Thailand	55.3	54	59	+3
Average Overall Score for Asia & Pacific for 2021 - 54.38				
Vietnam	51.1	63	55	-8
Cambodia	36.4	106	111	5
Lao PDR	35.6	110	-	-

It is clear from the table that P.R. China is leading the digital readiness in the Lancang-Mekong countries with an overall score of 65.6 and a global rank of 29. Compared to the 2011 ranking, P.R. China has improved by seven places. Thailand is the second most digitally ready country among the group. It has an overall score of 55.3 and is currently ranked at 54, an improved ranking position by three compared to 2011. Both P.R. China and Thailand's overall score is above the Asia and Pacific average. Vietnam is currently third in digital readiness with an overall score of 51.1 and a global rank of 63. However, compared to the 2011 ranking, it went down by eight positions. Its score is also below the average score for Asia and the Pacific. Despite improving its ranking compared to 2011, Cambodia remains outside the top 100 countries in digital readiness. Also, Lao PDR remained outside the top 100 list and emerged as the least ready country in the group.

Next, we look at the readiness of each country in Lancang-Mekong countries except Myanmar for each of the digital readiness pillars and sub-pillars.

P.R. China

P.R. China ranks 29th out of the 130 economies included in the NRI 2021. Its main strength relates to the Impact pillar. The highest scope for improvement is related to 'Governance'.
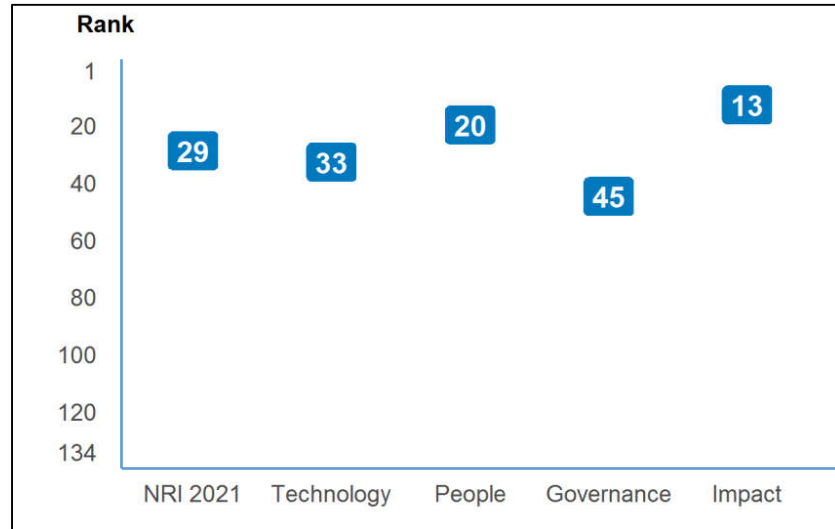
Figure 13: P.R. China Ranks

When it comes to sub-pillars, the strongest showings of P.R. China relate to Economy, Businesses, and SDG Contribution, among others. More could be done to improve P.R. China's performance in the Regulation, Inclusion, and Quality of Life sub-pillars. Overall, P.R. China ranks as one of the strongest performers in the region, standing amongst the top 20 in the Impact (13th) and People (20th) primary pillars.

Table 6: Sub-pillars of P.R. China Rank

Sub pillars	Global Rank
Technology	
Access	31
Content	43
Future Technologies	32
People	
Individuals	19
Businesses	6
Governments	43
Governance	
Trust	36
Regulation	87
Inclusion	48
Impact	
Economy	3
Quality of Life	54
SDG Contribution	17

Thailand

Thailand ranks 54th out of the 130 economies included in the NRI 2021. Its main strength relates to Technology. The highest scope for improvement relates to the 'People' pillar.
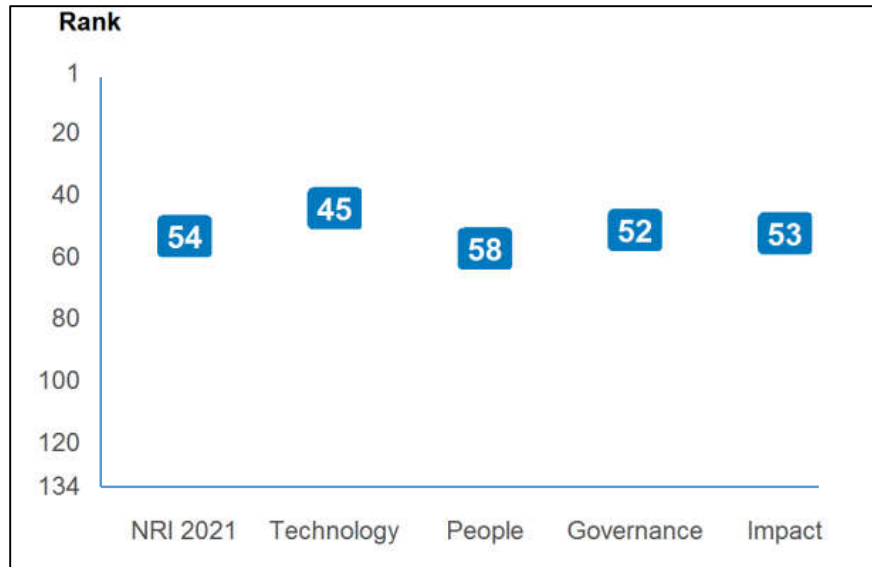
Figure 14: Thailand Ranks

When it comes to sub-pillars, the strongest showings of Thailand relate to Access, Economy, and Inclusion, among others (Table 7). More could be done to improve the economy's performance in the Content, Individuals, and SDG Contribution sub-pillars.

Table 7: Sub-pillars of Thailand Rank

Sub pillars	Global Rank
Technology	
Access	34
Content	68
Future Technologies	48
People	
Individuals	74
Businesses	51
Governments	55
Governance	
Trust	61
Regulation	57
Inclusion	45

Sub pillars	Global Rank
Impact	
Economy	37
Quality of Life	51
SDG Contribution	88

The relatively higher performance of Thailand in LMC is not surprising given that Under 20 years National Strategic Plan, Thailand has developed a clear roadmap to create a digital ecosystem to support the Nation's digital economy. MSMEs, who is the country's economic backbone, will benefit from this strategic plan. The office of Small and Medium Enterprises Promotion (OSMEP) (www.sme.go.th) is the Thai government agency responsible for formulating policies and strategies for MSMEs promotion as well as serving as a focal agency in coordinating the network systems of public and private sectors to drive MSMEs to grow with strength and sustainability.

Vietnam

Viet Nam ranks 63rd out of the 130 economies included in the NRI 2021 (Figure 15). Its main strength relates to Impact. The main scope for improvement, meanwhile, concerns People.
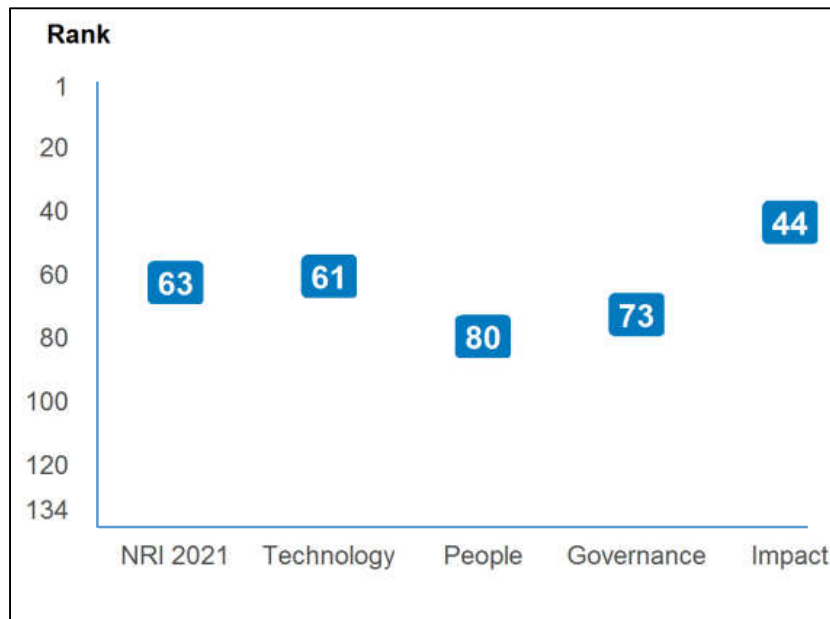
Figure 15: Vietnam Ranks

When it comes to sub-pillars, the strongest showings of Viet Nam relate to Economy, Individuals, and Access (Table 8). More effort is required to improve the economy's performance in the Regulation, Inclusion and Businesses sub-pillars

Table 8: Sub-pillars of Vietnam Rank

Sub pillars	Global Rank
Technology	
Access	50
Content	55
Future Technologies	77
People	
Individuals	46
Businesses	105
Governments	87
Governance	
Trust	50
Regulation	93
Inclusion	97
Impact	
Economy	25
Quality of Life	53
SDG Contribution	80

Although there is significant scope for improvement in Vietnam's digitalization initiatives, they are ranked above Cambodia, Lao PDR, and Myanmar. This is attributed to the several initiatives undertaken by the government. In 2017, National Assembly passed the Law on support for Small and Medium-Sized Enterprises (SME Law), effective from Jan 1, 2018 (www.loc.gov). This law supports SMEs to lower tax rates than the prevailing corporate income tax rate and other non-tax incentives such as land use, rents, and requirements to access credit funds.

Project and initiatives organized by the Vietnam Chamber and Commerce Industry to support SMEs' adoption of digital technologies include:

- Organized seminars, webinars, and forums to raise awareness and enhance SMEs' knowledge of digital transformation.
- Organized policy dialogue for all stakeholders related to MSMEs in Vietnam to meet and share opinions.
- Partner with government agencies and the private sector to conduct joint projects to support MSMEs, such as;
  - Partner with Vietnam Trade Promotion Agency (Vietrade) to develop an E-showroom for SMEs to promote products globally.
  - Partner with Viettel Telecom, Artalink Technology to support MSMEs in using digital marketing for trade and service. VCCI has signed MOU with Viettel Telecom and Artalink to support MSMEs in the digital transformation program.

     o   Partner with United States Agency for International Development (USAID) to create a digital transformation platform for MSMEs.

Cambodia

Cambodia ranks 106th out of the 130 economies included in the NRI 2021. Its main strength relates to Impact. The highest scope for improvement, meanwhile, concerns Governance.
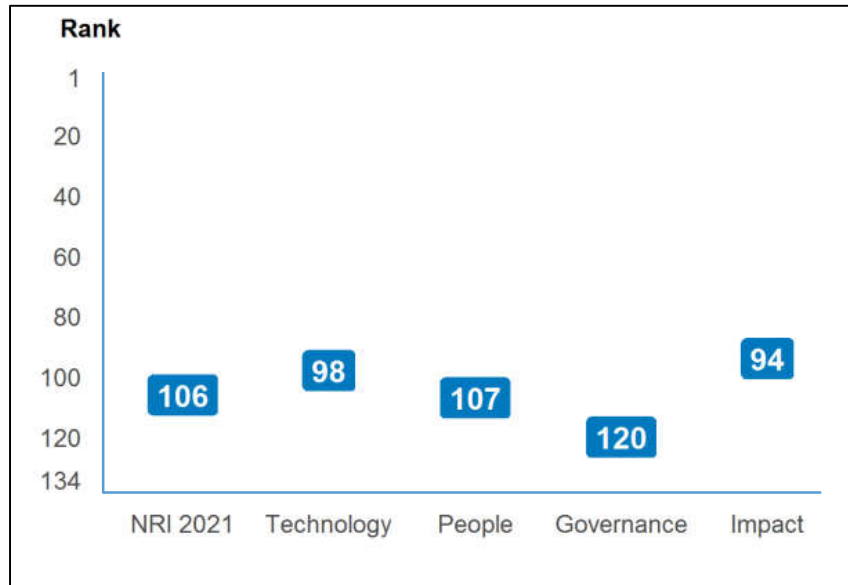
Figure 16: Cambodia Ranks

When it comes to sub-pillars, Cambodia is doing relatively well in Quality of Life, Access, and Economy, among others (Table 9). More could be done to improve the economy's performance in the Businesses, Trust, and Regulation sub-pillars. President of Indonesia, Joko Widodo, emphasized the necessity of digitalization for national economic growth by focusing on MSMEs that make up 99% of businesses and generate more than 60% of their national GDP.

Table 9: Sub-pillars of Cambodia Rank

Sub pillars	Global Rank
Technology	
Access	89
Content	113
Future Technologies	95
People	
Individuals	97

Sub pillars	Global Rank
Businesses	120
Governments	103
Governance	
Trust	120
Regulation	123
Inclusion	96
Impact	
Economy	92
Quality of Life	86
SDG Contribution	99

In response to the relatively lower rank globally on technology and digitalization, a policy to support and promote digital adoption for MSMEs was set up in 2020. In this policy, strategies and action plans are outlined regarding developing an ecosystem to support MSMEs' digital adoption, including financial support. The entity responsible for this policy implementation is the Ministry of Industry, Science, Technology, and Innovation which will play a key role in bridging all stakeholders such as associations and MSMEs to engage in digitalization initiatives.

Lao PDR

Lao PDR ranks 110th out of the 130 economies included in the NRI 2021 (Figure 17). Technology is the only pillar that was ranked below 100. There is significant scope for improvement, across all sub-pillars, especially in Governance. The relatively low ranking is despite the Lao ICT Commerce Association (LICA) being established in 2005 to build and maintain collaboration among ICT-related businesses in the country. This association is also related to the Lao National Chamber of Commerce and Industry (LNCCI) to support MSMEs' digital adoption.
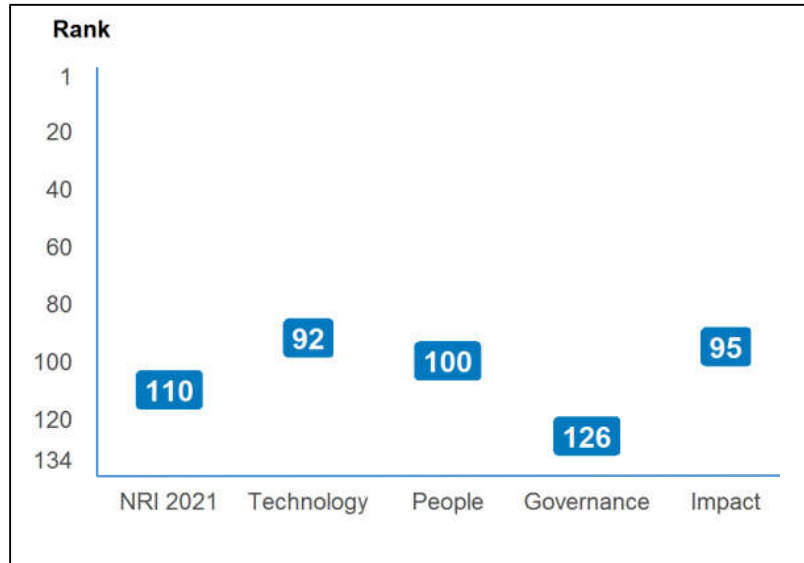
Figure 17: Lao PDR ranks

When it comes to sub-pillars, Lao PDR is doing relatively better regarding Future Technologies, Quality of Life, and Government. Significant effort is required to improve performances in the Trust, Regulation, and Inclusion sub-pillars, among others.

Table 10: Sub-pillars of Lao PDR Rank

Sub pillars	Global Rank
Technology	
Access	110
Content	104
Future Technologies	33
People	
Individuals	94
Businesses	117
Governments	93
Governance	
Trust	122
Regulation	122
Inclusion	129
Impact	
Economy	106
Quality of Life	77
SDG Contribution	98

In response to the relatively lower rank globally on technology and digitalization, in 2021, Lao PDR established the Ministry of Technology and Communications (MTC) to foster digital development. This industry is responsible for developing the Lao Digital Transformation plan and leading the country's digital policies and projects. At the same time, Lao announced a master plan to foster a Digital Economy which will work with related ministries and associations such as the department of SMEs Promotion, LNCCI, and LCT. There are several mechanisms and initiatives under the collaboration of this ministry and related ministry and associations, such as:

- Funding and loan support for SMEs from the Lao government and international organizations to subsidize technology product and service value adopted by SMEs in order to help them upgrade technology for their operations.
- Training, workshop, seminar partner with other departments such as LCCNI, MTC, and other global associations such as MI, UNDP to raise awareness on digitalization and how to use digital tools such as social media, digital marketing in their business

Moreover, the Department of Import and Export (DIMEX) of the Ministry of Commerce and Industry (LCI) and the Lao National Commerce of Commerce and Industry (LNCCI) develop Plaosme.com (www.plaosme.com), a Lao E-Commerce platform. Plaosme.com aims to be an infrastructure and ecosystem to support Lao SMEs to connect to ASEAN and the global market. Currently, it is operated and managed by Barterfli Holdings Group. Under the Plaosme.com ecosystem, registered SMEs member will receive training and other support to utilize digital tools provided by the platform. However, this e-commerce platform is not yet completed for the sell-buy transaction. Currently, it can display products and sellers (similar to a product showroom or E-marketplace). The transaction, including payment, still has to do offline through bank transfer (not convenient). It can be seen that the above support and initiatives regarding MSMEs' digitalization in Lao are just started (most of the projects started in late 2020 to early 2021). So it is too early to justify the success of the project. Nevertheless, the good thing is Lao government has already started initiatives to improve its current ranking.

Myanmar, which is not ranked in the NRI 2021 ranking, most likely has the lowest digital readiness in the LMC region. Several initiatives have been taken recently to improve its digital readiness. Myanmar's government's 12 points Economic policy and Digital Economy Development Committee (DEDC) policies recognize MSMEs as the main generator of employment and growth and that digital transformation and digital trade development are critical for MSMEs' growth. It includes several support mechanisms to assist and promote MSMEs' digital adoption, such as tax incentives to promote their digital tools' utilization. Apart from that, funds in various forms such as loans and cash injections are made available through the national MSME development program by the Ministry of industry, which is the Ministry that oversees SMEs development in Myanmar. In addition, several ministries and associations are working with the Ministry of Industry to facilitate the support for MSMEs digitization, such as the Department of Small-Scale Industries-Ministry of Cooperative and Rural Development, Ministry of Transport and Communications, Myanmar Computer Federation (MCF), Union of Myanmar Federation of Commerce and Industry (UMFCCI), Myanmar Value Added Services Operations Association. In addition, Myanmar is also

adopted the Universal Service Strategy in 2019 in conjunction with the liberalization of the telecom and ITC sector's policy to improve the "connectivity, accessibility, affordability, ability of choice and quality of service through market competition" for digital and telecom infrastructure and connectivity. The Universal Service Strategy aims to provide broadband internet connection in rural areas and develop a digital ecosystem and services to cover all parts of the country.

6.1.2. UNCTAD B2C E-commerce Index

According to APEC (2020), supporting MSMEs to engage in E-commerce is essential for economies to ride this growth wave. MSMEs will enjoy increased margins on sales, eliminate geographical limitations and more easily expand their business into the global market. In addition, e-commerce has numerous benefits, including low entry cost, reduction in transaction cost, more accessible access to the worldwide market, and secure market share (ASEAN-Korea Centre, 2017). Furthermore, it is expected that the facilitation of e-commerce will likely increase the overall market size, tourism flows, access to raw materials/markets, cross-border investment/ participation in production chains, and employment opportunities (ASEAN-Korea Centre, 2017).

The UNCTAD B2C E-commerce index measures a country's preparedness to support online shopping. The index consists of four indicators that are highly related to online shopping and for which there is comprehensive country coverage. The latest 2020 edition ranked 152 countries (UNCTAD, 2020). The overall index is calculated by taking the average of the four indicators: the share of individuals using the Internet, the percentage of individuals with an account with a financial institution or with a mobile-money-service provider, secure internet servers, and postal or delivery reliability.

The 2021 B2C E-commerce index and rank for Lancang-Mekong countries are given in Table 11.

Table 11: The 2021 B2C E-commerce Index and Rank for Lancang-Mekong Countries

Country	2020 Share of individuals using the Internet	2020 Share of individuals with an account	2020 Secure Internet	2020 Postal Reliability	2020 Overall Index Score	2020 Global Rank	2019 Global Rank
P.R. China	92	95	88	92	91.8	**10**	14
Thailand	67	82	59	97	76.0	**42**	48
Vietnam	69	31	64	83	61.6	**63**	66
Lao PDR	26	29	30	78	40.6	**101**	112
Cambodia	40	22	42	21	31.1	**117**	121
Myanmar	31	26	22	17	24.0	**130**	128

It is evident from the table that P.R. China is leading the B2C E-commerce index in the Lancang-Mekong countries with an overall score of 91.8 and a global rank of 10. Compared to the 2019 ranking, P.R. China has improved four places. Thailand is the second most E-commerce ready

country among the group. It has an overall score of 76.0 and is currently ranked at 42, an improved ranking position by six compared to 2019. Vietnam is presently third in digital readiness with an overall score of 61.6 and a global rank of 63, up to three positions from 2019. The improvement in Thailand and Vietnam is not surprising, given that internet penetration increased by about 30 percentage points between 2013 and 2018. This presents significant opportunities for all the players along the e-commerce value chain (US-ASEAN Business Council, 2021).

Despite improving ranking compared to 2019, Lao PDR remains outside the top 100 countries in E-commerce readiness. For further development, Lao PDR must strive to boost more awareness and readiness in cyber security, develop e-government services for its citizens (ID card, vehicle card, e-passport, etc.), develop more e-commerce platforms, and provide training for local MSMEs. In Lao PDR, specific regulations on e-commerce do not exist, and currently are developing and improving its legislative system to make preparations for e-commerce and the digital economy. Further, Cambodia and Myanmar remained outside the top 100 list and emerged as the least ready countries in the group. This is not surprising given that the digital readiness in Cambodia is still in the initial stage compared to regional peers (IOM, 2021). In Cambodia, only 40% of the population has access to the internet (World Economic Forum, 2021). One of Myanmar's main challenges in promoting e-commerce is the lack of ICT infrastructure. Myanmar's e-commerce has tremendous growth potential with an increasing internet penetration rate and widespread usage of mobile phones. Moreover, it shares the border with multiple countries, including Bangladesh, India, P.R. China, Lao PDR, and Thailand, making it advantageous for cross-border e-commerce among LMC countries. Myanmar needs to prepare a better business strategy to gain global competitiveness in the e-commerce market.

6.1.3. World Bank Ease of Doing Business Report

Ease of Doing Business report published by The World Bank presents quantitative indicators on business regulations and the protection of property rights that can be compared across 190 economies— from Afghanistan to Zimbabwe—and over time. The report recognizes the important work countries have done to improve their regulatory environments. It captures the following and provides a consolidated score and ranking for each country.
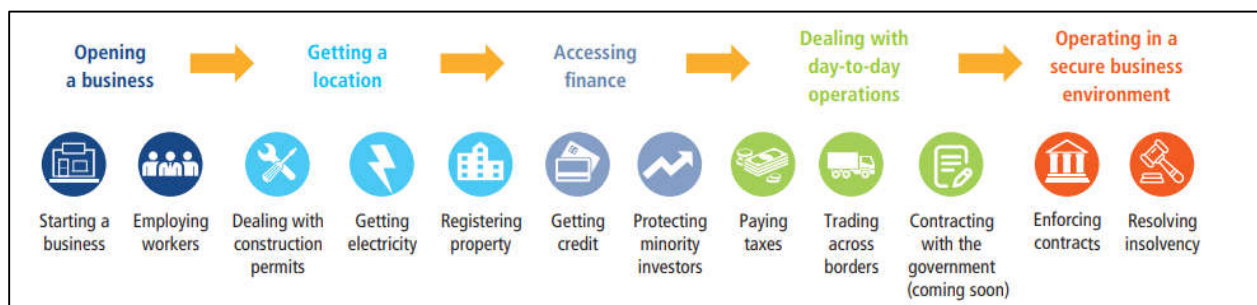
Figure 18: Indicators on Business Regulations and the Protection of Property Rights

The 2020 Ease of Doing Business score and ranking for Lancang-Mekong countries is given in Table 12.

Table 12: The 2020 Ease of Doing Business Score and Ranking for Lancang-Mekong Countries

Country	2020 Overall Score (Out of 100)	2020 Global Rank	2019 Global Rank
Thailand	80.1	21	27
P.R. China	77.9	31	46
Vietnam	69.8	70	69
Cambodia	53.8	144	138
Lao PDR	50.8	154	154
Myanmar	46.8	165	171

It is clear from the table that Thailand is leading the Ease of Doing Business score in the Lancang-Mekong countries with an overall score of 80.1 and a global rank of 27. Compared to the 2019 ranking, Thailand has improved six places. P.R. China is the second most friendly country among the group for doing business. It has an overall score of 77.9 and is currently ranked at 31, a significant improvement in ranking by 15 places compared to 2019. Vietnam is now third in the digital readiness with an overall score of 69.8 and a global rank of 70, down by a place from 2019. Cambodia scored 53.8 overall and is ranked 144 in the world. The ranking has fallen by six places from 138th position in 2019. Lao PDR's ranking has remained the same, with an overall score of 50.8, though outside the top 150 countries. Despite improving in ranking compared to 2019, Myanmar remains outside the least friendly country in the group, currently ranked at 165 out of the 190 countries considered in the ranking.

The improvement in P.R. China is because of the business reforms, especially for MSMEs. P.R. China has made paying taxes easier by implementing a preferential corporate income tax rate for small enterprises, reducing the value-added tax rate for specific industries, and enhancing the electronic filing and payment system. Similarly, Vietnam made paying taxes easier by upgrading the information technology infrastructure used by the General Department of Taxation. Myanmar made starting a business easier by introducing an online platform for company registration and reducing incorporation fees.

Next, we explore the regional initiatives in the Lancang-Mekong region to support the MSMEs

6.2.   *Lancang-Mekong Regional Initiatives for Supporting MSMEs*

Boosting regional cooperation on digital transformation, adopting digital technologies to leverage existing ties and create new ones, and focused investment into regional interoperable digital infrastructure will help accelerate COVID-19 recovery. Regional cooperation such as LMC could

chart a new course that will enable subregional cooperation to best realize these new opportunities due to the digital revolution. Regional initiatives and support programs can help harness the transformative potential of the digital revolution by addressing issues related to digital policies and regulation, including cross-trade and digital identification, e-commerce and payment systems, and risks of using digital technology such as cyber-attack, data security, and privacy. Such initiatives can harmonize regulatory and technical standards for data systems critical to integrating markets. Boosting regional cooperation on digital transformation, adopting digital technologies to leverage existing ties and create new ones, and focused investment into regional interoperable digital infrastructure will help accelerate COVID-19 recovery.

Regional cooperation and programs can help build and strengthen the capabilities of MSMEs affected by COVID-19 to recover and grow in the post-pandemic period. Key digitalization reforms in LMC can focus on policies and regulations to manage market disruptions and unfair competition, innovation, and creation of new products, access to micro-businesses, and data privacy and cybersecurity. Regional policies and programs could cover, among others, e-commerce infrastructure (i.e., telecommunications and network technologies); multimedia applications; electronic data interchange; database management; internet service providers; human-computer interface; and digital literacy. Regional digital capacity-building programs can focus on digital solutions in education, health, transport, and multimodal trade facilitation. In addition, the region could focus on technology startup ecosystems to build a robust, regionally integrated economy in 2030—one that is better able to withstand a competitive external environment and is fully equipped to seize new opportunities. Moreover, regional cooperation should be capable of addressing the challenges of recovery and resilience over the medium to long term against the economic and social damage to the subregion brought by the COVID-19 pandemic.

Similarly, access to the digital economy can potentially allow for the continuation of digital livelihood activities such as E-commerce for MSMEs in LMC countries during COVID-19. Digitalization, backed by artificial intelligence, has the potential to transform trade facilitation. However, some countries in LMC have limitations and challenges – such as weak digital infrastructure, the high price of electricity, and insufficient access to the internet. Also, specific efforts are needed to promote MSMEs' access to technology and build their capacity to use technology meaningfully and contribute to the digital economy.

6.2.1. Regional Cooperation for E-Commerce and Cross-border E-Commerce

E-commerce benefits stakeholders across the ecosystem. It allows merchants to transcend geographical boundaries to reach more markets and reduces entry barriers for small businesses. E-commerce has also enabled many new entrepreneurs to start their own companies easily through online market platforms or via social media, including segments of the population that

traditionally did not participate in the formal economy, such as women (US-ASEAN Business Council 2021). Consumers have more access to new products, enjoy a better customer experience, and through ratings, can provide positive reinforcement for more quality choices and services. The critical mass of consumers in the region creates a sizeable market for businesses. Online marketplaces, digital payment solutions, and logistics services constantly evolve to cater to this market. There is also a burgeoning and vibrant start-up scene in the region that is a catalyst for entrepreneurship and innovation. Ultimately, these elements result in new opportunities and additional economic and social gains for LMC governments and economies (US-ASEAN Business Council, 2021). E-commerce has been shown to be a potent enabler of MSME growth. The opportunities presented by cross-border e-commerce in LMC are remarkable. Some of the prospects of a single, integrated E-commerce market for the LMC region are as follows:

- E-commerce will lower the entry barriers for many businesses, saving on upfront costs such as physical rent and export costs and allowing greater economic participation amongst the Lancang-Mekong population.
- Having a more coordinated e-commerce market improves the intra-regional flow of goods. With less friction in the ecosystem, cross-border transfer costs and time taken for delivery can often be lowered.
- Smaller enterprises can expand beyond their local markets, leveraging lower delivery costs.
- Businesses with regional presence would find it easier to develop a single supply chain strategy, enjoying greater economies of scale and improved efficiency.
- With adequate access to technology – including software, platforms, APIs – MSMEs can quickly build and scale-up offerings, overcoming geographical boundaries and further spurring growth for MSMEs.
- Consumers in the LMC region can enjoy better access and choice at more competitive prices.

Source: (US-ASEAN Business Council, 2021)

Lancang-Mekong countries' middle-class population is increasing and leading increasingly digital lifestyles. Socio-economic forces are shifting consumer behavior and changing the business landscape, especially in the light of – and accelerated by – the global COVID-19 pandemic. Seamless cross-border e-commerce is not only a critical enabler for economic recovery but also facilitates the micro, small and medium enterprises (MSMEs) in the region to go online and go global. Governments are imperative in enabling merchants, consumers, and other relevant industry players to participate in e-commerce with trust, choice, and convenience (US-ASEAN Business Council, 2021). A coordinated e-commerce market will promote the intra-regional flow of goods, present more opportunities for Lancang-Mekong MSMEs, and ultimately result in new economic and social gains for member countries.

Regional cooperation such as Lancang-Mekong Cooperation and programs such as Greater-Mekong Subregion (GMS) can ease the transition to cross-border e-commerce by fast-tracking

the implementation of e-commerce policies and reforms and advancing the vision of a single market. Regional platforms can help countries better understand cross-border digitalization issues and challenges, and policy responses. A more straightforward border process and greater electronic or digital communications use will benefit the MSMEs that currently do not participate actively in regional trade. For instance, a more digitalized border that uses digital signatures, electronic submission and endorsement of customs declarations, e-certificate of origins, digital letters of undertaking or bank guarantees, etc., will support MSMEs in cross-border trade in LMC (IFC, 2021; PwC, 2021). The GMS will exploit e-commerce potential to boost consumption and factor productivity at the firm level, generate exports, stimulate innovation, offer flexible and dynamic employment, and mainly focus on benefits for MSMEs. E-commerce will play a decisive role in raising consumption, given that firms' participation is associated with a 30% increase in productivity and a 50% increase in exports. It confers powerful benefits on MSMEs. P.R. China has made giant strides and leads in e-commerce, while Viet Nam is advancing rapidly. Thailand, through its long-standing partnership in the Indonesia-Malaysia-Thailand Growth Triangle (IMT-GT), a subregional initiative, is expediting growth in online business for MSMEs by raising awareness and developing capacity for online business activities such as e-commerce and e-payment for MSMEs. The subregion also plans to leverage disruptive technologies such as mobile technology, big data, the Internet of Things, and cloud technology for business efficiency and productivity by building and upgrading ICT infrastructure and services. The GMS 2030 strategy will encourage subregional digital entrepreneurship in MSMEs, noting that e-commerce is a potent enabler of MSME growth. The GMS 2030 will promote peer learning and the exchange of E-commerce experiences through subregional forums and conferences.

The other regional initiatives, such as ASEAN, of which LMC countries are part, recognize the tremendous opportunities that e-commerce brings. ASEAN has emphasized the importance of cross-border e-commerce for regional economic development and the need to further develop e-commerce by advancing trade rules and building up digital connectivity across the region. The commitments include facilitating the exchange of e-documents, recognizing the legal validity of e-signature, recognizing the importance of data flows for business purposes subject to respective laws and regulations, and encouraging the use of safe, secure, efficient, and interoperable e-payment systems. Several existing ASEAN initiatives – including those espoused in the ASEAN Economic Community Blueprint 2025, ASEAN Work Program on Electronic Commerce 2017-2025, and Digital Integration Framework Action Plan (DIFAP)– support specific aspects of the cross-border e-commerce value chain. They include efforts to promote digital trade and use of the electronic payment, simplify customs procedures by facilitating data exchange among customs authorities, improve internet access, develop ICT infrastructure, enable transport connectivity, and harmonize e-commerce laws. Once fully implemented, these initiatives will help address the specific obstacles that cross-border e-commerce traders generally face in the region.

The focus areas of the ASEAN Work Program on Electronic Commerce 2017 – 2025 are given in Figure 19.
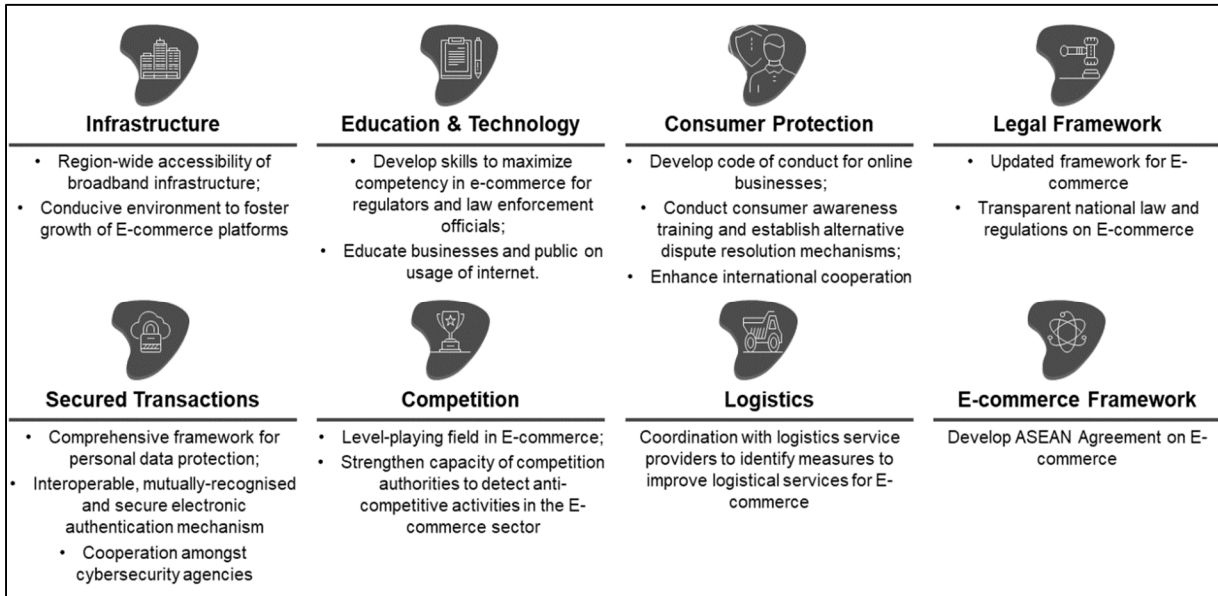
Figure 19: Focus areas of the ASEAN Work Program on Electronic Commerce 2017 – 2025

6.2.2. Regional Cooperation for Fintech

To foster financial inclusion of MSMEs, regulators must bring down the structural barriers impeding access to financial services and digitalization of financial transactions and innovations in financial technology (Fintech) and promote financial literacy. Regional cooperation can support national initiatives on Fintech through knowledge sharing, dissemination of experiences, and exchange of information on international best practices and successful models. A regional approach to raising finance for technology can support digital transformation in economies with limited access to finance. Development partners and multilateral institutions can play an essential role in building the trust and confidence of public, private, and personal stakeholders in technological development. The GMS 2030 program will assist MSMEs in easily accessing the regional and global market through the emerging trade pattern of e-commerce, online financial services, and electronic payment gateways. The benefits of Fintech for LMC MSMEs are as follows:

- Help MSMEs grow their revenue, manage operations, and gain access to formal financial services. The impact can be substantial – once businesses begin accepting digital payments, their revenues increase an average of 17% year on year.
- Introduce MSMEs to a broader pool of potential customers through rapidly growing e-commerce channels, including access to buyers abroad. By using digital payments to make purchases, MSMEs can quickly source from suppliers outside their immediate markets, enabling greater choice and price-competitive options.

- Benefit governments by improving transparency and efficiency of tax systems and supporting the economy's formalization. The five-year cumulative effect of a 10% increase in the number of digital payments per capita could impact between 1.4% to possibly 6% on GDP for AMS.
- Provide an opportunity to bring the underbanked into the financial system. Issuance of new (formal bank) accounts can leverage technology such as digital identities and e-KYC.
- Open source payments systems (e.g., open APIs) can also promote inclusiveness by enabling central banks, market infrastructures, payment processors, and Fintech firms to accelerate creating and deploying interoperable payment platforms that can scale.
- There are opportunities for the less mature member countries to improve existing payments infrastructure by adopting global standards such as EMVCo to help drive standardization and interoperability.

Source: US-ASEAN Business Council (2021)

6.3. Current Status of Adoption of Digital Technology by MSMEs in the Lancang-Mekong Countries

Digitalization is multi-faceted and can range from having a company website to accepting online payments or taking operations to the cloud (Mastercard, 2021). The study on MSMEs' Participation in the Digital Economy in ASEAN by Economic Research Institute for ASEAN and East Asia (ERIA) categorized digital technologies into three: basic technologies (basic software and communication tools), intermediate technologies (social media, website, e-commerce, e-payments, and use of the digital platform), and advanced technologies (advanced software, apps, analytics, artificial intelligence, and automation) (ERIA, 2019).

Basic	Intermediate	Advanced
•Microsoft office, email, access to computers and mobile phones •Internet usage, computer usage, web presence and basic ICT security	•Online presence via website, and social media •e-payments, e-commerce, software as a service	•Enterprise resource planning, Customer relationship management, analytics, big data, automation, scanners, bank card readers, central servers •Internet of the Things, data analytics, artificial intelligence, machine learning, blockchain among others

Figure 20: Levels of MSME Digitalization
Source: (ERIA, 2019, MTI, 2019)

The survey findings on the adoption of digital technologies are given below.

Digital Technologies Adopted (% Firms)

Technology	%
Digital Communication tool (such as E-mail, Whatsapp, Line,…	95.83
Basic software (such as Microsoft Office)	88.56
Social Media (such as Facebook, Instagram, TikTok)	86.19
Company Website	76.54
Application Tools (such as Google drive, Dropbox)	69.42
E-Payment, digital invoicing	65.42
Enterprise Resource Planning (ERP)	62.15
E-Commerce platform	58.00
Digital Platform for business operations (such as logistics,…	49.25
Analytical tool (such as sale forecasting)	45.69
Advance software and algorithms (such as AI and Machine…	44.50
Business Process Automation	42.57
Advanced data analytics (such as big data and cloud computing)	41.38
Internet of Things (Use of Sensors, RFID tags, etc.)	41.38
Other digitalization activities	39.31
Blockchain	38.42
Virtual and Augment Reality	38.42
Robotics	37.23

Figure 21: Digital Technology Adoption by MSMEs (as a percentage of MSMEs)

Extent of Adoption (Mean Score 1-5)

Technology	Mean Score
Basic software (such as…	3.98
Digital Communication tools	3.79
Social Media	3.75
Company Website	3.40
E-Payment, digital invoicing	3.39
Digital Application Tools	3.35
Internet of Things (IoT)	3.20
E-Commerce platform	3.10
Digital Platform for…	3.10
Enterprise Resource…	3.03
Analytical tool	2.89
Advance software and…	2.84
Business Process…	2.79
Advanced data analytics	2.78
Virtual and Augment Reality	2.59
Blockchain	2.38

Figure 22: Extend of Adoption of Digital Technology by MSMEs (Scale 1-5)

p.41

It is clear from the survey findings that digital communication tools such as E-mail, Whatsapp, Line, and WeChat are the most adopted (% of firms) digital technology by MSMEs in the companies surveyed (95.83%). Also, basic software, such as Word, Excel, etc., was used in the majority of the companies surveyed (88.56%). Social media platforms emerged as the third most used digital application in MSMEs. 86.19% of the MSMEs have used social media in their business. This is above the global average of 70% (Mastercard, 2021). Further, 76.54% of the MSMEs have a website. This is much higher than the Middle East and North Africa (MEA) average of 55% (Mastercard, 2021). Also, the extent of adoption of these digital technologies is also high (See Figure 22). We asked respondents to rate the extent of adoption on a scale of 1-5 (low to high extent of adoption). The extent of adoption was found to be the highest for basic software (3.98), followed by digital communication tools (3.79) and social media (3.75).

As evident from the survey findings, social media platforms are a useful way to communicate with audiences and a useful tool for providing customer services. P.R. China has witnessed significant adoption of Alipay and Wechat Pay by MSMEs. According to a recent report by Asia-Pacific Economic Corporation (APEC), P.R. China, Thailand, and Viet Nam are member countries. Many consumer-facing MSMEs now have Facebook pages to present their brands, products, and services to engage with customers effectively. In addition, the usage of platforms like Facebook and Instagram, where products can be featured visually, is on the rise. Facebook shared its data recently, noting that in economies hardest hit by the COVID-19 pandemic, messages on the platform increased by 50 percent, demonstrating that customers are online more than ever (APEC, 2020). Familiarity with Facebook for private purposes has led to MSMEs' high utilization of Facebook Pages to establish an online presence (ERIA, 2019). For example, in a rural district of Buriram Province, in Northeast Thailand, a women's cooperative group producing banana chips has successfully utilized online applications such as Facebook and Line to improve its sales. These changes from physical trading to online were quite successful in helping the business rebound from low sales due to the COVID-19 restrictions. Before COVID-19, they had no online sales (The Asia Foundation, 2020).

This trend of using social media is not just in Thailand but seen across LMC countries. For example, Ma Te Sai is a social enterprise in Lao PDF working with rural communities to sell its handmade products through offline and online stores. Apart from displaying organization and product information on its independent website, Ma Te Sai also operates an official Facebook page for marketing purposes and use it as an e-commerce platform (ERIA, 2019). Ma Te Sai's Facebook page has more than 2,300 followers who regularly receive marketing feeds on new products and unique campaigns.

On the other hand, intermediate technologies such as Google Drive, Dropbox, digital invoicing, enterprise resource planning software, and e-commerce platforms have witnessed moderate uptake among MSMEs - 50-70% of MSME firms surveyed are adopting these digital technologies. Also, the extent of adoption is average, between 3.00 and 3.50 on a 5-point scale. In contrast, advanced technologies such as data analytics, artificial intelligence (AI), blockchain, robotics, and automation seemed to be in an early deployment stage in the MSMEs surveyed. Only less than

40% of the MSMEs survey had adopted these advanced technologies. Also, the extent of implementation in these firms was found to be lower, with a mean score of less than 3 on a scale of 1-5. Regardless, more than 40% of the MSMEs adopting advantage Industry 4.0 technologies is promising, and the number is expected to grow. For instance, in the Thailand 4.0 scheme, DEPA promotes the development of digital-related activities and directory websites, and OSMEP supports and encourages SMEs to use innovation and promote digitalization. Also, Thailand has undertaken digital entrepreneur projects involving 4,000 communities in 10 major provinces with 300 centers nationwide. Technologies such as blockchain enable trade authenticity verification. AI leverages non-traditional data such as logistics data, e-commerce seller's trust scores, etc., to improve MSME risk-profiling, reducing the time for approving credits.

The survey also captured the different digital platforms used by the respondents. They are given below.
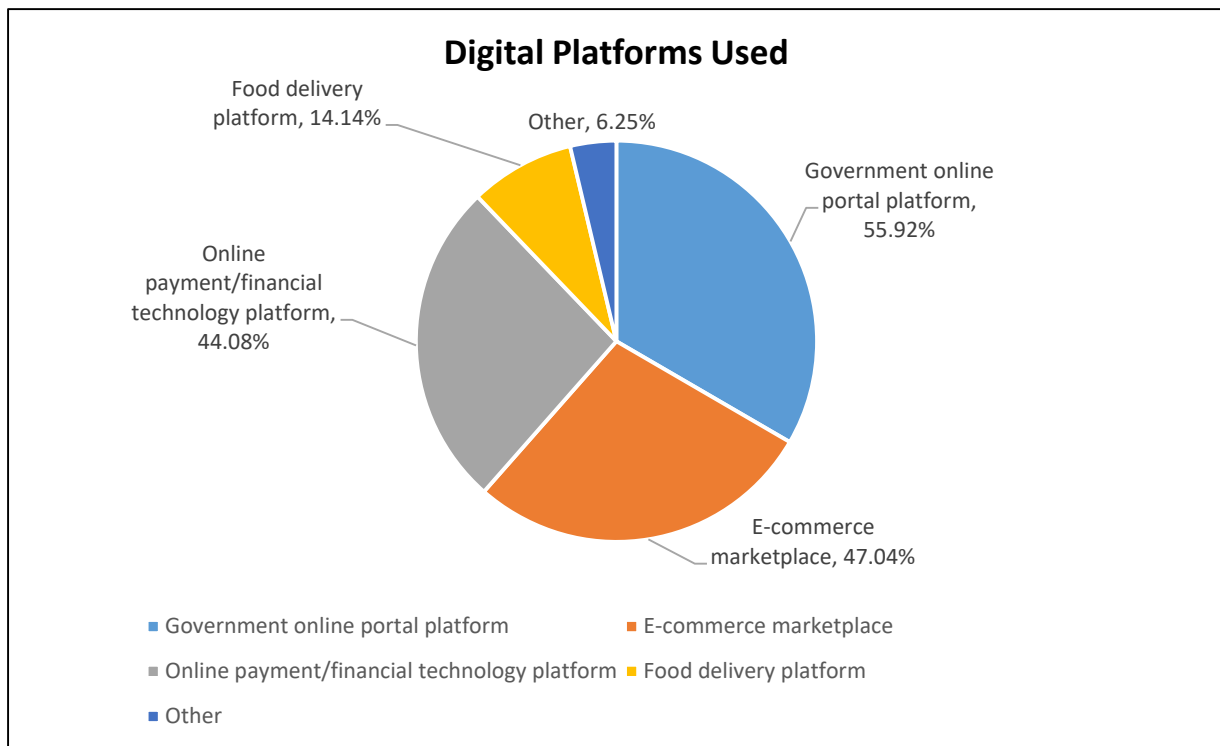
Figure 23: Digital Platforms Used

Some of the selective participant quotes related to the adoption of digital technologies are given below:

"MSMEs using technology to serve customers such as advertising through Facebook, accepting orders via Line application or payments using QR code, or participating in government programs that accept payments via Moneybag application"

> *"Business owners are turning to technology to serve more customers. Especially taking food orders online or receiving payment for goods through Promptpay system."*
>
> *"Restaurants have adapted to use online platforms such as Facebook for advertising, selling more products, including providing food delivery services to customers to their homes."*
>
> *"Our sales during COVID-19 lockdown relied on posting on Facebook to allow customers to see the product, and contact to buy products via Line application, including online payments to reduce physical contact."*

This study also asked participants about the technologies they plan to adopt in the near future. Some of the responses from the participants are given below.

> *"Plan to use technology in every section of the business and have data on cloud system"*
>
> *"Develop a storage system in the cloud and improve the security of the information"*
>
> *"Reduce the use of physical documents and improve communication through the system for reduce the workflow steps"*
>
> *"Implemented online payment system on the platform and using QR Code payment in business to make it easier to pay"*
>
> *"Collect data for Big Data Analytics and AI applications"*
>
> *"Develop business web site, increase social marketing and online payment"*
>
> *"Adopt Line application to communication"*
>
> *"Develop product technology and an online accounting system that makes work more convenient"*
>
> *Develop digital consumer database and consumer analytics*
>
> *"Develop applications, platforms, virtual stores and coins that can be used in the future as quickly as possible"*

6.4. Enablers of Digitalization in MSMEs in the Lancang-Mekong Countries

The primary survey results of this study on enablers of MSME digitalization is given below.

Enablers of MSMEs Digitalization

Enabler	Percentage
Customer suggestions/requirements	51.8%
Word of Mouth	48.5%
Public advertisement	42.1%
IT Vendors/ Digital Platformers	37.0%
Internal staff recommendation	29.7%
To comply with government regulations	24.8%
Competitors has implemented	22.7%
Government training	16.4%
Other	5.5%
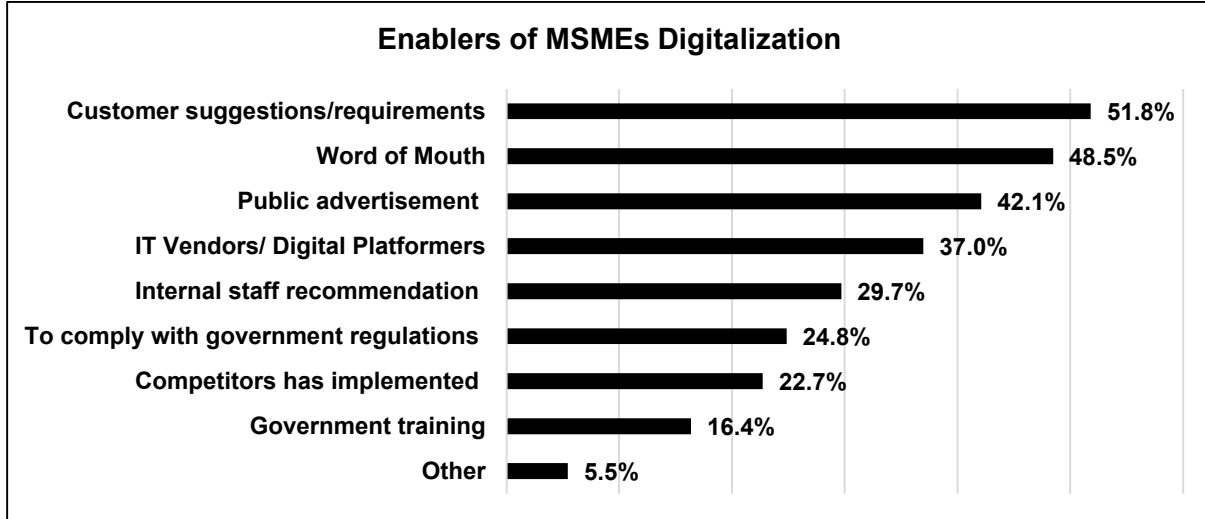
Figure 24: Enablers of MSMEs Digitalization

More than 51.8% of the MSMEs highlighted customer suggestions/requirements as one reason for adopting digital technologies. The results echo the recent Mastercard study, which reported that 43% of MSMEs are digitizing their business to respond to changing customer needs, such as demand for online services (Mastercard, 2021). For instance, more customers have been asking to pay digitally since the pandemic. Consumer preference for contactless has resulted in the accelerated availability of such solutions, including cashless payments for deliveries made to a customer's doorstep. More and more consumers have preferred contactless payments for everyday purchases, especially since the pandemic's beginning (Mastercard, 2021).

Word of mouth (48.5%) emerged as the second key enabler driving MSMEs to adopt digital technologies. This is significantly lower than the word of mouth influence (85%) reported in the 2019 study on ASEAN countries (ERIA, 2019). Public advertisement (42.1%) emerged as the third critical enabler of MSME digitalization. This is mainly during COVID-19, as there was a public campaign encouraging firms and customers to adopt digital technologies to control the spread of COVID-19. The influence of IT vendors and digital platformers (37%) drives some of the MSMEs to adopt digital technologies. This is much higher than the 8% reported in the ASEAN study by ERIA (2019). This clearly shows an increase in IT vendors and digital platformers urging MSMEs to adopt digital technologies. One-third of the MSMEs highlighted that their internal staff recommendation was one reason for embracing digitalization. This is similar to the study findings of ERIA (2019), which found internal staff recommendations influenced 35% of MSMEs in ASEAN countries. However, compliance or coercive pressure from governments (24.8%) didn't emerge as the main drivers of digitalization. This is not surprising, given the government is playing more of a facilitator of the digitalization of MSMEs rather than an enforcer. Also, MSMEs are not facing much competitor pressure (22.7%) to adopt digital technologies. This implies that MSMEs adopting digital technologies are likely to get first-mover benefits. 16.7% of the MSMEs

highlighted government training on digitalization as one of the reasons for adopting digital technologies. Earlier, ERIA (2019) reported that 10% of MSMEs were influenced by government training. This shows an increasing influence of the government training program on MSME digitalization, albeit low.

Some of the selective quotes from participants are as follows:

"More customers are turning to online payments. MSMEs need to accept this change in consumer behavior to support that requirement"

"Customers want to pay with online so forcing businesses to adapt and learn online payment technology"

"MSMEs are increasingly interested in using digital systems in their businesses to meet the trends and needs of customers and service users. Especially in government projects, the government's co-payment scheme and subsidy is an enabler of digitalization"

"Purchasing behavior has changed. The customers are increasingly interested to pay online and including communication with partners. Customers prefer to use online communication more such as Line application, Facebook"

"MSMEs are turning to technology to serve more customers. Especially taking food orders online or receiving payment for goods through Promptpay system"

"Both entrepreneurs and buyers need to be more adaptable, for example, traditionally accepting only cash. But nowadays, shoppers have a huge demand for online payments"

Next, we capture enablers of specific digital technologies of MSMEs, namely E-commerce platforms, food-delivery platforms, Fintech platforms, and government online or E-government platforms. The figures show that the top three enablers are e-commerce, food delivery, and Fintech. Not surprisingly, government compliance pressure emerged as the primary enabler for using government platforms, followed by government training.

Drivers of MSMEs adoption of E-Commerce Platforms

Driver	Percentage
Customer suggestions/requirements	44.44%
Public advertisement	39.11%
IT Vendors/ Digital Platformers	33.33%
Word of Mouth	31.11%
Competitors has implemented	29.78%
To comply with government regulations	20.00%
Internal staff recommendation	17.78%
Government training	16.44%
Other	6.67%
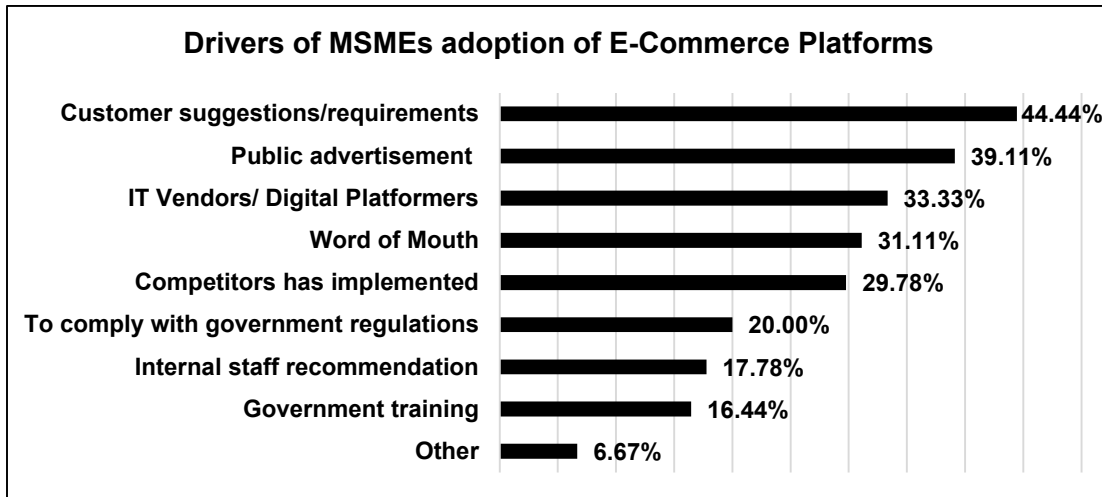
Figure 25: Drivers of MSMEs Adoption of E-Commerce Platforms

Drivers for MSMEs adoption of Food Delivery Platforms

Driver	Percentage
Public advertisement	48.84%
Word of Mouth	33.72%
Customer suggestions/requirements	33.72%
Internal staff recommendation	26.74%
IT Vendors/ Digital Platformers	26.74%
Competitors has implemented	19.77%
Government training	15.12%
To comply with government regulations	13.95%
Other	5.81%
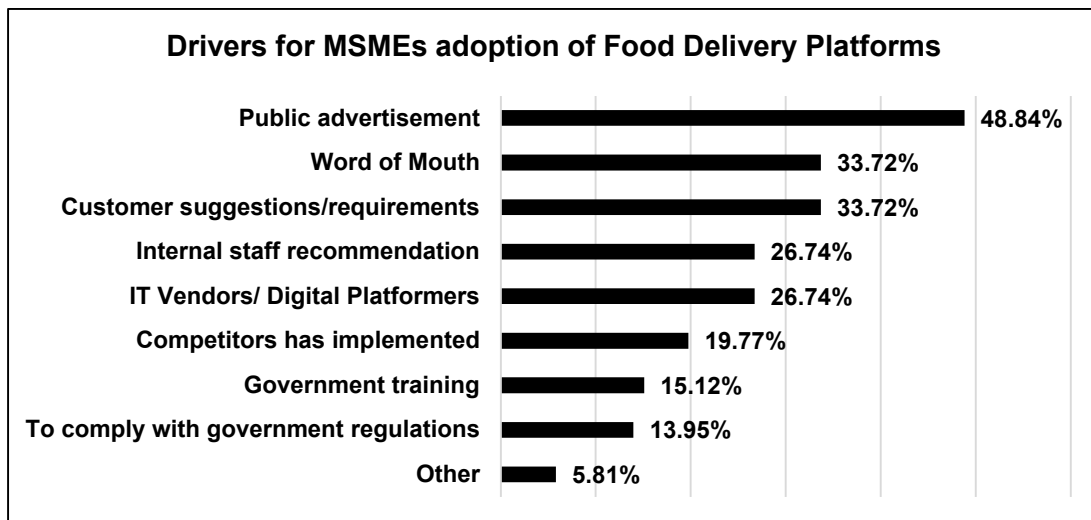
Figure 26: Drivers for MSMEs Adoption of Food Delivery Platforms

Drivers of MSMEs adoption of Fintech

Driver	%
Customer suggestions/requirements	47.76%
IT Vendors/ Digital Platformers	35.82%
Public advertisement	30.60%
Competitors has implemented	30.60%
Word of Mouth	26.12%
Internal staff recommendation	20.15%
To comply with government regulations	19.40%
Government training	11.94%
Other	6.72%
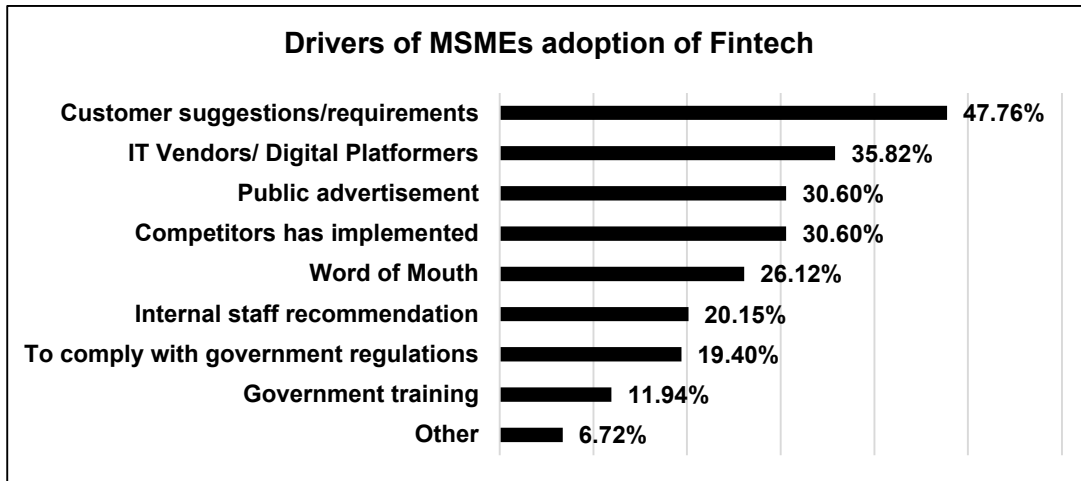
Figure 27: Drivers of MSMEs Adoption of Fintech

Drivers of using online government platforms

Driver	%
To comply with government regulations	63.55%
Government training	40.19%
Word of Mouth	26.17%
Public advertisement	26.17%
IT Vendors/ Digital Platformers	25.23%
Customer suggestions/requirements	23.36%
Competitors has adopted	18.69%
Internal staff recommendation	16.82%
Other	4.67%
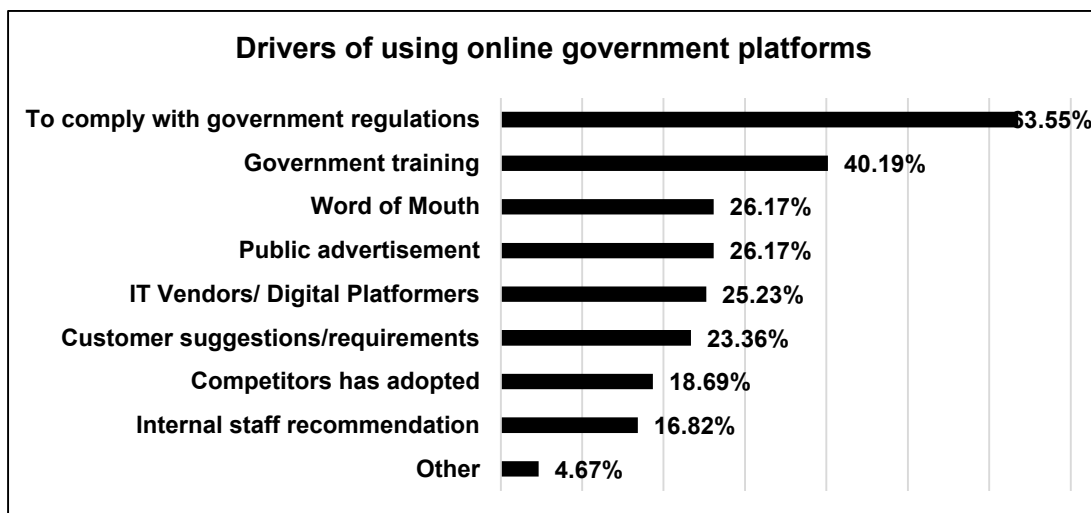
Figure 28: Drivers of Using Online Government Platforms

6.5. COVID-19 as an Accelerator of MSMEs Digital Transformation

The significance of MSME digitalization and digital connectivity is even more critical in the context of the COVID-19 pandemic. Nearly two years after the onset of COVID-19, one conclusion is clear—digital transformation has changed from a needed priority into a global imperative for all. The pandemic has highlighted the need to invest in digital infrastructure and shape policies and regulations. Businesses, governments, education institutions, and individuals all rapidly shifted their processes online in the wake of lockdown measures. The overnight shift towards virtual living and working heightened our reliance on digital technologies and has given a significant push to

MSME digitalization. The need for digital technologies has forced existing MSMEs to move online and led to several MSME digital startups. Digitalization of MSMEs is critical to a sustained and inclusive post-COVID-19 recovery. Trends toward technological change and incorporation will likely continue to affect MSMEs in the LMC countries while coping with and in the aftermath of COVID-19.

The acceleration of MSMEs' digital transformation during COVID-19 was evident from the primary research. The results of the survey findings are given below.

'COVID-19 has accelerated the generic adoption/use of digital technologies in my organization'
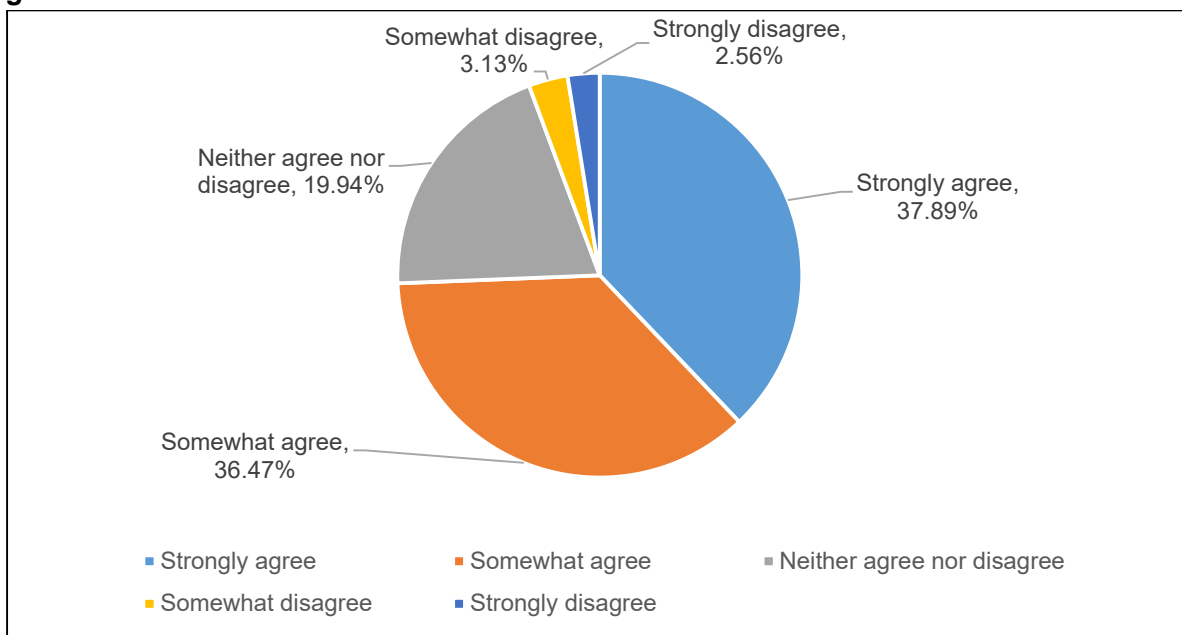
Figure 29: 'COVID-19 has Accelerated the Generic Adoption/ Use of Digital Technologies in My Organization'

'COVID-19 has accelerated the adoption/use of E-commerce platforms in my organization'
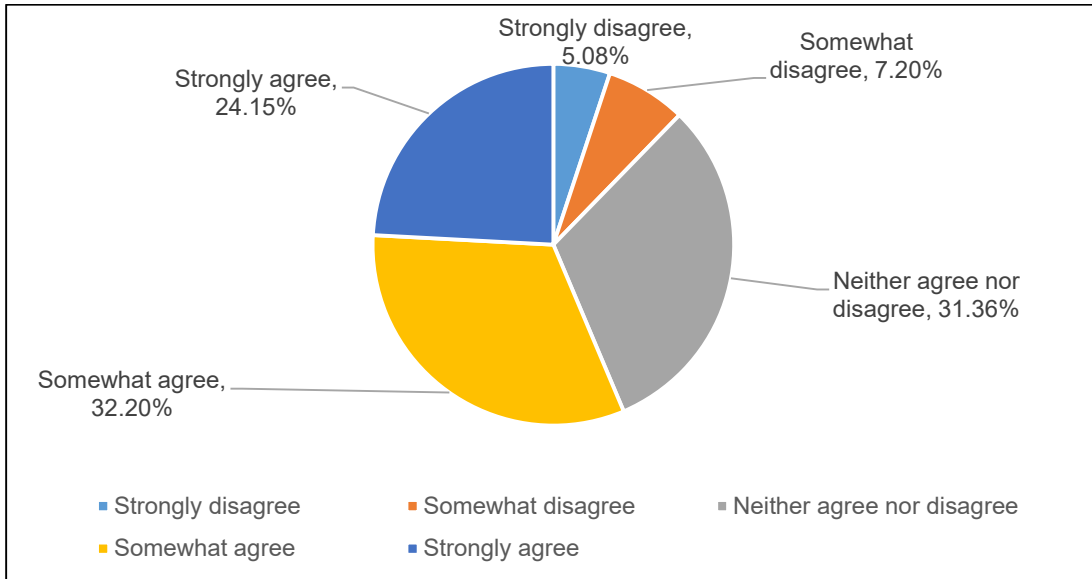
Figure 30: 'COVID-19 has Accelerated the Adoption/ Use of E-commerce Platforms

in My Organization'

'COVID-19 has accelerated the adoption/use of Food delivery platforms in my organization'
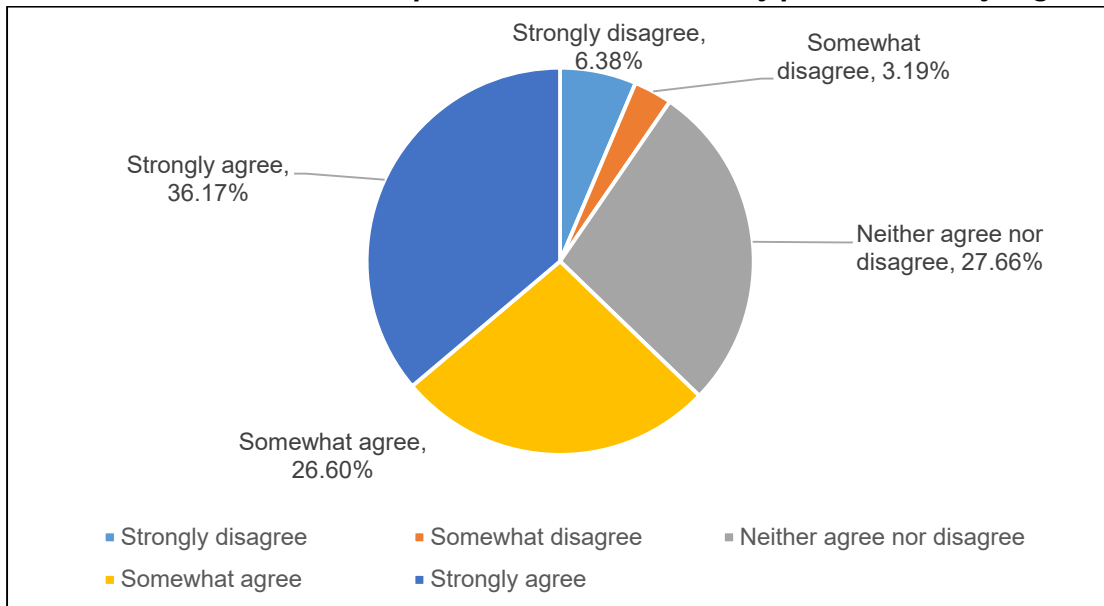
Figure 31: 'COVID-19 has Accelerated the Adoption/ Use of Food Delivery Platforms

in My Organization'

'COVID-19 has accelerated the adoption/use of online payment/financial technology platforms in my organization'
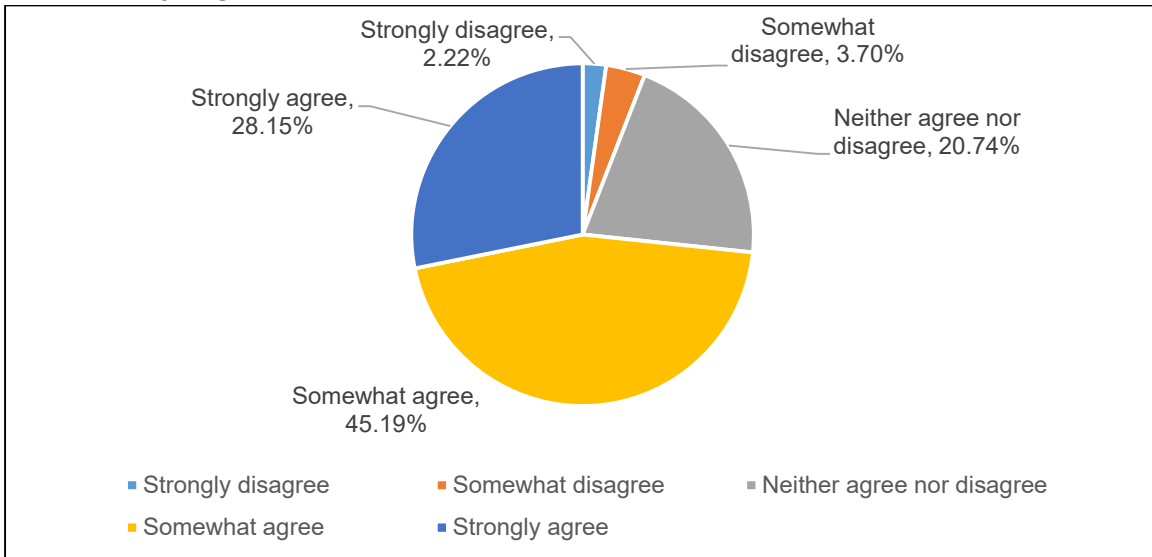
Figure 32: 'COVID-19 has Accelerated the Adoption/use of Online Payment/ Financial Technology Platforms in My Organization'

'COVID-19 has accelerated the adoption/use of online government platforms in my organization'
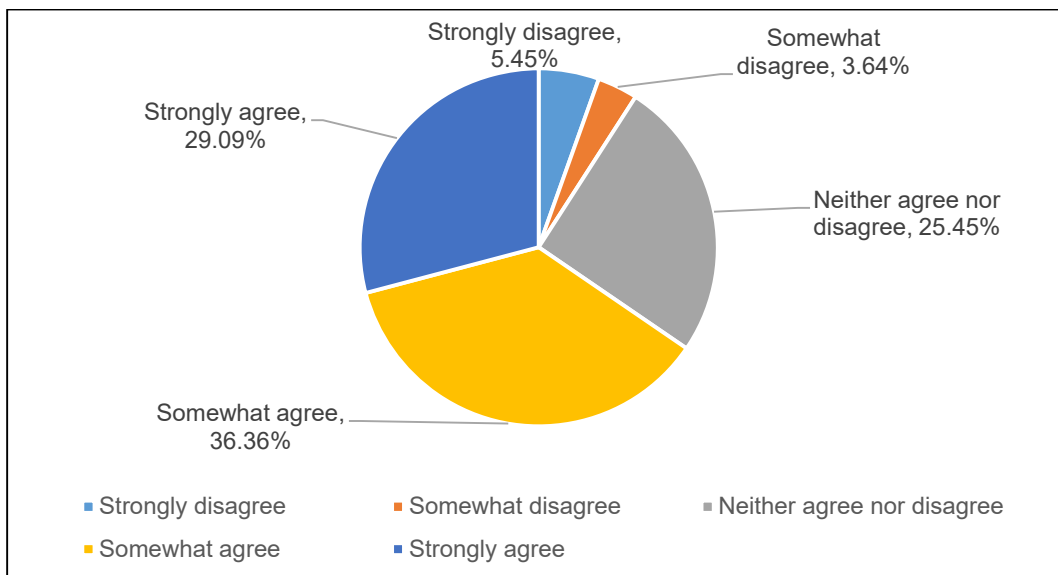
Figure 33: 'COVID-19 has Accelerated the Adoption/use of Online Government Platforms in My Organization'

'There is an increase in customer demand for online purchases and/or services during COVID-19'
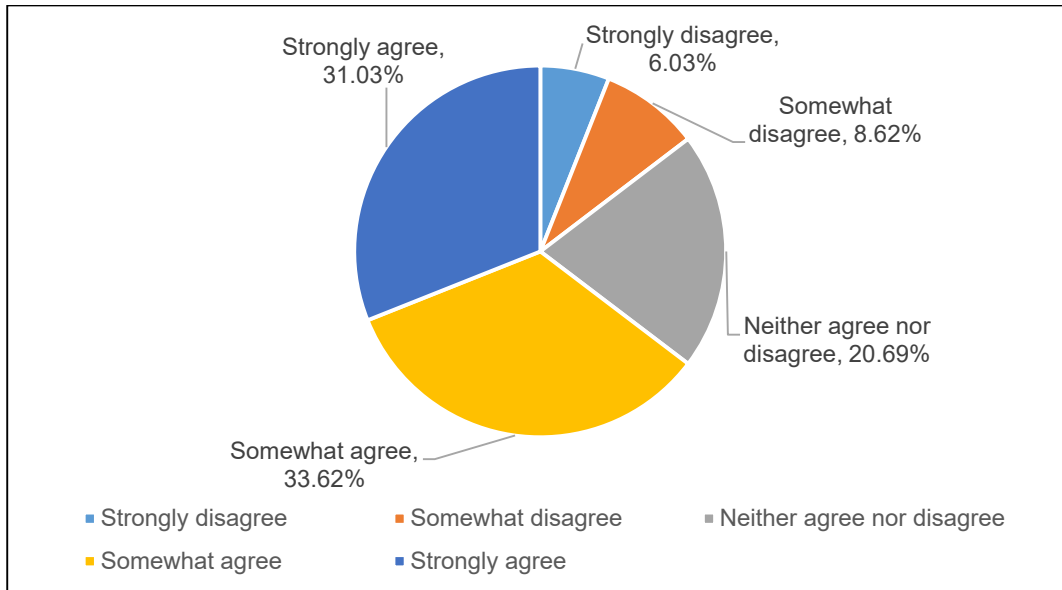
Figure 34: 'There is an Increase in Customer Demand for Online Purchases and/or Services during COVID-19'

'COVID-19 has increased the investment in digital technologies in my organization'
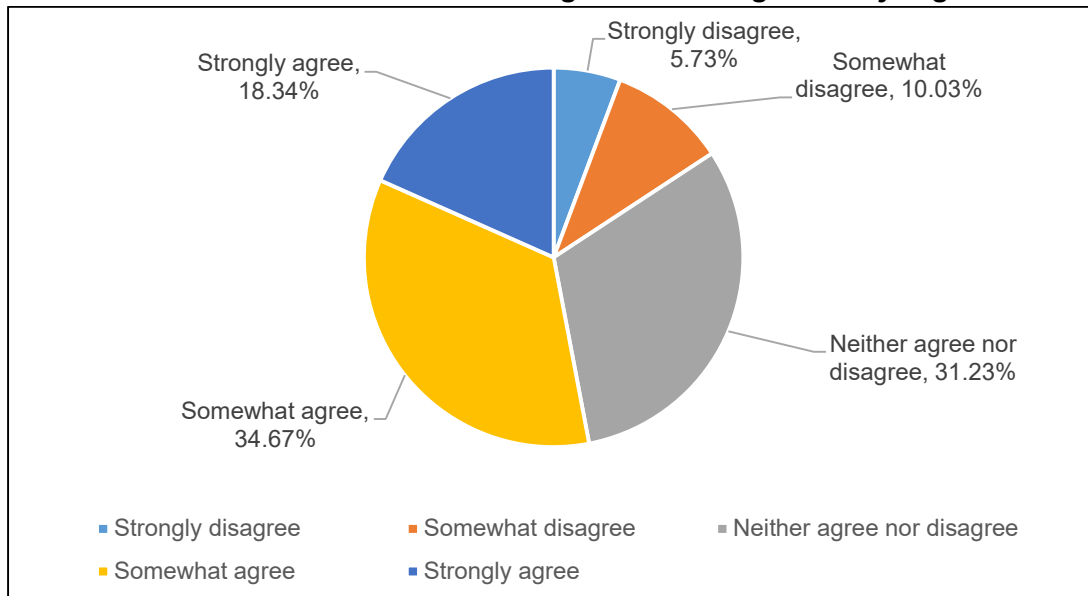
Figure 35: 'COVID-19 has Increased the Investment in Digital Technologies in My Organization'

In response to COVID-19, my organization now see digital technologies as a source of competitive advantage
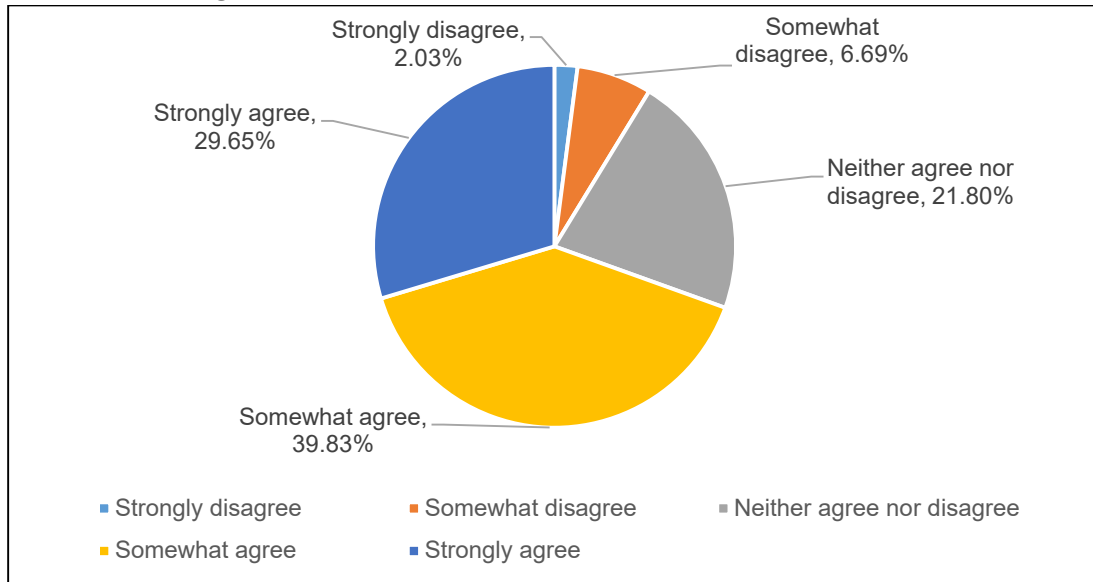
Figure 36: In Response to COVID-19, My Organization Now See Digital Technologies

as a Source of Competitive Advantage

In response to COVID-19, my organization is refocusing the entire business around digital technologies
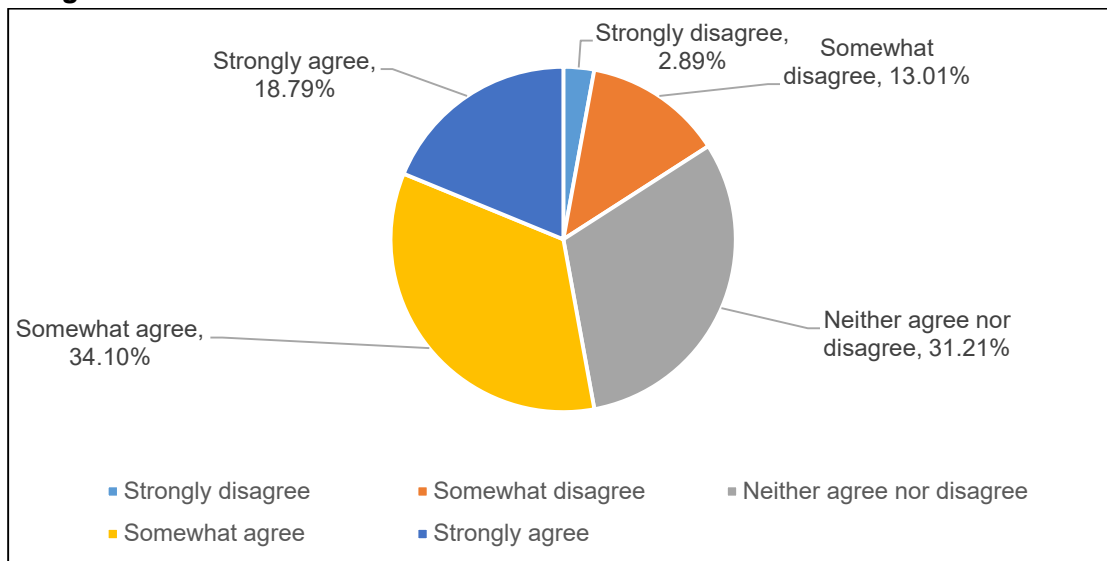
Figure 37: In Response to COVID-19, My Organization is Refocusing the Entire Business around Digital Technologies

The survey results echo the findings in the literature. According to Mastercard (2021) study, 70% of SMEs globally accelerated their adoption/use of digital technologies during the COVID-19 pandemic in 2020-21 to enable business continuity. APEC (2020) study found that the COVID-19 crisis may be accelerating trends towards e-commerce. As buying behaviors of consumers and businesses change during COVID-19 to manage transactions at a distance, MSMEs may have little choice but to digitalize to adapt to the realities of the market and remain competitive. The digital transformation of MSME businesses continues as a policy priority during COVID-19, formalizing informal businesses, opening foreign markets to MSMEs, and developing youth and women entrepreneurship during the recovery (ADB, 2021).

Further, the COVID-19 pandemic has accelerated the drive towards a cashless economy. MSMEs have also recognized the benefits of a cashless economy. The primary survey research findings show that MSMEs transition toward a cashless economy, although physical cash transactions are still happening for business transactions. More than 86% of MSMEs now use bank transfers for business transactions.

Mode of Payment recieved by MSMEs from customers (% of Firms)

Category	Value
Bank account transfer	86.11%
Online credit/debit card	35.65%
Cash on delivery	30.56%
Third party payment service such as Paypal, Line pay, shopee pay	26.39%
Other	4.63%
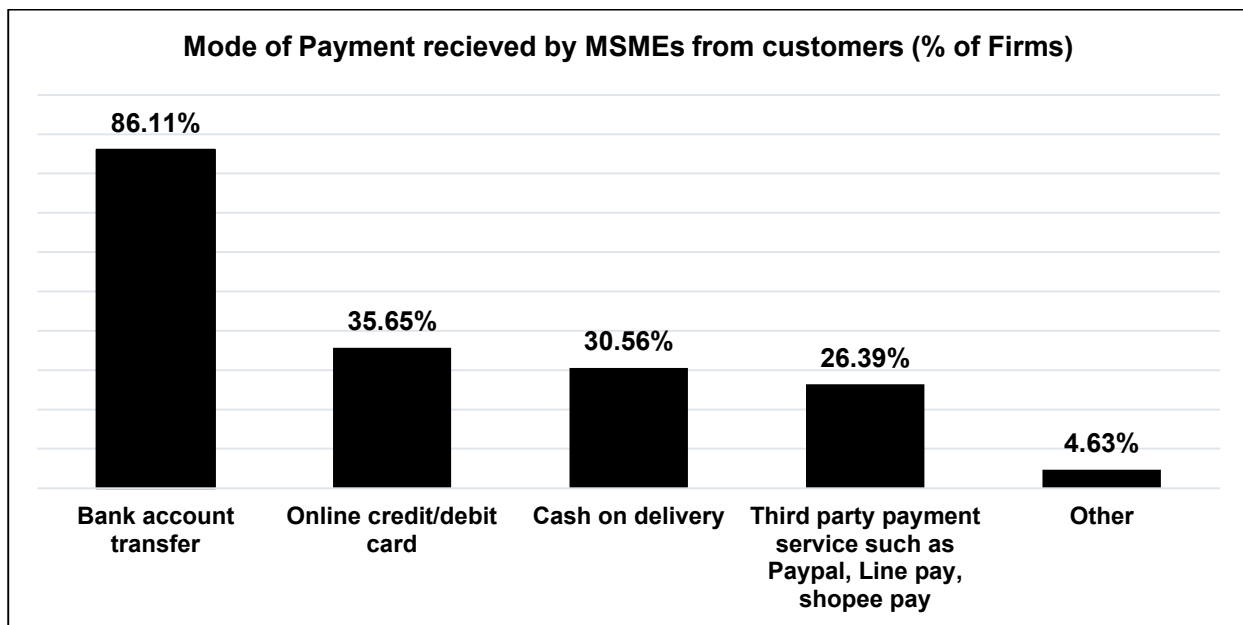
Figure 38: Mode of Payment Received by MSMEs from Customers (% of Firms)

6.6. Benefits of Digitalization in MSMEs in the Lancang-Mekong Countries

The survey results of this study on the benefits of MSME digitalization are given below.

Benefits of Digitalization for MSMEs

Benefit	Percentage
Ease of business operations	84.85%
Enhanced customer service	68.48%
Increased customer base	67.58%
Cost reduction	58.48%
Enhanced marketing and customer outreach	54.55%
Reduction in operational time	51.82%
Higher brand awareness	47.58%
Improvement in quality (such as reduction in…)	46.67%
Empowering information-based decision making	42.12%
Other	1.21%

Figure 39: Benefits of Digitalization for MSMEs

Close to 85% of the MSMEs highlighted the ease of business operation as one of their main reasons for adopting digital technologies. Enhancement in customer (68.48%) service emerged as the second most common reason for MSMEs to adopt digital technologies. An increasing customer base emerged as the third most highlighted benefit of MSME digitalization (67.58%). From a marketing and branding perspective, enhanced marketing and customer outreach emerged as the 5th most cited benefit (54.55%) of digitalization. In comparison, enhanced brand awareness emerged as the 7th most cited benefit (47.58%) of digitalization. This is because platforms benefit from network effects. The more users a platform has, the more other potential users will be attracted to it, making the platform grow bigger and capture a larger share of the market (UNESCAP 2020). From an operational standpoint, cost reduction (58.48%) and reduction in operational time (51.82%) emerged as the 4th and 6th most highlighted benefits of digitalization, respectively. Improvement in quality (46.67%) and empowering information-based decision-making (42.12%) emerged as the least two important reasons for digitalization.

For instance, ERIA (2019) study highlighted the main benefits of digitalization for MSMEs as access to a broader customer base, reduced costs (in operating businesses as many services are integrated within platforms), and optimizing their businesses (ERIA, 2019).
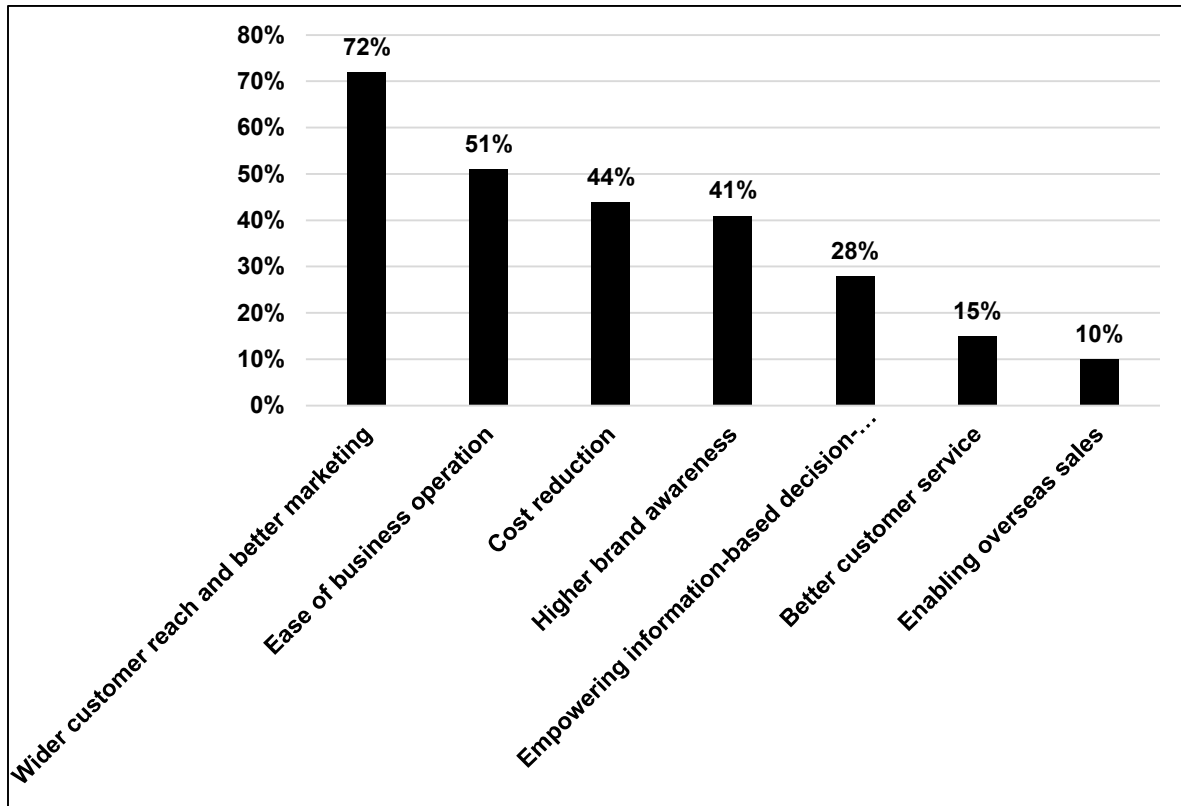
Figure 40: Benefits of Digitalization for MSMEs in ASEAN Countries
Source: (ERIA, 2019)

As shown in Figure 41, a survey conducted by consulting firm Accenture reported that 73% of small and medium enterprises (SMEs) from P.R. China had experienced additional revenues, and 69% have successfully reduced costs by exploiting digital platform services. Moreover, the survey's top five benefits were the innovation of products and services, better customer retention, and faster market speed to market (ERIA, 2019).
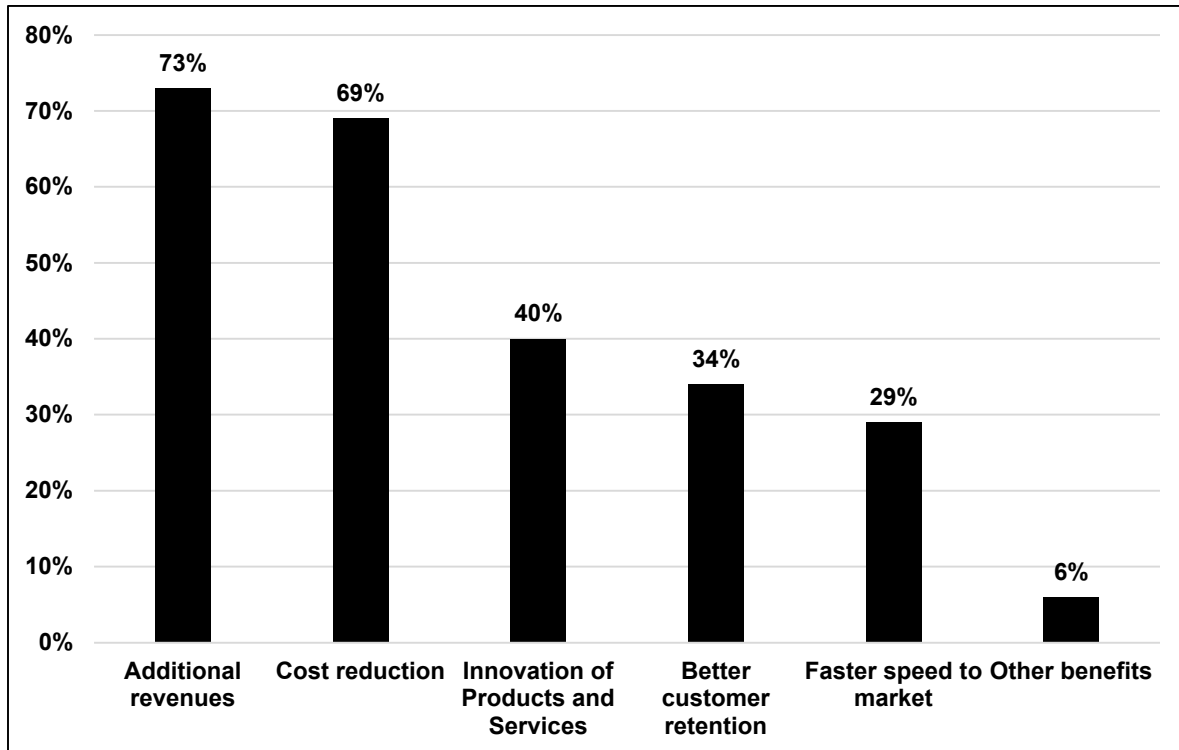
Figure 41: Benefits of Digitalization for MSMEs

Source: (ERIA, 2019)

According to the study conducted by APEC (2020), digital solutions can help MSMEs in APEC manage transactions at a distance, deliver goods efficiently, facilitate access to financial services, and engage with new and existing customers. An IDC survey of more than 1,500 business leaders in the Asia Pacific region identified improved profit margins, productivity, and customer loyalty and retention, along with cost reductions, ability to offer new products and services, and increased revenue as among the top benefits their organizations reaped from their digital transformation initiatives (IDC, 2018, APEC, 2020). A recent study by OECD reported one of the main benefits of MSME digitalization: reducing transaction costs by providing better and quicker access to information and communication between staff, suppliers, and networks. The OECD report also highlighted the benefit of integration into global markets through digitalization (OECD, 2020).

Some of the selective quotes on digitalization benefits from the participants are as follows:

"Restaurants have adapted to use online platforms such as Facebook for advertising, selling more products, including providing food delivery services to customers to their homes"

"Used the digital system to match with needs of customers and can reach as many customers as possible"

"The government's co-payment scheme project is quite useful. Because it makes people more educated and learn to use technology, especially when paying for goods"

"More new customers from online channels"

Next, we capture the benefits of specific digital technologies of MSMEs, namely E-commerce platforms, food-delivery platforms, Fintech platforms, and government online or E-government platforms. As seen in the figures, ease of business operation emerged as the top benefit regardless of whether the platform is e-commerce, food-delivery, Fintech, or an online government platform.

Benefits of E-Commerce Platforms for MSMEs

Ease of business operations	69.33%
Increased customer base	62.22%
Enhanced customer service	56.44%
Enhanced marketing and customer outreach	51.56%
Higher brand awareness	46.67%
Cost reduction	43.11%
Reduction in operational time	43.11%
Improvement in quality (such as reduction in…	35.56%
Empowering information-based decision making	34.67%
Other	4.44%

Figure 42: Benefits of E-Commerce Platforms for MSMEs

In addition to the above benefits of e-commerce platforms, our primary research findings showed that, on average, 35% of the total revenue of MSMEs is now coming through e-commerce platforms. APEC (2020) study highlighted that e-commerce platforms could serve as important channels for MSMEs to gain greater customer access, including international customers. Digital platforms considerably improve the visibility of partner MSMEs due to their access to a vast customer pool ERIA (2019). E-commerce platforms relieve partners of the fuss of logistics and payments by providing these services at reasonable costs (ERIA, 2019). Also, there is evidence that E-commerce platformer collaborates with foreign platformers. For instance, an e-commerce digital platformer in one of the ASEAN countries collaborates with a counterpart platformer in P.R. China to sell ASEAN products to P.R. China to develop a broader customer base for MSMEs.

Moreover, e-commerce platforms drastically reduce costs in setting up physical stores for MSMEs. Setting up physical stores requires vast investment and, thus, a higher break-even point. However, setting up an online store on an e-commerce platform takes far less time to break even (ERIA, 2019). Further, E-commerce has also enabled many new small entrepreneurs who can

start their businesses quickly through online market platforms or via social media, including segments of the population that were traditionally not participating in the formal economy, such as women (US-ASEAN Business Council, 2020).

Benefits of using Food Delivery Platforms for MSMEs

Ease of business operations	67.57%
Enhanced customer service	43.24%
Increased customer base	40.54%
Cost reduction	39.19%
Reduction in operational time	33.78%
Enhanced marketing and customer outreach	31.08%
Higher brand awareness	25.68%
Empowering information-based decision making	21.62%
Improvement in quality (such as reduction in errors)	20.27%
Other	8.11%

Figure 43: Benefits of using Food Delivery Platforms for MSMEs

In addition to the above benefits of food delivery platforms, our primary research findings showed that, on average, 37% of the total revenue of MSMEs in the food sector is now coming through e-commerce platforms. Partnering with digital food delivery platforms helps reduce operating costs due to economies of scale and separation of functions digital platforms help achieve. For instance, restaurants can deliver food through a delivery platform instead of hiring their delivery team. Around 76% of MSMEs in the food industry in ASEAN did not offer delivery services before, but the delivery services programs provided by the digital platformers have enabled them to cater to their foods more easily without hiring their delivery driver. Digital platforms such as Foodpanda provide built-in analytics that helps partners understand sales patterns and potentially optimize their product offerings. Alibaba plans to bring in cloud computing for its MSME partners to ensure that they can work with the latest systems and optimize their operations (ERIA, 2019). In general, revenue increases were reported by most partner MSMEs in the food industry. For example, a partner restaurant that serves curry successfully opened a second shop in a different location thanks to increased revenue from delivery sales (ERIA, 2019).

Benefits of using Fintech for MSMEs

Category	Percentage
Ease of business operations	78.95%
Enhanced customer service	57.89%
Reduction in operational time	47.37%
Increased customer base	43.61%
Cost reduction	42.11%
Enhanced marketing and customer outreach	29.32%
Improvement in quality (such as reduction in errors)	24.06%
Empowering information-based decision making	19.55%
Higher brand awareness	18.05%
Other	1.50%

Figure 44: Benefits of using Fintech for MSMEs

In addition to the above benefits of Fintech platforms, our primary research findings showed that 54% of total MSMEs transactions are through Fintech. Mastercard's study on MEA reported ease of not handling or processing cash; faster access to revenues; the convenience of paying suppliers digitally; more efficient transactions and payments across multiple channels; access to new business growth opportunities as the biggest benefits of adopting Fintech for MSMEs (Mastercard, 2021). Moreover, in addition to the easing payments, digital payments can also benefit MSMEs in other ways. Fintech can improve the credit scores of MSMEs, which can help them later access finance and support the country's transition towards a cashless economy (UNESCAP, 2020).

Benefits of using Online Government Platforms

Category	Percentage
Ease of business operations	63.55%
Increased customer base	42.06%
Cost reduction	40.19%
Reduction in operational time	39.25%
Enhanced customer service	37.38%
Enhanced marketing and customer outreach	32.71%
Empowering information-based decision making	27.10%
Improvement in quality (such as reduction in errors)	27.10%
Higher brand awareness	25.23%
Other	3.74%

Figure 45: Benefits of using Online Government Platforms

E-government and online government platforms provide efficient public service delivery to MSMEs (Mastercard, 2021). Online government platforms offer a one-stop-shop for MSMEs for government approvals such as e-invoicing and e-signature and facilitate easy electronic submissions of documents such as compliance with the government's tax regulations, overall reducing the compliance cost of regulations (OECD, 2020).

6.7. Barriers and Challenges of Digitalization in MSMEs in the Lancang-Mekong Countries

"Small businesses are the unsung heroes of the global economy – creating jobs and growth in every country and helping to reduce poverty and income inequality. But they are facing the challenge of a lifetime. The COVID-19 pandemic isn't just a public health emergency; it's also an economic crisis that is hitting small and medium-sized businesses exceptionally hard" - Facebook/OECD/World Bank (2020)

Supporting MSMEs' digitalization efforts amid COVID-19 requires policymakers to adopt a two-pronged set of interventions that allow MSMEs to reap the benefits of the digital world while overcoming the challenges of digitalization. It is, therefore, crucial to recognize the complex challenges that digitalization presents for MSMEs. This study has compiled the key barriers and challenges of MSMEs' digitalization drive from secondary research, including ASEAN and LMC countries studies.

Figure 46 presents the various challenges facing MSMEs' Digitalization.

Lack of awareness and knowledge	**Cybersecurity issues**	**Fragmented Regulatory Environment**	**Information-related barriers**
• Lack of awareness • Lack of knowledge	• Data Fraud • Data Theft • Data Privacy • Phising Scams	• Weak or non-existent regulation • No central regulation	• Limited Information • Misinformation • Cross-language Information Access

Digital Divide	**Reluctance to Change Business Process**	**Finance-related barriers**	**Shortage of Expertise in Digitalization**
• Digital Infrastructure divide (e.g., high speed internet connection) • Digital Readiness of the population • Asymmetric market power • Platform dominance	• Interoperability • Lack of wilingness to change • Fear of unknown	• High Capital Investment Cost • High commission or transaction fees • Access to finance • Cash flow constraints	• Lack of digital literarcy (internal skills gap) • Lack of industry-ready graduates

Figure 46: Challenges Facing MSMEs' Digitalization

6.7.1.   Lack of Awareness and Knowledge

MSMEs are typically not very well aware of where to obtain useful information on digitalization, as the sources are usually scattered and not easily accessible (APEC, 2020). Lack of knowledge and awareness of MSMEs about digital technology emerged as a stumbling block in digitalization's first step (ERIA, 2019). Even if MSME owners have a general awareness of the benefits that digitalization can bring, they lack the knowledge of the practical steps that need to be taken to adapt their business operations to digital technologies (ERIA, 2019).

6.7.2.   Cyber Security Issues

MSMEs that have recently gone digital might not think about cybersecurity until after a security breach. Typical security breaches affecting MSMEs include ransomware and phishing attacks and the stealing of passwords. Policy reports have highlighted that some countries in Southeast Asia are becoming hotspots of malicious cyber activities and that there has been an underinvestment in hard and soft infrastructure for cybersecurity (UNESCAP, 2020). In the ASEAN region, the regional expenditure in cybersecurity represented 0.07 per cent of the GDP, below an average of 0.13 per cent in other regions (UNESCAP, 2020). This is in line with similar remarks about the state of MSMEs cybersecurity in other regions, particularly during the Covid-

19 pandemic. Many SMEs did not have Virtual Private Networks (VPNs) in place, did not use multi-factor authentication for remote access, or had to allow employees to use their own devices, which were not as secure as the ones provided by the organization' (OECD, 2020b). The lack of high cybersecurity standards can hurt MSMEs financially. The violation of data protection obligations, as set in domestic laws, carry monetary penalties, which could have damaging effects on MSMEs. It can also impact consumer trust. Cyberattacks can expose sensitive personal data of consumers (for instance, financial information) enabling identity theft, and as a result some consumers might be hesitant to engage in digital transactions, download apps with inadequate privacy policies, among others (UNESCAP, 2020). In the words of one of the participants from Thailand *"We have a high cost when there is a problem of data security. Because the system may not be good enough, causing a hack to use or impersonate through the company's server".*

6.7.3. Challenging Regulatory Environment for MSMEs

The legal and regulatory environment is crucial for digitalization. It is the extent to which a government promotes MSMEs digitalization through regulation, policy, and planning. Lack of regulations related to additional e-commerce taxes, weaknesses in cybersecurity, digital consumer rights protection, and privacy may hinder MSMEs' digitalization drive (ERIA, 2019). Also, there may not be any regulation for emerging disruptive technologies such as blockchain and cryptocurrencies. For instance, in Lao PDR, regulations on e-commerce do not exist and remain in the initial stages of drafting (ERIA, 2019). On the other hand, sudden changes or implementation of regulations will also cause significant regulatory risks for MSMEs as they may not have enough resources for timely compliance with regulations. Similarly, overly restrictive regulations and cumbersome procedures on communication, electronic payments, data localization, etc., also impede MSME digitalization (ERIA, 2019).

The regulatory compliance cost of digital industries is high. For example, in some countries, businesses are not allowed to store public data outside the country and hence must establish local data centers. Major platformers, including Amazon, Google, and Microsoft, are strongly against the restriction. In addition, regulations such as those related to additional e-commerce taxes may potentially hinder the activity of digital platformers. Such regulations increase the costs of digital platform providers, which would eventually be passed on to MSMEs and customers or users. Thus, overly restrictive regulations might stunt the growth of the digitalization of MSMEs.

Table 13 shows the 2021 NRI rank for the regulatory environment for digitalization for Lancang-Mekong countries except for Myanmar. The disparity in regulation related to digitalization among LMC countries is evident from the table.

Table 13: The 2021 NRI rank for the regulatory environment for digitalization for Lancang-Mekong countries

Country	Global Rank	LMC Rank
Thailand	57	1
P.R. China	87	2
Vietnam	93	3
Lao PDR	122	4
Cambodia	123	5

Source: (The Network Readiness Index, 2021)

It is clear from the table that Thailand is leading the regulation in the Lancang-Mekong countries with a global rank of 57 out of 130 countries in the NRI ranking. Despite having an overall rank of 29 in NRI, P.R. China is lagging on the regulatory front with a rank of 87. Vietnam is currently third in the regulation, with a global rank of 93. Cambodia and Lao PDR remained outside the top 100 countries and emerged as one of the least ready countries in the world regarding regulations for supporting digitalization. Although not featured in the ranking, Myanmar also has a poor regulatory landscape. LMC countries, especially Cambodia, Lao PDR, and Myanmar, should amend the outdated rules and regulations.

Further, there can be substantial challenges regarding the movement, release and clearance of goods crossing borders for trade in goods. Exporters have to submit documentation regarding the shipping details, customs declarations, evidence of payments, and certificates regarding the safety and security of products, among other requirements varying according to the type of product and destination. Customs authorities (and, in some cases, other government agencies) will decide on the clearance of goods based on this documentation. If this process is successful, goods are cleared and can enter the market. However, the complexity of this process can be a burden for MSMEs, which in addition to having limited resources, have to deal with complex procedures to export. This implies that while platforms for e-commerce can help MSMEs reach international markets, the trade cost of sending products abroad could be impeding realizing the opportunities offered by the digital economy.

Table 14 shows the procedures and time required for customs clearance in LMC countries except for P.R. China. Customs procedures are complicated and time-consuming in some LMC countries. This might result in adverse effects on cross-border businesses and, thus, impede successful e-businesses that may otherwise be able to operate without borders.

Table 14: Procedures and Time Required for Customs Clearance

Country	Documents (number)		Documentary (hours)		Border (hours)	
	Export	Import	Export	Import	Export	Import
Thailand	5	5	11	4	51	50
Viet Nam	5	8	50	76	55	56

Country	Documents (number)		Documentary (hours)		Border (hours)	
	Export	Import	Export	Import	Export	Import
Cambodia	8	9	132	132	48	8
Myanmar	8	8	144	48	142	230
Lao PDR	10	10	216	216	12	14
ASEAN Average	**5.8**	**6.7**	**85.3**	**83.6**	**57.5**	**67.9**

Documents (number): Number of documents
Documentary (hours): Time (hours) required for documentary compliance
Border (hours): Time (hours) required for border compliance

It is evident from Table 14 that Thailand has the most effective and efficient regulation among LMC countries. Their average for all categories is better than the ASEAN average. This is not surprising given that in 2017 Thailand established the Digital Economy Promotion Agency (DEPA). The Agency offers many services for MSMEs, which main tool is the Digital Transformation Fund. Similarly, Vietnam is also doing relatively well compared to ASEAN average in all categories except import documents required. Cambodia, Myanmar and Lao PDR are outside the ASEAN average and hence required substantial work to improve the border regulation, which is a critical factor for cross-border MSME trade. For instance, in Myanmar, 230 hours is required for border compliance for import compared to ASEAN average of 67.9.

6.7.4. Information-related Barriers

MSMEs are typically not very well aware of where to obtain helpful information on digitalization, as the sources are usually scattered and not easily accessible. This problem of accessibility is partially due to language barriers or the so-called 'Cross-Language Information Access' issue. English is not the primary language in LMC countries. Most MSMEs tend to rely on word-of-mouth for knowledge related to digitalization, and there was no online source consistently referred to. Low English proficiency is also a hurdle for MSMEs in ASEAN and LMC. The majority of all websites are in English, and localized content is limited, especially on digital tools for businesses. Most of the self-learning materials for digital tools are also only available in English, leading to information-related barriers (ERIA, 2019). Further, misinformation remains a complicated issue with negative implications on businesses and social cohesion. For MSMEs, false reviews and negative publicity on popular platforms could lead to loss of transactions (APEC, 2020). One of the participants mentioned that there are no guidelines for storing data in the cloud and improving information security.

6.7.5. Digital Divide

As discussed earlier in the report, the intrinsic difference across countries in digital infrastructures, such as internet penetration and secure servers, is a roadblock to MSME digitalization. For instance, access to high-speed broadband is a prerequisite for the digital transformation of SMEs (OECD, 2020). MSMEs also face challenges from asymmetric market power. Large platforms

may acquire sufficient market power to affect MSMEs. Large digital platform providers in e-commerce and food-delivery charge steep service commissions that cut into profits and drive some MSMEs out of the market (APEC, 2020). Unlike large firms, MSMEs do not have the bargaining power to negotiate with platform providers. Low digital readiness of the general population is also a concern. For instance, customer preference for cash-on-delivery impedes Fintech's adoption of MSMEs (ADB, 2021). The digital divide is also evident among male and female small-scale entrepreneurs in LMC countries. According to IFC (2021) study, small-scale women entrepreneurs have been disproportionately affected by the COVID-19 pandemic. They often have limited access to finance and digital connectivity and have been less able to adapt to market disruptions. In Thailand, during the COVID-19 lockdown, women indicated that they could only last 2.56 months, while men said they could last 2.73 months before temporarily or permanently closing their business. This shows women have less financial reserve than small-scale male entrepreneurs (The Asia Foundation, 2020). Also, small-scale women entrepreneurs often lack access to information and networks and may not know where to find financing. The gender gap in information technology, including women's lack of digital literacy, skills, and equipment, is likely to prevent small-scale women entrepreneurs' ability to leverage technology during and after COVID-19 and therefore threatens their ability to survive during the pandemic (IFC, 2021).

6.7.6.   Reluctance to Change Business Process

Reluctance to change business processes on the part of MSME business owners prevents the acquisition of digital technologies even though the cost of digital technologies is becoming affordable for MSMEs. It was evident from the interviews that most of the MSMEs in LMC have limited knowledge of IT and technology, especially the business owners who are the first-generation owner. Thus, they resist change, especially with unfamiliar technology. It was evident that the resistance to change is even greater, especially if they are pretty successful with their traditional sales channel, and hence they don't see the need to change. Other MSMEs tend to resist adopting new technologies due to the perceived risks and the financial burden associated with it (ERIA, 2019). For most MSMEs, taking the first step to digitalize a part of the business is the most challenging, but once this has been accomplished, incremental improvements come more naturally and easily. One of the participants highlighted the need for open-mindedness to learn and adapt new things for MSMEs in Thailand.

6.7.7.   Finance-related Barriers

The MSMEs reduced access to credit and financial resources are barriers to implementing digital technologies, furthering the digital divide. MSMEs are less likely than large firms to be able to access finance due to factors such as a limited credit history and lack of detailed financial information (Facebook/OECD/World Bank, 2020). The International Finance Corporation (IFC) estimates that 40% of registered MSMEs in emerging markets have an annual unmet financing need of $5.2 trillion (IFC 2017). Further, during COVID-19, financial reserves are likely to be

depleted due to the loss of income from the extended COVID-19 lockdown and border closures and hence may not have the necessary financial resources for digitalization.

6.7.8.   Shortage of Expertise in Digitalization

MSMEs can be directly affected by a lack of sufficient digital skills (UNESCAP, 2020). To thrive in the digital economy, MSMEs require a diverse set of skills ranging from information and communications technology (ICT) generic skills (how to use technologies and applications for professional purposes), ICT specialist skills (how to program apps, develop applications and manage networks) to ICT complementary skills (how to communicate on social networks, manage brands, analyze big data) (UNESCAP, 2020). For instance, skilled employees must handle the ICT tools to manage MSMEs' web or social media presence, webshop, cloud-based applications, and digitalization of back-office functions. Unfortunately, one of the main challenges facing MSMEs in the ASEAN region is the shortage of expertise in digital technologies, not just in programming and digital solution provision, but a good understanding of the business context and ICT environment (ERIA, 2019). Without skilled human resource expertise, implementation of digitalization becomes a great challenge, especially when MSMEs wish to move beyond basic adoption toward greater digital sophistication. However, hiring full-time IT professionals may not be an option for most MSMEs looking to build their digital capabilities due to their relatively high labour costs, especially when there is a skill shortage (ERIA, 2019).

Presently, most MSMEs face internal skill gaps as current employees may not have the expertise in various digital technology tools (Mastercard, 2021)). The internal skills gap also prevents managers and workers from identifying the digital solutions they need and adapting business models and processes (OECD, 2020). Also, it is widely acknowledged that the ICT graduates' skillsets often fall short of what the industry requires. For instance, in Thailand, ICT graduates lack basic skills like coding or a strong foundation in core subjects, such as advanced mathematics. 90% of the 20,000 ICT graduates each year are unable to meet the basic qualifications for companies. The industry needs 6,000–7,000 workers annually, which translates to a skills shortage of 4,000 to 5,000 a year (ERIA, 2019).

Some of these above barriers and challenges have emerged from our primary research findings. This study captured obstacles and challenges facing specific digital technology adoption of MSMEs, namely E-commerce platforms, food-delivery platforms, Fintech platforms, and government online or E-government platforms. Some selective quotes from participants on the barriers and challenges facing MSMEs are given below.

Challenges and barriers to using E-commerce platforms

Reluctance to Change Business Process

"We do not know if the e-commerce platform is helpful in our business sector and can it really help find customers for us. The investment is also high, and there is no guarantee that our business will grow using e-commerce platform"

Finance-related Barriers

"Rules and deduction of fees for using the service to sell products causing businesses to have to increase product prices to compensate for the part of the fee deducted from the platform"

"Credit term of payment is too long effect to company cash flow"

"Advertising costs are too high. Also, the knowledge to use e-commerce in the enterprise, companies have to pay a high price to learn"

"Still need to pay for high advertising such as Flash Sale, to increase awareness and sale volume"

"High investment cost"

Lack of Knowledge and Awareness

"Lack of understanding and data management of operational staff / preparation of material such as product images / management control and check the order is correct"

"Employees do not have enough knowledge in electronics"

"Understanding and knowledge of using e-commerce platform"

"We have no experience yet, and would need support or proper training"

Shortage of Expertise in Digitalization

"Lack of manpower to reply to customers and pack products"

"Lack of skilled staff in this field"

Challenges and barriers to using food delivery platforms

Finance-related Barriers

"High cost of advertising and promotion"

"Advertising cost"

"High commission charged by platform providers"

Lack of Knowledge and Awareness

"Difficulty in using the system. It is not user friendly"

"The employees' knowledge and understanding of how to use it is still low"

Digital Divide

"The network system is unstable"

Challenges and barriers to using Fintech platforms

Finance-related Barriers

"High processing fees such as installment payments swipe credit card which has a relatively high percentage compared to the gross profit that has occurred"

"Service fee is very high and take long time for transfer money to my account"

"Credit term of payment"

Digital Divide

"Some customers have restrictions on the use of technology. Therefore, still use cash to pay for services"

"Internet stability, speed, disruption of banking applications"

"Customer internet connection Some people have to take a long time due to the limitation of internet speed"

"UX/UI and certain restrictions on banking systems that cannot handle certain financial tasks with full efficiency"

"Network stability & Internet speed"

"Stability of banking platforms/wallets applications, e.g. during periods of simultaneous access to the system. The use of the Platform may be disrupted"

Cybersecurity Issues

"Online money fraud"

Challenges and barriers to using Online Government platforms

Information-related Barriers

"The whole UX UI design pattern is unclear, high transaction errors"

"E-mail notification system does not support Thai language"

"Lack of knowledge on rules and regulations and the time period in which they are in force"

Digital Divide

"The system for logging in is limited only to Browser"

"The platform is not updated, has bugs and makes working with government agencies inconvenient and delayed"

"Initially there were frequent system crashes. Lately it has been very good"

"The paper work involved is the same and needs to be scanned into the system, which I think can be improved in the process on the eGP"

<u>Lack of Knowledge and Awareness</u>

"Lack of knowledge, understanding, and expertise in using technology"

"Learning how to use is challenging"

<u>Shortage of Expertise in Digitalization</u>

Lack of expertise should open channels for training or other

<u>Cybersecurity Issues</u>

"Security and Customer Compliance are low"

"Stability of their server"

6.8. Learning Case Studies of Digitalization in Lancang-Mekong countries

6.8.1. Case Study 1: Robinhood Thailand (Private Sector)

Figure 47: Robinhood Thailand

Robinhood (www.robinhood.in.th) is a Thailand homegrown food delivery platform developed by Purple Venture Co., Ltd, a subsidiary of SCB10X. Robinhood, launched in early 2021 aims to support the society during COVID-19 under the service motto "app for small guys." It aims to help small restaurants and merchants adopt the digital platform to sell their food online, especially in the wake of lockdown and social distancing measures during COVID-19. Robinhood supports MSMEs by providing the following supports:

- Robinhood does not charge subscription fees, gross profit (GP) fees, or other fees like other food delivery platforms. This support aims to help small restaurants lower their costs while maintaining food quality.
- As its strength as a subsidiary company of Thailand banking and financial service (Siam Commercial Bank), Robinhood commits to making funds available in merchants' accounts within 1 hour after a food delivery service transaction has been completed. This significantly improves merchants' liquidity and working capital for their business operations as MSMEs tend to rely pretty much on daily income for their business operations.
- Robinhood supports the online presence of the merchant. The company provides a support team to help merchants, especially the small restaurants with elderly owners or those unfamiliar with using the digital application for setting up their shop online. They also provide training for MSMEs on promoting and advertising their shop online.

Project goal and implementation strategy
- As a subsidiary company of banking and financial service, Robinhood sees the opportunity to support MSMEs to scale up their business by providing a loan or microfinance for the merchant in their food delivery application service. Access to bank loans for MSMEs has always been a barrier. The traditional financial credit system requires a certain amount of merchant liquidity credit records, hindering MSMEs from scaling up their business. Some of them may use an alternative option to loan sharks which is illegal and lose money because of the high-interest rate.
- To sustain MSMEs' ability to do their business in the long term, Robinhood is planning to support them by setting up "Robinhood Academy" as a training hub for MSMEs to enhance their capability to sustain and grow up their business.

Key challenges
- Robinhood's main objective since launching the service is to support small restaurants and hawkers to sell food online during COVID-19. Therefore, these target groups of merchants are typically non-tech, elderly, and not government-registered merchants (not in the tax system). Robinhood's challenge is facilitating their support to have an online presence and training them to utilize their food delivery application and advertise their shop by using their application's add-on support services.

- Another challenge from the business ecosystem perspective is that the local Thailand internet platform and mobile application providers have a very high setup cost, especially infrastructure investment. Hence, it is challenging to compete with the giant global platform providers.

Benefits and critical success factors
- Since the Robinhood food delivery application launch at the end of 2020, the company has already helped several MSMEs in the food and restaurant sector. Some statistics are given below:
  - o 90,000 small restaurants are online on the application
  - o There are 2.3 million food orders via application, valued at approximately 500 million baht.
  - o Provide jobs to more than 15,000 riders

- Due to the success of the Robinhood app for food delivery, the company is planning to launch "Robinhood Travel," an Online Travel Agent (OTA) platform to support the Thai tourism and hospitality sector to recover from COVID-19 after reopening the country. The tourism industry is one of the main sectors contributing to Thailand's GDP, which was adversely affected by COVID-19. Robinhood commits to building a social enterprise business model and competing with global platform players by taking a compassionate approach toward supporting local MSMEs. Robinhood Travel offers "zero-commission" and "one-hour payment after customer checking out" to tourism agents and hotel owners. This offer will support MSMEs in this sector to lower their operating costs and cash flow, unlike other online booking platforms. The hotel business in Thailand relies heavily on the OTA platform. MSMEs currently own over 50,000 small and medium-sized accommodations, and they have to pay a hefty commission to the booking platform (around 10-20%) and a waiting period of 3-7 days to receive payment.

- It can be seen that the critical success factors of Robinhood come from the clear and strong vision to genuinely support MSMEs, as their motto was "app for small guys" under the social enterprise business model. This strategy clearly differentiated Robinhood from other food delivery applications. Another critical success factor is that Robinhood is a subsidiary company of Siam Commercial Bank, which can support them in terms of financial transactions to transfer money to MSMEs within 1 hour, removing the barrier related to timely cash transfer.

- Robinhood suggests having government support for building nation digital infrastructure for local platforms or mobile applications then local technology platforms can utilize these infrastructures at a lower cost. Thus, those local technology platforms can get several benefits which, in the end, will benefit MSMEs such as:

- o Due to the government's support for technology infrastructure, MSMEs can lower their investment costs and spend their money to improve other application services and features.
- o Government can support strengthening local technology platforms and mobile application service providers' competitiveness to compete with the global giant technology companies.
- o Lower cyber risks
- o Government can utilize data from these platforms for data nation's data analytics to offer more government services and products for citizens.

6.8.2. Case Study 2: Digital Economy Promotion Agency (DEPA), Thailand (Public Sector)

Figure 48: Digital Economy Promotion Agency (DEPA), Thailand

The Digital Economy Promotion Agency (DEPA), Thailand, was established under the Digital Development for Economy and Society Act B.E.2560 (2017). It aims to support the development of the digital industry and innovation in Thailand in critical areas such as

- To develop a strategic plan for the promotion of Thailand's digital economy
- To promote and support private investment and business operations, and
- To promote and support human resource development for digital innovation and industry.

Since 2017 DEPA has supported SMEs, hawkers, and farmers in Thailand in adopting digital technology. The number of SMEs, hawkers, and farmers and economic value created by this sector which DEPA supported, is shown in below table:

Table 15: DEPA supported for SMEs

Year	2018	2019	2020	Target for 2021
Number of SMEs, hawkers, farmers adopting digital technology	395 companies	2,750 companies	3,595 companies	23,600 companies
The economic value created by digital SMEs, hawkers, and farmers (accumulated figures)	262 Mio. Baht	1,112 Mio Baht	1,796 Mio. Baht	2,800 Mio. Baht

Source: (DEPA, 2021)

In addition, DEPA reported in the 2020 annual report that the agency has reached out to provide support to 6,421 SMEs, Community members, farmers, hawkers, and factory workers.

Project goal and implementation strategy
DEPA has initiated two projects since 2018 targeted to support MSMEs in adopting digital technology.

- The first project call "DEPA mini transformation voucher". This project provides small funding for voucher values up to 10,000 Baht (approximately 310 USD) per MSMEs to purchase any digital equipment or service for their business operations from DEPA registered service provider. The products and services that MSMEs purchase include developing an online catalog for their E-commerce page, developing a simple website for their company, renting drones for crop planting planning, and buying a Point of Sale (PoS) system.

- The second project aims to provide higher value funding up to 1 Mio. Baht (approximately 31,250 USD) for MSMEs who have already adopted technology and want to scale up their business to reach a new market to increase sales volume. A successful case study of MSMEs who have successfully scaled up their business under this project is the company named "Ban Rao Mai Bab".

Key challenges
- MSMEs in Thailand are large in number and variety in sectors such as Agriculture, Food, Tourism, Repair and Maintenance, and Merchant. Due to the limited resources and budget of the agency, funding to support MSMEs has to be carefully designed to match the need of each sector for MSMEs highest benefit. Previous studies have shown that any financial problems related to the lack of funds and government support would adversely influence MSMEs' adoption of innovative practices.
- Policymakers need to develop suitable policies/interventions to ensure that all MSMEs, irrespective of their size (micro, small, medium), can contribute equitably towards the digital initiatives of the country.

Key success factors

- Effective communication with MSMEs is through the provincial governor, the municipality major, and the MSMEs association in each province. Direct contact from the central government or central agency to MSMEs is not efficient as MSMEs tend to have more trust in local government than in central government or agency. Thus, the critical success is the collaboration between the central government and agencies like DEPA and state (provincial) government and the MSMEs association.
- Projects for MSMEs must be easy, simple, and should match their need. The allocation of funds alone does not necessarily guarantee the project's success.

6.8.3. Case Study 3: The Office of Small and Medium Enterprise Promotion (OSMEP), Thailand (Public Sector)

Figure 49: The Office of Small and Medium Enterprise Promotion (OSMEP), Thailand

The Office of Small and Medium Enterprises Promotion (OSMEP) was established in 2000 to support mechanisms to promote MSMEs in Thailand. During the past four years, and just before the pandemic, OSMEP initiated "SME ACCESS" to be ONE stop online platform to support MSMEs.

Project goal and implementation strategy
The idea behind this platform is based on OSMEP's survey with MSMEs about their need for support which includes 1) The ease of access to government information, 2) the Learning platform, and 3) Coaching.
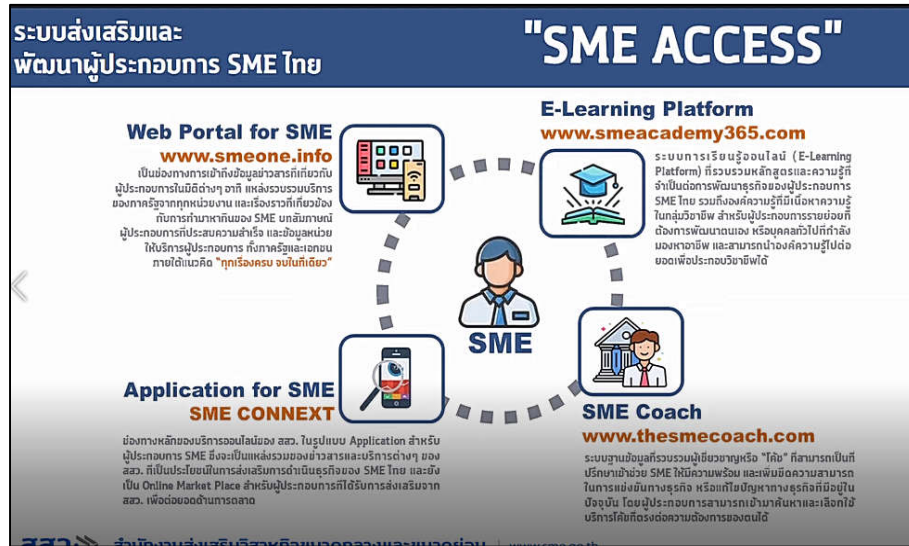
Figure 50: SME ACCESS Platform

Source: (OSMEP, Thailand)

The platform includes 3 services and 1 Application as follows:

Web Portal for SME - It is a website (www.smeone.info) that links all government services from all agencies (ONE stop platform) for SMEs. It also includes news and newsletters for MSMEs in one link.

Figure 51: Web Portal for SME

Source: (OSMEP,Thailand)

E-Learning Platform - It is an online learning platform (www.smeacademy365.com) for all courses to reskill and upskill MSMEs

Figure 52: E-Learning Platform

Source: (OSMEP, Thailand)

SME Coach - It is an online platform (www.thesmecoach.com) aims to provide coaching and mentoring for MSMEs

Figure 53: SME Coach

Source: (OSMEP,Thailand)

Application for SME - SME CONNEXT.

Figure 54: SME CONNEXT Application

Key Challenges

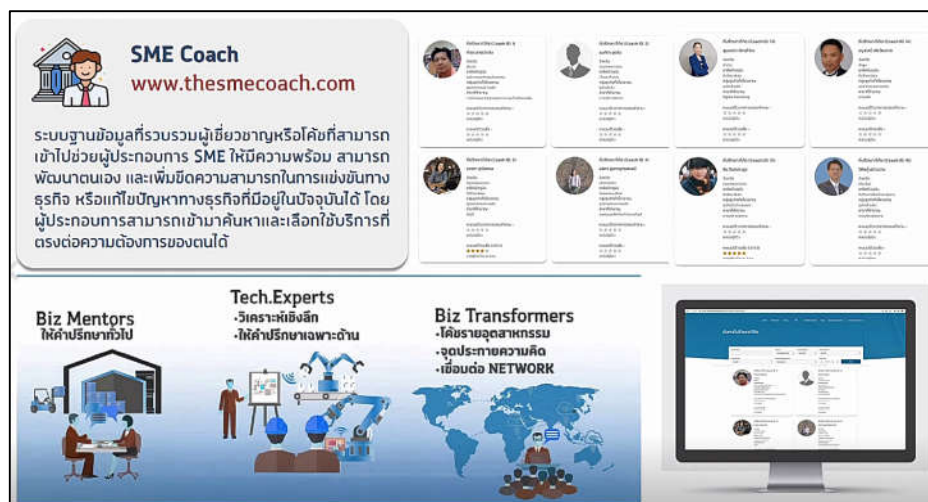MSMEs have limited knowledge in IT and technology, especially business owners who are first-generation owners (age above 60). Previous studies have shown that in the case of MSMEs, their commitment to new innovation and ideas is often linked to the personality of their owner-managers, which manifests itself in company actions.

Although COVID-19 has forced them to adopt technology, the only device they are using is a smartphone with a limited capacity and scalability for company operations. Thus, we have to educate them and train them to use computers and other smart devices and applications in addition to smartphones. Previous studies have shown that digitalization requires sound technical and managerial know-how regarding, for example, the use of the latest technological tools and techniques, standards, and certifications. Therefore, the lack of this know-how in the workforce constitutes a barrier.

Key Success Factors

The success of this service is evidenced by the number of users, which saw a dramatic increase during COVID-19. SMEOne users have increased from less than 10,000 in 2018 to more than 500,000 in 2021. It also has more than 79,000 followers on its Facebook page and 5,000 Line group members.

7. Recommendations for Digitalization in Lancang-Mekong Countries

We propose the following recommendation to address the challenges facing MSMEs and capitalize on digitalization opportunities during and post COVID-19.

7.1. *Facilitating MSMEs Access to Finance and Providing Financial Support*

According to IFC, 40% of registered MSMEs in emerging markets have an annual unmet financing need of $5.2 trillion (IFC 2017). Despite their higher contribution to GDP, the percentage of MSME loans to total bank loans in South Asia is only 14.8% (ADB, 2021). Access to finance is a significant barrier for MSMEs to scale up their business. In most cases, MSMEs lack the high credit score required to access loans and credit facilities. Supporting MSMEs by facilitating access to finance is critical. Advancements in Fintech could support MSMEs' financing requirements (e.g., Robinhood's strategy to help MSMEs scale up their business by using Fintech technology). Fintech provides an alternative to traditional financing, facilitating MSMEs to access loans that otherwise require credit histories and collateral (UNESCAP, 2020). Fintech lending is also helping address the liquidity crisis among MSMEs (APEC, 2020). Some of the initiatives in LMC have been promising.

For instance, P.R. China has cut rates, set up a refinancing facility, and reduced reserve thresholds for bank lending to SMEs. MYBank announced partnerships with 100 banks in P.R. China to launch "contactless loans" to support 15 million MSMEs, using their "310" lending model. The lender's risk is reduced through AI tools that allow loan applications to be completed in 3 minutes and approved in 1 second with 0 human intervention (APEC, 2020). For example, MYBank has provided loans to more than 20 million SMEs in P.R. China since it began its operations in 2015. MYBank leverages more than 3,000 variables analyzed by an algorithm to decide over an applicant's ability to pay within 3 minutes (UNESCAP, 2020). Several countries also use rate reductions, soft loans, re-financing, and guarantees to improve MSME liquidity (ADB, 2021). P.R. China has cut rates, set up a refinancing facility, and reduced reserve thresholds for bank lending to SMEs (APEC, 2020).

Also, providing financial support to MSMEs considering embracing digital technologies can be an effective way to encourage them to move forward if it is properly designed (ERIA, 2019). In Thailand, DEPA's strategy is to provide small funds (up to 10,000 Baht, approx. 300 USD), medium funds (up to 100,000 Baht), and large funds (up to 1 million baht) to a different group of MSMEs depending on their size and need. The governments can effectively partner with digital platformers to provide additional financial support for MSMEs (ERIA, 2019). Further, governments could give MSMEs financial backing through credit guarantees, longer repayment period, collateral free loans, and low- and even zero-interest loans (APEC, 2020). During COVID-19, many governments have introduced loans, grants, and subsidies as primary means of financial support for MSMEs (Facebook/ OECD/ World Bank, 2020)

Still, more effort is required for MSMEs in rural regions, micro-entrepreneurs, and the informal and unbanked MSMEs to access financial services through Fintech, such as mobile banking applications, peer-2-peer (P2P) digital lending, microloans, among others. For instance, P2P offers an online marketplace to link individual borrowers with individual lenders directly so that businesses or individuals can borrow at more favorable terms. Investors can invest at a higher rate of return, creating a win-win situation. P2P platforms provide faster, easier, cheaper, and more flexible solutions to meet MSMEs' needs and facilitate their borrowing by allowing them to communicate directly with investors, making the information delivery more pertinent and more accurate, and giving it multiple chances to obtain funding (ERIA, 2019).

However, two interviewees (from the public sector) from Thailand and Lao PDR highlighted a duplication of projects launched by different government agencies within the same MSMEs sector. The interviewee suggests that the government or policymakers should monitor and make sure that projects from different government agencies should not be duplicated as they will compete with each other rather than support each other to help MSMEs. Moreover, an interviewee from Lao PDR also suggests that long-term and continuous support will benefit MSMEs rather than ad-hoc and short-term support.

7.2.   *Capacity Development of MSMEs – Upskilling and Reskilling*

Keeping the workforce up to date in terms of digital skills is the foundation for MSME digitalization. There is a need to strengthen their vocational training systems to train more people who are familiar with digital technology. Government support is required to provide education and training or grant and subsidy programs to transform existing employees into digitally skilled workforce. A recent study by ADB (2021) highlighted the importance of greater digital literacy and skills development among small and medium firms. In addition, it is vital to enhance MSMEs' capacity for financial management skills, including the ability to source funding for their business and management of working capital, financial literacy on trade finance and income-generating possibilities, and adaptation skills to survive during and post-COVID-19 (APEC, 2020).

Further, capacity-building programs for MSMEs on entrepreneurship and business skills, such as access to networks, access to sales opportunities, legal aspects, and the ability to identify potential suppliers and customers, are critical during and post COVID-19 (APEC, 2020). It is recommended that capacity-building programs should be in place for MSMEs in LMC through training, workshops, and other interactions that provide specific digital skills to MSME owners and employees (ADB, 2021). For instance, since 2018, Thailand's DEPA has offered 'Coding Thailand,' an online platform that collaborates between DEPA and tech partners, including Microsoft, to develop a coding curriculum and encourage young Thais to learn to code. Free online training courses for SMEs on digitalization in provided in Cambodia.

Governments should also consider working with digital platforms that directly contact MSMEs to impart digitalization knowledge (ERIA, 2019). UNCTAD has launched a new e-learning platform for national trade facilitation committees (NTFCs), allowing it to continue building its capacity to

keep trade flowing during the COVID-19 pandemic. The platform provides a safe and effective alternative to face-to-face interactions (UNCTAD, 2021a). Over 400 participants from several countries, including Cambodia, were the first beneficiaries to use the platform. The workshops strengthened the small-scale traders' entrepreneurial capacity, helping them identify and seize opportunities for growth in the harsh business environment created by the pandemic. The sessions helped the traders understand the sanitary measures required by their own countries and those from which they source their products. The workshop also improved their awareness of formal trade procedures to help them switch from informal to formal cross-border trading. Training on border procedures, simplified trade regimes, and rules of origin helps informal traders consider trading through formal crossings as a viable option, dispelling their worries about dealing with border authorities (UNCTAD, 2021b). Other GMS countries could either explore this platform or develop a similar digital platform for the capacity building of MSMEs during the pandemic. Finally, programs that encourage peer learning and mentoring might be more effective, given MSMEs' high reliance on word-of-mouth for digitalization-related information acquisition.

7.3. Developing Global Cooperation for Enhancing MSMEs Competitiveness

The region receives support from international organizations such as UNDP, USAID, JICA, etc. UNDP plays an important role in supporting MSMEs to lead digital transformation projects in Vietnam, Cambodia, and Lao PDR. Some of the support programs include:

- The interviewee from the Small and Medium Enterprise Department – Ministry of Industry, Science Technology and Innovation Cambodia mentioned that they initiated a project to support MSMEs in Cambodia in the food sector to set up their shop online and such as website, Facebook shop, and E-Commerce platform and to use the digital marketing tool to promote their product. With the funding support from UNDP, this project provided 5,000 USD for selected MSMEs. The first phase had more than 100 MSMEs applied, of which 40 MSMEs were selected. Due to the success of this project, UNDP and Small and Medium Enterprise Department, Ministry of Industry, Science Technology and Innovation Cambodia are planning to launch the second phase of this project. However, in this project, some MSMEs have criticized that the requirements for them to participate in the project were cumbersome, and because of that, so many of them are unable to apply.

- Lao PDR Like Vietnam and Cambodia, UNDP plays a pivotal role in supporting Digital transformation for MSMEs. In partnership with MTC, UNDP launched the Digital Government Transformation Project to support the digital transformation agenda in Lao (check more info.). In addition, the Department of Small and Medium Enterprise Promotion, Ministry of Industry and Commerce, Lao, in partnership with The United States Agency for International Development (USAID), launched SMARTUP (www.smartup.lica.com) in 2021. This platform is designed to help MSMEs enhance their digital skill and adopt digital to increase their business competitiveness. Examples of

modules for learning include Digital marketing and sales for SMEs, Data Analytics for SMEs, etc.

- Vietnam Chamber of Commerce and Industry (VCCI), in partnership with the United States Agency for International Development (USAID), to create a digital transformation platform for MSMEs

- Through bilateral support from Japan, Thailand has set up the ASEAN-Japan Cybersecurity Capacity Building Centre (AJCC BC) to advance the skills of cybersecurity professionals in governmental agencies and critical information infrastructure operators. It also established the ASEAN-Computer Emergency Response Team (CERT).

7.4. Develop Supportive Digital Infrastructure for MSMEs

As seen in this study, digital infrastructure inequalities are evident across LMC countries. For example, the digital readiness in Cambodia is still in the initial stage compared to regional peers (IOM, 2021). In Cambodia, only 40% of the population has access to the internet (World Economic Forum, 2021). Lao Internet coverage and digital infrastructure in the rural area are pretty poor. In addition, smartphone and internet cost is relatively high in Lao PDR compared to other countries in GMS or ASEAN.

In Myanmar, although COVID-19 has forced MSMEs to use digital technology for their business, a high proportion around 50% are still not able to utilize digital tools because internet connection is not available in some rural areas or unstable in some areas. Interviewees pointed out that some areas are also having a problem with electricity. Improving the digital infrastructure, including the coverage and access to high-speed and affordable internet for the general population, will significantly enhance the digitalization drive of MSMEs.

At the regional level, a more digitalized border is required in LMC, including digital signatures, electronic submission and endorsement of customs declarations, e-certificate of origins, digital letters of undertaking or bank guarantees, etc. This reduces the waiting times and cumbersome paperwork at the borders and encourages MSMEs to engage and seize the opportunities of cross-border e-commerce. By 2022, an estimated 20% of all e-commerce will be comprised of cross-border activity (APEC, 2020). Border management and immigration procedures should leverage technology such as QR codes for vaccination records and contact tracing and other innovations such as touchless biometrics and contactless scanning to increase efficiency and reduce the risk of person-to-person or surface-to-person contamination while maintaining a focus on security.

7.5. Develop a Supportive Regulatory and Legal Environment for MSMEs

An essential factor for MSMEs to thrive in the digital economy is a supportive legal, regulatory, and business infrastructure. These include laws on digital signatures and electronic authentication, among others. The main objective is to ensure that online contracts will have the same value as paper-based contracts. A regulatory framework that encourages healthy

competition and discourages the abuse of dominance among digital platforms is one measure that could be considered since digital platforms play a central role in promoting MSME digitalization. For instance, the availability of one-stop-shop government platforms can facilitate the business environment for MSMEs (UNESCAP, 2021).

The WTO Trade Facilitation Agreement (TFA) is an instrument designed to facilitate and reduce the cost of trade across borders. It contains different measures that involve the use of digital solutions. Article 1 requires that information on requirements for import, export, and transit procedures should be published online. Article 7 requires adopting procedures for submitting import documentation, preferably in electronic form and accepting electronic payments of duties and fees. Article 10 encourages the use of electronic copies to submit documentation requirements. It also establishes the use of single national windows. It is estimated that the implementation of these commitments can reduce trade costs by up to 40 percent for least developed countries. LMC countries could use the WTO TFA as a starting point for enabling legal and regulatory infrastructure to facilitate international trade through trade procedures. A robust regulatory framework for digital clearance can help reduce transport and border operations costs, increase the tradeability of services, and reduce the costs of logistics and operations. Further, LMC countries like P.R. China have developed dispute resolution systems dedicated to e-commerce. P.R. China has set up an 'internet court' system for cross-border e-commerce disputes in Hangzhou.

7.6. Create Awareness of Digitalization

Partnering with local governments and business associations closer to MSMEs than central governments could be an effective approach to reaching out to maximum MSMEs and creating awareness of the benefits of digitalization (ERIA, 2018). Some digital platform providers are already trying to establish local channels to communicate with MSMEs. For example, Bukalapak, one of the leading e-commerce companies in Indonesia, is deploying hundreds of agents to cover important cities and suburban areas to communicate and collaborate with local MSMEs physically. LMC governments can support such moves by digital vendors. Local IT vendors would be another possible channel as most MSMEs rely on local IT vendors when trying to obtain information on digital technologies, rather than looking for information on the Internet, including that provided by digital platformers or major IT vendors (ERIA, 2019). Creating networks of local IT vendors to let them convey information on various policy programs for MSME digitalization could be an effective policy measure.

Also, more awareness needs to be created to move informal, non-registered MSMEs to formal channels. Several MSMEs in LMC are self-owners/ located at home or in their residential area / running businesses with family members. They rely on cash-based daily transactions. It was evident from the interviews that one of the main reasons to remain informal is the mindset that was dealing with the government is complicated—formalizing such MSMEs who have not registered their business with the government (not in government TAX and VAT). At present

informal MSMEs are excluded from government support, including access to loans and funding, and hence belong to the vulnerable category.

7.7. Build Public-Private Partnerships

Public-private partnerships are critical for initial and sustainable investments in building digital infrastructure. For example, by working with private enterprise partners in the financial and telecommunications sectors, policymakers can enhance MSMEs' access to more advanced international payment processing tools, such as payment gateways, which can help businesses manage online transactions and cash flow more effectively needs. Partnerships with private lending institutions could help many MSMEs rebound from the COVID-19 crisis and grow in new ways (APEC, 2020).

Further, digital platformers are becoming primary digital service providers for MSMEs. They are in direct contact with many MSMEs, and they are knowledgeable about the types of MSMEs that have successfully utilized their services to digitalize businesses operations. Moreover, digital platformers have the expertise and are keen to improve the digital capability of MSMEs, which would, in turn, be instrumental in expanding their business base. One of the food delivery platform provider interviewees mentioned that their company is proud to help MSMEs in the food and restaurant sector adopt online delivery channels. During COVID-19, we have noticed an emergence of a new business called "ghost kitchen" for people who lost their job or wanted to close their shops for cost-saving, which created a new business model for MSMEs for selling food online only without any restaurant. In P.R. China, one of the interviewees from the digital service provider highlighted how their company had supported MSMEs. The interviewee shared a success story of a well-known restaurant operating for many years in Kunming Xishan District. It mainly deals in Yunnan local cuisine. The specialty is pickled cabbage and fish. The owner uses manual bookkeeping for management. Before the transition to digital, the shopkeeper spent a lot of time in revenue management and supplier management every day. During the peak meal period, customers were impatient for too long to wait for checkout. After using our digital payment system, the restaurant has realized the functions of code scanning at the table, ordering, code scanning and checkout, background real-time operation data monitoring, supplier data real-time monitoring, etc. The owner now can know all the real-time data of his enterprise on a mobile phone. He no longer needs to spend a lot of time calculating the bill and revenue of each table, leaving a lot of time to improve customer service quality and reduce customer complaints. The profits of MSME come not only from expanding the business but also from reducing waste and improving operational efficiency. Helping MSMEs improve management efficiency is the central task of any digital service platform provider.

Governments and digital platformers can complement each other to promote MSMEs' digitalization effectively. For instance, developing partnerships and collaborations with tech giants, including e-commerce marketplaces (such as Amazon), social media networks (such as Facebook), app stores (Google Play and Apple Store), and internet search engines (Google, Bing), among others for supporting MSMEs should be pursued. Such initiatives will provide

affordable and scalable digital solutions for MSMEs. For example, Microsoft Airband Initiative aims to close the digital divide and bring high-speed internet connectivity to unconnected communities worldwide (UNESCAP, 2021). Social network platforms such as WeChat, Weibo, Line, Facebook, Instagram, Twitter, WhatsApp, and YouTube, among others, are very effective channels to reach social media users for MSMEs.

7.8. *No 'One Size Fit All Approach'*

The majority of MSMEs in LMC countries operate in various sectors such as agriculture, food, tourism, repair and maintenance, and trading. Several interviewees pointed out that digital adoption varies across the industry. Also, the survival rate of MSMEs is different across countries and sectors. For instance, in P.R. China, as one interviewee mentioned, MSMEs' deregistration is quite high, especially in the agricultural and wholesale sectors. From the perspective of the survival cycle, the average life expectancy of MSMEs in P.R. China is around 3-5 years while large enterprises are more than 10 years. It is reported that approximately 50% of MSMEs could not survive the first three years of operation (http://sz.fzg360.com). Another concern highlighted by interviewees is the persistent gap among MSMEs themselves. For instance, the revenue gap is relatively high when comparing the revenues of micro, small and medium enterprises. Micro enterprises may require more generic support than small and medium ones. Also, interviewees highlighted that the location of MSMEs also needs to be considered. MSMEs located in remote rural areas may require more support than those MSMEs situated in urban areas. Policymakers need to develop suitable policies/interventions to ensure that all MSMEs, irrespective of their size (micro, small, medium), can contribute equitably towards the digital initiatives of the country.

8. Conclusion

MSMEs employ a large proportion of the workforce, and they play a critical role as the backbone of national economies (ADB 2020, 15). The benefits of the digitalization of MSMEs are clear from this study. The adoption of digital technologies by MSMEs has a positive and statistically significant impact on a firm's productivity. Moreover, the digitization of MSMEs is critical for the country's economic growth and also for regional competitiveness. Our primary and second research showed that most MSMEs that have adopted digitalization have mostly benefited from it. The intrinsic characteristics of MSMEs, such as less bureaucracy, greater structural flexibility, responsiveness, and simpler decision-making processes, have supported the digitalization drive. For instance, MSMEs make decisions faster and respond quicker to the concerns of stakeholders than large firms. Further, COVID-19 has emerged as an accelerator for MSMEs' digitalization and has enabled them to 'break the barriers' of digitalization. Still, more effort is required to engage and support the digitalization of MSMEs.

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Appendices

A. The Interview Question of Government and Association

Research on Status and Prospects on Digital Connectivity in Micro, Small and Medium Enterprises (MSMEs) in the Lancang-Mekong Countries

Interview Protocol

Government and Association

Prepare by Mekong Institute

Interviewer:

1. Dr. Janya Chanchaichujit, Project Researcher
2. Dr. Sreejith Balasubramanian, Project Researcher
3. Ms. Yupaporn Siribut, Mekong Institute

31 January 2022

Research on Status and Prospects on Digital Connectivity in Micro, Small and Medium Enterprises (MSMEs) in the Lancang-Mekong Countries

Interview Protocol

I.   Pre-Interview

The participants are sent a questionnaire and interview questions for prefill prior to the online interview session. Questionnaire consists of 2 main sections; Demographic data and the status on government support, lesson learned, barriers and successful case study for promoting MSMEs' digital adoption in your country.

A. Demographic Data: About the organization and the respondent

    a) The respondent's organization.
    b) The respondent's designation/role in the organization.

B. Interview Questions

Q1. Question related to your organization's policies and/or regulations or initiatives to support MSMEs digital adoption
    Q1.1   Policies and/or regulations or initiatives related to enhancing digital infrastructure in general or specific to MSMEs (such as internet broadband) Yes/ No (Please explain)
    Q1.2   Policies and/or regulations or initiatives related to enhance digital skills in general or specific to MSMEs (such as training programs)
        Yes/ No (Please explain)
    Q1.3   Any policies and/or regulations related to support MSMEs business ecosystem in general (not necessarily on digital adoption, such as provide financial support) Yes/ No (Please explain)
    Q1.4   Any other policies and/or regulations or initiatives to support MSMEs digital adoption Yes/ No (Please explain)

Q2. Question regarding to government and association communication with MSMEs
    Q2.1   Do you have an up-to-date and accurate database of MSMEs?
        Yes/ No (Please explain) If so, how you are keeping it up-to-date and accurate?
    Q2.2   How does your organization communicate with MSMEs regarding to Q1. (Please select your answer, answer can be multiple selection)
        A. Public campaign on radio, television
        B. Public campaign through organization's website or/and related association website
        C. Social Media such as Facebook, Twitter, Instagram, please specify………..
        D. Other means of communication, please specify
            ………………………………………

Q2.2   Which communication channel with MSMEs from Q2.2 is the most effective way to communicate with MSMEs? please explain ………………………………

Q3. Success stories/case study
Q3.1   Please share one or more success stories or examples of your organization's policy and/or regulation and/or initiatives which has played a key role in promoting MSMEs digital adoption.
Q3.2   What are the key success factors from Q3.1?
Q3.3   How did you measured the success of Q3.1?
Q3.4   How MSMEs are benefiting from Q3.1?
Q3.5   What are key lessons learned from Q3.1?

Q4. Unsuccessful stories/case study
Q4.1   Please share on or more unsuccessful stories or examples of your organization's policy and/or regulation and/or initiative which was either unsuccessful or ineffective in promoting MSMEs digital adoption.
Q4.2   What are the main reason of the policy and/or regulation and/or initiative to be unsuccessful or ineffective from Q4.1?
Q4.3   What are the key lessons learned from Q4.1?

II.   Semi-structured interviews.

Semi-structured interviews will be carried out, one on one, between the researchers and each of the participant from government or association in LMC countries. This session aims to discuss more detail and clarify some points that may not clear from the pre-interview session on prefill interview questions.

The schedule of the semi- interview is shown below.

Duration (Minutes)	Description
5	**Introduction/Welcome** ● Welcome participant. ● Explain the purpose of the research. ● Check if the participant is still happy to continue/clarify any questions before the interview; the ethics approval consent form.
15	**Q1. Question regarding to your organization policies and/or regulations to support MSMEs digital adoption** Q1.1 Policies and/or regulations or initiatives related to enhancing digital infrastructure in general or specific to MSMEs Q1.2 Policies and/or regulations or initiatives related to enhancing digital skills in general or specific to MSMEs Q1.3 Policies and/or regulations or initiatives related to enhancing business ecosystem of MSMEs (not necessarily on digital adoption) Q1.4 Any other policies and/or regulations or initiatives to support MSMEs digital adoption
5	**Q2. Question regarding to government and association communication with MSMEs**

	Q2.1 Do you have an up-to-date and accurate database of MSMEs? If so, how you are keeping it up-to-date and accurate? Q2.2 How does your organization communicate with MSMEs regarding to Q1. Q2.3 Which communication channel with MSMEs from Q2.1 is the most effective way to communicate with MSMEs?
15	**Q3. Success stories or case study** Q3.1 Please share one or more success stories or examples of your organization's policy and/or regulation and/or initiatives which has played a key role in promoting MSMEs digital adoption. Q3.2 What are the key success factors from Q3.1? Q3.3 How did you measured the success of Q3.1? Q3.4 How MSMEs are benefiting from Q3.1? Q3.5 What are key lessons learned from Q3.1?
15	**Q4. Unsuccessful case study** Q4.1 Please share one or more unsuccessful stories or examples of your organization's policy and/or regulation and/or initiative which was either unsuccessful or ineffective in promoting MSMEs digital adoption. Q4.2 What are the main reason of the policy and/or regulation and/or initiative to be unsuccessful or ineffective (from Q4.1)? Q4.3 What are the key lessons learned from Q4.1?
5	**Closing** • Any other comments from the participants? • Thank the participant for their contributions. • Meeting Closed.
Total: 60 minutes	

B. The Interview Question of Internet / Mobile (Digital) Platform

Research on Status and Prospects on Digital Connectivity in Micro, Small and Medium Enterprises (MSMEs) in the Lancang-Mekong Countries

Interview Protocol

Internet / Mobile (Digital) Platform

Prepare by Mekong Institute

Interviewer:

4. Dr. Janya Chanchaichujit, Project Researcher
5. Dr. Sreejith Balasubramanian, Project Researcher
6. Ms. Yupaporn Siribut, Mekong Institute

31 January 2022

Research on Status and Prospects on Digital Connectivity in Micro, Small and Medium Enterprises (MSMEs) in the Lancang-Mekong Countries

Interview Protocol

II.   Pre-Interview

The participants are sent a questionnaire and interview question for prefill prior to the online interview session. Questionnaire consists of 2 main sections; Demographic data and the status on your business's current support, lesson learned, barriers and successful case study for promoting MSMEs' digital adoption in your country and the region.

C. Demographic Data: About the organization and the respondent

    c) The respondent's organization.
    d) The respondent's designation/role in the organization.
    e) Field of your business
        A. E-Commerce platform (marketplace)
        B. Food delivery platform
        C. Social media platform
        D. Ride hailing platform
        E. Logistics platform
        F. Other, please specify
    d) How many countries in Lancang-Mekong Countries (LMC) does your business operated?
        A. Cambodia
        B. P.R. China
        C. Lao PDR
        D. Myanmar
        E. Thailand
        F. Vietnam
    e) Number of employees.
        A. Local (please specify)
        B. Global (please specify)
    f) Company's approximate annual revenue.
        A. Local (please specify)
        B. Global (please specify)

D. Interview Questions

Q1. Question regarding to the current status and trend of MSMEs digital adoption in your country and the region.
    Q1.1   What do you think about the status about the internet platform utilization of MSMEs for their business in your country? (Such as digital payment/invoicing, e-commerce platform, digital B2B, B2C communication etc.)

Q1.2   Did you see any growing trend of MSMEs involvement in the internet / mobile (digital) platform? (before and during COVID-19 and after) ((such as digital payment/invoicing, e-commerce platform, digital B2B, B2C communication etc.)

Q2. Question regarding to your business ecosystem to support MSMEs.
Q2.1   Any supports or initiatives that you offer specific to MSMEs or build for MSMEs (such as product, service, financial and training) Yes/ No (Please explain)
Q2.2   How MSMEs are benefiting from your support Q2.1?
Q2.3   The challenges to do business with MSMEs.

Q3. Success stories/ case study
Q3.1   Please share your success stories or specific practices that helped MSMEs digital adoption
Q3.2   What are the key success factors from Q3.1?
Q3.3   How did you measured the success of Q3.1?
Q3.4   What are the lesson learned from Q3.1?

Q4. Unsuccessful stories/ case study
Q4.1   Please share any of your unsuccessful stories or ineffective initiatives to support MSMEs digital adoption
Q4.2   What are the main reasons for Q4.1?
Q4.3   What are the lessons learned from Q4.1?

Q5. Question regarding to government policies or support to your business
Q5.1   In your opinion, what are regulatory obstacles or policy which may hinder MSMEs from digital adoption?
Q5.2   What need to be done or improved for MSMEs to take advantage of the digital transformation opportunity in your country and in the wider LMC?
Q5.3   Any other mechanism or measures that you think would promote MSMEs' digital adoption in your country and in the wider LMC?
Q5.4   What are you expect from policymakers to make your future plan successful?

III.   Semi-structured interviews.

Semi-structured interviews will be carried out, one on one, between the researchers and each of the participant from internet platform in LMC countries. This session aims to discuss more detail and clarify some points that may not clear from the pre-interview session on prefill interview questions.

The schedule of the semi- interview is shown below.

Duration (Minutes)	Description
5	**Introduction/Welcome** ● Welcome participant.

	• Explain the purpose of the research. • Check if the participant is still happy to continue/clarify any questions before the interview; the ethics approval consent form.
15	**Q1. Question regarding to the current status and trend of MSMEs digital adoption in your country and the region.** Q1.1 What do you think about the status about the internet platform utilization of MSMEs for their business in your country? (such as digital payment/invoicing, e-commerce platform, digital B2B, B2C communication etc.) Q1.2 Did you see any growing trend of MSMEs involvement in the internet platform? (before and during COVID-19) ((such as digital payment/invoicing, e-commerce platform, digital B2B, B2C communication etc.)
5	**Q2. Question regarding to your business ecosystem to support MSMEs.** Q2.1 Any supports or initiatives that you offer specific to MSMEs or build for MSMEs (such as product, service, financial and training) Q2.2 How MSMEs are benefiting from your support Q2.1?
15	**Q3. Success stories/ case study** Q3.1 Please share your success stories or specific practices that helped MSMEs digital adoption Q3.2 What are the key success factors from Q3.1? Q3.3 How did you measured the success of Q3.1? Q3.4 What are the lesson learned from Q3.1?
15	**Q4. Unsuccessful stories/case study** Q4.1 Please share any of your unsuccessful stories or ineffective initiatives to support MSMEs digital adoption Q4.2 What are the main reasons for Q4.1? Q4.3 What are the lessons learned from Q4.1?
15	**Q5. Question regarding to government policies or support to your business** Q5.1 In your opinion, what are regulatory obstacles or policy which may hinder MSMEs from digital adoption? Q5.2 What need to be done or improved for MSMEs to take advantage of the digital transformation opportunity in your country and in the wider LMC? Q5.3 Any other mechanism or measures that you think would promote MSMEs' digital adoption in your country and in the wider LMC? Q5.4 What are you expect from policymakers to make your future plan successful?
5	**Closing** • Any other comments from the participants? • Thank the participant for their contributions. • Meeting Closed.
Total: 75 minutes	

C. Questionnaires for MSMEs (English Version)

Digital Connectivity in Micro, Small and Medium Enterprises (MSMEs) in the Lancang-Mekong Countries

Q1

Dear Participant,

You are invited to participate in a research study titled *"Status and Prospects on Digital Connectivity in Micro, Small and Medium Enterprises (MSMEs) in the Lancang-Mekong Countries"* by Mekong Institute (MI) under the support from the People's Government of the People's Republic of P.R. China. This survey aims to 1) understand the current situation of awareness and adoption of relevant digital technology and innovation by MSMEs in Lancang-Mekong countries, 2) challenges and opportunities of MSMEs to participate in digitalization (including risks of not going digital), and 3) key government policy and enabling initiatives to support functioning digital connectivity and digital transformation in MSMEs.

We highly value your participation in this study which will take not more than 10-12 minutes of your time. The survey is voluntary and strictly anonymous to maintain confidentiality and prevent the identification of specific respondents. Also, you can withdraw from the study at any time while completing the survey. Thank you for your interest and participation in this study.

If you have any questions related to the survey, please email janya.chanchaichujit@gmail.com

STATEMENT BY PERSON AGREEING TO PARTICIPATE IN THIS STUDY - I have read and understood the participant information above and I freely and voluntarily give my consent to participate in this study.

Yes, I consent (1)
No, I do not consent (2)

Q2 Please mention your role/designation in the organization

_____

Q3 How many years of work experience you have in total

- ☐ 0-2 (1)
- ☐ 3-5 (2)
- ☐ 6-10 (3)
- ☐ 10-15 (4)
- ☐ 16-25 (5)
- ☐ 25+ (6)

Q5 How many years you are working in your current organization

- ☐ 0-2 (1)
- ☐ 3-5 (2)
- ☐ 6-10 (3)
- ☐ 10-15 (4)
- ☐ 16-25 (5)
- ☐ 25+ (6)

Q10 How many years your organization has been in operation?

- ☐ 0-2 (1)
- ☐ 3-5 (2)
- ☐ 6-10 (3)
- ☐ 10-15 (4)
- ☐ 16-25 (5)
- ☐ 25+ (6)

Q11 How many employees work in your organization?

- ☐ 0-9 (1)
- ☐ 10-25 (2)
- ☐ 26-50 (3)
- ☐ 51-100 (4)
- ☐ 101-250 (5)
- ☐ 251-500 (6)
- ☐ 501-1000 (7)
- ☐ 1001-2500 (8)
- ☐ Above 2500 (9)

Q12 How much your Company's approximate annual revenue? (in USD)

☐ Less than 250,000 (1)
☐ 250,000 - 500,000 (2)
☐ 500,001 - 1 Million (3)
☐ 1 Million - 5 Million (4)
☐ 5 Million - 10 Million (5)
☐ 10 Million - 50 Million (6)
☐ 50 Million - 100 Million (7)
☐ 100 Million - 250 Million (8)
☐ Above 250 Million (9)

Q13 How many annual customers do you have on average (Please provide approximate estimate in the text below)

_____

country Please mention your nationality?

▼ Afghanistan (1) ... Zimbabwe (1357)

Q7 In which country do you currently reside?

▼ Afghanistan (1) ... Zimbabwe (1357)

- -

Q8 Which is the primary country of your business operations?

☐ Cambodia (1)
☐ P.R. China (2)
☐ Lao PDR (3)
☐ Myanmar (4)
☐ Thailand (5)
☐ Vietnam (6)
☐ Others (Please specify in below text box) (7)

_____

Q26 Which of the following industry/sector most closely matches the one of your organization?

☐ Tourism and Hospitality (1)
☐ Construction and Real estate (2)
☐ Educational services (3)
☐ Airline/Aviation (4)
☐ Manufacturing (5)
☐ Retail and Trading (6)
☐ Healthcare (7)
☐ Transportation, Logistics and Supply Chain (8)
☐ Public Administration/Services (16)
☐ Banking and Finance (9)
☐ Information Technology (IT) (10)
☐ Media, Entertainment and Recreation (13)
☐ Food and Agriculture (21)
☐ Others (Please specify in below text box) (17)

_____

Q14 Is your business include export and cross border?

☐ Yes (Please specify below the main country that your product ship to..) (1)

_____

☐ No (2)

Q15 Please mention the digitalization activities from the following list that your company has adopted (Please select all that is relevant and also mention when it was introduced - if you are aware of the year)

☐ Company Website (since when, specify the year below) (1)

_____

☐ Digital Communication tool (such as E-mail, Whatsapp, Line, Wechat) (since when, specify the year below) (2) _____

☐ Basic software (such as Microsoft Office) (since when, specify the year below) (3)

_____

☐ Enterprise Resource Planning (ERP) (since when, specify the year below) (4)

_____

☐ Social Media (such as Facebook, Instagram, TikTok) (since when, specify the year below) (5) _____

☐ E-Commerce platform (since when, specify the year below) (6)

_____

☐ E-Payment, digital invoicing (since when, specify the year below) (7)

_____

- ☐ Digital Platform for business operations (such as logistics, warehouse, fulfilment) (since when, specify the year below) (8)
  _____
- ☐ Advance software and algorithms (such as Artificial Intelligence and Machine Learning, etc.) (since when, specify the year below (9)
  _____
- ☐ Application Tools (such as Goolge drive, Dropbox) (since when, specify the year below) (10) _____
- ☐ Analytical tool (such as sale forecasting, AI) (since when, specify the year below) (11)
  _____
- ☐ Business Process Automation (since when, specify the year below) (12)
  _____
- ☐ Advanced data analytics (such as big data and cloud computing) (since when, specify the year below) (13) _____
- ☐ Blockchain (since when, specify the year below) (14)
  _____
- ☐ Robotics (since when, specify the year below) (15)
  _____
- ☐ Internet of Things (Use of Sensors, RFID tags, etc.) (Please mention the activity and since   when, specify the year below) (16)
  _____
- ☐ Virtual and Augment Reality (Please mention the activity and since when, specify the year below) (18)
  _____
- ☐ Other digitalization activities (Please mention the activity and since when, specify the year below) (17) _____

Q16 Please rate the extent of adoption of the following (Whichever applicable)

	Very low extent (1)	Low extent (2)	Moderate extent (3)	High extent (4)	Very high extent (5)	Not applicable (6)
Company Website (1)						
Digital Communication tools (2)						
Basic software (such as Microsoft Office) (3)						

	Very low extent (1)	Low extent (2)	Moderate extent (3)	High extent (4)	Very high extent (5)	Not applicable (6)
Enterprise Resource Planning (ERP) (4)						
Social Media (5)						
E-Commerce platform (6)						
E-Payment, digital invoicing (7)						
Digital Platform for business operations (8)						
Application Tools (9)						
Advance software and algorithms (10)						
Analytical tool (11)						
Business Process Automation (12)						
Advanced data analytics (13)						
Blockchain (14)						
Internet of Things (15)						
Virtual and Augment Reality (16)						

Q18 Which are the main drivers for the company to adopt various digitalization tools (Please select all that is relevant)

☐ Word of Mouth (1)
☐ Public advertisement (2)
☐ Internal staff recommendation (3)
☐ Government training (4)
☐ IT Vendors/ Digital Platformers (5)
☐ Competitors has implemented (6)
☐ Customer suggestions/requirements (7)
☐ To comply with government regulations (8)
☐ Other, please specify (9) _____

Q17 What are the benefits associated with the digitalization adoption in your organization (Please select all that is relevant)

☐ Increased customer base (1)
☐ Enhanced customer service (2)
☐ Ease of business operations (3)
☐ Cost reduction (4)
☐ Higher brand awareness (5)
☐ Empowering information-based decision making (6)
☐ Enhanced marketing and customer outreach (7)
☐ Reduction in operational time (8)
☐ Improvement in quality (such as reduction in errors) (9)
☐ Other, please specify (10) _____

Q19 Which of the following internet platforms your organization is using? (Please select all that is relevant)

☐ E-commerce marketplace (1)
☐ Food delivery platform (2)
☐ Online payment/financial technology platform (4)
☐ Government online portal platform (5)
☐ Other (please specify) (6) _____

Q73 **Assessing the impact of COVID-19 on MSMEs adoption of digital technologies**

Q62 Please rate the level of agreement with the following statement: 'COVID-19 has accelerated the adoption/use of digital technologies in my organization'

☐ Strongly disagree (4)
☐ Somewhat disagree (5)
☐ Neither agree nor disagree (6)
☐ Somewhat agree (7)
☐ Strongly agree (8)

Q69 Please rate the level of agreement with the following statement: 'There is an increase in customer demand for online purchases and/or services during COVID-19'

☐ Strongly disagree (4)
☐ Somewhat disagree (5)
☐ Neither agree nor disagree (6)
☐ Somewhat agree (7)
☐ Strongly agree (8)

Q70 Please rate the level of agreement with the following statement: 'COVID-19 has increased the investment in digital technologies in my organization'

☐ Strongly disagree (4)
☐ Somewhat disagree (5)
☐ Neither agree nor disagree (6)
☐ Somewhat agree (7)
☐ Strongly agree (8)

Q71 Please rate the level of agreement with the following statement: 'In response to COVID-19, my organization now see digital technologies as source of competitive advantage'

☐ Strongly disagree (4)
☐ Somewhat disagree (5)
☐ Neither agree nor disagree (6)
☐ Somewhat agree (7)
☐ Strongly agree (8)

Q72 Please rate the level of agreement with the following statement: 'In response to COVID-19, my organization is refocusing the entire business around digital technologies'

- ☐ Strongly disagree (4)
- ☐ Somewhat disagree (5)
- ☐ Neither agree nor disagree (6)
- ☐ Somewhat agree (7)
- ☐ Strongly agree (8)

Q58 **E-commerce (Skip this section if not relevant)**

Q22 Which is the E-Commerce marketplace platform that your organization is using? (Please mention in the below text)

_____

Q23 When did your organization start using E-Commerce platform? Please specify the year

_____

Q63 Please rate the level of agreement with the following statement: 'COVID-19 has accelerated the adoption/use of E-commerce platform in my organization'

- ☐ Strongly disagree (4)
- ☐ Somewhat disagree (5)
- ☐ Neither agree nor disagree (6)
- ☐ Somewhat agree (7)
- ☐ Strongly agree (8)

Q24 Which are the main drivers for your organization to adopt E-commerce platform (Please select all that is relevant)

- ☐ Word of Mouth (1)
- ☐ Public advertisement (2)
- ☐ Internal staff recommendation (3)
- ☐ Government training (4)
- ☐ IT Vendors/ Digital Platformers (5)
- ☐ Competitors has implemented (6)
- ☐ Customer suggestions/requirements (7)
- ☐ To comply with government regulations (8)
- ☐ Other, please specify (9) _____

Q26 What are the benefits associated with E-commerce adoption in your organization (Please select all that is relevant)

☐ Increased customer base (1)
☐ Enhanced customer service (2)
☐ Ease of business operations (3)
☐ Cost reduction (4)
☐ Higher brand awareness (5)
☐ Empowering information-based decision making (6)
☐ Enhanced marketing and customer outreach (7)
☐ Reduction in operational time (8)
☐ Improvement in quality (such as reduction in errors) (9)
☐ Other, please specify (10) _____

Q27 What percentage of your organizations total sales are made through E-commerce marketplace   platform?

	0 10 20 30 40 50 60 70 80 90 100
0-100% ()	
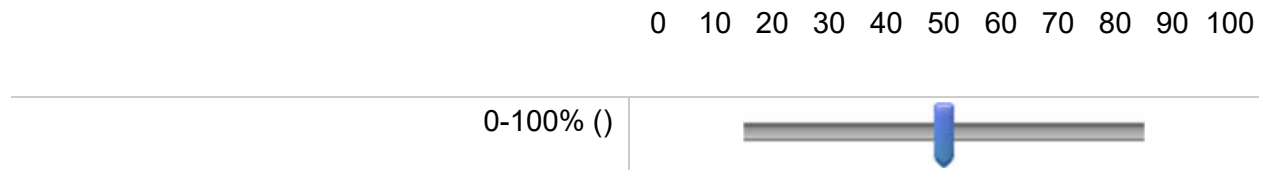
Q28 How does your business receive payments for your E-Commerce marketplace orders (Please select all that is relevant)

☐ Online credit/debit card (1)
☐ Third party payment service such as Paypal, Line pay, shopee pay (2)
☐ Bank account transfer (3)
☐ Cash on delivery (4)
☐ Others, please specify (5) _____

Q29 Does your organization use third party logistics service provider for following activities? (Please select all that is relevant)

☐ Transportation (1)
☐ Packing (2)
☐ Warehouse (3)
☐ Shipping documents (4)
☐ Others, please specify (5)

Q30 What challenges/barriers does your organization faced/facing using E-commerce marketplace platform?

_____

_____

_____

_____

_____

Q59 **Food delivery platform seller (Skip this section if not relevant)**

Q30 Which is the food delivery platform that your organization is using? (Please mention in the below text)

_____

Q31 When did your organization start using food delivery platform? Please specify the year

_____

Q64 Please rate the level of agreement with the following statement: 'COVID-19 has accelerated the adoption/use of Food delivery platform in my organization'

☐ Strongly disagree (4)
☐ Somewhat disagree (5)
☐ Neither agree nor disagree (6)
☐ Somewhat agree (7)
☐ Strongly agree (8)

Q32 Which are the main drivers for your organization to adopt food delivery platform (Please select all that is relevant)

- ☐ Word of Mouth (1)
- ☐ Public advertisement (2)
- ☐ Internal staff recommendation (3)
- ☐ Government training (4)
- ☐ IT Vendors/ Digital Platformers (5)
- ☐ Competitors has implemented (6)
- ☐ Customer suggestions/requirements (7)
- ☐ To comply with government regulations (8)
- ☐ Other, please specify (9) _____

Q33 What are the benefits associated with food delivery platform adoption in your organization (Please select all that is relevant)

- ☐ Increased customer base (1)
- ☐ Enhanced customer service (2)
- ☐ Ease of business operations (3)
- ☐ Cost reduction (4)
- ☐ Higher brand awareness (5)
- ☐ Empowering information-based decision making (6)
- ☐ Enhanced marketing and customer outreach (7)
- ☐ Reduction in operational time (8)
- ☐ Improvement in quality (such as reduction in errors) (9)
- ☐ Other, please specify (10) _____

Q34 What percentage of your organizations total sales are made through food delivery platform ?

	0	10	20	30	40	50	60	70	80	90	100

| 0-100% () | |
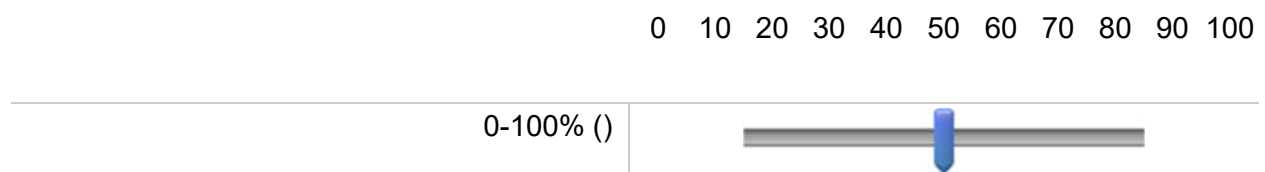
Q35 How does your business receive payments through food delivery platform (Please select all that is relevant)

☐ Online credit/debit card (1)
☐ Third party payment service such as Paypal, Line pay, shopee pay (2)
☐ Bank account transfer (3)
☐ Cash on delivery (4)
☐ Others, please specify (5) _____

Q37 What challenges/barriers does your organization faced/facing in doing business using food delivery platform

_____

_____

_____

_____

_____

Q60 **Online payment/financial technology platform (Skip this section if not relevant)**

Q38 Which is the online payment/financial technology platform that your organization is using? (Please mention in the below text)

_____

Q39 When did your organization start using online payment/financial technology platform? Please specify the year

_____

Q66 Please rate the level of agreement with the following statement: 'COVID-19 has accelerated the adoption/use of online payment/financial technology platform in my organization'

☐ Strongly disagree (4)
☐ Somewhat disagree (5)
☐ Neither agree nor disagree (6)
☐ Somewhat agree (7)
☐ Strongly agree (8)

Q40 Which are the main drivers for your organization to adopt online payment/financial technology platform (Please select all that is relevant)

☐ Word of Mouth (1)
☐ Public advertisement (2)
☐ Internal staff recommendation (3)
☐ Government training (4)
☐ IT Vendors/ Digital Platformers (5)
☐ Competitors has implemented (6)
☐ Customer suggestions/requirements (7)
☐ To comply with government regulations (8)
☐ Other, please specify (9) _____

Q41 What are the benefits associated with online payment/financial technology platform in your organization (Please select all that is relevant)

☐ Increased customer base (1)
☐ Enhanced customer service (2)
☐ Ease of business operations (3)
☐ Cost reduction (4)
☐ Higher brand awareness (5)
☐ Empowering information-based decision making (6)
☐ Enhanced marketing and customer outreach (7)
☐ Reduction in operational time (8)
☐ Improvement in quality (such as reduction in errors) (9)
☐ Other, please specify (10) _____

Q42 What percentage of your organizations total sales are made through online payment/financial technology platform ?

	0 10 20 30 40 50 60 70 80 90 100
0-100% ()	
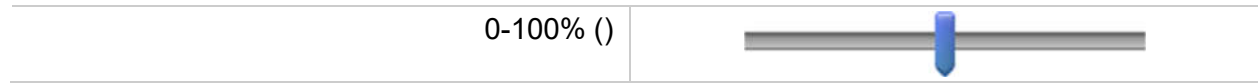
Q44 What challenges/barriers does your organization faced/facing in doing business using online payment/financial technology platform?

_____

_____

_____

_____

_____

Q61 **Government online platforms (Skip this section if not relevant)**

Q45 What are the online government platforms that your organization is using? (Please mention in the below text)

_____

Q46 When did your organization start using government online platforms? Please specify the year

_____

Q67 Please rate the level of agreement with the following statement: 'COVID-19 has accelerated the adoption/use of online government platform in my organization'

☐ Strongly disagree (6)
☐ Somewhat disagree (7)
☐ Neither agree nor disagree (8)
☐ Somewhat agree (9)
☐ Strongly agree (10)

Q47 Which are the main drivers for your organization to adopt online government online platforms (Please select all that is relevant)

☐ Word of Mouth (1)
☐ Public advertisement (2)
☐ Internal staff recommendation (3)
☐ Government training (4)
☐ IT Vendors/ Digital Platformers (5)
☐ Competitors has implemented (6)
☐ Customer suggestions/requirements (7)
☐ To comply with government regulations (8)
☐ Other, please specify (9) _____

Q48 What are the benefits associated with online government platforms in your organization (Please select all that is relevant)

☐ Increased customer base (1)
☐ Enhanced customer service (2)
☐ Ease of business operations (3)
☐ Cost reduction (4)
☐ Higher brand awareness (5)
☐ Empowering information-based decision making (6)
☐ Enhanced marketing and customer outreach (7)
☐ Reduction in operational time (8)
☐ Improvement in quality (such as reduction in errors) (9)
☐ Other, please specify (10) _____

Q50 What challenges/barriers does your organization faced/facing in using government online platforms?

_____

_____

_____

_____

_____

Q68 What are the key digitalization trends you have witnessed during COVID-19 among MSMEs? Please specify

_____

_____

_____

_____

_____

Q51 What are the regulatory hurdles or policies that hinder MSMEs like you to go digital? Please specify

_____

_____

_____

_____

_____

Q52 What kind of policies do you think would promote MSMEs' digital adoption in your country? Please specify

_____

_____

_____

_____

_____

Q53 If your business is not utilizing any digitalization or is lagging behind others, please specify the reasons

_____

_____

_____

_____

_____

Q54 How do you plan to utilize digital technologies in your future business?

_____

_____

_____

_____

_____

Q55 What do you think need to be improved to meet the digital transformation opportunities? Please specify

_____

_____

_____

_____

_____

Q56 What digitalization policies do you expect from policy makers to make your future business successful?

_____

_____

_____

D. Questionnaires for MSMEs (English-Thai Version)

Digital Connectivity in Micro, Small and Medium Enterprises (MSMEs) in the Lancang-Mekong Countries
การเชื่อมต่อทางดิจิทัลในวิสาหกิจขนาดกลางและขนาดย่อม (MSMEs) ในกลุ่มประเทศล้านช้าง-แม่โขง

Dear Participant,

You are invited to participate in a research study titled *"Status and Prospects on Digital Connectivity in Micro, Small and Medium Enterprises (MSMEs) in the Lancang-Mekong Countries"* by Mekong Institute (MI) under the support from the People's Government of the People's Republic of P.R. China. This survey aims to 1) understand the current situation of awareness and adoption of relevant digital technology and innovation by MSMEs in Lancang-Mekong countries, 2) challenges and opportunities of MSMEs to participate in digitalization (including risks of not going digital), and 3) key government policy and enabling initiatives to support functioning digital connectivity and digital transformation in MSMEs.

We highly value your participation in this study which will take not more than 10-12 minutes of your time. The survey is voluntary and strictly anonymous to maintain confidentiality and prevent the identification of specific respondents. Also, you can withdraw from the study at any time while completing the survey. Thank you for your interest and participation in this study.

If you have any questions related to the survey, please email janya.chanchaichujit@gmail.com

เรียน ผู้เข้าร่วมทุกท่าน

ท่านได้รับเชิญให้เข้าร่วมการศึกษาวิจัย เรื่อง "สถานะและอนาคตของการเชื่อมต่อทางดิจิทัลในวิสาหกิจขนาดกลางและขนาดย่อม (MSMEs) ในกลุ่มประเทศล้านช้าง-แม่โขง (Status and Prospects on Digital Connectivity in Micro, Small and Medium Enterprises (MSMEs) in the Lancang-Mekong Countries)" โดยสถาบันความร่วมมือเพื่อพัฒนาเศรษฐกิจลุ่มน้ำโขง (Mekong Institute : MI) ภายใต้การสนับสนุนของรัฐบาลสาธารณรัฐประชาชนจีน โดยแบบสำรวจนี้มีวัตถุประสงค์เพื่อ 1) ศึกษาสถานการณ์ปัจจุบันของการตระหนักรู้และ

การนำเทคโนโลยีดิจิทัลและนวัตกรรมที่เกี่ยวข้องมาใช้ในวิสาหกิจขนาดกลางและขนาดย่อม (MSMEs) ในกลุ่ม
ประเทศล้านช้าง-แม่โขง 2) ศึกษาความท้าทายและโอกาส (Challenges and opportunities) ของวิสาหกิจขนาด
กลางและขนาดย่อม (MSMEs) ในการเป็นดิจิทัล (รวมถึงความเสี่ยงจากการไม่ปรับตัวให้เป็นดิจิทัล) และ 3)
นโยบายที่สำคัญของรัฐบาลและแนวคิดเพื่อสนับสนุนการเชื่อมต่อทางดิจิทัลและการเปลี่ยนแปลงทางดิจิทัลใน
วิสาหกิจขนาดกลางและขนาดย่อม (MSMEs)

       คณะผู้วิจัยให้ความสำคัญกับการมีส่วนร่วมของผู้เข้าร่วมในการศึกษานี้เป็นอย่างมากและจะใช้เวลาไม่เกิน
10-12 นาที การตอบแบบสำรวจนี้จะดำเนินการโดยความสมัครใจของผู้ตอบแบบสอบถาม โดยคณะผู้วิจัยจะไม่มี
การเปิดเผยข้อมูลส่วนบุคคลของท่านเพื่อรักษาความลับและป้องกันการระบุตัวตนของผู้ตอบแบบสอบถาม
นอกจากนี้ ท่านยังถามสามารถถอนตัวจากการศึกษาเมื่อใดก็ได้ในขณะที่ตอบแบบสำรวจ
ขอขอบคุณที่ให้ความสนใจและมีส่วนร่วมในการศึกษาครั้งนี้

หากท่านมีคำถามเกี่ยวกับแบบสำรวจนี้ โปรดส่งคำถามมายังอีเมล janya.chanchaichujit@gmail.com

STATEMENT BY PERSON AGREEING TO PARTICIPATE IN THIS STUDY - I have read and understood
the participant information above and I freely and voluntarily give my consent to participate in
this study.

Q1 คำชี้แจงสำหรับผู้ที่ตกลงที่จะเข้าร่วมในการศึกษานี้ - ฉันได้อ่านและทำความเข้าใจเกี่ยวกับข้อมูลข้างต้น
แล้ว และยินยอมเข้าร่วมการศึกษานี้โดยสมัครใจ

◯ Yes, I consent (1) (ใช่, ฉันยินยอม)

◯ No, I do not consent (2) (ไม่, ฉันไม่ยินยอม)

Q2 Please mention your role/designation in the organization

โปรดระบุบทบาทหรือตำแหน่งของท่านในองค์กร

_____

Q3 How many years of work experience you have in total?

ท่านมีประสบการณ์การทำงานทั้งหมดนานเท่าใด

 ◗ 0-2 (1)

 0-2 ปี

 ◗ 3-5 (2)

 3-5 ปี

 ◗ 6-10 (3)

 6-10 ปี

 ◗ 10-15 (4)

 10-15 ปี

 ◗ 16-25 (5)

 16-25 ปี

 ◗ 25+ (6)

 ยี่สิบห้าปีขึ้นไป

Q4 How many years you are working in your current organization?

ท่านทำงานในองค์กรปัจจุบันมานานเท่าใด

 ◗ 0-2 (1)

 0-2 ปี

 ◗ 3-5 (2)

 3-5 ปี

 ◗ 6-10 (3)

6-10 ปี

◯ 10-15 (4)

10-15 ปี

◯ 16-25 (5)

16-25 ปี

◯ 25+ (6)

ยี่สิบห้าปีขึ้นไป

Q5 How many years your organization has been in operation?

องค์กรของท่านเปิดดำเนินการมาแล้วนานเท่าใด

◯ 0-2 (1)

0-2 ปี

◯ 3-5 (2)

3-5 ปี

◯ 6-10 (3)

6-10 ปี

◯ 10-15 (4)

10-15 ปี

◯ 16-25 (5)

16-25 ปี

◯ 25+ (6)

ยี่สิบห้าปีขึ้นไป

Q6 How many employees work in your organization?

ในองค์กรของท่านมีพนักงานจำนวนเท่าใด

◯ 0-9 (1)

0-9 คน

○ 10-25 (2)

10-25 คน

○ 26-50 (3)

26-50 คน

○ 51-100 (4)

51-100 คน

○ 101-250 (5)

101-250 คน

○ 251-500 (6)

251-500 คน

○ 501-1000 (7)

501-1,000 คน

○ 1001-2500 (8)

1,001-2,500 คน

○ Above 2500 (9)

มากกว่า 2,500 คน

Q7 How much your Company's approximate annual revenue? (in USD)

องค์กรของท่านมีรายได้ต่อปีโดยประมาณเท่าใด? (หน่วย ดอลลาร์สหรัฐ)

○ Less than 250,000 (1)

น้อยกว่า 250,000 ดอลลาร์สหรัฐ

○ 250,000 - 500,000 (2)

250,000-500,000 ดอลลาร์สหรัฐ

○ 500,001 - 1 Million (3)

500,000- 1 ล้าน ดอลลาร์สหรัฐ

○ 1 Million - 5 Million (4)

1 ล้าน- 5 ล้าน ดอลลาร์สหรัฐ

○ 5 Million - 10 Million (5)

5 ล้าน- 10 ล้าน ดอลลาร์สหรัฐ

◯ 10 Million - 50 Million (6)

10 ล้าน- 50 ล้าน ดอลลาร์สหรัฐ

◯ 50 Million - 100 Million (7)

50 ล้าน- 100 ล้าน ดอลลาร์สหรัฐ

◯ 100 Million - 250 Million (8)

100 ล้าน- 250 ล้าน ดอลลาร์สหรัฐ

◯ Above 250 Million (9)

มากกว่า 250 ล้าน ดอลลาร์สหรัฐ

Q8 How many annual customers do you have on average? (Please provide approximate estimate in the text below)

ท่านมีลูกค้าเฉลี่ยต่อปีกี่ราย (โปรดระบุค่าโดยประมาณในกล่องข้อความด้านล่าง)

_____

Q9 country Please mention your nationality?

กรุณาระบุสัญชาติของท่าน?

สัญชาติไทย ระบุ "Thailand"

▼ Afghanistan (1) ... Zimbabwe (1357)

Q10 In which country do you currently reside?

ปัจจุบันท่านอาศัยอยู่ในประเทศใด?

ประเทศไทย ระบุ "Thailand"

▼ Afghanistan (1) ... Zimbabwe (1357)

Q11 Which is the primary country of your business operations?

องค์กรของท่านดำเนินการอยู่ในประเทศใดเป็นหลัก?

⭕Cambodia (1)

ประเทศกัมพูชา

⭕P.R. China (2)

สาธารณรัฐประชาชนจีน

⭕Lao PDR (3)

สาธารณรัฐประชาธิปไตยประชาชนลาว

⭕Myanmar (4)

ประเทศพม่า

⭕Thailand (5)

ประเทศไทย

⭕Vietnam (6)

ประเทศเวียดนาม

⭕Others (Please specify in below text box) (7)

อื่น ๆ (กรุณาระบุชื่อประเทศในกล่องข้อความด้านล่าง)

_____

Q12 Which of the following industry/sector most closely matches the one of your organization?

อุตสาหกรรมหรือภาคส่วนใดต่อไปนี้ตรงกับองค์กรของท่านมากที่สุด

⭕Tourism and Hospitality (1)

การท่องเที่ยวและการบริการ

⭕Construction and Real estate (2)

การก่อสร้างและอสังหาริมทรัพย์

⭕Educational services (3)

การบริการทางการศึกษา

◯ Airline/Aviation （4）

สายการบิน/การขนส่งทางอากาศ

◯ Manufacturing （5）

การผลิต

◯ Retail and Trading （6）

การค้าปลีกและการซื้อขาย

◯ Healthcare （7）

การดูแลสุขภาพ

◯ Transportation, Logistics and Supply Chain （8）

การขนส่ง โลจิสติกส์ และห่วงโซ่อุปทาน

◯ Public Administration/Services （16）

การบริหารราชการ/บริการ

◯ Banking and Finance （9）

การธนาคารและการเงิน

◯ Information Technology (IT) （10）

เทคโนโลยีสารสนเทศ (ไอที)

◯ Media, Entertainment and Recreation （13）

สื่อ บันเทิง และนันทนาการ

◯ Food and Agriculture （21）

อาหารและการเกษตร

◯ Others (Please specify in below text box) （17）

อื่นๆ (โปรดระบุในกล่องข้อความด้านล่าง)

_____

Q13 Is your business include export and cross border?

ธุรกิจของท่านมีการส่งออก (Export) และขนส่งสินค้าข้ามพรมแดน (Cross Border) หรือไม่?

◯ Yes (Please specify below the main country that your product ship to..) (1)

ใช่ (โปรดระบุประเทศหลักที่ธุรกิจของท่านมีการขนส่งสินค้าไป)

_____

◯ No (2)

ไม่, ธุรกิจของฉันไม่เกี่ยวข้องกับการส่งออก (Export) และขนส่งสินค้าข้ามพรมแดน (Cross Border)

Q14 Please mention the digitalization activities from the following list that your company has adopted (Please select all that is relevant and also mention when it was introduced - if you are aware of the year)

โปรดระบุกิจกรรมด้านดิจิทัลจากรายการต่อไปนี้ที่บริษัทของท่านมีการนำไปใช้งาน (โปรดเลือกทุกข้อที่เกี่ยวข้อง และระบุด้วยว่าเริ่มใช้งานเมื่อใด - หากท่านทราบปีที่เริ่มใช้งาน)

☐ Company Website (since when, specify the year below) (1)

เว็บไซต์ของบริษัท (Company Website) (ตั้งแต่เมื่อใด โปรดระบุปีด้านล่าง)

_____

☐ Digital Communication tool (such as E-mail, Whatsapp, Line, Wechat) (since when, specify the year below) (2)

เครื่องมือสื่อสารทางดิจิทัล (เช่น E-mail, Whatsapp, Line, Wechat) (ตั้งแต่เมื่อใด โปรดระบุปี ด้านล่าง)

_____

☐ Basic software (such as Microsoft Office) (since when, specify the year below) (3)

ซอฟต์แวร์พื้นฐาน (เช่น Microsoft Office) (ตั้งแต่เมื่อใด โปรดระบุปีด้านล่าง)

_____

☐ Enterprise Resource Planning (ERP) (since when, specify the year below) (4)

การวางแผนทรัพยากรองค์กร (Enterprise Resource Planning : ERP) (ตั้งแต่เมื่อใด โปรดระบุปี ด้านล่าง)

_____

☐ Social Media (such as Facebook, Instagram, TikTok) (since when, specify the year below) (5)

โซเชียลมีเดียหรือสื่อสังคมออนไลน์ (Social Media) เช่น Facebook, Instagram, TikTok (ตั้งแต่เมื่อใด โปรดระบุปีด้านล่าง)

_____

☐ E-Commerce platform (since when, specify the year below) (6)

แพลตฟอร์มอีคอมเมิร์ซ (E-Commerce platform) (ตั้งแต่เมื่อใด โปรดระบุปีด้านล่าง)

_____

☐ E-Payment, digital invoicing (since when, specify the year below) (7)

ระบบการชำระเงินแบบอิเล็กทรอนิกส์ (E-Payment), การออกใบแจ้งหนี้ดิจิทัล (Digital Invoice) (ตั้งแต่เมื่อใด โปรดระบุปีด้านล่าง)

_____

☐ Digital Platform for business operations (such as logistics, warehouse, fulfilment) (since when, specify the year below) (8)

ดิจิทัลแพลตฟอร์มสำหรับการดำเนินธุรกิจ เช่น โลจิสติกส์, คลังสินค้า, การคลังสินค้าพร้อมจัดส่ง (Fulfilment) (ตั้งแต่เมื่อใด โปรดระบุปีด้านล่าง)

_____

☐ Advance software and algorithms (such as Artificial Intelligence and Machine Learning, etc.) (since when, specify the year below) (9)

ซอฟต์แวร์และอัลกอริธึมขั้นสูง (Advance Software and Algorithms) เช่น ปัญญาประดิษฐ์ (AI) และ Machine Learning ฯลฯ (ตั้งแต่เมื่อใด โปรดระบุปีด้านล่าง)

_____

☐ Application Tools (such as Google drive, Dropbox) (since when, specify the year below) (10)

เครื่องมือแอปพลิเคชัน (Application Tools) เช่น Google drive, Dropbox (ตั้งแต่เมื่อใด โปรดระบุปีด้านล่าง)

_____

☐ Analytical tool (such as sale forecasting, AI) (since when, specify the year below)

เครื่องมือสำหรับการวิเคราะห์ (Analytical tool) เช่น การพยากรณ์การขาย, AI (ตั้งแต่เมื่อใด โปรดระบุ
ปีด้านล่าง)

_____

☐Business Process Automation (since when, specify the year below) (12)

ระบบอัตโนมัติของกระบวนการทางธุรกิจ (Business Process Automation) (ตั้งแต่เมื่อใด โปรดระบุปี
ด้านล่าง)

_____

☐Advanced data analytics (such as big data and cloud computing) (since when, specify
the year below) (13)

การวิเคราะห์ข้อมูลขั้นสูง (Advanced Data Analytics) เช่น Big Data และ Cloud Computing (ตั้งแต่
เมื่อใด โปรดระบุปีด้านล่าง)

_____

☐Blockchain (since when, specify the year below) (14)

บล็อคเชน (Blockchain) (ตั้งแต่เมื่อใด โปรดระบุปีด้านล่าง)

_____

☐Robotics (since when, specify the year below) (15)

วิทยาการหุ่นยนต์ (Robotics) (ตั้งแต่เมื่อใด โปรดระบุปีด้านล่าง)

_____

☐Internet of Things (Use of Sensors, RFID tags, etc.) (Please mention the activity and
since when, specify the year below) (16)

Internet of Things (IoT) (การใช้เซ็นเซอร์, RFID และอื่นๆ) (ตั้งแต่เมื่อใด โปรดระบุปีและกิจกรรม
ด้านล่าง)

_____

☐Virtual and Augment Reality (Please mention the activity and since when, specify the
year below) (18)

เทคโนโลยีความเป็นจริงเสมือน (Virtual Reality) และเทคโนโลยีโลกเสมือนผสานโลกแห่งความจริง
(Augmented Reality) (ตั้งแต่เมื่อใด โปรดระบุปีและกิจกรรมด้านล่าง)

_____

☐Other digitalization activities (Please mention the activity and since when, specify the year below) (17)

กิจกรรมอื่นๆ ทางดิจิทัล (ตั้งแต่เมื่อใด โปรดระบุปีและกิจกรรมด้านล่าง)

_____

Q15 Please rate the extent of adoption of the following (Whichever applicable)

โปรดประเมินระดับการยอมรับในการใช้งานสิ่งต่อไปนี้ (แล้วแต่กรณี)

	Very low extent (1) ต่ำมาก	Low extent (2) ต่ำ	Moderate extent (3) ปานกลาง	High extent (4) สูง	Very high extent (5) สูงมาก	Not applicable (6) ไม่เคยใช้
Company Website (1) เว็บไซต์ของบริษัท (Website)						
Digital Communication tools (2) เครื่องมือสื่อสารทางดิจิทัล						
Basic software (such as Microsoft Office) (3) ซอฟต์แวร์พื้นฐาน (เช่น Microsoft Office)						
Enterprise Resource Planning (ERP) (4) การวางแผนทรัพยากรองค์กร (ERP)						
Social Media (5) โซเชียลมีเดียหรือสื่อสังคมออนไลน์ (Social Media)						
E-Commerce platform (6)						

	Very low extent (1) ต่ำมาก	Low extent (2) ต่ำ	Moderate extent (3) ปานกลาง	High extent (4) สูง	Very high extent (5) สูงมาก	Not applicable (6) ไม่เคยใช้
แพลตฟอร์มอีคอมเมิร์ซ (E-Commerce platform)						
E-Payment, digital invoicing (7) ระบบการชำระเงินแบบอิเล็กทรอนิกส์ (E-Payment), การออกใบแจ้งหนี้ดิจิทัล (Digital Invoice)						
Digital Platform for business operations (8) ดิจิทัลแพลตฟอร์ม (Digital Platform) สำหรับการดำเนินธุรกิจ						
Application Tools (9) เครื่องมือแอปพลิเคชัน (Application Tools)						
Advance software and algorithms (10) ซอฟต์แวร์และอัลกอริธึมขั้นสูง						
Analytical tool (11) เครื่องมือสำหรับการวิเคราะห์						
Business Process Automation (12) ระบบอัตโนมัติของกระบวนการทางธุรกิจ						

	Very low extent (1) ต่ำมาก	Low extent (2) ต่ำ	Moderate extent (3) ปานกลาง	High extent (4) สูง	Very high extent (5) สูงมาก	Not applicable (6) ไม่เคยใช้
(Business Process Automation)						
Advanced data analytics (13) การวิเคราะห์ข้อมูลขั้นสูง						
Blockchain (14) บล็อคเชน (Blockchain)						
Internet of Things (15) Internet of Things (IoT)						
Virtual and Augment Reality (16) เทคโนโลยีความเป็นจริงเสมือน และเทคโนโลยีโลกเสมือนผสานโลกแห่งความจริง (Virtual and Augment Reality)						

Q16 Which are the main drivers for the company to adopt various digitalization tools? (Please select all that is relevant)

สิ่งใดเป็นตัวขับเคลื่อนหลักขององค์กรในการนำเครื่องมือดิจิทัลต่างๆ มาใช้งาน (โปรดเลือกทุกข้อที่เกี่ยวข้อง)

☐ Word of Mouth (1)

การบอกต่อ

☐ Public advertisement (2)

การโฆษณาสาธารณะ

☐ Internal staff recommendation (3)

คำแนะนำจากพนักงานในองค์กร

☐ Government training (4)

การจัดอบรมของรัฐบาล

☐ IT Vendors/ Digital Platformers (5)

ผู้ให้บริการด้านไอทีหรือแพลตฟอร์มดิจิทัล (IT Vendors/ Digital Platformers)

☐ Competitors has implemented (6)

การนำไปใช้งานของคู่แข่ง

☐ Customer suggestions/requirements (7)

คำแนะนำและความต้องการจากลูกค้า

☐ To comply with government regulations (8)

กฎระเบียบของราชการ

☐ Other, please specify (9)

อื่น ๆ โปรดระบุ

Q17 What are the benefits associated with the digitalization adoption in your organization? (Please select all that is relevant)

ประโยชน์ใดที่เกิดขึ้นจากการนำระบบดิจิทัลไปใช้ในองค์กรของท่าน (โปรดเลือกทุกข้อที่เกี่ยวข้อง)

☐ Increased customer base (1)

การมีฐานลูกค้าเพิ่มขึ้น

☐ Enhanced customer service (2)

การยกระดับการให้บริการลูกค้า

☐ Ease of business operations (3)

การดำเนินธุรกิจได้สะดวกขึ้น

☐ Cost reduction (4)

การลดต้นทุนลง (Cost reduction)

☐ Higher brand awareness (5)

การสร้างการรับรู้แบรนด์ (Brand Awareness) ที่สูงขึ้น

☐ Empowering information-based decision making (6)

การเพิ่มขีดความสามารถในการตัดสินใจโดยอาศัยการใช้ข้อมูลเป็นหลัก

☐ Enhanced marketing and customer outreach (7)

การปรับปรุงการตลาดและการเข้าถึงลูกค้า

☐ Reduction in operational time (8)

การลดเวลาดำเนินการ (Operational Time)

☐ Improvement in quality (such as reduction in errors) (9)

การปรับปรุงคุณภาพ (เช่น ลดข้อผิดพลาดที่อาจเกิดขึ้น)

☐ Other, please specify (10)

อื่น ๆ โปรดระบุ

_____

Q18 Which of the following internet platforms your organization is using? (Please select all that is relevant)

แพลตฟอร์มอินเทอร์เน็ต (Internet Platforms) ใดต่อไปนี้ที่องค์กรของท่านมีการใช้งาน (โปรดเลือกทุกข้อที่เกี่ยวข้อง)

☐ E-commerce marketplace (1)

อีคอมเมิร์ซ มาร์เก็ตเพลส (E-commerce Marketplace)

☐ Food delivery platform (2)

แพลตฟอร์มสำหรับการส่งอาหาร (Food Delivery Platform)

☐ Online payment/financial technology platform (4)

การชำระเงินออนไลน์ / แพลตฟอร์มเทคโนโลยีทางการเงิน (Online Payment/Financial Technology Platform)

☐ Government online portal platform (5)

ระบบเว็บไซต์กลางและการบริการออนไลน์ของภาครัฐ (Government Online Portal Platform)

☐ Other (please specify) (6)

อื่น ๆ โปรดระบุ_____

Assessing the impact of COVID-19 on MSMEs adoption of digital technologies

การประเมินผลกระทบของ COVID-19 **ต่อการปรับใช้เทคโนโลยีดิจิทัลของวิสาหกิจขนาดกลางและขนาดย่อม (**MSMEs)

Q19 Please rate the level of agreement with the following statement: 'COVID-19 has accelerated the adoption/use of digital technologies in my organization'

โปรดระบุความคิดเห็นกับข้อความต่อไปนี้ : 'COVID-19 ได้เร่งให้เกิดการนำหรือการใช้เทคโนโลยีดิจิทัลในองค์กรของฉัน'

◯ Strongly disagree （6)

ไม่เห็นด้วยอย่างยิ่ง

◯ Somewhat disagree （7)

ค่อนข้างไม่เห็นด้วย

◯ Neither agree nor disagree （8)

ทั้งเห็นด้วยและไม่เห็นด้วย

◯ Somewhat agree （9)

ค่อนข้างเห็นด้วย

◯ Strongly agree （10)

เห็นด้วยอย่างยิ่ง

Q20 Please rate the level of agreement with the following statement: 'There is an increase in customer demand for online purchases and/or services during COVID-19'

โปรดระบุความคิดเห็นกับข้อความต่อไปนี้ : 'ความต้องการซื้อสินค้าหรือบริการออนไลน์ของลูกค้าเพิ่มขึ้นในช่วง COVID-19'

◯ Strongly disagree （6)

ไม่เห็นด้วยอย่างยิ่ง

◯ Somewhat disagree （7）

ค่อนข้างไม่เห็นด้วย

◯ Neither agree nor disagree （8）

ทั้งเห็นด้วยและไม่เห็นด้วย

◯ Somewhat agree （9）

ค่อนข้างเห็นด้วย

◯ Strongly agree （10）

เห็นด้วยอย่างยิ่ง

Q21 Please rate the level of agreement with the following statement: 'COVID-19 has increased the investment in digital technologies in my organization'

โปรดระบุความคิดเห็นกับข้อความต่อไปนี้ : 'COVID-19 ทำให้เกิดการเพิ่มการลงทุนด้านเทคโนโลยีดิจิทัลในองค์กรของฉัน'

◯ Strongly disagree （6）

ไม่เห็นด้วยอย่างยิ่ง

◯ Somewhat disagree （7）

ค่อนข้างไม่เห็นด้วย

◯ Neither agree nor disagree （8）

ทั้งเห็นด้วยและไม่เห็นด้วย

◯ Somewhat agree （9）

ค่อนข้างเห็นด้วย

◯ Strongly agree （10）

เห็นด้วยอย่างยิ่ง

Q22 Please rate the level of agreement with the following statement: 'In response to COVID-19, my organization now see digital technologies as source of competitive advantage'

โปรดระบุความคิดเห็นกับข้อความต่อไปนี้ : 'เพื่อรับมือกับ COVID-19 ตอนนี้องค์กรของฉันมองว่าเทคโนโลยีดิจิทัลเป็นแหล่งสร้างความได้เปรียบในการแข่งขัน'

◯ Strongly disagree (6)
ไม่เห็นด้วยอย่างยิ่ง
◯ Somewhat disagree (7)
ค่อนข้างไม่เห็นด้วย
◯ Neither agree nor disagree (8)
ทั้งเห็นด้วยและไม่เห็นด้วย
◯ Somewhat agree (9)
ค่อนข้างเห็นด้วย
◯ Strongly agree (10)
เห็นด้วยอย่างยิ่ง

Q23 Please rate the level of agreement with the following statement: 'In response to COVID-19, my organization is refocusing the entire business around digital technologies'
โปรดระบุความคิดเห็นกับข้อความต่อไปนี้ : 'เพื่อรับมือกับสถานการณ์ COVID-19 องค์กรของฉันกำลังปรับธุรกิจทั้งหมดโดยใช้เทคโนโลยีดิจิทัล'

◯ Strongly disagree (6)
ไม่เห็นด้วยอย่างยิ่ง
◯ Somewhat disagree (7)
ค่อนข้างไม่เห็นด้วย
◯ Neither agree nor disagree (8)
ทั้งเห็นด้วยและไม่เห็นด้วย

◯ Somewhat agree　(9)
ค่อนข้างเห็นด้วย
◯ Strongly agree　(10)
เห็นด้วยอย่างยิ่ง

E-commerce (Skip this section if not relevant)
อีคอมเมิร์ซ (E-commerce) (โปรดข้ามส่วนนี้หากไม่เกี่ยวข้องกับท่าน)

Q24 Which is the E-Commerce marketplace platform that your organization is using? (Please mention in the below text)
แพลตฟอร์มอีคอมเมิร์ซมาร์เก็ตเพลส (E-Commerce Marketplace) ใดที่องค์กรของท่านมีการใช้งานอยู่ในปัจจุบัน (โปรดระบุในกล่องข้อความด้านล่าง)

_____

Q25 When did your organization start using E-Commerce platform? Please specify the year
องค์กรของท่านเริ่มใช้งานแพลตฟอร์มอีคอมเมิร์ซ(E-Commerce Platform) ตั้งแต่เมื่อใด โปรดระบุปี

_____

Q26 Please rate the level of agreement with the following statement: 'COVID-19 has accelerated the adoption/use of E-commerce platform in my organization'
โปรดระบุความคิดเห็นกับข้อความต่อไปนี้ : 'COVID-19 ได้เร่งให้เกิดการนำไปใช้หรือใช้งานแพลตฟอร์มอีคอมเมิร์ซ(E-Commerce Platform)ในองค์กรของฉัน'

◯ Strongly disagree (6)

ไม่เห็นด้วยอย่างยิ่ง

◯ Somewhat disagree (7)

ค่อนข้างไม่เห็นด้วย

◯ Neither agree nor disagree (8)

ทั้งเห็นด้วยและไม่เห็นด้วย

◯ Somewhat agree (9)

ค่อนข้างเห็นด้วย

◯ Strongly agree (10)

เห็นด้วยอย่างยิ่ง

Q27 Which are the main drivers for your organization to adopt E-commerce platform

(Please select all that is relevant)

สิ่งใดเป็นตัวขับเคลื่อนหลักขององค์กรของท่านในการนำงานแพลตฟอร์มอีคอมเมิร์ซ (E-Commerce Platform)

มาใช้งาน (โปรดเลือกทุกข้อที่เกี่ยวข้อง)

☐ Word of Mouth (1)

การบอกต่อ

☐ Public advertisement (2)

การโฆษณาสาธารณะ

☐ Internal staff recommendation (3)

คำแนะนำจากพนักงานในองค์กร

☐ Government training (4)

การจัดอบรมของรัฐบาล

☐ IT Vendors/ Digital Platformers (5)

ผู้ให้บริการด้านไอทีหรือแพลตฟอร์มดิจิทัล (IT Vendors/ Digital Platformers)

☐ Competitors has implemented (6)

การนำไปใช้งานของคู่แข่ง

☐Customer suggestions/requirements （7）

คำแนะนำและความต้องการจากลูกค้า

☐To comply with government regulations （8）

กฎระเบียบของราชการ

☐Other, please specify （9）

อื่น ๆ โปรดระบุ

_____

Q28 What are the benefits associated with E-commerce adoption in your organization

(Please select all that is relevant)

ประโยชน์ใดที่เกิดขึ้นจากการนำอีคอมเมิร์ซ(E-commerce)ไปใช้ในองค์กรของท่าน (โปรดเลือกทุกข้อที่เกี่ยวข้อง)

☐Increased customer base （1）

การมีฐานลูกค้าเพิ่มขึ้น

☐Enhanced customer service （2）

การยกระดับการให้บริการลูกค้า

☐Ease of business operations （3）

การดำเนินธุรกิจได้สะดวกขึ้น

☐Cost reduction （4）

การลดต้นทุนลง (Cost reduction)

☐Higher brand awareness （5）

การสร้างการรับรู้แบรนด์ (Brand Awareness) ที่สูงขึ้น

☐Empowering information-based decision making （6）

การเพิ่มขีดความสามารถในการตัดสินใจโดยอาศัยการใช้ข้อมูลเป็นหลัก

☐Enhanced marketing and customer outreach （7）

การปรับปรุงการตลาดและการเข้าถึงลูกค้า

☐Reduction in operational time （8）

การลดเวลาดำเนินการ (Operational Time)

☐Improvement in quality (such as reduction in errors) (9)

การปรับปรุงคุณภาพ (เช่น ลดข้อผิดพลาดที่อาจเกิดขึ้น)

☐Other, please specify (10)

อื่น ๆ โปรดระบุ

_____

Q29 What percentage of your organizations total sales are made through E-commerce marketplace platform?

สัดส่วน (ร้อยละ) ของยอดขายทั้งหมดขององค์กรของท่านที่เกิดขึ้นจากการดำเนินการผ่านอีคอมเมิร์ซมาร์เก็ตเพลส (E-Commerce Marketplace)?

	0	10	20	30	40	50	60	70	80	90	100

0-100% ()

Q30 How does your business receive payments for your E-Commerce marketplace orders (Please select all that is relevant)

ธุรกิจของท่านได้รับการชำระเงินสำหรับคำสั่งซื้อในอีคอมเมิร์ซมาร์เก็ตเพลส (E-Commerce Marketplace) อย่างไร (โปรดเลือกทุกข้อที่เกี่ยวข้อง)

☐Online credit/debit card (1)

การชำระเงินออนไลน์ผ่านบัตรเครดิต/เดบิต (Online credit/Debit card)

☐Third party payment service such as Paypal, Line pay, shopee pay (2)

ผู้ให้บริการรับชำระเงิน เช่น Paypal, Line pay, shopee pay

☐Bank account transfer (3)

โอนเงินเข้าบัญชีธนาคาร (Bank Account Transfer)

☐Cash on delivery (4)

เก็บเงินปลายทาง (Cash on Delivery)

☐Others, please specify (5)

อื่น ๆ โปรดระบุ

_____

Q31 Does your organization use third party logistics service provider for following activities? (Please select all that is relevant)

องค์กรของท่านใช้บริการจากผู้ให้บริการด้านโลจิสติกส์ภายนอก(Third Party Logistics Service Provider)ในกิจกรรมต่อไปนี้หรือไม่? (โปรดเลือกทุกข้อที่เกี่ยวข้อง)

☐Transportation (1)

การขนส่ง (Transportation)

☐Packing (2)

การบรรจุ (Packing)

☐Warehouse (3)

คลังสินค้า (Warehouse)

☐Shipping documents (4)

การจัดเตรียมเอกสารสำหรับการขนส่ง (Shipping Documents)

☐Others, please specify (5)

อื่น ๆ โปรดระบุ

Q32 What challenges/barriers does your organization faced/facing using E-commerce marketplace platform?

องค์กรของท่านเผชิญกับความท้าทายหรืออุปสรรคใดบ้างจากการใช้แพลตฟอร์มอีคอมเมิร์ซมาร์เก็ตเพลส (E-Commerce Marketplace)

_____

_____

_____

_____

_____

Food delivery platform seller (Skip this section if not relevant)

ผู้ค้าขายบนแพลตฟอร์มจัดส่งอาหาร (โปรดข้ามส่วนนี้หากไม่เกี่ยวข้องกับท่าน)

Q33 Which is the food delivery platform that your organization is using? (Please mention in the below text)

แพลตฟอร์มจัดส่งอาหาร(Food Delivery Platform)ใดที่องค์กรของท่านมีการใช้งานอยู่ในปัจจุบัน (โปรดระบุในกล่องข้อความด้านล่าง)

_____

Q34 When did your organization start using food delivery platform? Please specify the year

องค์กรของท่านเริ่มใช้แพลตฟอร์มจัดส่งอาหาร(Food Delivery Platform)ตั้งแต่เมื่อใด โปรดระบุปี

_____

Q35 Please rate the level of agreement with the following statement: 'COVID-19 has accelerated the adoption/use of Food delivery platform in my organization'

โปรดระบุความคิดเห็นกับข้อความต่อไปนี้ : 'COVID-19 ได้เร่งให้เกิดการยอมรับหรือการใช้แพลตฟอร์มจัดส่งอาหาร(Food Delivery Platform)ในองค์กรของฉัน'

⭕ Strongly disagree (6)

ไม่เห็นด้วยอย่างยิ่ง

⭕ Somewhat disagree (7)

ค่อนข้างไม่เห็นด้วย

⭕ Neither agree nor disagree (8)

ทั้งเห็นด้วยและไม่เห็นด้วย

⭕ Somewhat agree (9)

ค่อนข้างเห็นด้วย

⭕ Strongly agree (10)

เห็นด้วยอย่างยิ่ง

Q36 Which are the main drivers for your organization to adopt food delivery platform (Please select all that is relevant)

สิ่งใดเป็นตัวขับเคลื่อนหลักสำหรับองค์กรของท่านในการใช้งานแพลตฟอร์มจัดส่งอาหาร(Food Delivery Platform) (โปรดเลือกทุกข้อที่เกี่ยวข้อง)

☐ Word of Mouth (1)

การบอกต่อ

☐ Public advertisement (2)

การโฆษณาสาธารณะ

☐ Internal staff recommendation (3)

คำแนะนำจากพนักงานในองค์กร

☐ Government training (4)

การจัดอบรมของรัฐบาล

☐ IT Vendors/ Digital Platformers (5)

ผู้ให้บริการด้านไอทีหรือแพลตฟอร์มดิจิทัล (IT Vendors/ Digital Platformers)

☐Competitors has implemented (6)

การนำไปใช้งานของคู่แข่ง

☐Customer suggestions/requirements (7)

คำแนะนำและความต้องการจากลูกค้า

☐To comply with government regulations (8)

กฎระเบียบของราชการ

☐Other, please specify (9)

อื่น ๆ โปรดระบุ

_____

Q37 What are the benefits associated with food delivery platform adoption in your organization (Please select all that is relevant)

ประโยชน์ของแพลตฟอร์มจัดส่งอาหาร(Food Delivery Platform)ในองค์กรของท่านมีอะไรบ้าง (โปรดเลือกทุกข้อที่เกี่ยวข้อง)

☐Increased customer base (1)

การมีฐานลูกค้าเพิ่มขึ้น

☐Enhanced customer service (2)

การยกระดับการให้บริการลูกค้า

☐Ease of business operations (3)

การดำเนินธุรกิจได้สะดวกขึ้น

☐Cost reduction (4)

การลดต้นทุนลง (Cost reduction)

☐Higher brand awareness (5)

การสร้างการรับรู้แบรนด์ (Brand Awareness) ที่สูงขึ้น

☐Empowering information-based decision making (6)

การเพิ่มขีดความสามารถในการตัดสินใจโดยอาศัยการใช้ข้อมูลเป็นหลัก

☐Enhanced marketing and customer outreach (7)

การปรับปรุงการตลาดและการเข้าถึงลูกค้า

☐Reduction in operational time (8)

การลดเวลาดำเนินการ (Operational Time)

☐Improvement in quality (such as reduction in errors) (9)

การปรับปรุงคุณภาพ (เช่น ลดข้อผิดพลาดที่อาจเกิดขึ้น)

☐Other, please specify (10)

อื่น ๆ โปรดระบุ

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Q38 What percentage of your organizations total sales are made through food delivery platform ?

สัดส่วน (ร้อยละ) ของยอดขายทั้งหมดขององค์กรของท่านที่เกิดขึ้นจากการดำเนินการผ่านแพลตฟอร์มจัดส่งอาหาร(Food Delivery Platform)?

	0 10 20 30 40 50 60 70 80 90 100
0-100% ()	▬▬▬▬▬▮▬▬▬▬▬

Q39 How does your business receive payments through food delivery platform (Please select all that is relevant)

ธุรกิจของท่านได้รับการชำระเงินผ่านแพลตฟอร์มจัดส่งอาหาร(Food Delivery Platform)อย่างไร (โปรดเลือกทุกข้อที่เกี่ยวข้อง)

☐Online credit/debit card (1)

การชำระเงินออนไลน์ผ่านบัตรเครดิต/เดบิต (Online credit/Debit card)

☐Third party payment service such as Paypal, Line pay, shopee pay (2)

ผู้ให้บริการรับชำระเงิน เช่น Paypal, Line pay, shopee pay

☐ Bank account transfer　(3)

โอนเงินเข้าบัญชีธนาคาร (Bank Account Transfer)

☐ Cash on delivery　(4)

เก็บเงินปลายทาง (Cash on Delivery)

☐ Others, please specify　(5)

อื่น ๆ โปรดระบุ

_____

Q40 What challenges/barriers does your organization faced/facing in doing business using food delivery platform

องค์กรของท่านต้องเผชิญกับความท้าทายหรืออุปสรรคใดบ้างในการใช้แพลตฟอร์มจัดส่งอาหาร(Food Delivery Platform)

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Online payment/financial technology platform (Skip this section if not relevant)

แพลตฟอร์มการชำระเงินออนไลน์หรือเทคโนโลยีทางการเงิน (Online Payment/Financial Technology Platform) (โปรดข้ามส่วนนี้หากไม่เกี่ยวข้องกับท่าน)

Q41 Which is the online payment/financial technology platform that your organization is using? (Please mention in the below text)

แพลตฟอร์มการชำระเงินออนไลน์หรือเทคโนโลยีทางการเงิน(Online Payment/Financial Technology Platform)ใดที่องค์กรของท่านมีการใช้งาน? (โปรดระบุในกล่องข้อความด้านล่าง)

_____

Q42 When did your organization start using online payment/financial technology platform? Please specify the year

องค์กรของท่านเริ่มใช้แพลตฟอร์มการชำระเงินออนไลน์หรือเทคโนโลยีทางการเงิน(Online Payment/Financial Technology Platform) ตั้งแต่เมื่อใด โปรดระบุปี

_____

Q43 Please rate the level of agreement with the following statement: 'COVID-19 has accelerated the adoption/use of online payment/financial technology platform in my organization'

โปรดระบุความคิดเห็นกับข้อความต่อไปนี้ : 'COVID-19 ได้เร่งให้เกิดการยอมรับหรือการใช้แพลตฟอร์มการชำระเงินออนไลน์หรือเทคโนโลยีทางการเงิน(Online Payment/Financial Technology Platform)ในองค์กรของฉัน'

⭕Strongly disagree (6)

ไม่เห็นด้วยอย่างยิ่ง

⭕Somewhat disagree (7)

ค่อนข้างไม่เห็นด้วย

⭕Neither agree nor disagree (8)

ทั้งเห็นด้วยและไม่เห็นด้วย

⭕Somewhat agree (9)

ค่อนข้างเห็นด้วย

⭕Strongly agree (10)

เห็นด้วยอย่างยิ่ง

Q44 Which are the main drivers for your organization to adopt online payment/financial technology platform (Please select all that is relevant)

สิ่งใดเป็นตัวขับเคลื่อนหลักขององค์กรของท่านในการนำแพลตฟอร์มการชำระเงินออนไลน์หรือเทคโนโลยีทาง การเงิน(Online Payment/Financial Technology Platform)มาใช้งาน (โปรดเลือกทุกข้อที่เกี่ยวข้อง)

☐Word of Mouth (1)

การบอกต่อ

☐Public advertisement (2)

การโฆษณาสาธารณะ

☐Internal staff recommendation (3)

คำแนะนำจากพนักงานในองค์กร

☐Government training (4)

การจัดอบรมของรัฐบาล

☐IT Vendors/ Digital Platformers (5)

ผู้ให้บริการด้านไอทีหรือแพลตฟอร์มดิจิทัล (IT Vendors/ Digital Platformers)

☐Competitors has implemented (6)

การนำไปใช้งานของคู่แข่ง

☐Customer suggestions/requirements (7)

คำแนะนำและความต้องการจากลูกค้า

☐To comply with government regulations (8)

กฎระเบียบของราชการ

☐Other, please specify (9)

อื่น ๆ โปรดระบุ

_____

Q45 What are the benefits associated with online payment/financial technology platform in your organization (Please select all that is relevant)

ประโยชน์ของแพลตฟอร์มการชำระเงินออนไลน์หรือเทคโนโลยีทางการเงิน(Online Payment/Financial Technology Platform)ในองค์กรของท่านมีอะไรบ้าง (โปรดเลือกทุกข้อที่เกี่ยวข้อง)

☐ Increased customer base (1)

การมีฐานลูกค้าเพิ่มขึ้น

☐ Enhanced customer service (2)

การยกระดับการให้บริการลูกค้า

☐ Ease of business operations (3)

การดำเนินธุรกิจได้สะดวกขึ้น

☐ Cost reduction (4)

การลดต้นทุนลง (Cost reduction)

☐ Higher brand awareness (5)

การสร้างการรับรู้แบรนด์ (Brand Awareness) ที่สูงขึ้น

☐ Empowering information-based decision making (6)

การเพิ่มขีดความสามารถในการตัดสินใจโดยอาศัยการใช้ข้อมูลเป็นหลัก

☐ Enhanced marketing and customer outreach (7)

การปรับปรุงการตลาดและการเข้าถึงลูกค้า

☐ Reduction in operational time (8)

การลดเวลาดำเนินการ (Operational Time)

☐ Improvement in quality (such as reduction in errors) (9)

การปรับปรุงคุณภาพ (เช่น ลดข้อผิดพลาดที่อาจเกิดขึ้น)

☐ Other, please specify (10)

อื่น ๆ โปรดระบุ

_____

Q46 What percentage of your organizations total sales are made through online payment/financial technology platform ?

สัดส่วน (ร้อยละ) ของยอดขายทั้งหมดขององค์กรของท่านที่เกิดขึ้นจากการดำเนินการผ่านแพลตฟอร์มการชำระเงินออนไลน์หรือเทคโนโลยีทางการเงิน(Online Payment/Financial Technology Platform)?

	0 10 20 30 40 50 60 70 80 90 100
0-100% ()	▬▬▬▬●▬▬▬
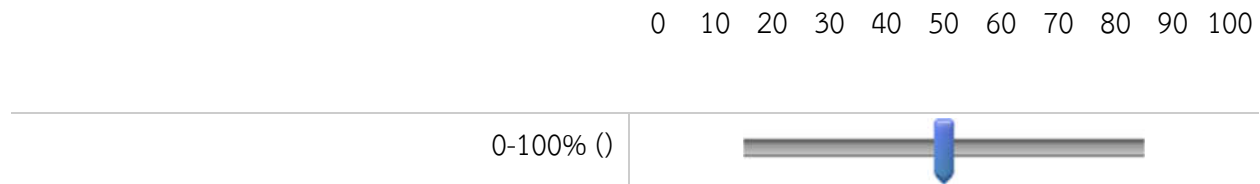
Q47 What challenges/barriers does your organization faced/facing in doing business using online payment/financial technology platform?

องค์กรของท่านต้องเผชิญกับความท้าทายหรืออุปสรรคใดบ้างในการใช้แพลตฟอร์มการชำระเงินออนไลน์หรือเทคโนโลยีทางการเงิน(Online Payment/Financial Technology Platform)

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<u>Government online platforms (Skip this section if not relevant)</u>

แพลตฟอร์มออนไลน์ของรัฐบาล (Government Online Platforms) (โปรดข้ามส่วนนี้หากไม่เกี่ยวข้องกับท่าน)

Q48 What are the online government platforms that your organization is using? (Please mention in the below text)

แพลตฟอร์มออนไลน์ใดของรัฐบาล (Government Online Platforms) ที่องค์กรของท่านมีการใช้งานอยู่ใน ปัจจุบัน (โปรดระบุในกล่องข้อความด้านล่าง)

_____

Q49 When did your organization start using government online platforms? Please specify the year

องค์กรของท่านเริ่มใช้แพลตฟอร์มออนไลน์ของรัฐบาล(Government Online Platforms) ตั้งแต่เมื่อใด โปรดระบุ ปี

Q50 Please rate the level of agreement with the following statement: 'COVID-19 has accelerated the adoption/use of online government platform in my organization'

โปรดระบุความคิดเห็นกับข้อความต่อไปนี้ : COVID-19 ได้เร่งให้เกิดการยอมรับหรือการใช้แพลตฟอร์มออนไลน์ ของรัฐบาล(Government Online Platforms) ในองค์กรของฉัน'

◯ Strongly disagree (6)

ไม่เห็นด้วยอย่างยิ่ง

◯ Somewhat disagree (7)

ค่อนข้างไม่เห็นด้วย

◯ Neither agree nor disagree (8)

ทั้งเห็นด้วยและไม่เห็นด้วย

◯ Somewhat agree (9)

ค่อนข้างเห็นด้วย

◯ Strongly agree (10)

เห็นด้วยอย่างยิ่ง

Q51 Which are the main drivers for your organization to adopt online government online platforms (Please select all that is relevant)

สิ่งใดเป็นตัวขับเคลื่อนหลักขององค์กรท่านในการนำแพลตฟอร์มออนไลน์ของรัฐบาล(Government Online Platforms) มาใช้งาน (โปรดเลือกทุกข้อที่เกี่ยวข้อง)

☐ Word of Mouth (1)

การบอกต่อ

☐ Public advertisement (2)

การโฆษณาสาธารณะ

☐ Internal staff recommendation (3)

คำแนะนำจากพนักงานในองค์กร

☐ Government training (4)

การจัดอบรมของรัฐบาล

☐ IT Vendors/ Digital Platformers (5)

ผู้ให้บริการด้านไอทีหรือแพลตฟอร์มดิจิทัล (IT Vendors/ Digital Platformers)

☐ Competitors has implemented (6)

การนำไปใช้งานของคู่แข่ง

☐ Customer suggestions/requirements (7)

คำแนะนำและความต้องการจากลูกค้า

☐ To comply with government regulations (8)

กฎระเบียบของราชการ

☐ Other, please specify (9)

อื่น ๆ โปรดระบุ

_____

Q52 What are the benefits associated with online government platforms in your organization (Please select all that is relevant)

ประโยชน์ของแพลตฟอร์มออนไลน์ของรัฐบาล(Government Online Platforms) ในองค์กรของท่านมีอะไรบ้าง (โปรดเลือกทุกข้อที่เกี่ยวข้อง)

☐ Increased customer base (1)

การมีฐานลูกค้าเพิ่มขึ้น

☐ Enhanced customer service (2)

การยกระดับการให้บริการลูกค้า

☐ Ease of business operations (3)

การดำเนินธุรกิจได้สะดวกขึ้น

☐ Cost reduction (4)

การลดต้นทุนลง (Cost reduction)

☐ Higher brand awareness (5)

การสร้างการรับรู้แบรนด์ (Brand Awareness) ที่สูงขึ้น

☐ Empowering information-based decision making (6)

การเพิ่มขีดความสามารถในการตัดสินใจโดยอาศัยการใช้ข้อมูลเป็นหลัก

☐ Enhanced marketing and customer outreach (7)

การปรับปรุงการตลาดและการเข้าถึงลูกค้า

☐ Reduction in operational time (8)

การลดเวลาดำเนินการ (Operational Time)

☐ Improvement in quality (such as reduction in errors) (9)

การปรับปรุงคุณภาพ (เช่น ลดข้อผิดพลาดที่อาจเกิดขึ้น)

☐ Other, please specify (10)

อื่น ๆ โปรดระบุ

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Q53 What challenges/barriers does your organization faced/facing in using government online platforms?

องค์กรของท่านต้องเผชิญกับความท้าทายหรืออุปสรรคใดบ้างในการใช้แพลตฟอร์มออนไลน์ของรัฐบาล (Government Online Platforms)

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Q54 What are the key digitalization trends you have witnessed during COVID-19 among MSMEs? Please specify

แนวโน้มการเปลี่ยนแปลงทางดิจิทัล(Digitalization Trends)ที่ท่านได้เห็นในช่วง COVID-19 ในกลุ่มวิสาหกิจขนาดกลางและขนาดย่อม (MSMEs) มีอะไรบ้าง? โปรดระบุในกล่องข้อความด้านล่าง

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Q55 What are the regulatory hurdles or policies that hinder MSMEs like you to go digital? Please specify

กฎระเบียบหรือนโยบาย(Regulatory or Policy)ใดที่ขัดขวางให้วิสาหกิจขนาดกลางและขนาดย่อม (MSMEs) เช่นท่านเข้าสู่การเปลี่ยนแปลงเป็นดิจิทัล โปรดระบุในกล่องข้อความด้านล่าง

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Q56 What kind of policies do you think would promote MSMEs' digital adoption in your country? Please specify

นโยบาย (Policy) ประเภทใดที่ท่านคิดว่าสามารถส่งเสริมให้วิสาหกิจขนาดกลางและขนาดย่อม (MSMEs) มีการนำดิจิทัลไปใช้งานในประเทศของท่าน โปรดระบุในกล่องข้อความด้านล่าง

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Q57 If your business is not utilizing any digitalization or is lagging behind others, please specify the reasons

หากองค์กรของท่านไม่ได้มีการใช้งานระบบดิจิทัลหรือค่อนข้างล้าหลัง โปรดระบุเหตุผลที่ทำให้องค์กรของท่านดำเนินการเช่นนั้น

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Q58 How do you plan to utilize digital technologies in your future business?

ท่านวางแผนที่จะใช้เทคโนโลยีดิจิทัล (Digital Technology) ในธุรกิจของท่านในอนาคตอย่างไร? โปรดระบุในกล่องข้อความด้านล่าง

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Q59 What do you think need to be improved to meet the digital transformation opportunities? Please specify

ท่านคิดว่าอะไรคือสิ่งที่ต้องปรับปรุงเพื่อให้ทันต่อโอกาสในการเปลี่ยนแปลงไปสู่การเป็นดิจิทัล (Digital Transformation) โปรดระบุในกล่องข้อความด้านล่าง

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Q60 What digitalization policies do you expect from policy makers to make your future business successful?

นโยบาย (Policy) ด้านดิจิทัลที่ท่านคาดหวังจากผู้กำหนดนโยบายเพื่อให้องค์กรของท่านประสบความสำเร็จในอนาคต โปรดระบุในกล่องข้อความด้านล่าง

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E. Questionnaires for MSMEs (English-Chinese Version)

Digital Connectivity in Micro, Small and Medium Enterprises (MSMEs) in the Lancang-Mekong Countries

澜沧江-湄公河国家中小微企业的数字连接

Dear Participant,

You are invited to participate in a research study titled *"Status and Prospects on Digital Connectivity in Micro, Small and Medium Enterprises (MSMEs) in the Lancang-Mekong Countries"* by Mekong Institute (MI) under the support from the People's Government of the People's Republic of P.R. China. This survey aims to 1) understand the current situation of awareness and adoption of relevant digital technology and innovation by MSMEs in Lancang-Mekong countries, 2) challenges and opportunities of MSMEs to participate in digitalization (including risks of not going digital), and 3) key government policy and enabling initiatives to support functioning digital connectivity and digital transformation in MSMEs.

亲爱的参与者：

在中华人民共和国人民政府的大力支持下，湄公河研究所特邀请您参加一项题为"澜沧江-湄公河国家中小微企业数字连接现状和前景"的研究。本次调查旨在 1）了解澜沧江-湄公河国家中小微企业对相关数字技术和创新的认知和采用现状，2）中小微企业参与数字化的挑战和机遇（包括不数字化的风险），3）支持中小微企业正常运行的数字连接和数字转型的关键政府政策和扶持举措。

We highly value your participation in this study which will take not more than 10-12 minutes of your time. The survey is voluntary and strictly anonymous to maintain confidentiality and prevent the identification of specific respondents. Also, you can withdraw from the study at any time while completing the survey. Thank you for your interest and participation in this study.

我们非常重视您参与这项研究，这项研究将占用您不超过 10-12 分钟的时间。这项调查是自愿的，严格且匿名，以保护特定受访者的身份。此外，您可以在完成调查时随时退出研究。感谢您对本研究的兴趣和参与。

If you have any questions related to the survey, please email janya.chanchaichujit@gmail.com

如果您有任何与调查相关的问题，请发电子邮件给 janya。chanchaichujit@gmail.com

STATEMENT BY PERSON AGREEING TO PARTICIPATE IN THIS STUDY - I have read and understood the participant information above and I freely and voluntarily give my consent to participate in this study.

同意参与本研究的人员声明——我已阅读并理解上述参与者信息，并自愿同意参与本研究。

○ Yes, I consent (1) (是的，我同意)

○ No, I do not consent (2) (不，我不同意)

Q2 Please mention your role/designation in the organization
问题 2：请您说明您在贵公司的角色/职务

_____

Q3 How many years of work experience you have in total?
问题 3：您总共有多少年的工作经验？

      ◯ 0-2 (1)
0-2 年
      ◯ 3-5 (2)
3-5 年
      ◯ 6-10 (3)
6-10 年
      ◯ 10-15 (4)
10-15 年
      ◯ 16-25 (5)
16-25 年
      ◯ 25+ (6)
25 年以上

Q4 How many years you are working in your current organization?
问题 4：您在目前的公司工作了多少年？

      ◯ 0-2 (1)
0-2 年
      ◯ 3-5 (2)
3-5 年
      ◯ 6-10 (3)
6-10 年
      ◯ 10-15 (4)
10-15 年
      ◯ 16-25 (5)
16-25 年
      ◯ 25+ (6)
25 年以上

Q5 How many years your organization has been in operation?
问题 5：贵公司运营了多少年？

◯0-2 (1)

0-2 年

◯3-5 (2)

3-5 年

◯6-10 (3)

6-10 年

◯10-15 (4)

10-15 年

◯16-25 (5)

16-25 年

◯25+ (6)

25 年以上

Q6 How many employees work in your organization?

问题 **6** : 贵公司有多少员工？

◯0-9 (1)

0-9 人

◯10-25 (2)

10-25 人

◯26-50 (3)

26-50 人

◯51-100 (4)

51-100 人

◯101-250 (5)

101-250 人

◯251-500 (6)

251-500 人

◯501-1000 (7)

501-1,000 人

◯1001-2500 (8)

1,001-2,500 人

◯Above 2500 (9)

2500 人以上

Q7 How much your Company's approximate annual revenue? (in USD)

问题 **7** : 贵公司的年收入大约是多少？（美元）

◯Less than 250,000 (1)

不到 250,000 美元

◯250,000 - 500,000 (2)

250,000-500,000 美元

◯500,001 - 1 Million (3)

500,000- 1 百万 美元

◯1 Million - 5 Million (4)

1 百万- 5 百万 美元

❍ 5 Million - 10 Million (5)
5 百万- 1 千万 美元
❍ 10 Million - 50 Million (6)
1 千万- 5 千万 美元
❍ 50 Million - 100 Million (7)
5 千万- 1 亿 美元
❍ 100 Million - 250 Million (8)
1 亿- 2.5 亿 美元
❍ Above 250 Million (9)
2.5 亿美元以上

Q8 How many annual customers do you have on average? (Please provide approximate estimate in the text below)
问题 8：您平均每年有多少客户？（请在以下横线上填写）

_____

Q9 country Please mention your nationality?
问题 9：请说明您的国籍？

▼ Afghanistan (1) ... Zimbabwe (1357)

Q10 In which country do you currently reside?
问题 10：您目前居住在哪个国家？

▼ Afghanistan (1) ... Zimbabwe (1357)

Q11 Which is the primary country of your business operations?
问题 11：您的业务主在哪一个国家开展？
❍ Cambodia (1)
柬埔寨
❍ P.R. China (2)
中国
❍ Lao PDR (3)
老挝
❍ Myanmar (4)
缅甸
❍ Thailand (5)
泰国
❍ Vietnam (6)
越南
❍ Others (Please specify in below text box) (7)
其他（请在下面横线填写）_____

Q12 Which of the following industry/sector most closely matches the one of your organization?

问题 **12**：以下哪个行业/部门与贵公司最匹配？

◯Tourism and Hospitality (1)
旅游与酒店
◯Construction and Real estate (2)
建筑和房地产
◯Educational services (3)
教育服务
◯Airline/Aviation (4)
航空
◯Manufacturing (5)
制造业
◯Retail and Trading (6)
零售与贸易
◯Healthcare (7)
健康产业
◯Transportation, Logistics and Supply Chain (8)
运输、物流和供应链
◯Public Administration/Services (16)
公共行政/服务
◯Banking and Finance (9)
银行与金融
◯Information Technology (IT) (10)
信息技术
◯Media, Entertainment and Recreation (13)
媒体、休闲与娱乐
◯Food and Agriculture (21)
食品与农业
◯Others (Please specify in below text box) (17)
其他（请在以下横线填写）

_____

Q13 Is your business include export and cross border?

问题 **13**：您的业务是否包括出口和跨境？

◯Yes (Please specify below the main country that your product ship to..) (1)
是的（请在下面横线填写产品装运到的主要国家）

_____

◯No (2)
不是

Q14 Please mention the digitalization activities from the following list that your company has adopted (Please select all that is relevant and also mention when it was introduced - if you are aware of the year)

问题 14：请从以下列表中提及贵公司已采用的数字化活动（请选择所有相关活动，并说明其推出

时间——如果您还记得该年）

☐Company Website (since when, specify the year below)（1）

公司网站（从何时开始，请在下面横线填写具体年份）

☐Digital Communication tool (such as E-mail, Whatsapp, Line, Wechat) (since when, specify the year below)（2）

数字通信工具（如电子邮件、Whatsapp、Line、微信）（从何时开始，请在下面横线填写具体年份）

☐Basic software (such as Microsoft Office) (since when, specify the year below)（3）

基础软件（如 Microsoft Office）（从何时开始，请在下面横线填写具体年份）

☐Enterprise Resource Planning (ERP) (since when, specify the year below)（4）

企业资源规划（ERP）（从何时开始，请在下面横线填写具体年份）

☐Social Media (such as Facebook, Instagram, TikTok) (since when, specify the year below)（5）

社交媒体（如脸书、Instagram、抖音）（从何时开始，请在下面横线填写具体年份）

☐E-Commerce platform (since when, specify the year below)（6）

电子商务平台（从何时开始，请在下面横线填写具体年份）

☐E-Payment, digital invoicing (since when, specify the year below)（7）

电子支付、数字发票（从何时开始，请在下面横线填写具体年份）

☐Digital Platform for business operations (such as logistics, warehouse, fulfilment) (since when, specify the year below)（8）

商业运营的数字平台（如物流、仓库、配送）（从何时开始，请在下面横线填写具体年份）

☐Advance software and algorithms (such as Artificial Intelligence and Machine Learning, etc.) (since when, specify the year below)（9）

高级软件和算法（如人工智能和机器学习等）（从何时开始，请在下面横线填写具体年份）

☐Application Tools (such as Google drive, Dropbox) (since when, specify the year below)（10）

应用工具（如谷歌云端硬盘、Dropbox）（从何时开始，请在下面横线填写具体年份）

☐Analytical tool (such as sale forecasting, AI) (since when, specify the year below) (11)
分析工具（如销售预测、人工智能）（从何时开始，请在下面横线填写具体年份）

☐Business Process Automation (since when, specify the year below) (12)
业务流程自动化（从何时开始，请在下面横线填写具体年份）

☐Advanced data analytics (such as big data and cloud computing) (since when, specify the year below) (13)
高级数据分析（如大数据和云计算）（从何时开始，请在下面横线填写具体年份）

☐Blockchain (since when, specify the year below) (14)
区块链（从何时开始，请在下面横线填写具体年份）

☐Robotics (since when, specify the year below) (15)
机器人技术（从何时开始，请在下面横线填写具体年份）

☐Internet of Things (Use of Sensors, RFID tags, etc.) (Please mention the activity and since when, specify the year below) (16)
物联网（使用传感器、无线射频标签等）（请填写具体活动以及从何时开始，请在下面横线填写具体年份）

☐Virtual and Augment Reality (Please mention the activity and since when, specify the year below) (18)
虚拟现实和增强现实（请填写具体活动以及从何时开始，请在下面横线填写具体年份）

☐Other digitalization activities (Please mention the activity and since when, specify the year below) (17)
其他数字化活动（请填写具体活动以及从何时开始，请在下面横线填写具体年份）

Q15 Please rate the extent of adoption of the following (Whichever applicable)
问题 15：请对以下各项的采用程度进行选择（以适用为准）

	Very low extent (1) 程度极低	Low extent (2) 程度低	Moderate extent (3) 程度中等	High extent (4) 程度高	Very high extent (5) 程度极高	Not applicable (6) 不适用
Company Website (1)						

	Very low extent (1) 程度极低	Low extent (2) 程度低	Moderate extent (3) 程度中等	High extent (4) 程度高	Very high extent (5) 程度极高	Not applicable (6) 不适用
公司网站						
Digital Communication tools (2) 数字通信工具						
Basic software (such as Microsoft Office) (3) 基础软件（如 Microsoft Office）						
Enterprise Resource Planning (ERP) (4) 企业资源规划（ ERP）						
Social Media (5) 社交媒体						
E-Commerce platform (6) 电子商务平台						
E-Payment, digital invoicing (7) 电子支付、数字 发票						
Digital Platform for business operations (8)						

	Very low extent (1) 程度极低	Low extent (2) 程度低	Moderate extent (3) 程度中等	High extent (4) 程度高	Very high extent (5) 程度极高	Not applicable (6) 不适用
商业运营的数字平台						
Application Tools (9) 应用工具						
Advance software and algorithms (10) 高级软件和算法						
Analytical tool (11) 分析工具						
Business Process Automation (12) 业务流程自动化						
Advanced data analytics (13) 高级数据分析						
Blockchain (14) 区块链						
Internet of Things (15) 物联网						
Virtual and Augment Reality (16) 虚拟增强现实						

Q16 Which are the main drivers for the company to adopt various digitalization tools? (Please select all that is relevant)

问题 16：贵公司采用各种数字化工具的主要驱动因素是什么？（请选择所有相关内容）

☐Word of Mouth (1)

口碑

☐Public advertisement (2)

公共广告

☐Internal staff recommendation (3)

内部工作人员建议

☐Government training (4)

政府培训

☐IT Vendors/ Digital Platformers (5)

信息技术供应商/数字平台制造商

☐Competitors has implemented (6)

竞争对手已经实施了

☐Customer suggestions/requirements (7)

客户建议/要求

☐To comply with government regulations (8)

遵守政府规定

☐Other, please specify (9)

其他，请具体说明

_____

Q17 What are the benefits associated with the digitalization adoption in your organization? (Please select all that is relevant)

问题 17：贵公司采用数字化的好处是什么？（请选择所有相关内容）

☐Increased customer base (1)

增加了客户群体

☐Enhanced customer service (2)

加强了客户服务

☐Ease of business operations (3)

业务运营的便利性

☐Cost reduction (4)

降低成本

☐Higher brand awareness (5)

更高的品牌知名度

☐Empowering information-based decision making (6)

增强基于信息的决策能力

☐Enhanced marketing and customer outreach (7)

加强营销和客户拓展

☐Reduction in operational time (8)

缩短操作时间
☐Improvement in quality (such as reduction in errors) (9)
提高质量（如减少错误）
☐Other, please specify (10)
其他，请具体说明

Q18 Which of the following internet platforms your organization is using? (Please select all that is relevant)
问题 **18**：贵公司正在使用以下哪种互联网平台？（请选择所有相关内容）
☐E-commerce marketplace (1)
电子商务市场
☐Food delivery platform (2)
食品配送平台
☐Online payment/financial technology platform (4)
在线支付/金融技术平台
☐Government online portal platform (5)
政府网上门户平台
☐Other (please specify) (6)
其他（请具体说明）

Assessing the impact of COVID-19 on MSMEs adoption of digital technologies
新冠疫情对中小微企业采用数字技术的影响评估
Q19 Please rate the level of agreement with the following statement: 'COVID-19 has accelerated the adoption/use of digital technologies in my organization'
问题 **19**：请根据陈述进行选择："新冠疫情加速了我所在公司对数字技术的采用/使用"
◌Strongly disagree (6)
非常不同意
◌Somewhat disagree (7)
有些不同意
◌Neither agree nor disagree (8)
既不同意也不反对
◌Somewhat agree (9)
有些同意
◌Strongly agree (10)
非常同意

Q20 Please rate the level of agreement with the following statement: 'There is an increase in customer demand for online purchases and/or services during COVID-19'
问题 **20**：请根据陈述进行选择："在新冠疫情期间，客户对在线购买和/或服务的需求有所增加"
◌Strongly disagree (6)
非常不同意

◐Somewhat disagree (7)
有些不同意
◐Neither agree nor disagree (8)
既不同意也不反对
◐Somewhat agree (9)
有些同意
◐Strongly agree (10)
非常同意

Q21 Please rate the level of agreement with the following statement: 'COVID-19 has increased the investment in digital technologies in my organization'
问题 **21**：请根据陈述进行选择："新冠疫情增加了我所在公司对数字技术的投资"
◐Strongly disagree (6)
非常不同意
◐Somewhat disagree (7)
有些不同意
◐Neither agree nor disagree (8)
既不同意也不反对
◐Somewhat agree (9)
有些同意
◐Strongly agree (10)
非常同意

Q22 Please rate the level of agreement with the following statement: 'In response to COVID-19, my organization now see digital technologies as source of competitive advantage'
问题 **22**：请根据陈述进行选择："做为对新冠疫情的回应，我的公司现在将数字技术视为竞争优势的来源"。
◐Strongly disagree (6)
非常不同意
◐Somewhat disagree (7)
有些不同意
◐Neither agree nor disagree (8)
既不同意也不反对
◐Somewhat agree (9)
有些同意
◐Strongly agree (10)
非常同意

Q23 Please rate the level of agreement with the following statement: 'In response to COVID-19, my organization is refocusing the entire business around digital technologies'
问题 **23**：请根据陈述进行选择："做为对新冠疫情的回应，我的公司将整个业务重新聚焦于数字技术"

○ Strongly disagree (6)
非常不同意
○ Somewhat disagree (7)
有些不同意
○ Neither agree nor disagree (8)
既不同意也不反对
○ Somewhat agree (9)
有些同意
○ Strongly agree (10)
非常同意

E-commerce (Skip this section if not relevant)
电子商务（如果不相关，请跳过本节）

Q24 Which is the E-Commerce marketplace platform that your organization is using? (Please mention in the below text)
问题 **24**：贵公司使用的电子商务市场平台是哪一个？（请在下文中提及）

_____

Q25 When did your organization start using E-Commerce platform? Please specify the year
问题 **25**：贵公司何时开始使用电子商务平台？请具体说明年份

_____

Q26 Please rate the level of agreement with the following statement: 'COVID-19 has accelerated the adoption/use of E-commerce platform in my organization'
问题 **26** 请根据陈述进行选择："新冠疫情加速了我所在公司对电子商务平台的采用/使用"

○ Strongly disagree (6)
非常不同意
○ Somewhat disagree (7)
有些不同意
○ Neither agree nor disagree (8)
既不同意也不反对
○ Somewhat agree (9)
有些同意
○ Strongly agree (10)
非常同意

Q27 Which are the main drivers for your organization to adopt E-commerce platform (Please select all that is relevant)

问题 27：贵公司采用电子商务平台的主要驱动因素是什么（请选择所有相关因素）

☐Word of Mouth (1)

口碑

☐Public advertisement (2)

公共广告

☐Internal staff recommendation (3)

内部工作人员建议

☐Government training (4)

政府培训

☐IT Vendors/ Digital Platformers (5)

信息技术供应商/数字平台制造商

☐Competitors has implemented (6)

竞争对手已经实施了

☐Customer suggestions/requirements (7)

客户建议/要求

☐To comply with government regulations (8)

遵守政府规定

☐Other, please specify (9)

其他，请具体说明

_____

Q28 What are the benefits associated with E-commerce adoption in your organization (Please select all that is relevant)

问题 28：贵公司采用电子商务有哪些好处（请选择所有相关内容）

☐Increased customer base (1)

增加了客户群体

☐Enhanced customer service (2)

加强了客户服务

☐Ease of business operations (3)

业务运营的便利性

☐Cost reduction (4)

降低成本

☐Higher brand awareness (5)

更高的品牌知名度

☐Empowering information-based decision making (6)

增强基于信息的决策能力

☐Enhanced marketing and customer outreach (7)

加强营销和客户拓展

☐Reduction in operational time (8)

缩短操作时间

☐Improvement in quality (such as reduction in errors) (9)

提高质量（如减少错误）
☐Other, please specify (10)
其他，请具体说明

_____

Q29 What percentage of your organizations total sales are made through E-commerce marketplace platform?
问题 **29**：通过电子商务市场平台实现的销售额占贵公司总销售额的百分比是多少？
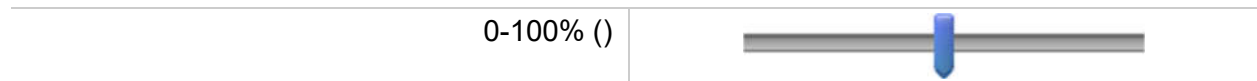
	0 10 20 30 40 50 60 70 80 90 100
0-100% ()	

Q30 How does your business receive payments for your E-Commerce marketplace orders (Please select all that is relevant)
问题 **30**：您的企业如何接收电子商务订单的付款（请选择所有相关内容）
☐Online credit/debit card (1)
在线信用卡/借记卡
☐Third party payment service such as Paypal, Line pay, shopee pay (2)
第三方支付服务，如 Paypal、Line pay、shopee pay
☐Bank account transfer (3)
银行转账
☐Cash on delivery (4)
货到付款
☐Others, please specify (5)
其他，请具体说明

_____

Q31 Does your organization use third party logistics service provider for following activities? (Please select all that is relevant)
问题 **31**：贵公司是否使用第三方物流服务提供商进行以下活动？（请选择所有相关内容）
☐Transportation (1)
运输
☐Packing (2)
包装
☐Warehouse (3)
仓储
☐Shipping documents (4)
装运单据
☐Others, please specify (5)

其他，请具体说明

Q32 What challenges/barriers does your organization faced/facing using E-commerce marketplace platform?

问题 32：贵公司在使用电子商务市场平台时面临哪些挑战/障碍？

_____
_____
_____
_____
_____
_____

Food delivery platform seller (Skip this section if not relevant)

食品配送平台卖家（如果不相关，请跳过本节）

Q33 Which is the food delivery platform that your organization is using? (Please mention in the below text)

问题 33：贵公司使用的食品配送平台是哪一个？（请在以下横线说明）

_____

Q34 When did your organization start using food delivery platform? Please specify the year

问题 34：贵公司何时开始使用食品配送平台？请具体说明年份

_____

Q35 Please rate the level of agreement with the following statement: 'COVID-19 has accelerated the adoption/use of Food delivery platform in my organization'

问题 35 请根据陈述进行选择："新冠疫情加速了我所在公司对食品配送平台的采用/使用"

○ Strongly disagree (6)
非常不同意
○ Somewhat disagree (7)
有些不同意
○ Neither agree nor disagree (8)
既不同意也不反对
○ Somewhat agree (9)
有些同意
○ Strongly agree (10)
非常同意

Q36 Which are the main drivers for your organization to adopt food delivery platform (Please select all that is relevant)

问题 36：贵公司采用食品配送平台的主要驱动因素是什么（请选择所有相关因素）

□ Word of Mouth (1)
口碑
□ Public advertisement (2)

公共广告
☐Internal staff recommendation (3)
内部工作人员建议
☐Government training (4)
政府培训
☐IT Vendors/ Digital Platformers (5)
信息技术供应商/数字平台制造商
☐Competitors has implemented (6)
竞争对手已经实施了
☐Customer suggestions/requirements (7)
客户建议/要求
☐To comply with government regulations (8)
遵守政府规定
☐Other, please specify (9)
其他，请具体说明

Q37 What are the benefits associated with food delivery platform adoption in your organization (Please select all that is relevant)
问题 37：贵公司采用食品配送平台有哪些好处（请选择所有相关内容）
☐Increased customer base (1)
增加了客户群体
☐Enhanced customer service (2)
加强了客户服务
☐Ease of business operations (3)
业务运营的便利性
☐Cost reduction (4)
降低成本
☐Higher brand awareness (5)
更高的品牌知名度
☐Empowering information-based decision making (6)
增强基于信息的决策能力
☐Enhanced marketing and customer outreach (7)
加强营销和客户拓展
☐Reduction in operational time (8)
缩短操作时间
☐Improvement in quality (such as reduction in errors) (9)
提高质量（如减少错误）
☐Other, please specify (10)
其他，请具体说明

Q38 What percentage of your organizations total sales are made through food delivery platform ?
问题 38：通过食品配送平台实现的销售额占贵公司总销售额的百分比是多少？
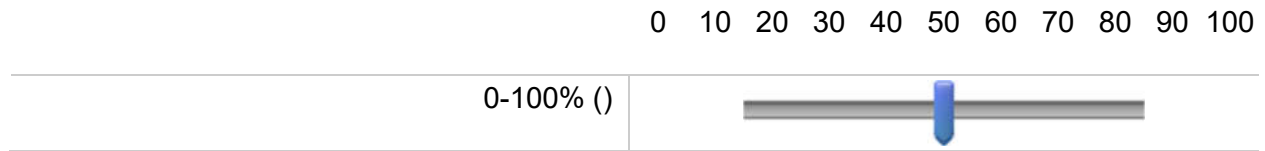
	0 10 20 30 40 50 60 70 80 90 100
0-100% ()	▬▬▬▬▬▯▬▬▬▬▬

Q39 How does your business receive payments through food delivery platform (Please select all that is relevant)
问题 39：您的企业如何通过食品配送平台接收付款（请选择所有相关信息）

☐Online credit/debit card (1)
在线信用卡/借记卡
☐Third party payment service such as Paypal, Line pay, shopee pay (2)
第三方支付服务，如 Paypal、Line pay、shopee pay
☐Bank account transfer (3)
银行转账
☐Cash on delivery (4)
货到付款
☐Others, please specify (5)
其他，请具体说明

_____

Q40 What challenges/barriers does your organization faced/facing in doing business using food delivery platform
问题 40：贵公司在使用食品配送平台开展业务时面临哪些挑战/障碍

_____
_____
_____
_____
_____

Online payment/financial technology platform (Skip this section if not relevant)
在线支付/金融技术平台（如果不相关，请跳过本节）

Q41 Which is the online payment/financial technology platform that your organization is using? (Please mention in the below text)
问题 41：贵公司使用的在线支付/金融技术平台是哪一个？（请在以下横线说明）

_____

Q42 When did your organization start using online payment/financial technology platform? Please specify the year
问题 42：贵公司何时开始使用在线支付/金融技术平台？请具体说明年份

_____

Q43 Please rate the level of agreement with the following statement: 'COVID-19 has accelerated the adoption/use of online payment/financial technology platform in my organization'
问题 43：请根据以下陈述进行选择："新冠疫情加速了我所在公司对在线支付/金融技术平台的采用/使用"

○ Strongly disagree (6)
非常不同意
○ Somewhat disagree (7)
有些不同意
○ Neither agree nor disagree (8)
既不同意也不反对
○ Somewhat agree (9)
有些同意
○ Strongly agree (10)
非常同意

Q44 Which are the main drivers for your organization to adopt online payment/financial technology platform (Please select all that is relevant)
问题 44：贵公司采用在线支付/金融技术平台的主要驱动因素是什么（请选择所有相关因素）

☐ Word of Mouth (1)
口碑
☐ Public advertisement (2)
公共广告
☐ Internal staff recommendation (3)
内部工作人员建议
☐ Government training (4)
政府培训
☐ IT Vendors/ Digital Platformers (5)
信息技术供应商/数字平台制造商
☐ Competitors has implemented (6)
竞争对手已经实施了
☐ Customer suggestions/requirements (7)
客户建议/要求
☐ To comply with government regulations (8)
遵守政府规定
☐ Other, please specify (9)
其他，请具体说明

Q45 What are the benefits associated with online payment/financial technology platform in your organization (Please select all that is relevant)
问题 45：贵公司的在线支付/金融技术平台有哪些好处（请选择所有相关内容）

☐Increased customer base (1)
增加了客户群体
☐Enhanced customer service (2)
加强了客户服务
☐Ease of business operations (3)
业务运营的便利性
☐Cost reduction (4)
降低成本
☐Higher brand awareness (5)
更高的品牌知名度
☐Empowering information-based decision making (6)
增强基于信息的决策能力
☐Enhanced marketing and customer outreach (7)
加强营销和客户拓展
☐Reduction in operational time (8)
缩短操作时间
☐Improvement in quality (such as reduction in errors) (9)
提高质量（如减少错误）
☐Other, please specify (10)
其他，请具体说明

Q46 What percentage of your organizations total sales are made through online payment/financial technology platform ?
问题 46：通过在线支付/金融技术平台实现的销售额占贵公司总销售额的百分比是多少？
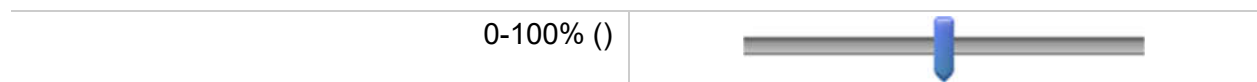
0　10　20　30　40　50　60　70　80　90　100

0-100% ()

Q47 What challenges/barriers does your organization faced/facing in doing business using online payment/financial technology platform?
问题 47：在使用在线支付/金融技术平台开展业务时，贵公司面临哪些挑战/障碍？

_____

_____

_____

Government online platforms (Skip this section if not relevant)

政府在线平台（如果不相关，请跳过本节）

Q48 What are the online government platforms that your organization is using? (Please mention in the below text)

问题 48：贵公司正在使用哪些在线政府平台？（请在以下横线说明）

_____

Q49 When did your organization start using government online platforms? Please specify the year

问题 49：贵公司何时开始使用政府在线平台？请具体说明年份

_____

Q50 Please rate the level of agreement with the following statement: 'COVID-19 has accelerated the adoption/use of online government platform in my organization'

问题 50：请对以下陈述的同意程度进行打分："新冠疫情加速了我所在公司对在线政府平台的采用/使用"

- Strongly disagree (6)
  非常不同意
- Somewhat disagree (7)
  有些不同意
- Neither agree nor disagree (8)
  既不同意也不反对
- Somewhat agree (9)
  有些同意
- Strongly agree (10)
  非常同意

Q51 Which are the main drivers for your organization to adopt online government online platforms (Please select all that is relevant)

问题 51：贵公司采用政府在线平台的主要驱动因素是什么（请选择所有相关因素）

- Word of Mouth (1)
  口碑
- Public advertisement (2)
  公共广告
- Internal staff recommendation (3)
  内部工作人员建议
- Government training (4)
  政府培训
- IT Vendors/ Digital Platformers (5)

信息技术供应商/数字平台制造商

☐Competitors has implemented (6)

竞争对手已经实施了

☐Customer suggestions/requirements (7)

客户建议/要求

☐To comply with government regulations (8)

遵守政府规定

☐Other, please specify (9)

其他，请具体说明

Q52 What are the benefits associated with online government platforms in your organization (Please select all that is relevant)

问题 52：贵公司的在线政府平台有哪些好处（请选择所有相关内容）

☐Increased customer base (1)

增加了客户群体

☐Enhanced customer service (2)

加强了客户服务

☐Ease of business operations (3)

业务运营的便利性

☐Cost reduction (4)

降低成本

☐Higher brand awareness (5)

更高的品牌知名度

☐Empowering information-based decision making (6)

增强基于信息的决策能力

☐Enhanced marketing and customer outreach (7)

加强营销和客户拓展

☐Reduction in operational time (8)

缩短操作时间

☐Improvement in quality (such as reduction in errors) (9)

提高质量（如减少错误）

☐Other, please specify (10)

其他，请具体说明

Q53 What challenges/barriers does your organization faced/facing in using government online platforms?

问题 53：贵公司在使用政府在线平台时面临哪些挑战/障碍？

_____

_____

_____

_____

_____

Q54 What are the key digitalization trends you have witnessed during COVID-19 among MSMEs? Please specify
问题 54：中小微企业在新冠疫情期间所看到的主要数字化趋势是什么？请具体说明

_____
_____
_____
_____
_____
_____

Q55 What are the regulatory hurdles or policies that hinder MSMEs like you to go digital? Please specify
问题 55：有哪些监管障碍或政策阻碍了像您这样的中小微企业走向数字化？请具体说明

_____
_____
_____
_____
_____

Q56 What kind of policies do you think would promote MSMEs' digital adoption in your country? Please specify
问题 56：您认为什么样的政策会促进中小微企业在贵国的数字化应用？请具体说明

_____
_____
_____
_____
_____

Q57 If your business is not utilizing any digitalization or is lagging behind others, please specify the reasons
问题 57：如果您的企业没有利用任何数字化或落后于其他企业，请说明原因

_____
_____
_____
_____
_____
_____

Q58 How do you plan to utilize digital technologies in your future business?
问题 58：您计划如何在未来的业务中利用数字技术？

_____
_____
_____
_____
_____

Q59 What do you think need to be improved to meet the digital transformation opportunities? Please specify

问题 59：您认为需要改进什么才能满足数字化转型的机遇？请具体说明

_____
_____
_____
_____
_____

Q60 What digitalization policies do you expect from policy makers to make your future business successful?

问题 60：您希望政策制定者采取哪些数字化政策，使您未来的业务取得成功？

_____
_____
_____
_____
_____

F. Interview participants list and Case Study

F.1 Interview participants list

| Government and Associations			
Country	**Organization**	**Participant**	**Position**
Thailand	Digital Economy Promotion Agency (DEPA)	Mr.Thawatchai Khotwong	Vice President, Northern Region
	The Office of Small and Medium Enterprise Promotion (OSMEP),	Mr. Vorapoj Prasanpanich	Director, SME Knowledge and Service System Department
Myanmar	Ministry of Cooperate and Rural Development	Ms. Nyeinn Aye	Director, Department of Small Scale Industries
	Ministry of Transport and Communications	Ms. Su Myat Myat Tun	Assistant Director
	Myanmar International Freight Forwarder's Association	Ms. Klin Hla Kyi	Joint Secretary
Vietnam	Vietnam Chamber of Commerce and Industry	Mr. Nguyen Duc Binh	Director
Cambodia	Ministry of Industry, Science Technology and Innovation	Mr. Chhea Layhy	Director, Small and Medium Enterprise Department

Government and Associations			
Country	**Organization**	**Participant**	**Position**
Lao PDR	Department of SMEs Promotion	Mr. Litthideth Khamhoung	Director, Entrepreneur Development Division
	The Lao ICT Commerce Association (LICA)	Mr. Thanousone Phonamat	Director
	Ministry of Technology and Communication	Mr.Minaxay Philavong	Director, Technology Promotion and Transfer Center
	Lao National Chamber of Commerce and Industry	Mr. Thanongsinh Kanlagna	Director
P.R. China	Kunming Federation of Industry and Commerce	Mr. Xiaoxi Yang	Assistant Chairman
	SME Service center of Kunming High Tech Industrial Park	Mr. Dong Deng	General Officer
Internet/Mobile Platform provider			
Country	**Organization**	**Participant**	**Position**
Thailand	LINEMAN Wongnai (Food Delivery Application)	Mr. Isriya Paireepairat	Head, Public Affairs
	Purple Ventures Co.,Ltd (Robinhood) (Food Delivery Application)	Mr. Srihanath Lamsam	CEO, Robinhood
Vietnam	Lazada Vietnam (E-Commerce Platform)	Ms. Hang Nguyen	Marketing Director
	Sen Do Joint Stock Company (E-Commerce Platform)	Ms. Thi Kim Hoang Le Ngo	Senior Supply Chain Manager
	Lalamove Vietnam (Last-Mile delivery)	Ms. Truc Nguyen	
P.R. China	Yunnan Qingzhong Digital Management Co.,Ltd (Digital Marketing service)	Mr. Yu Zhao	Deputy Director
	Kunming Sigma Internet Technology Co.,Ltd) (E-Comerce Platform)	Mr. Chi Zhang	Managing Director

F.2 Case study

Government and Associations			
Country	**Organization**	**Participant**	**Position**
Thailand	Digital Economy Promotion Agency (DEPA)	Mr.Thawatchai Khotwong	Vice President, Northern Region
	The Office of Small and Medium Enterprise Promotion (OSMEP),	Mr. Vorapoj Prasanpanich	Director, SME Knowledge and

|			
			Service System Department
Internet/Mobile Platform provider			
Country	**Organization**	**Participant**	**Position**
Thailand	Purple Ventures Co.,Ltd (Robinhood) (Food Delivery Application)	Mr. Srihanath Lamsam	CEO, Robinhood

G. Screenshot on Interview Session

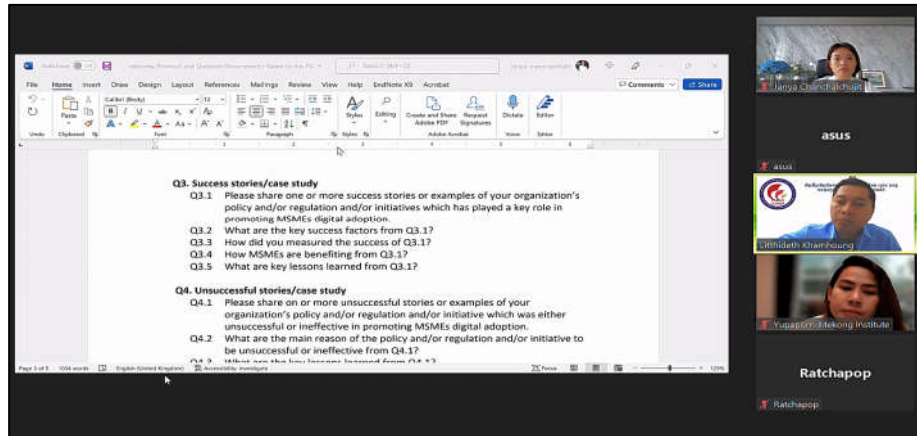G.1 Interview: Digital Economy Promotion Agency (DEPA), Mr. Thawatchai Khotwong on 7 February 2022
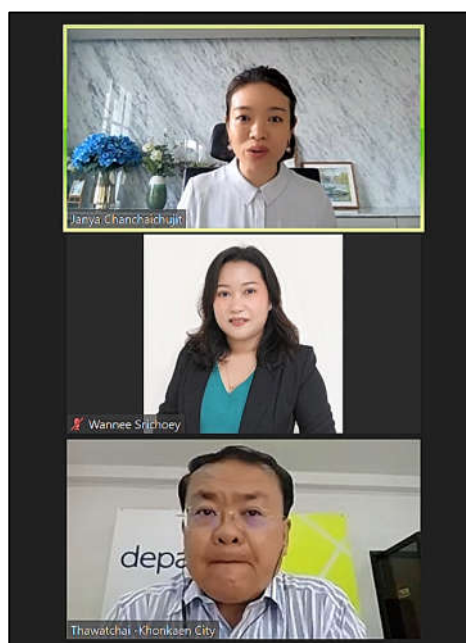
G.2 Interview: Ministry of Industry, Science Technology and Innovation, Cambodia, Mr. Vichhey Lim on 11 February 2022
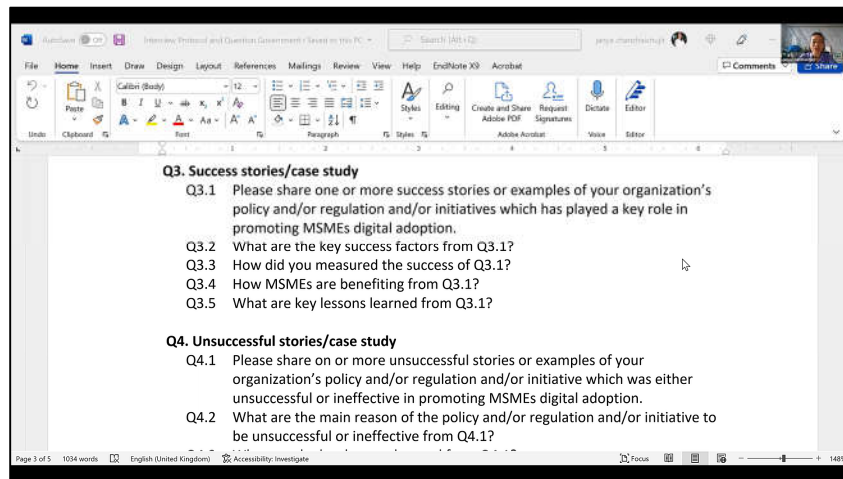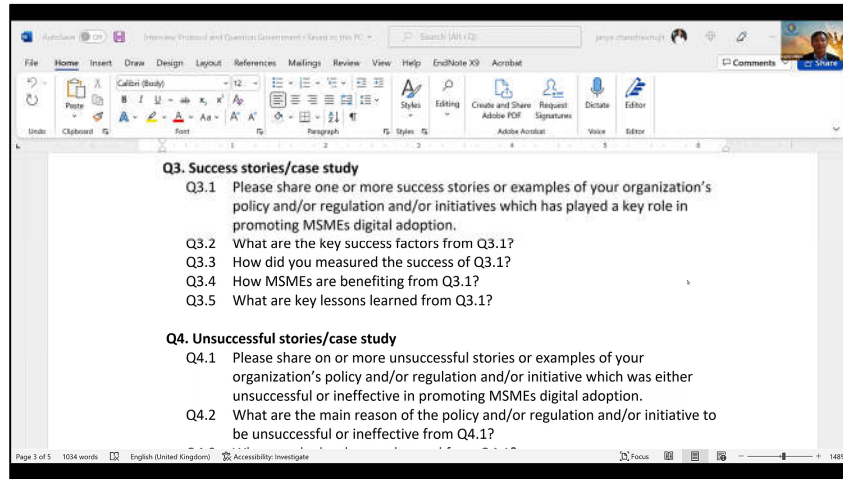
G.3 Interview: Department of SME Promotion, Ministry of Industry and Commerce, Lao PDR, Mr.Litthideth Khamhoung on 14 February 2022
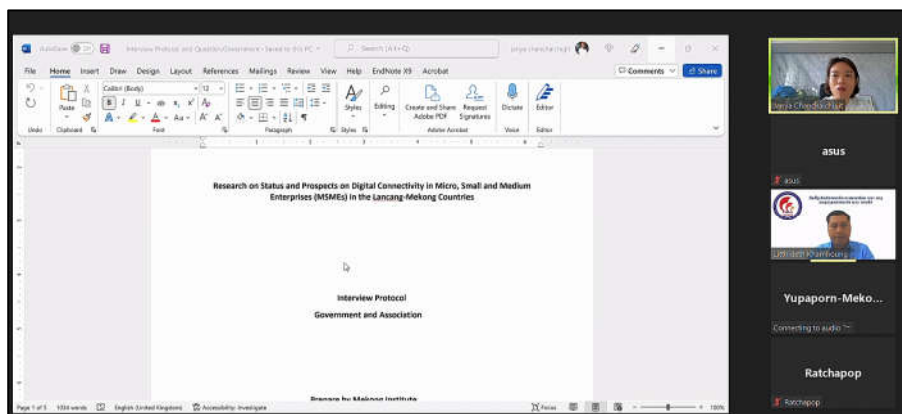
G.4 Interview: The Lao ICT Commerce Association (LICA), Lao PDR, Mr. Thanousone Phonamat on 14 February 2022
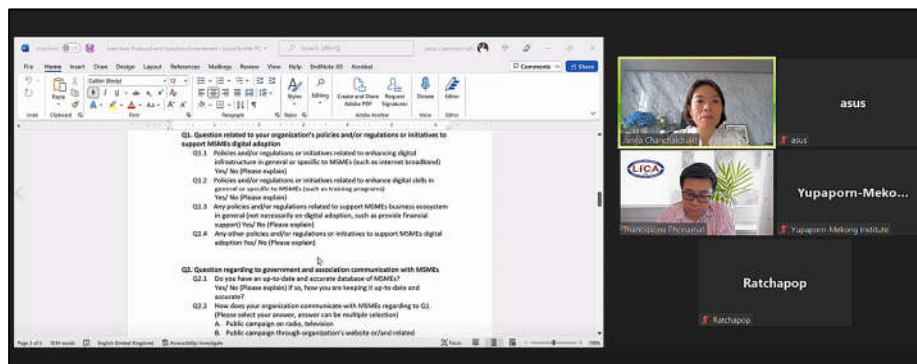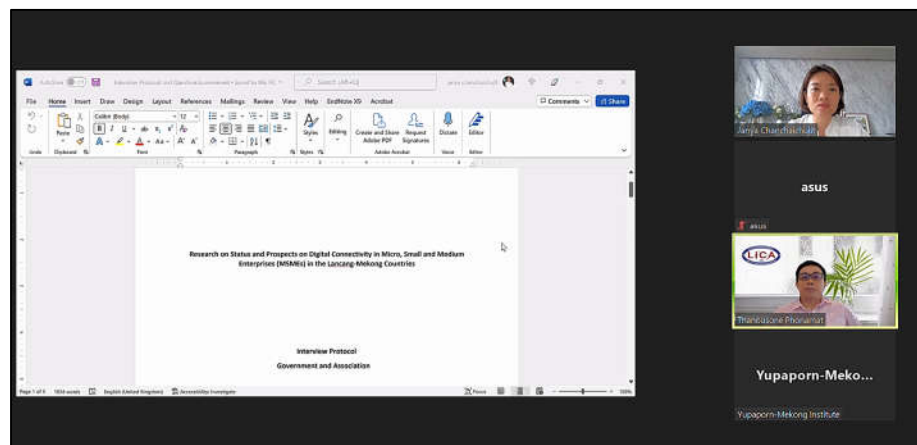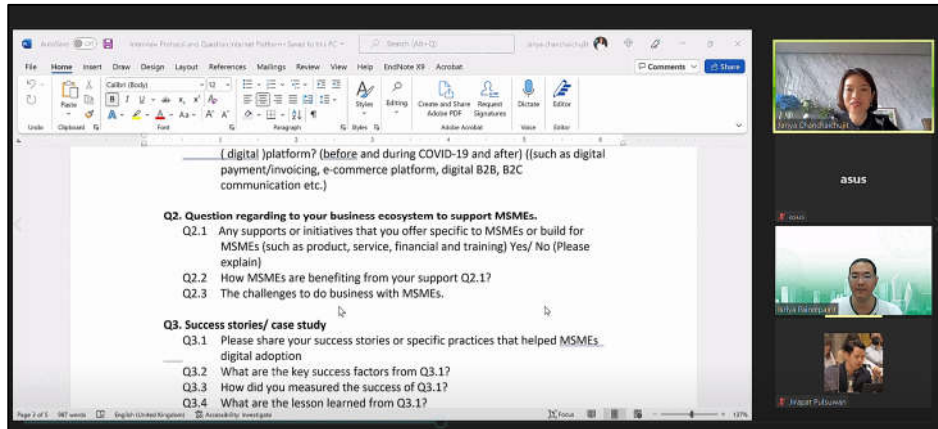
G.5 Interview: The Office of Small and Medium Enterprise Promotion (OSMEP), Mr. Vorapoj Prasanpanich on 15 February 2022
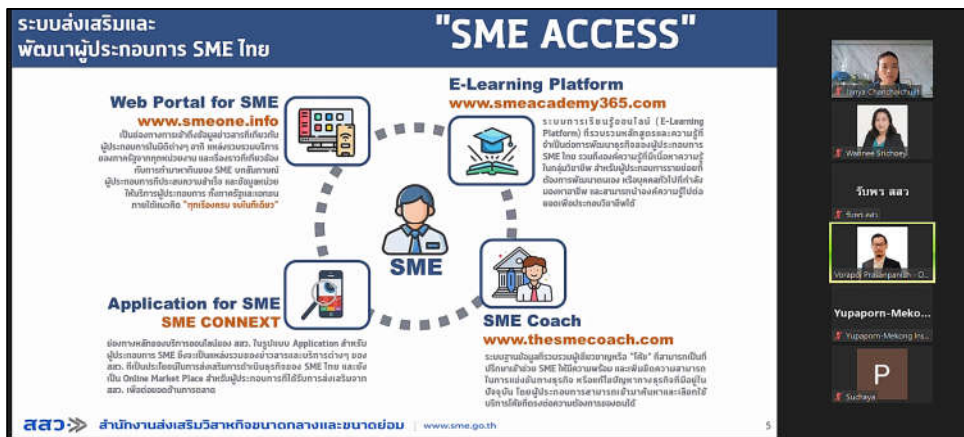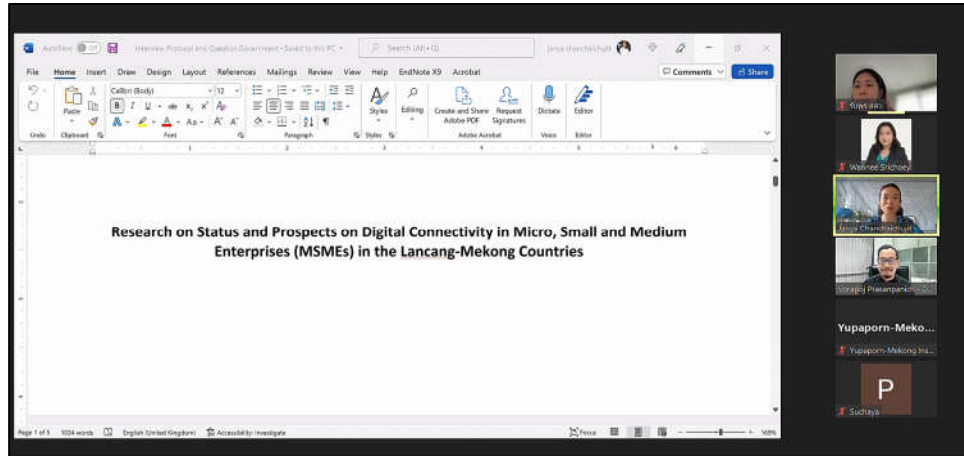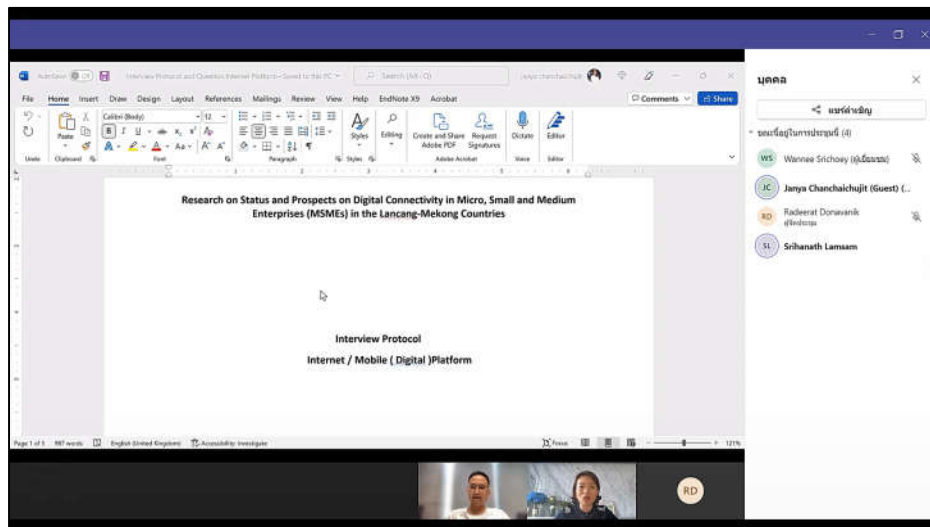

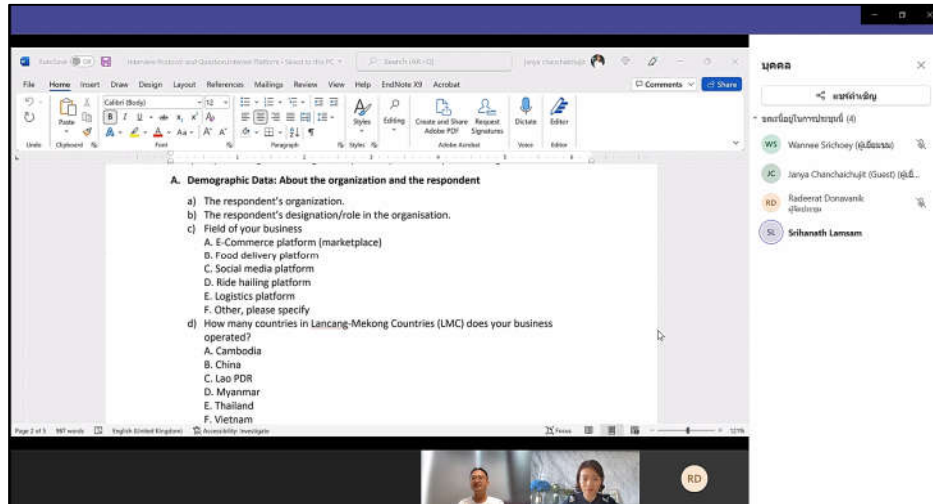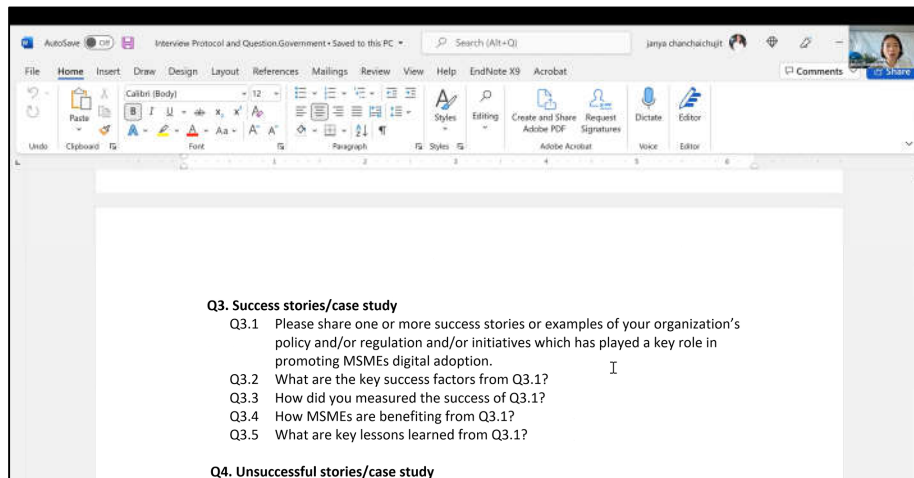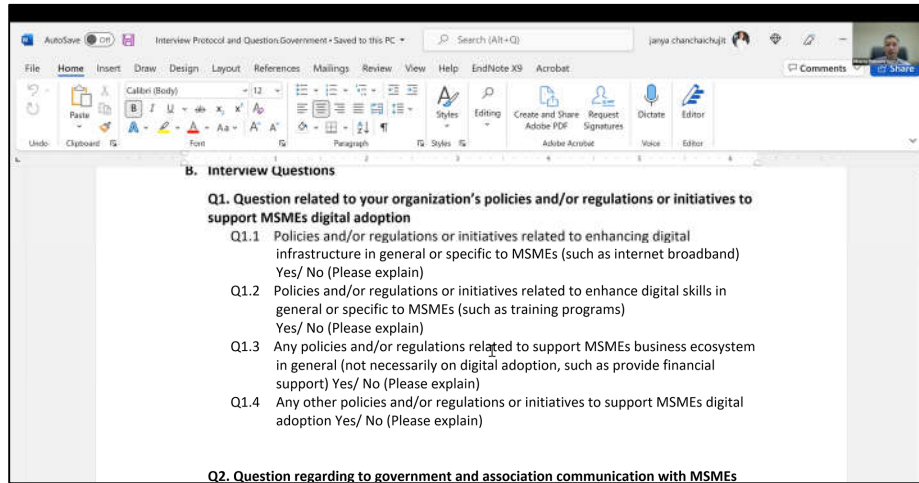G.6 Interview: LINE MAN Wongnai, Mr. Isriya Paireepairit on 17 February 2022
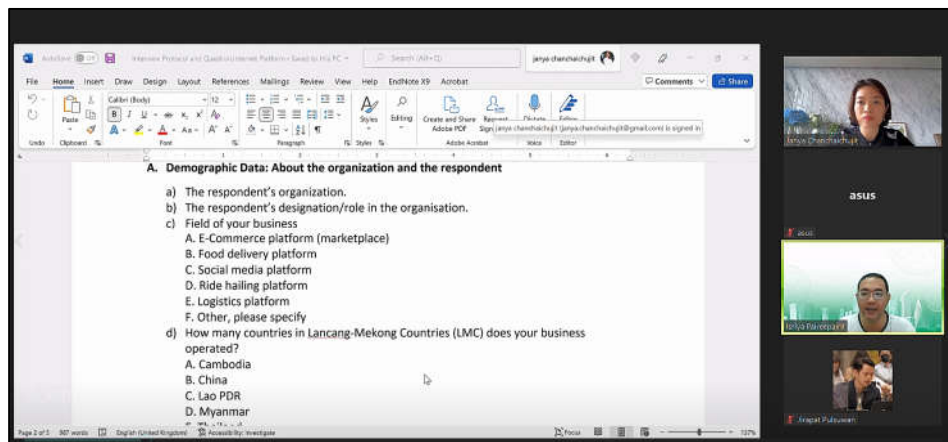
G.7 Interview: Purple Ventures Co.,Ltd. (Robinhood), Mr. Srihanath Lamsam on 17 February 2022
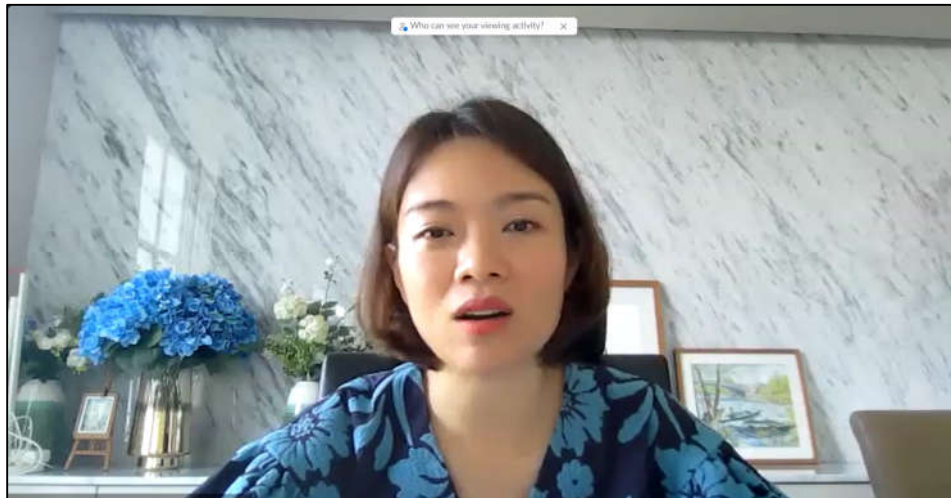
G.8 Interview Ministry of Technology and Communications, Lao PDR, Mr. Minaxay Philavong on 22 February 2022

G.9 Interview: LNCCI in P.R. China cooperation between LMC and P.R. China on 1 March 2022
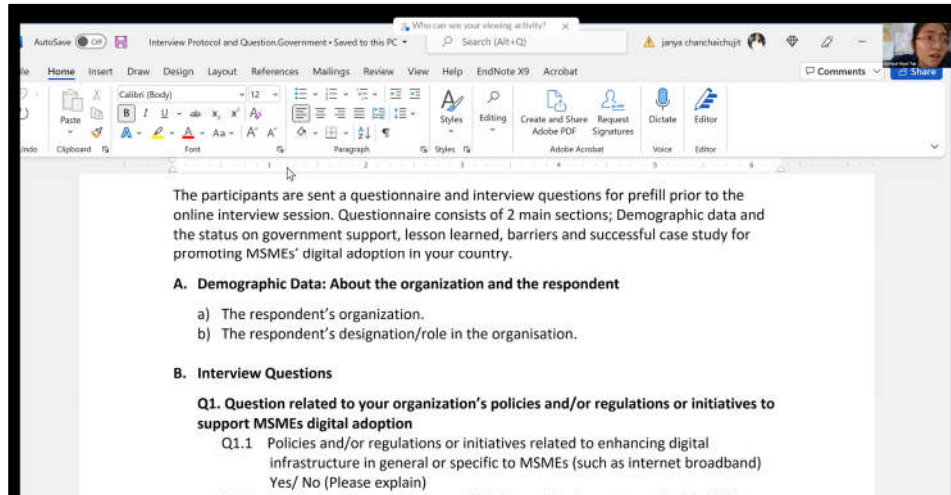
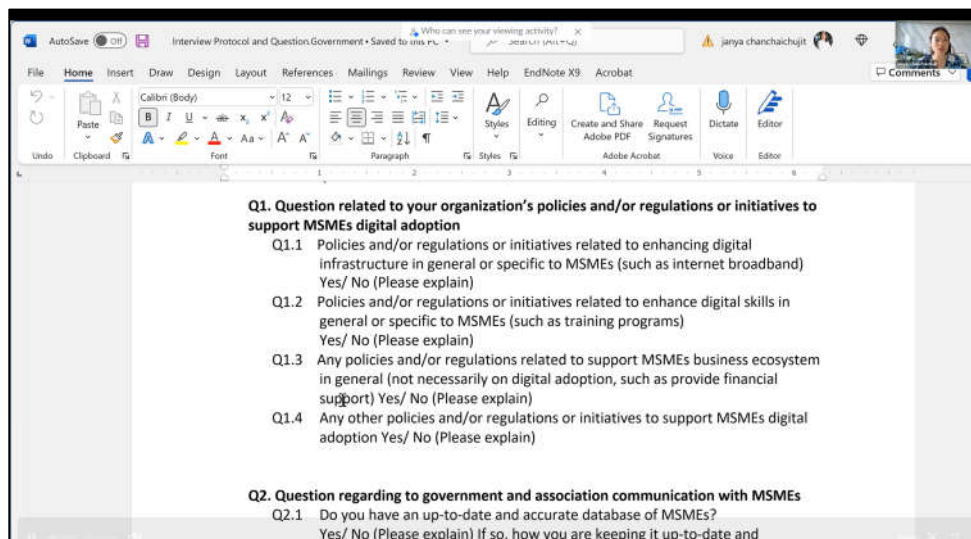G.10 Interview on 7 March 2022
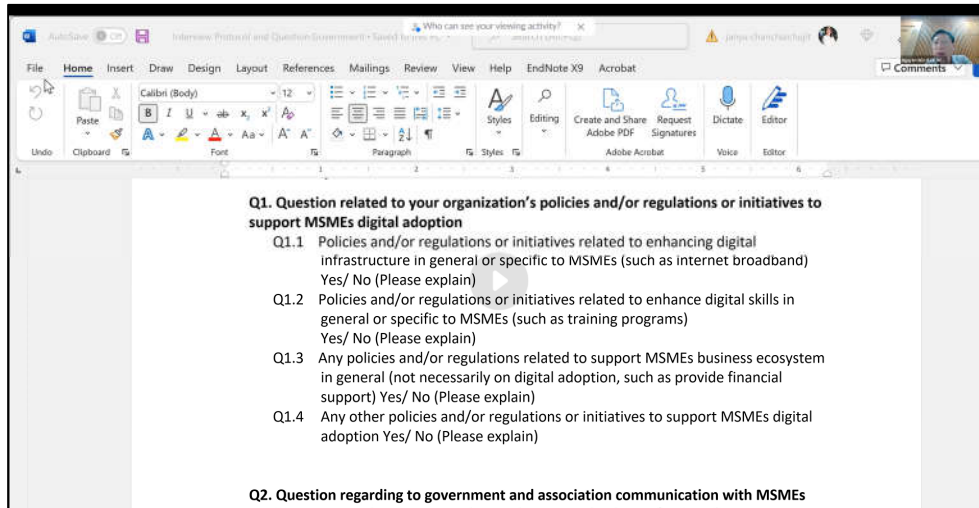1) Department of Small-Scale industries Ministry of Cooperative and Rural Development, Ms. Nyeinn Aye
2) Ministry of Transport and Communications, Ms.Su Myat Myat Tun
3) Myanmar International Freight Forwarder's Association, Ms. Khin Hla Kyi

G.11 Interview: Vietnam Chamber of Commerce & Industry - Hochiminh City Branch (VCCI-HCM), Mr. Nguyen Duc Binh on 11 March 2022

Q1. Question related to your organization's policies and/or regulations or initiatives to support MSMEs digital adoption

Q1.1   Policies and/or regulations or initiatives related to enhancing digital infrastructure in general or specific to MSMEs (such as internet broadband) Yes/ No (Please explain)

Q1.2   Policies and/or regulations or initiatives related to enhance digital skills in general or specific to MSMEs (such as training programs) Yes/ No (Please explain)

Q1.3   Any policies and/or regulations related to support MSMEs business ecosystem in general (not necessarily on digital adoption, such as provide financial support) Yes/ No (Please explain)

Q1.4   Any other policies and/or regulations or initiatives to support MSMEs digital adoption Yes/ No (Please explain)

Q2. Question regarding to government and association communication with MSMEs

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