Expanding the Market through Digitalization: Identification Tool for MSME's to Their Potential Costumer

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ABSTRACT

This research aims to provide simple tools for MSMEs to understand the market conditions they are facing. Moreover, this research also intended to provide information for MSMEs on where customers can buy their products and their ability to access the digital marketing platform they will use. The expected users of these tools are MSMEs. Hence, the important aspect of constructing the tools highlighted in this research is simple, general, and inexpensive. Three key questions try to answer in this research are (1) where the customers are; (2) whether there are potential customers for MSMEs; and (3) do they have the ability to access the digital marketing platform that the MSMEs will try to use in this pandemic. This research proposes two types of indicators for targeted digital marketing. The first indicator is the regional indicator, which shows the capacity of the regions to spend or consume. The second indicator is a household indicator that shows the purchasing ability to consume and the ability of a household to access a digital platform. The data is estimated at the provincial level using annual data obtained from Statistics Indonesia. The results show that the provinces in Java currently have the highest potential for accessing digital platforms. However, analyzing the data using the growth variables shows a big potential for provinces in Kalimantan and Sulawesi as the next destination for expanding the digital platform.

Keyword: *digitalization; MSMEs; market expansion; index construction; costumers identification*

INTRODUCTION

The COVID-19 pandemic has impacted all countries in the world. This pandemic has caused limited activities and social movements, negatively impacting the economy. The world economy is facing a contraction in 2020. IMF, in its World Economic Outlook published in April 2021, however, predict that the growth in 2021 will be positive, reaching 6 percent for the global economy and 6.7 percent for emerging markets. On the other hand, this optimistic prediction is still met with challenging conditions faced by almost all sectors

of the economy. For Indonesia, two consecutive quarters with negative growth in 2020 have put the country's economy on the brink of recession (Accenture, 2021).

One of the resilient actors of the Indonesian economy is micro, small, and medium enterprises (MSMEs). MSMEs saved the economy during Asian Crisis in 1998 (Cooper, Schindler, 2011). However, in the current crisis caused by the pandemic, MSMEs could not swiftly evade the economic impact of the pandemic. The Ministry of Cooperatives and MSMEs stated that 37,000 MSMEs reported that they are seriously impacted, with 56 percent reporting a decline in sales, 22 percent said financing difficulties, 15 percent had issues with distribution, and 4 percent reported difficulties in obtaining raw materials (Rahman, 2020). The recent OJK-BCG Joint Research Survey shows that sales and financing are the two main challenges for micro and SMEs in Indonesia in the COVID-19 era, especially in sales; the decline of purchasing power is the central aspect they have to face (OJK-BCG, 2020).

MSMEs face two aspects of business, *i.e.,* the supply side and the market side. The supply side is related to the network of suppliers that provide inputs for MSME production. The market side is related to how the MSMEs understand the market and access the customers. COVID-19 has forced MSMEs to change their business plan and operations in handling these two aspects. Shifting business plans and processes are challenging for large and established enterprises, nevertheless, for MSMEs. One of the answers to this challenge posed is through digitalization. Digitalization could become one of the solutions to break through activities limitation by enabling access to both suppliers and customers by using the digital platform (Amandus, et al. 2017).

MSMEs have also realized the importance of digitalization. A survey conducted by LPEM FEB UI mentioned that business owners impacted by COVID-19 have begun to move toward online platforms. Similar results are shown by OJK-BCG Joint Research Survey, which says training on the digital platform is the most expected non-financial assistance. Most of the digitalization process they have conducted is in finding a supplier and reaching out to customers. Three key questions to answer are (1) where are the customers; (2) are there potential customers for MSMEs; and (3) do they have the ability to access the digital marketing platform that the MSMEs will try to use in this pandemic. This research aims to provide simple tools for MSMEs to understand the market conditions they are facing. Moreover, this research also intended to provide information for MSMEs on where customers can buy their products and their ability to access the digital marketing platform they will use (LPEM FEB UI, 2020).

The expected users of these tools are MSMEs. Hence, the important aspect of constructing the tools highlighted in this research is simple, general, and inexpensive. Simple means that it is easily constructed, using familiar methods, and easily interpreted (Arsyad, L. 2010). This research would not construct the tools using highly quantitative and sophisticated methods. Therefore, the results of the tools will be general, in which the information provided by the tool is general information serves as an overview of the latest

conditions that the enterprises face. The tools constructed in this research will not provide detailed and customized information for MSMEs on the customers' conditions. Inexpensive means that all of the tools and information are constructed using publicly available data that is practically free and would not become an additional cost for the MSMEs to procure (Raeskyesa et al., 2019).

This research intended to further assist MSMEs in reaching out to customers using digitalization by providing information on the potential customers that could be targeted using digitalization on the provincial level. Information on potential customers is accessible to large enterprises that can gather and collect customer information through surveys and market research. Moreover, large enterprises also have specific funds to conduct a massive marketing strategy covering a large area and many types of customers. That is not, however, the case, especially for micro and small enterprises. This research proposes using publicly available data that needs no funds to collect. It is expected that MSMEs could use the results of this survey to design their digitalization strategy, especially in terms of marketing strategy.

METHOD

1.1. Data and Proposed Indicators

This research proposes two types of indicators for targeted digital marketing. The first indicator is the regional indicator, which shows the capacity of the regions to spend or consume. The variable used in this indicator is the Household Consumption Expenditure of GRDP by Expenditure. This variable shows household expenditure on goods and services for final consumption, where one of the components is the value of goods and services obtained from purchases. In this research, the Household Consumption Expenditure of GRDP by Expenditure is used to indicate the portion of the economy in the province powered through consumption (Gujarati, D., 2004).

The second indicator is a household indicator that shows the purchasing ability to consume and the ability of a household to access a digital platform. Four variables are used in this indicator. The first variable is the growth of GRDP per capita as the proxy of the purchasing ability potential of the individual in the respective provinces.

The second variable is the proxy of education level. Since these tools focus on digitalization, one is assumed to need a specific skill in Information and Computer Technology Skills (ICT) to access digital devices. Therefore, the research uses data on the proportion of adolescents and adults aged 15-59 years with Information and Computer Technology (ICT) skills.

The third variable is the proxy for individual internet access using the data on the productive population accessing the internet in the previous three months. We only use the data for specific age groups for this data, *i.e.,* 25 years and more. This age group is selected because it is assumed that his age group is the age group that already has purchasing power since they are already at the age where the university/college level is completed. Based on

the data definition, internet access facilities are not assumed to be only through computers; it is also possible to use cell phones, PDAs, electronic gaming devices, digital television, and others, and access can be through a fixed or cellular network.

1.2. Indicators Constructions

The indicators construction uses a different methodology for the two groups of indicators. For regional indicators, the estimations are conducted using the Klassen approach. Klassen's method is widely used in regional economics. It is usually used to understand a region's economy's pattern and structure. This approach initially aims to compare the growth and share of a sector compared to other sectors in the economy. The Klassen analysis will group a sector into four categories, *i.e.* (i) prime sector; (ii) potential sector; (iii) developing sector; and (iv) under-developed sector (Wahyuningtyas, et all., 2013).

This research tries to map a province's position compared to other provinces regarding consumption. Therefore, the traditional Klassen analysis is modified in this research to compare the growth and share of household consumption of a province compared to other provinces at the national level (Katti, Setiahadi, 2019). Hence, this research will map the provinces instead of mapping the sector. This approach will identify a province's consumption pattern and position relative to other provinces (Kuncoro, M., 2011). The Klassen categories and how to decide the categories used in this research can be seen in Table 1.

Table 1: Modified Matrix for Klassen Typology

Growth	Share	
	$S_{province} \geq S_{average\ of\ all\ provinces}$	$S_{province} < S_{average\ of\ all\ provinces}$
$r_{province} \geq r_{average\ of\ all\ provinces}$	High Growth, High Consumption	High Growth, Low Consumption
$r_{province} < r_{average\ of\ all\ provinces}$ l	Low Growth, High Consumption	Low Growth, Low Consumption

Notes: $S_{province}$:   share of indicator *x* of province *i*

$S_{average\ of\ all\ provinces}$:   average share of indicator *x* for all provinces

$r_{province}$:   growth of indicator *x* of province *i*

$r_{average\ of\ all\ provinces}$:   average growth of indicator *x* for all provinces

(Source :   BPS, 2022

The second indicator is constructed using a more straightforward approach. All variables in the second group of indicators are ranked. A composite index is later created using the ranks from all the variables. All the variables have the same weight in the composite construction since all variables are believed to have the same importance. After the construction, the index is grouped into four categories using its quartile threshold. The

estimation is conducted using the current variable ranks and the growth of the related variables (Rahayu, 2010).

Estimating the regional indicators will group the provinces into four groups. Likewise, estimating the household indicators will also result in four groups of provinces. Combining the results and selecting provinces in the top two groups of each indicator will give us information on the potential customers to expand the market through digitalization.

FINDINGS AND DISCUSSION

Early analysis based on regional indicators, using the Klassen-type approach of Household Consumption Expenditure of Regional GDP by Expenditure, can be seen in Figure 1. The analysis shown in Figure 1 for growth using the average growth of provinces between 2021 and 2022 for the cross point with the share estimations. The figure added additional thresholds showing the mean value +/- 0.5 standard deviation. These thresholds are shown in the blue line. By adding the line, it will enable to further differentiation the position of each province. The provinces in the quadrant of high growth and high consumption are often called fast-growing regions. They have high household consumption expenditure growth compared to other provinces in 2022. They also have a high share of household consumption in their GRDP. These provinces are Jawa Timur, DKI Jakarta, Sumatra Selatan, Jawa Tengah, and Bengkulu.

The second quadrant is the high-growth quadrant, with a low share of household consumption. It means that with these regions' high growth relative to the other areas, there is potential to increase household consumption. Papua and Sulawesi Tengah are the leading provinces in the quadrant, followed by Kalimantan Selatan, Riau, Kepulauan Riau, and Sulawesi Tenggara. DIY and Banten are two Java provinces in the third quadrant, showing a high share of household consumption but low growth in that consumption.

This result shows that the provinces in these three quadrants (Quadrants I, II, and III) have the potential to market goods and services since they are provinces with a high share of household consumption or a relatively low share of household consumption but have high growth in household consumption.

The results of the estimation for the household index can be seen in Figure 2 and Figure 3. The household index consists of income variable, education variable, and access to internet variables. Figure 2 shows the quantile analysis of the index estimation using the growth of each variable in the index, where the provinces are grouped using the index's quantile values. Using the growth of variables will give information of the future prospects of digital marketing. The lighter color shows the lower value of the index, which shows households have higher income, higher ICT education, and better access to the internet. On the other hand, the darker color shows the higher value of the index, which shows households have lower income, lower ICT education, and limited access to the internet. Among provinces with household indexes in the first and second quantiles are Kalimantan Barat, Kalimantan Utara, Sumatra Utara, Jawa Timur, and DI Yogyakarta. Meanwhile,

Figure 3 shows the quantile analysis of the index estimation using the current data of each variable. Using the current data will give information on the current condition of the potential of digital marketing. Figure 3 shows that provinces that have household indexes in the first and second quantiles are, among others, all provinces in Java. Bali, Riau, Kepulauan Riau, and Kalimantan Barat.

Figure 1: Results of Klassen on Household Consumption Expenditure of Regional GDP by Expenditure, 2022
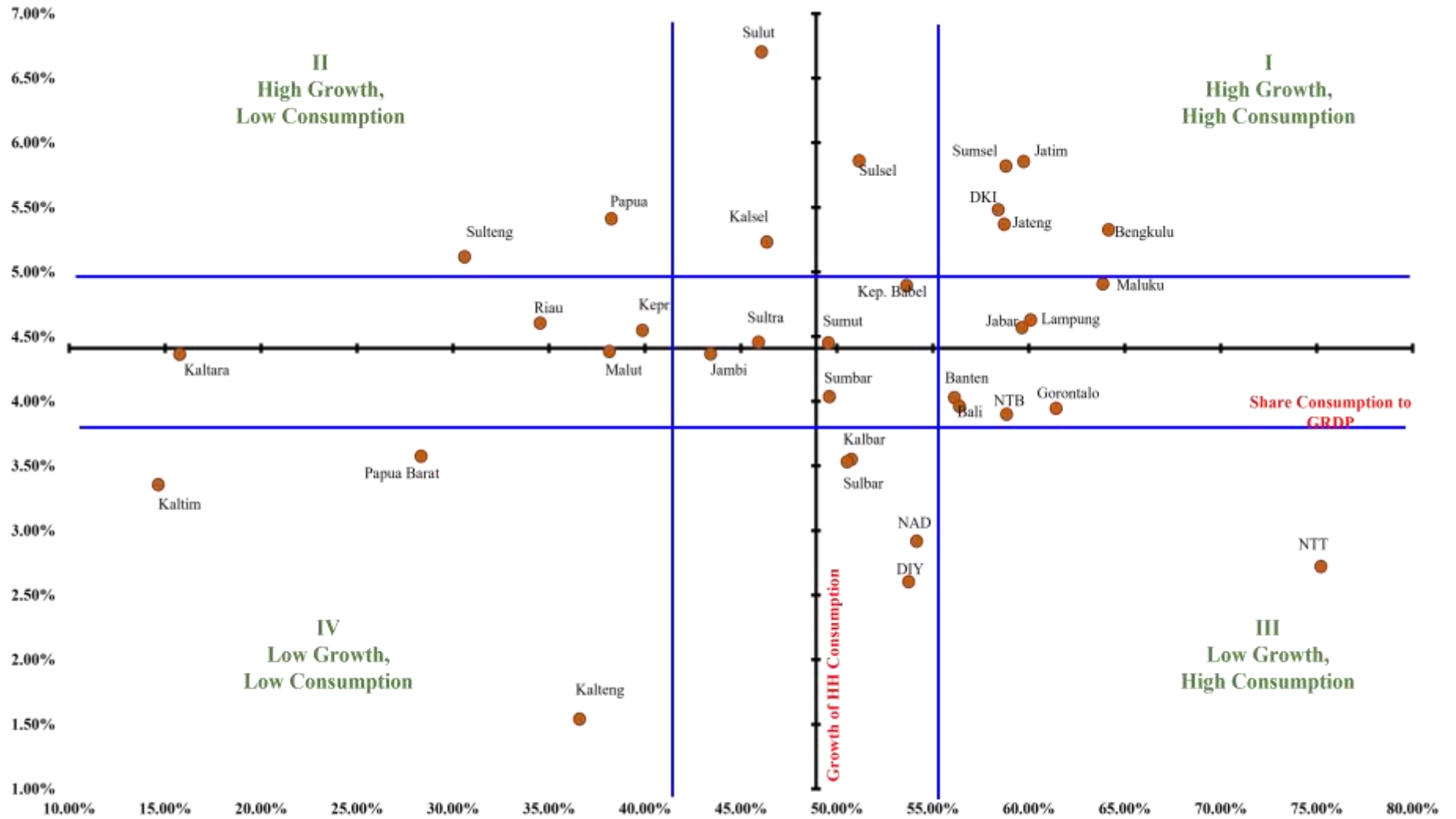
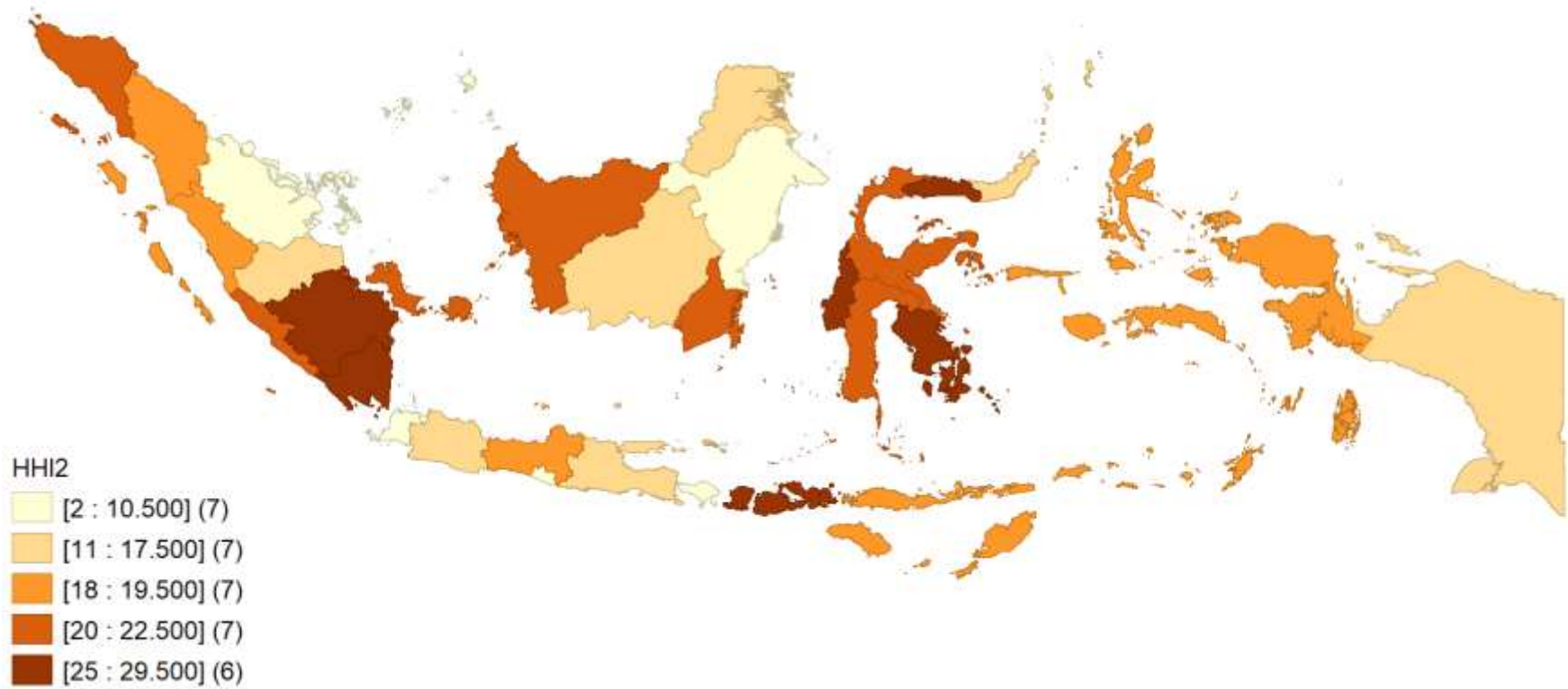Note: Data source from Statistics Indonesia

Figure 2: Household Indicators Index: Growth, 2022 – Quintile Analysis
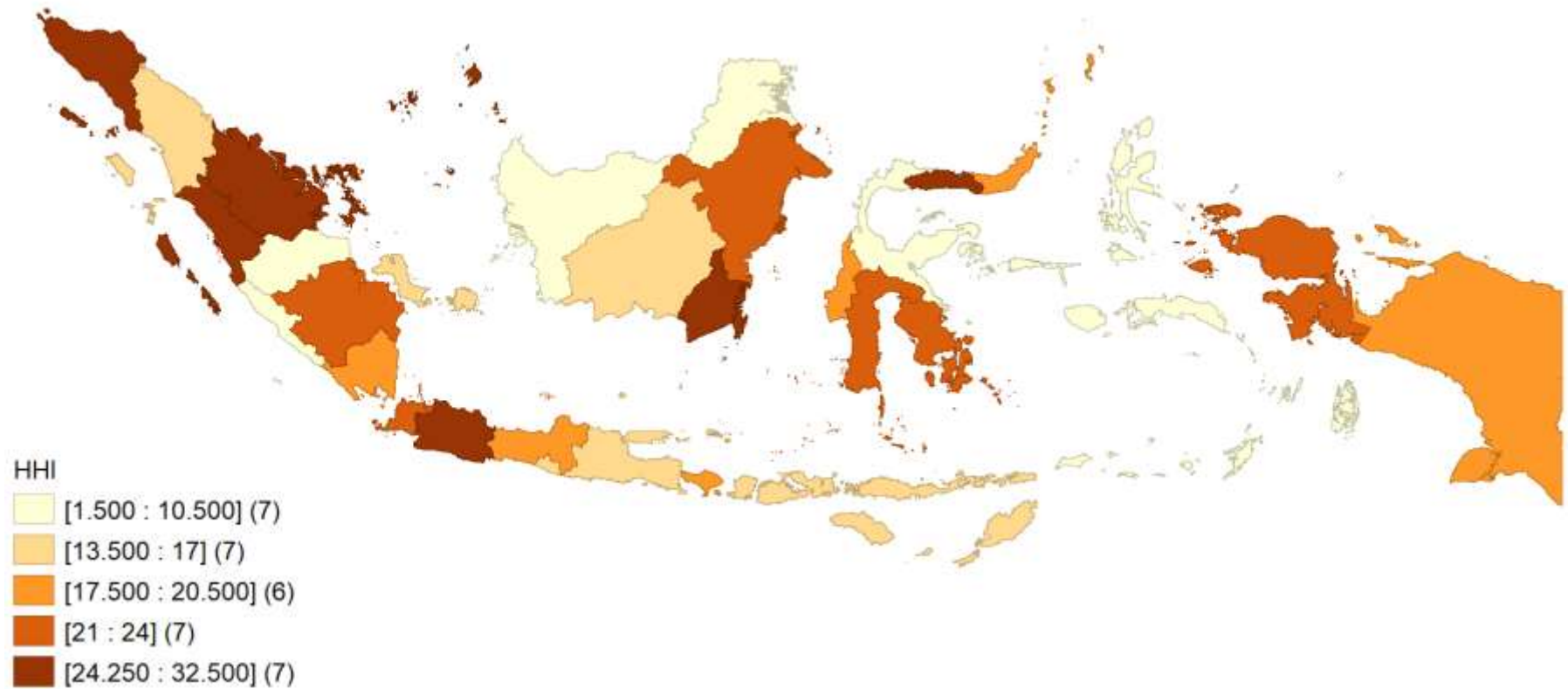
Note: Data source from Statistics Indonesia

Figure 2: Household Indicators Index: Current, 2022 – Quintile Analysis

HHI2
- [2 : 10.500] (7)
- [11 : 17.500] (7)
- [18 : 19.500] (7)
- [20 : 22.500] (7)
- [25 : 29.500] (6)

The analysis is then conducted by combining the estimation from two indicators. The results can be seen in Table 2 and Table 3. These provinces provided in Table 2 and Table 3 are those based on the analyses conducted in this research have the potential for MSMEs to expand their market through digitalization.

Table 2: The Mapping of Potential Provinces for Digitalization - Growth

Regional Indicators / Household Indicators	High Growth, High Consumption		High Growth, Low Consumption		Low Growth, Low Consumption	
	Quartile 1	Quartile 2	Quartile 1	Quartile 2	Quartile 1	Quartile 2
Provinces	Maluku	Sumatra Utara	Sulawesi Tengah		NTB	DI Yogyakarta
	Bengkulu	Kep Babel			Kalimantan Barat	Bali
	Jawa Timur	Jawa Tengah				NTT
						Sulawesi Barat

Table 3: The Mapping of Potential Provinces for Digitalization - Current

Regional Indicators / Household Indicators	High Growth, High Consumption		High Growth, Low Consumption		Low Growth, Low Consumption	
	Quartile 1	Quartile 2	Quartile 1	Quartile 2	Quartile 1	Quartile 2
Provinces	DKI Jakarta	Jawa Barat	Sulawesi Utara	Papua	DI Yogyakarta	
		Jawa Tengah			Banten	
		Jawa Timur			Bali	

CONCLUSION

The results of the analysis provide information on where the potential customers that have the ability to access digital platforms are. After finding this information, the next steps that could be taken are explained in the following.

The methods could further estimate using district (*kabupaten/kota*) level data. Using district-level data will provide more detailed information since the provincial-level information is often considered too general. Another expansion of the analysis is estimating using sectoral data to have knowledge of sectoral mapping.

In terms of developing better tools, several aspects could be tried and simulated. Regarding the methods, there are more sophisticated methods that could be tried to improve the results. However, in conducting this, it still needs to be underlined that the method chosen should still be simple and easy to understand. Moreover, other variables also could be simulated to have better information on the condition of the customers. Especially for the growth variables, the data period could be improved to cover a wider period of time, since growth is considered a long-run variable.

For MSMEs, this information will provide early information on the demand side when they want to apply digitalization to improve their business. This information is helpful, especially if the enterprises want to apply a targeted market strategy. By understanding where the household that has access on the internet, have skill to access, and have power to purchase, then using digitalization as part of the marketing strategy might impact their sales. MSMEs might not have a large budget as part of the marketing strategy. Therefore, promotion targeted at specific regions might be the strategy that can be used. Using a market place platform to market their products might have significant outreach without spending a substantial budget. However, suppose MSMEs want to move to higher level of business, from micro to small enterprises, or from small to medium enterprises. In that case, they might need to start to have marketing and promotion strategies to improve their sales and revenue.

This information could also trigger the next important step for MSMEs, which is mapping the supply side of their business. The supply side, in this case, is where the enterprises get their inputs. When enterprises get their inputs inefficiently, this will also make the production process inefficient and lead to high production costs. High production costs will later lead to the high selling price and make the enterprises difficult to compete with others to produce more efficiently. The enterprises get their input inefficiently if they have to pay a high price for the input procurement, for example, because of high transportation costs. Knowing where your customers are one thing, but if the enterprise could also match the knowledge of the supplier, this will make the enterprise become more efficient. Expanding the market to tap the potential market will be able to be conducted. What it is before known as an impossible thing to become bigger as a business, will be possible.

The role of the government, in this case, is two folds. The government could be the provider of the information in a dashboard or platform that MSMEs could access. In this platform, the government could also provide guidelines on how to use and interpret the information. This guideline will ease the MSMEs to utilize the information to expand their business further. Moreover, the government could also provide capacity building for MSMEs to equip them with tools and skills to access and utilize digital platforms to expand their business.

The second role that the government could play as the enabler for matching the supply and demand gap that MSMEs face. If the mapping of supply and the mapping of demand for MSMEs could be conducted and the gap is detected, there is a big possibility that MSMEs cannot close this gap. The government could provide a platform that offers information for MSMEs in their effort of closing the gap. For example, a small company in Jawa Timur would like to expand its business to Papua Barat. The cost for providing input from Jawa Timur to Papua Barat will be substantial for this company. The owner then could log in to the platform provided by the government, where she could find the list of input prices that she could choose or other alternatives that she could use that might enable her business expansion to Papua Barat.

In conclusion, the results of the analysis could serve the MSMEs in mapping their target market. Understanding the target market could be crucial for MSMEs in riding the wave of COVID-19 crisis. Further, according to Accenture Point of View on Powering Small and Medium Business Resiliency in a COVID-19 World, this target could enable swift connect with customers through, for example, website development, online storefront, email signup. Moreover, the market and customer mapping could also optimize the supply chain to drive faster delivery and increase satisfaction, while reducing the cost to serve, for example through customer support and tracking for product shipping.

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