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E-Commerce in Indonesia: What is Holding Back Small Businesses?

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EXECUTIVE SUMMARY

- The paper summarizes the results from a survey conducted in Indonesia to identify the main barriers faced by micro, small, and medium enterprises (MSMEs) when engaging in e-commerce. There were 104 respondents in the retail and food and beverages services industry in the greater Jakarta area, 42% of which were non-e-commerce adopters while 58% were in e-commerce.
- The impediments are classified into four categories: organizational, environmental, technological, and CEO/owner/senior manager views. The survey found that the main barriers for MSMEs were organizational, followed by environmental, technological, and CEO/owner/senior managers' views.
- The findings of the survey indicate that making online platform more accessible and affordable for MSMEs, and increasing digital and e-commerce literacy among MSMEs are key in getting these enterprises to engage in e-commerce.
- Other areas worthy of policy attention are: strengthening the e-commerce-enabling environment, especially by improving the telecommunication and logistics infrastructure; reducing the segmentation of business activities, and; enhancing access to finance and skilled human capital.

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INTRODUCTION

Indonesia is the largest and fastest-growing internet economy in ASEAN.¹ The market size is estimated to be USD27 billion in 2018 and it is forecasted to grow to USD100 billion by 2025. The Gross Merchandise Value (GMV) of Indonesia's internet economy is estimated at 2.9% of GDP in 2018.²

The fast-growing e-commerce in Indonesia is driven by several factors, including a large number of mobile phone users, digitally savvy young consumers, increasing micro, small, and medium enterprises' (MSMEs) participation in online commerce, growing investment in online commerce, and supportive government policies.³ About three-quarters of online consumers in Indonesia are using mobile devices to shop. Affordable devices and mobile data have encouraged e-commerce penetration especially amongst the young, and this is in a country where about 87 million of its population are between the ages of 16 and 35 years, and digitally savvy.⁴

To promote e-commerce development, the government's 14th economic package that was launched in 2016 focused on outlining an e-commerce roadmap⁵ for the country. The roadmap emphasized financing schemes for e-commerce development, including: (1) People's Business Credit (KUR) for the tenants of platform development; (2) Grants for business incubators to assist start-ups; (3) Universal Service Obligation (USO) funds for digital micro, small, and medium enterprises (MSMEs) and e-commerce platform start-up; (4) angel capital; (5) seed capital from "*Bapak Angkat*";⁶ and (6) Crowdfunding.^{7, 8}

Subsequently, the government enacted Government Regulation No. 80 of 2019 on Electronic Commerce which regulated e-commerce players who are serving Indonesia's market. It provided the definitions, rights and obligations of e-commerce players, as well as consumer protection. The regulation also required e-commerce players to register their businesses via the online single submission (OSS) platform. MSMEs can use their business permits to register, while individual sellers can use their identity cards. However, registered merchants on e-commerce platforms have not needed to register for a permit, as the platforms already had their data.⁹

To help MSMEs adopt e-commerce, the government also launched a number of specific e-commerce projects. For example, the Ministry of ICT launched *MSMEs go online* programme targeting 8 million MSMEs to go online by 2019. By December 2018, reportedly, about 9.6 million MSMEs went online through collaborations with marketplaces.¹⁰ The government also introduced a "One Million Domains" programme, providing websites for MSMEs, schools, and communities. By 2018, about an estimated 47,913 MSMEs benefitted from the programme (Kominfo, 2018).¹¹ A number of regional programmes were also conducted to get MSMEs online.

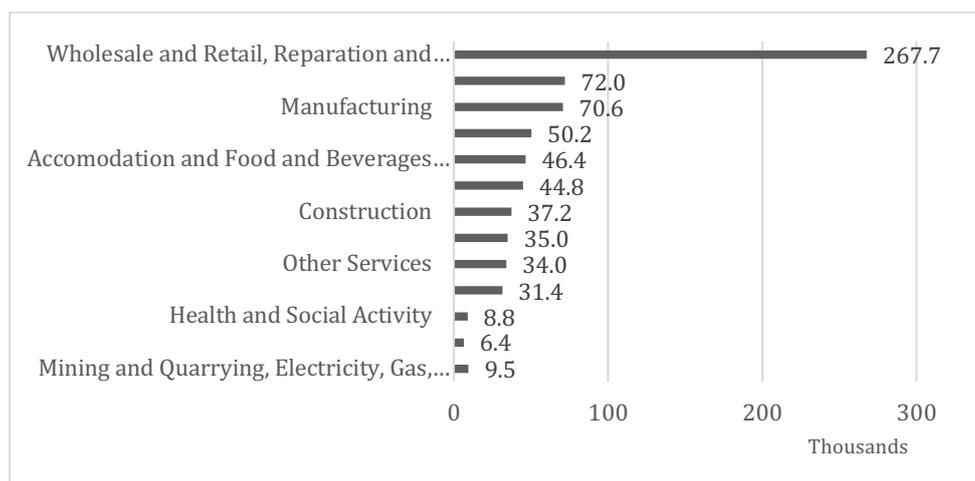
Despite increasing policy focus, the extent of e-commerce adoption was still relatively low according to official data. This paper discusses the main barriers faced by MSMEs in e-commerce adoption, based on a survey conducted in the Greater Jakarta area (DKI Jakarta, Bogor, Depok, Tangerang, Bekasi), from January to March 2019.

MSME Participation in E-Commerce

Indonesia’s 2016 Economic Census reported that there were about 26.7 million units of establishment in Indonesia,¹² 99.9% of which were micro, small, medium enterprises (MSMEs). However, only 3% (about 750 thousand establishments) were conducting online business.¹³ The majority of these online businesses were in wholesale and retail, communication and information, and manufacturing (Figure 1).

However, the emergence of big platform players such as Tokopedia, Shopee and Bukalapak has also facilitated the participation of MSMEs in e-commerce. These platforms have helped MSMEs to establish web stores, manage shipping, and market their services. There were about 4.5 million active merchants in 2017, of which 99% were MSMEs. The implementation of e-procurement has further accelerated the use of e-commerce in Indonesia (McKinsey and Co, 2018).¹⁴

Figure 1. Number of Online Business by Sector



Source: Indonesia Central Statistics Bureau, 2018

IDENTIFYING BARRIERS TO E-COMMERCE ADOPTION: SURVEY RESULTS

In this survey, e-commerce is defined as the sale or purchase of goods or services conducted over computer networks by methods specifically designed to receive or place orders. The survey had 104 respondents, of which 61 percent were food and beverages services providers, 38 percent were retailers, and one percent were manufacturers. Although the survey sample size was relatively small, it does provide some useful insights into the barriers encountered by MSMEs in their journey towards e-commerce adoption.

The majority of the respondents are micro enterprises (59 percent) with 1-4 workers (Appendix 1). In terms of revenue, the majority of the respondents had a revenue of USD 22,143 or less.¹⁵ Notably, the majority had only a school-level education. This has important

implications in understanding e-commerce adoption, as is demonstrated in the survey results presented in the next section.

A greater share of the respondents (65.4 percent) claimed that they used the internet in their business mainly for selling and purchasing, marketing and payment transactions. Only 33.3 percent used the internet for gathering information. The main technologies used were smartphones (98.5 percent), Facebook page and other social media sites (83.9 percent). It was found that close to a majority (49.0 percent) used both online and offline for their sales and purchases, and a small minority (8.7 percent) used only online transactions.

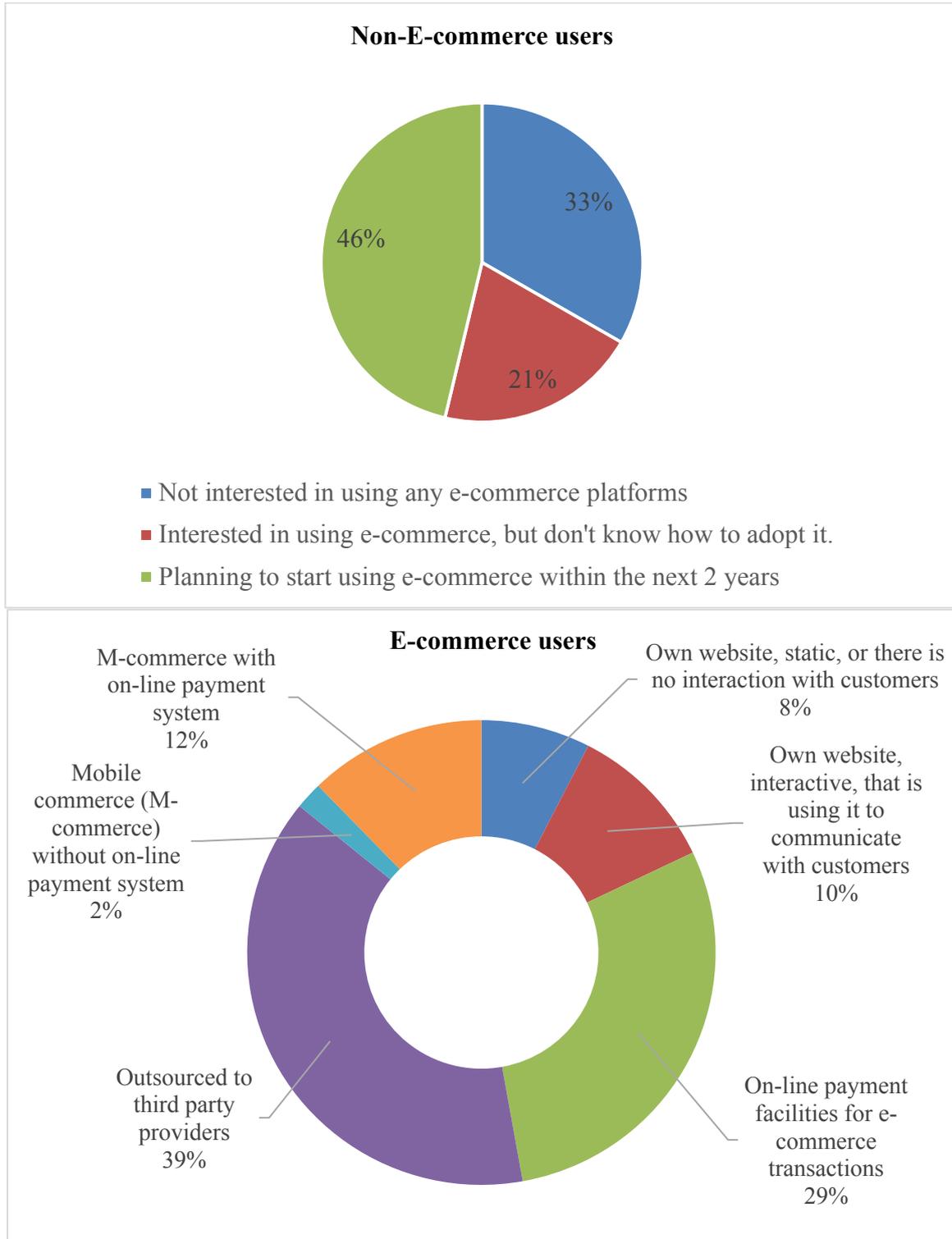
LEVELS OF E-COMMERCE ADOPTION

We found that the majority of the respondents (57.7 percent) were e-commerce users or adopters. Among non-adopters, 46 percent wanted to adopt e-commerce and planned to do so in the next two years. A smaller percentage of the respondents (21 percent) stated that they wanted to adopt e-commerce, but did not know how. As many as 33 percent of the non-users were not interested in adopting e-commerce (Figure 2).¹⁶

For the users of e-commerce, outsourcing to third-party providers was a common procedure (39 percent). A smaller share of them had online payment facilities (29 percent) while an even smaller share had implemented mobile-commerce (or m-commerce) with an online payment system (12 percent). Less commonly used e-commerce tools were own interactive websites (10 percent) and static web-sites (eight percent). Several of them had implemented m-commerce without any online payment system (two percent), implying that they were using cash-on-delivery. Ten percent of them had their own interactive website, eight percent owned a static website, and two percent implemented m-commerce without any online payment systems (Figure 2).

The majority of the firms/individuals using ecommerce were males (53.3 percent), of an average age of 32 years. E-commerce adoption was also associated with the education level of the owner/CEO/senior manager: the higher the education level of the owner, the more likely that they had adopted e-commerce. About 61.7 percent of owners/CEOs/senior managers of the MSME e-commerce adopters had diploma/university/post-graduate qualifications (Table 1).

Figure 2. Levels of E-commerce Adoption



Source: Survey results

Table 1. Characteristics of E-commerce Adopters

Characteristics	
Age of CEO/Owner/Senior Manager (year)	
Min	20.00
Max	64.00
Mean	32.30
Gender of CEO/Owner/Senior Manager (%)	
Male	53.33
Female	46.67
Highest education level by CEO/owner/Senior Manager (%)	
School Level (Grades 1- 12)	38.33
Diploma (High Vocational/Technical Cert)	6.67
University (Bachelor's degree)	41.67
Post-Graduate (Master's degree)	13.33

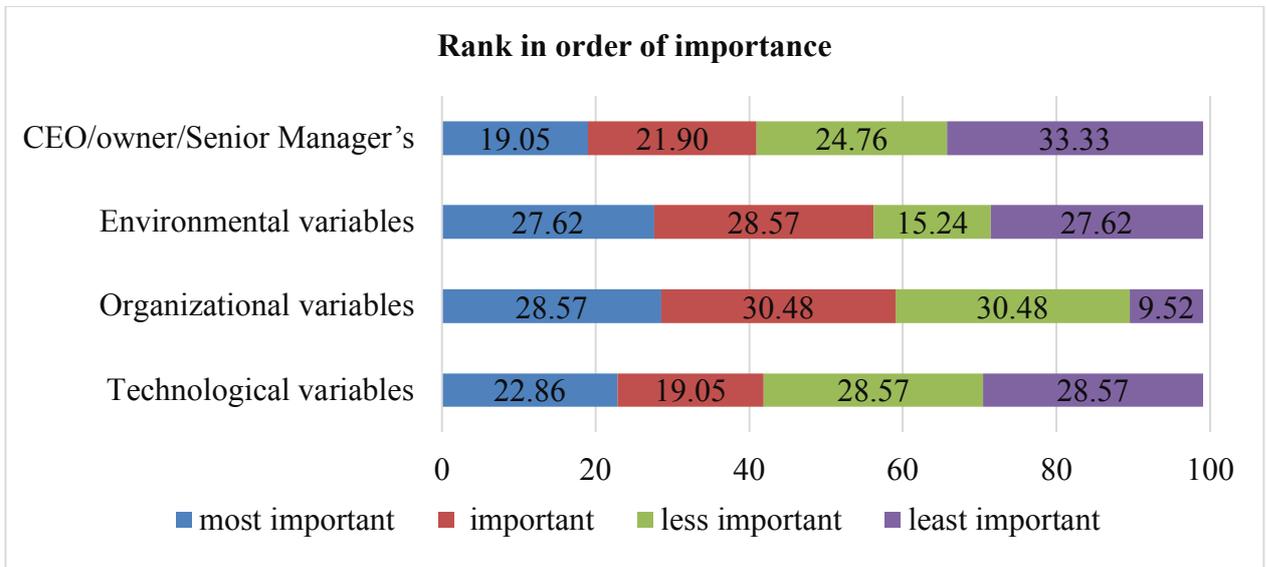
Source: Survey results

Barriers in Adopting E-commerce

Our respondents ranked the four factors that limited them from adopting e-commerce as follows: organizational or internal factors (59.1 percent), followed by environmental (56.2 percent), technological (42 percent), and CEO/owner/senior manager's views (41 percent) (Figure 3).¹⁷ Government assistance is needed to help these MSMEs overcome their internal organizational challenges, following a deeper investigation of what these challenges are.

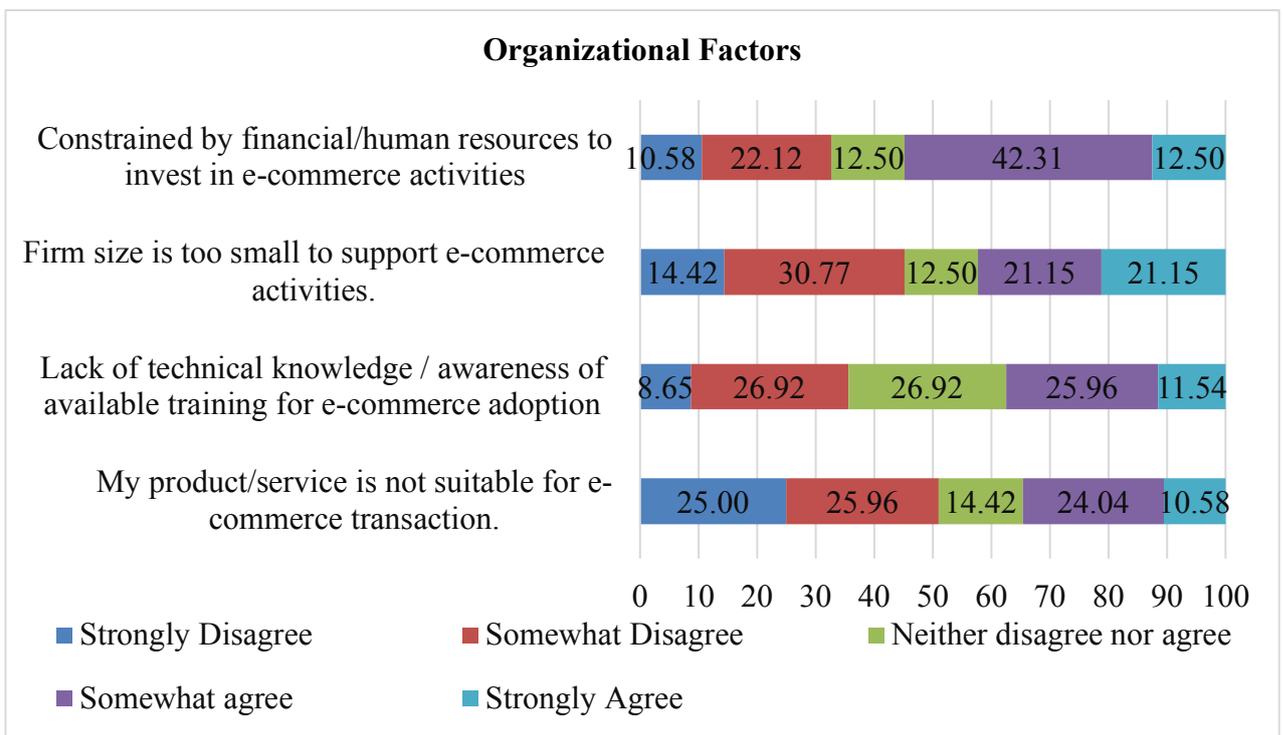
It was found that financial and human resources were the most important organizational constraints (54.8 percent) (Figure 4).¹⁸ Respondents repeatedly emphasized that they did not have the necessary human and financial resources to manage e-commerce activities and that adopting e-commerce required financial commitments that they could not afford. The size of the MSMEs meant that external human resources were needed to facilitate e-commerce adoption, especially when owners were not conversant in these matters due to their level of education (Table 1), which in turn has financial implications. Some of the MSMEs (42.3 percent) deemed their enterprises to be too small in terms of scale of production and hence did not yet need e-commerce to sell their products. In addition, lack of knowledge on e-commerce, for example technical product knowledge (37.5 percent), as well as the perception that their products were not suited for e-commerce transactions (34.6 percent) were other barriers to adopting e-commerce. In particular, micro food and beverage service providers felt that their services were not suited for e-commerce transactions.

Figure 3. Ranking of the Four Factors in Order of Importance



Source: Survey results

Figure 4. Response on Organizational Barriers in Adopting E-commerce

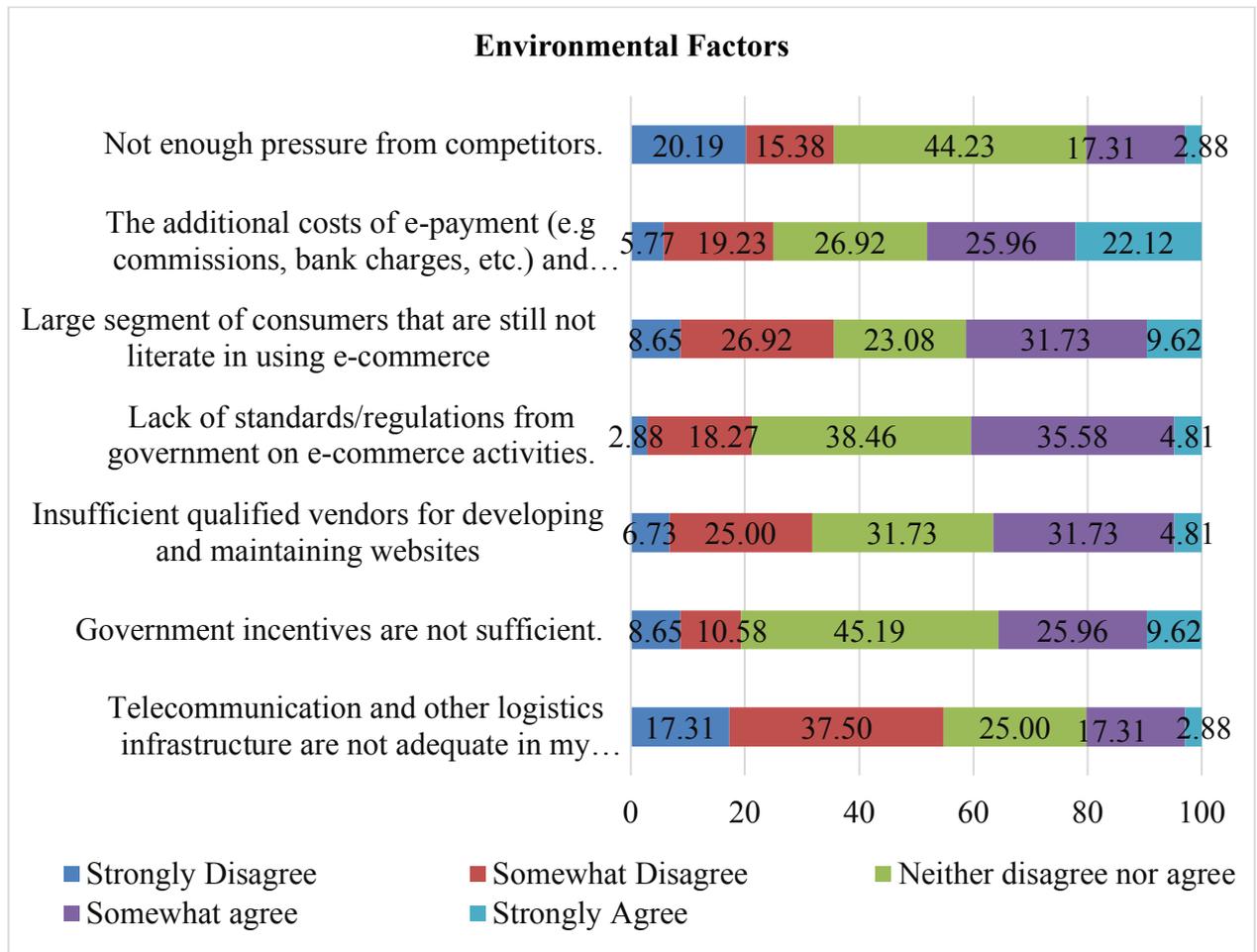


Source: Survey results

Regarding environmental factors (including external conditions), the additional costs of e-payment and logistics pursuant to e-commerce were identified as the most impeding barriers (48.1 percent in Figure 5). This was followed by the perceived problem that a large segment of their consumers was still unfamiliar with e-commerce (41.4 percent), and the perceived lack of standards and regulations on e-commerce (40.4 percent). Both payments and

logistics have been identified in other analyses as key factors deterring MSMEs from adopting e-commerce in Indonesia. Cash on delivery is still a common mode of payment, what with as much as 35 percent of Indonesian e-commerce transactions being estimated as being fraudulent.¹⁹ Policies addressing the payment and logistics problems would alleviate the perceived external challenges of the MSMEs.

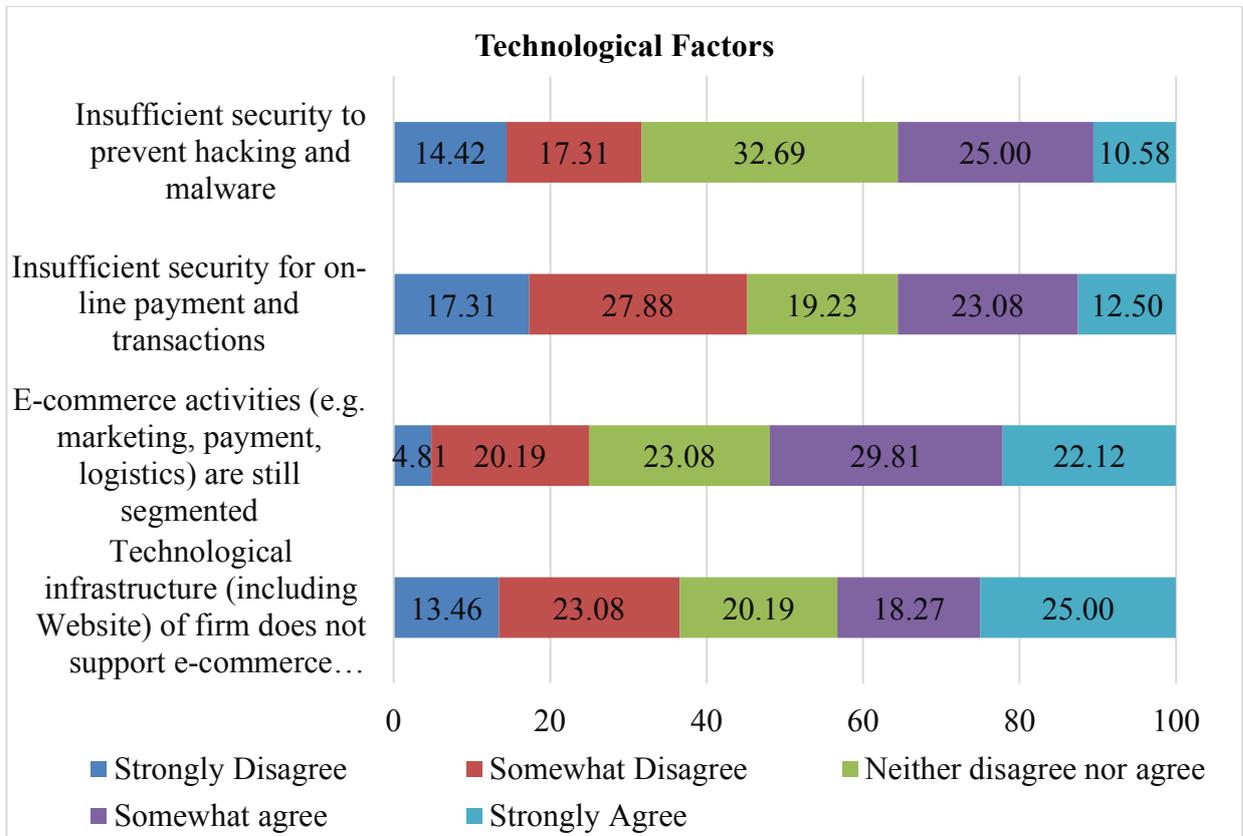
Figure 5. Response on Environmental Barriers in Adopting E-commerce



Source: Survey results

Amongst the technological barriers to the adoption of e-commerce, the most important was perceived to be segmented e-commerce activity (51.9 percent) (Figure 6). Respondents claimed that e-commerce activities such as marketing, payment, logistics were still separate functions rather than integrated ones needing a single solution. They assumed that greater efforts would be needed for them to manage all the different functions of e-commerce; at a time when they were already constrained in terms of human and financial resources (see organizational constraints). MSMEs also argued that there was insufficient technological infrastructure to support e-commerce activity (43.3 percent). In addition, security issues such as malware and hacking (35.6 percent) and inadequate security of online payment and transaction (35.6 percent) also discouraged them from utilizing e-commerce.

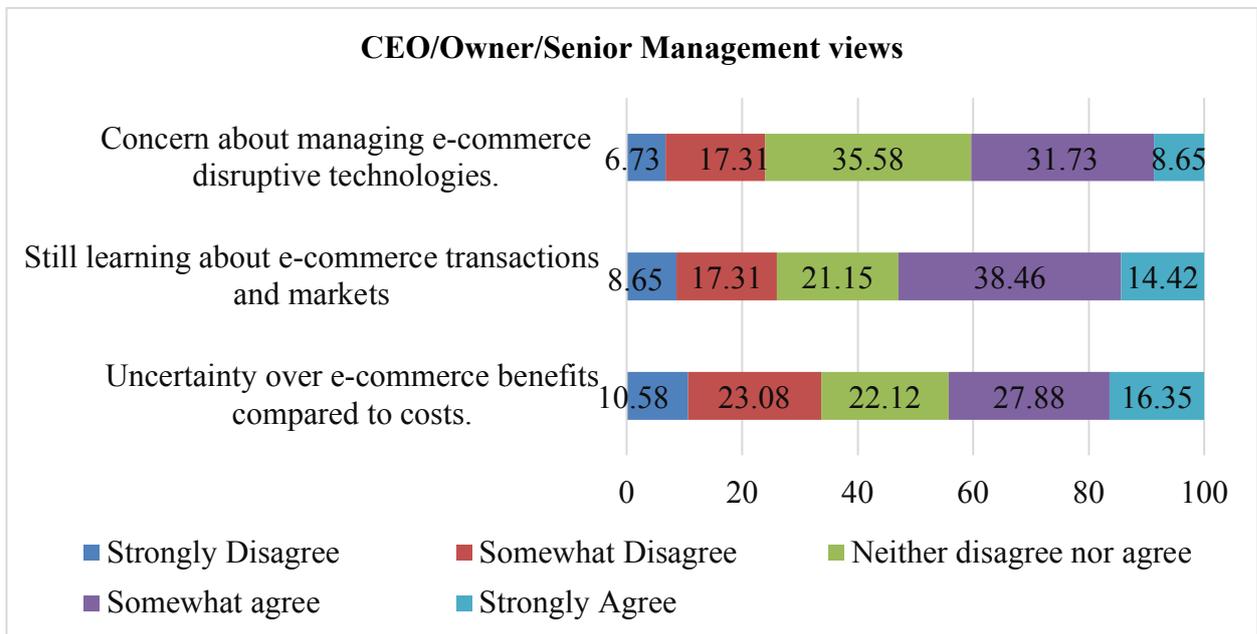
Figure 6. Response on Technological Barriers in Adopting E-commerce



Source: Survey results

Regarding the owner/CEO/senior managers' views, we found that half of the respondents strongly and somewhat agreed that they were still learning about e-commerce transactions and markets (53 percent) (Figure 7). Uncertainty over the benefits and costs of e-commerce also constrained the respondents from engaging in e-commerce (44 percent).

Figure 7. Response on CEO/Owner/Senior Managements' Views on the Barriers in Adopting E-commerce



Source: Survey results

CONCLUSION

Digitalization and e-commerce have increased opportunities for MSMEs to do their business differently. The recent emergence of e-commerce platforms has encouraged MSMEs to engage in e-commerce without investing in a high fixed cost for setting up brick and mortar shops and/or participating in many expensive trade fairs. The government has also introduced several programmes for MSMEs to adopt e-commerce including MSMEs *go online* and *one million domains* as well as an e-commerce roadmap. Despite these initiatives, e-commerce adoption among MSMEs is still low.

The findings suggest several barriers to the adoption of e-commerce, such as the costs for implementing e-commerce, including additional payment costs (e.g. for payment gateway or fees for merchant centers). Improving facilitation efforts for MSMEs to adopt e-commerce is therefore critical, as are making online platforms more accessible and affordable for MSMEs. In addition, programmes to increase digital and e-commerce literacy among MSMEs are also crucial.

Strengthening the e-commerce-enabling environment, especially by improving the telecommunication and logistics infrastructure, reducing the segmentation of business activities, and enhancing access to finance and skilled human capital are other areas in need of policy attention. In particular, the availability of skilled human capital to help MSMEs manage a new form of business is crucial.

Appendix 1. Characteristics of Respondents

Characteristics	
Number of observations (unit)	104
Business Sector (%)	
Manufacturing	1.0
Food and Beverages services	61.0
Retailers	38.0
Number (Employment)	
Min	1.0
Max	45.0
Mean	7.0
Sales revenue end of 2017(%)²⁰	
<= US\$ 22,143	62.50
> US\$ 22,143 – US\$ 184,529	33.65
> US\$ 184,529 – US\$ 3,690,582	3.85
Do you use internet (%)	
No	34.6
Yes	65.4
The purpose of using the internet (%)²¹	
Information collection	22.1
Marketing	56.7
Sell and purchase	57.7
Payment transaction	40.4
Others: Education and Information	1.0
Types of technology available to the firm (%)²²	
Computers (PC/laptops/tablets)	36.5
Smart Phones	64.4
Firm's website /own company apps	18.3
Facebook page or other social media (e.g. Instagram, Line, WhatsApp etc.)	54.8
Point-of-sale (POS) system	26.9
Digital Marketing	24.0
Cloud Office Management System	5.8
Others: education channel	1.0
Others: the online journal	1.0
Others: EDC machine	1.0
Highest education level by CEO/owner/Senior Manager	
School Level (Grades 1- 12)	51.9
Diploma (High Vocational/Technical Cert)	11.5
University (Bachelor's degree)	27.9
Post-Graduate (Master's degree)	8.7
Age of CEO/Owner/Senior Manager (year)	
Min	20.0
Max	68.0
Mean	36.4
Gender of CEO/Owner/Senior Manager (%)	
Male	54.8
Female	45.2
Firm conduct sales/purchase through internet (%)	
Only online	8.7
Online and offline	49.0
Offline	42.3
E-commerce adoption (%)	
Non-user	42.3
E-commerce user	57.7
Duration of use of e-commerce (year)	
Min	1.0
Max	7.0
Mean	2.5
E-commerce platforms²³	
E-market places (e.g., Lazada, Shopee, Tokopedia)	24.0
Own website / applications	18.0
Social Media (e.g., Facebook, Instagram, Line, WA,)	62.0
Food delivery platforms (e.g. Grabfood)	28.0

Source: Survey Results

¹This refers to: (1) e-commerce i.e. Marketplace, Malls, “Brand.com”; (2) online media i.e. online advertising, online gaming, video on demand, and music on demand; (3) ride-hailing i.e. online transport and online food delivery; (4) online travel i.e. online flights, online hotels, and online vacation rentals (Google-Temasek, 2018).

²Google-Temasek, 2018. <https://www.thinkwithgoogle.com/intl/en-apac/tools-resources/research-studies/e-economy-sea-2018-southeast-asias-internet-economy-hits-inflection-point/>

³<https://www.mckinsey.com/~media/McKinsey/Featured%20Insights/Asia%20Pacific/The%20digital%20archipelago%20How%20online%20commerce%20is%20driving%20Indonesias%20economic%20development/The-digital-archipelago-Executive-summary.ashx>

⁴<https://www.mckinsey.com/~media/McKinsey/Featured%20Insights/Asia%20Pacific/The%20digital%20archipelago%20How%20online%20commerce%20is%20driving%20Indonesias%20economic%20development/The-digital-archipelago-Executive-summary.ashx>

⁵ For further details, please see Siwage, Yose and Azali, 2020. “E-commerce Development in Indonesia: Challenges and Prospects”, Chapter 6 in Lee, C. and Lee, E. (eds.), E-commerce, Competition and ASEAN Economic Integration. Singapore: ISEAS.

⁶ Literally “foster parent”, whereby larger firms in certain industries and locations have to assist the MSMEs in marketing, management and technical development.

⁷ <https://setkab.go.id/en/main-points-of-14th-economic-policy-package/>

⁸ https://www.kominfo.go.id/content/detail/8356/siaran-pers-tentang-paket-kebijakan-ekonomi-xiv-peta-jalan-e-commerce/0/siaran_pers

⁹ <https://www.thejakartapost.com/news/2019/12/12/seven-things-you-need-to-know-about-the-new-e-commerce-regulation.html>

¹⁰ Buku Memori Jabatan Menteri Komunikasi Dan Informatika Republik Indonesia (2019), pg. 43

¹¹ <https://aptika.kominfo.go.id/2018/10/1-juta-nama-domain/>

¹² Note that the census excludes the agriculture sector.

¹³ Online business refers to business which sells goods and services through the internet.

¹⁴https://www.mckinsey.com/~media/McKinsey/Featured%20Insights/Asia%20Pacific/The%20digital%20archipelago%20How%20online%20commerce%20is%20driving%20Indonesias%20economic%20development/FINAL_The-digital-archipelago-How-online-commerce-is-driving-Indonesias-economic-development.ashx

¹⁵ In this survey, orders made by telephone calls, facsimile or manually typed e-mail were excluded. Respondents included those having permanent workers of more than 1 worker and less than 100 workers and were established before 2018. The survey instrument was constructed based on a commonly used technology adoption framework called the decision-makers, technological, organizational and environmental (or DTOE) framework whereby these four dimensions of technology adoption are explored. The items in each dimension were adapted from the empirical literature using this framework, and tested with the relevant stakeholders before being pilot-tested. The final adjusted survey instrument was used based on face-to-face interviews by trained interviewers, based on purposive sampling, where most of the MSMEs are located.

¹⁶ Although the reason for the reluctance to adopt e-commerce was not examined in the questionnaire, some respondents in the food and beverage sector indicated that they did not think their sector suited for ecommerce.

¹⁷ The ranking is based on aggregating the “most important” and “important responses” together.

¹⁸ The ranking is based on aggregating “strongly agree” and “somewhat agree” responses together.

¹⁹ See Singtel MyBusiness, “Online retailing in Indonesia: What SMEs should know”.

<https://mybusiness.singtel.com/techblog/online-retailing-indonesia-what-smes-should-know>

²⁰ Exchange rate of Indonesia Rupiah (IDR) in 2017: US\$ 1 = IDR 13,548

²¹ Respondents may choose more than one option.

²² Respondents may choose more than one option.

²³ Respondents may choose more than one option.

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