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Digital Marketing Utilization Determinants: Study on MSEs in Salatiga City

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ABSTRACT

This research aims to identify the factors influencing the use of digital marketing by Micro, Small, and Medium Enterprises (MSMEs) and to examine the factors affecting the preference for digital marketing usage by MSMEs in the city of Salatiga. The research sample consists of 135 business units representing MSMEs in Salatiga. Data analysis techniques involve descriptive statistical analysis, qualitative analysis, binomial and multinomial logistic regression. The research findings provide evidence of the implementation of the UTAUT theory, particularly concerning performance expectations and facilitating conditions, significantly influencing the probability of digital marketing usage and the marketing of business products. Surprisingly, acceptance as part of performance expectations has a negative impact on digital marketing usage, especially on social media platforms. Furthermore, digital marketing proves to be of paramount importance for MSMEs looking to expand their businesses.

Keywords : MSMEs; Digital Marketing; Covid-19; UTAUT Theory; Logistic Regression

ABSTRAK

Penelitian ini bertujuan untuk mengidentifikasi faktor-faktor yang memengaruhi penggunaan pemasaran digital oleh Usaha Mikro Kecil dan Menengah (UMKM) serta untuk meneliti faktor-faktor yang memengaruhi preferensi penggunaan pemasaran digital oleh UMKM di Kota Salatiga. Sampel penelitian terdiri dari 135 unit usaha yang mewakili UMKM di Kota Salatiga. Teknik analisis data melibatkan teknik analisis statistik deskriptif, analisis kualitatif, regresi logistik binomial, dan multinomial. Hasil penelitian menunjukkan adanya bukti implementasi teori UTAUT, terutama dalam hal ekspektasi kinerja dan kondisi penunjang yang berpengaruh signifikan terhadap probabilitas penggunaan pemasaran digital dan pemasaran produk usaha. Penerimaan sebagai bagian dari ekspektasi kinerja ternyata memiliki dampak negatif terhadap penggunaan pemasaran digital, terutama pada platform media sosial. Selain itu, pemasaran digital sangat penting bagi pelaku UMKM yang ingin mengembangkan bisnis.

Kata Kunci : UMKM; Pemasaran Digital; Covid-19; Teori UTAUT; Regresi Logistik



INTRODUCTION

According to Law Number 20 of 2008, MSMEs or Micro, Small and Medium Enterprises are defined as Micro Enterprises, namely productive businesses owned by individuals and/or individual business entities that meet the criteria for micro businesses as regulated in the law. as a Small Business, namely a productive economic business that stands alone, which is carried out by an individual or business entity that is not a subsidiary or branch of a company that is owned, controlled, or is part, either directly or indirectly, of a Medium Business or Large Business that meets Small Business criteria as intended in the Law. As a Medium Business, namely a productive economic business that stands alone, which is carried out by an individual or business entity that is not a subsidiary or branch of a company that is owned, controlled, or part of either directly or indirectly with a Small Business or Large Business with total net assets or annual sales proceeds as regulated in the Law (MLHR, 2008).

According to the CMEA (2021), Micro, Small, and Medium Enterprises (MSMEs) are an important foundation for the economics of Indonesia. Not only that their ability to cope with the economic crisis in 1997/1998 been proved, but their contribution to Indonesia's economy in terms of business unit and labor is much larger compared to the big scale business unit (see Chart 1).



Source: MCSME, 2019

Note: Percentage is from the total number of the business unit, labor, and the total value of GDP, export, and investment.

Chart 1. Contribution of MSME and MSE in Indonesia in 2018

The pandemic caused by the Covid-19 virus in early 2020 has brought an economic crisis in all countries in the world, including the MSE in Indonesia because, to restrain and prevent the widespread of the virus, the Indonesian government released a policy to limit the society activities. This policy reduces the demand for goods and services and therefore also decreases household expenditures. Eventually, it affects the revenue of business units like MSEs. The lower revenue drives many business units to reduce their labor, either by decreasing their working hours or by laying off their laborers. This condition also forced some business units to close their business. At the end of 2021, there were 87.5% MSMEs



impacted by the Covid-19 pandemic, and about 50% of them might well be bankrupt (tempo.co, 2021).

The Covid-19 pandemic of course also affects the MSEs in Salatiga City, a small city in the Central Java Province in Indonesia. The Covid-19 pandemic caused the contribution of some sectors to the GRDP of Salatiga City to be less. Many MSEs in Salatiga City work in the trade field. Table 1 shows that the Covid-19 pandemic has caused the economic contribution of the trade field to decrease by 35%. According to the data from the Cooperative and SME Office of Salatiga City, before the MSMEs got financial aid called the economic safety net from the government, the Covid-19 pandemic has reduced the revenue of MSMEs in the food and beverage processing industry up to 70%. This situation must have forced the business people to rack their brains to find the right marketing strategy for their business during the Covid-19 pandemic. Fortunately, the development of information technology makes it possible for them to take advantage of digital marketing.

Table 1. Distribution and Distribution Change of GRDP 2010 Series at Current PriceAccording to Industrial Origin in 2019-2020 (%)

Industrial Origin	2020*	2019	Δ
Processing Industry	32.19	31.27	0.92
Construction	31.94	14.41	-0.47
Wholesale and Retail Trade; Repair of Motor Vehicles and Motorcycles	12.85	13.19	-0.35
Provision of Accommodation, Eating, and Drinking	7.12	7.53	-0.41
Education Services	5.53	5.39	0.13
Government Administration, Defense, and Compulsory Social Security	5.20	5.18	0.02
Real Estate	4.62	4.58	0.04
Agriculture, Forestry, and Fishery	4.54	4.50	0.03
Information and Communication	3.85	3.22	0.62
Financial and Insurance Services	3.55	3.48	0.08
Transportation and Warehousing	2.30	3.01	-0.71
Health Services and Social Activities	1.80	1.61	0.19
Business Activities	1.26	1.32	-0.06
Other Services Activities	0.96	1.02	-0.06
Electricity and Gas Procurement	0.19	0.18	0.00
Mining and Quarrying	0.04	0.04	0.00
Water Supply, Sewerage, Waste Management, and Remediation Activities	0.07	0.07	0.00
Total GRDP	100.00	100.00	

Source: Statistics of Salatiga Municipality, 2022

Note: * = preliminary figures, Δ = distribution change

Digital marketing, which is also known as internet marketing, e-marketing, or webmarketing, is an effort to achieve marketing objectives by applying digital media (Chaffey & Fiona, 2016). The digital media may use various digital technology platforms such as the internet, websites, blogs, email, mobile apps, social media (Facebook, Instagram, Twitter, etc.), mobile phones, tablet, laptop, desktops, interactive television, IPTV, and digital signage (Chaffey & Fiona, 2016).

Digital marketing offers many benefits which are called the "5S of Internet Marketing" by Chaffey and Smith (2013). The first S is for "sell" because it can grow sales (bring new consumers or expand the market) (Junusi, 2020; Schwarzl & Grabowska, 2015). Hence, it might be able to help the business unit to survive during the Covid-19 pandemic. The second S is for "serve" because it can be used to provide online services and to inform the product's development to the customers. Thus, it can be used to keep the



customers' loyalty (García et al., 2019. The third S is for "speak" because it can be utilized to build communication between the business unit and its customers. It can be used to do online research or as a medium for electronic public relations to influence customers (Shirisha, 2018). The fourth S is for "save" cost because it can make the selling cost becomes much more efficient (Brunius & Lind, 2017; Shirisha, 2018). The last S is for "sizzle" because it can extend the brand of the business unit's goods or services. With many benefits, then the digital marketing through social media is found to have a positive effect on the profit by Chan and Yazdanifard (2014).

Many studies have been conducted to study factors affecting the utilization of digital marketing (Afifah et al., 2018; Barroso et al., 2019; Dahnil et al., 2014; Gunawan & Sulaeman, 2020; Huda et al., 2020; Kanchanatanee et al., 2014; Mapunda, 2021; Pollak & Markovic, 2021; Ritz et al., 2019; Shaltoni, 2017). The studies carried out in Indonesia are still limited (Afifah et al., 2018; Gunawan & Sulaeman, 2020; Huda et al., 2020). Most research study factors determine or have a relationship with the intention of a business unit to adopt digital marketing or the behavior of a unit business in using digital marketing, or the benefit that a business unit get from the utilization of digital marketing using structural equation modeling (SEM) (Afifah et al., 2018; Barroso et al., 2019; Brunius & Lind, 2017; Dahnil et al., 2014; Gunawan & Sulaeman, 2020; Huda et al., 2020; Kanchanatanee et al., 2014; Mapunda, 2021; Pollak & Markovic, 2021; Ritz et al., 2019; Shaltoni, 2017), but Dahnil et al. (2014) and Mapunda (2021) used literature review, Pollak and Markovic (2021) employed the contingency test, Shaltoni (2017) applied the Pearson correlation, and Barroso et al. (2019) combined fuzzy cognitive mapping (FCM) and SEM.

Based on the background, our first objective is to identify factors affecting the usage of digital marketing by MSEs. The difference between this research and previous studies is that we will use the binomial logistic regression method instead of SEM. Hence, the dependent variable in this study is whether a unit business uses digital marketing or not. The second objective of this study, which is also the second difference between our study and previous studies, is to investigate factors influencing preferences on the type of digital marketing used by the MSEs. The multinomial logistic regression is applied to achieve the second objective.

However, our data is not designed for this purpose but to analyze whether digital marketing usage affects business revenue. Therefore, the explanatory variables in this study are the unit business characteristics and the respondent characteristics, in which the respondent could be the owner or the business' labor who runs the business. To the best of the research team's knowledge, we are the first who do it. It also becomes the third difference between this research and previous studies. In the previous studies, the independent variables are characteristics, behavior, or perception of the owner or the decision-maker, or the manager of the unit business in the utilization of digital marketing. Last, this research is conducted in Salatiga City.

Unified Theory of Acceptance and User of Technology (UTAUT)

UTAUT is a theory that explains how people decide or accept the usage of technological advances that is developed by Venkatesh et al. (2003, 2012). According to UTAUT theory, there are 4 factors that can affect people's decision in using a form of technology progress (Darmawan et al., 2020; Venkatesh et al., 2012). First is how far a person believes that the utilization of new technology can increase his performance (performance expectancy). Second is the extent to which the usage of that new technology can bring easiness in that person's work (effort expectancy). The third is the degree to



which others affect that person's decision in using the new technology (social influence). Fourth is the condition of supporting facilities to apply that new technology (facilitating conditions).

Previous Studies

Based on previous studies, we can summarize that there are some factors that can influence the usage of digital marketing or the intention to use digital marketing. The first factor is knowledge (Afifah et al., 2018; Gunawan & Sulaeman, 2020; Huda et al., 2020; Mapunda, 2021). The second factor is related to technology aspect, such as website and digital platform, IT (information technology) infrastructure and facilities, and compatibility of technology being used with the organization's culture (Barroso et al., 2019; Dahnil et al., 2014; Kanchanatanee et al., 2014; Mapunda, 2021; Shaltoni, 2017). The third is organizational factor related to operational management, marketing and promotions (Barroso et al., 2019; Dahnil et al., 2014). The fourth factor is environmental factor, i.e. business' market (Barroso et al., 2019; Dahnil et al., 2014) which includes pressure from competitors (Shaltoni, 2017), government's policy on digital marketing adoption and the market readiness in applying digital transaction (Dahnil et al., 2014). The fifth factor is innovation on technology, product and new market (Gunawan & Sulaeman, 2020; Shaltoni, 2017). The sixth factor is customers or end users (Dahnil et al., 2014; Shaltoni, 2017). The seventh factor is the perceived advantage of digital marketing (Kanchanatanee et al., 2014; Ritz et al., 2019; Shaltoni, 2017). The eight factor is entrepreneur profile, that is, business' owner and/or manager's attitude such as their selfconfident to do a job (Barroso et al., 2019; Huda et al., 2020; Kanchanatanee et al., 2014; Mapunda, 2021). Other factors that may affect digital marketing are availability of supporting resource such as money, time, and other specific resources (Mapunda, 2021), the easiness of digital marketing usage (Ritz et al., 2019), previous experience (Pollak & Markovic, 2021).

RESEARCH METHOD

Sampling

MSEs in Salatiga City are the population research. The main data of interest in this research is the nominal scale data of utilization of digital marketing by MSEs in Salatiga City. To determine the minimum sample that should be taken, this research uses the proportion of e-commerce users in the Central Java province as a proxy for the proportion population (\hat{p}), which is 30,1% (BPS, 2021). From the sample that is chosen, we expect to be able to construct an interval estimation for the proportion population of MSEs that use digital marketing with a 95% confidence level and a maximum margin error of 10%. Therefore, the minimum sample that should be taken is (Sharpe et al., 2021):

$$n_{min} = \hat{p}\hat{q}\left(\frac{z}{e}\right)^2 = \hat{p}(1-\hat{p})\left(\frac{z}{e}\right)^2 = 30,1\% \times (1-30,1\%) \times \left(\frac{1,96}{10\%}\right)^2 \approx 81$$
(1)

Where: *n_{min}* is the minimum sample size that must be collected, *z* is a number from the normal distribution table for the confidence interval of 95%, and *e* is the margin error.

Table 2. shows the minimum sample size that should be taken in each district, which is determined by the stratified sampling (Sekaran & Bougie, 2016). Then, the sample in each district is collected based on the judgment sampling (Sekaran & Bougie, 2016) that the MSE must have been in the business for at least 2 years because the survey was conducted in October-November 2021 and the research also wanted to record the data



before and during the Covid-19 pandemic. Moreover, the criteria for micro and small enterprises are based on law number 20 in 2008 (MLHR, 2008) and Statistics of Indonesia (2022) (see Table 3).

		Ratio of Chosen		
	Population		Chosen	Sample to Population
District	2020 ¹⁾	MinimumSample ²⁾	Sample ³⁾	2020
Tingkir	601	25	35	5.8%
Sidorejo	585	24	38	6.5%
Sidomukti	477	20	37	7.8%
Argomulyo	306	12	25	8.2%
Total	1,969	81	135	6.9%

Table 2. The Population of Small and Medium Enterprises and Sample Chosen perDistrict in Salatiga City

Source: 1) Statistics of Salatiga Municipality, 2022b

Note: 1) Population data is from (Statistics of Salatiga Municipality, 2022b). 2) The minimum sample size that should be taken. 3) The chosen size for the analysis.

Table 3. Characteristics of Micro, Small, and Medium Enterprises

Business Size	Labor (people) ¹⁾	Revenus (million IDR) ²⁾	Asset ^{*)} (million IDR/year) ²⁾
Micro	1 - 4	≤ 300	≤ 50
Small	5 – 19	$< 300 - \le 2.500$	$< 50 - \le 500$
Medium	20 – 99	$>$ 2.500 $ \leq$ 50.000	$> 500 - \le 10.000$

Source: 1) Statistics Indonesia, 2022. 2) Law number 20 in 2008 (MLHR, 2008) Note: *) not including the business' land and building.

The sample is also collected by making sure that it covers all business fields: (a) agriculture, plantation, farming, and fishery, (b) processing industry (manufacture), (c) trade dan (d) services.

Data

This research uses primary data collected by interviewing the respondents using the research questionnaire in a survey. Not only identifying whether a respondent uses digital marketing or not, but the research also collected the identity of respondents and business units, such as revenue assets, and labor quantity, before and during the Covid-19 pandemic. Not all respondents can estimate the business unit's assets because the respondents might not be the owner or the decision-maker in the business, but some of them are only workers. Therefore, asset data cannot be collected in terms of its value, but the type of assets owned by the business unit, such as the business place, motor vehicle, and business equipment.

Respondents who do not use digital marketing are asked about the obstacles which make them not use digital marketing. For respondents who use digital marketing, further, identification is carried out to know the type of digital marketing that they use, and the benefit that they gain from the utilization of digital marketing. To respondents who stated that they are not interested in using digital marketing, we asked their reason why they do not interested in using digital marketing.



Regression Technique

This research uses descriptive statistics analysis to present the profile of respondents and business units in this study. We also use the qualitative analysis to explain the respondents' obstacles in using digital marketing or why they are not interested in applying digital marketing, and the advantages that they obtain from the utilization of digital marketing. Furthermore, we employ the binomial and the multinomial logistic regression model (Gujarati, 2015) with characteristics of the business unit and the respondent (the owner or the business' labor who runs the business) as the independent variables.

The binomial logistic regression model is used to investigate factors that affect the usage of digital marketing:

 $L_{1i} = \ln \left(\frac{P_1(Market = 1)}{P_1(Market = 0)} \right) = Z_{1i}$ = $a_0 + a_1 \cdot Revenue_i + a_2 \cdot Labor_i + a_3 \cdot Lifetime_i + a_4 \cdot AgriInd_i + a_5 \cdot Service_i + a_6 \cdot Age_i + a_7 \cdot Sex_i + e_i$ (1)

Where: $L_1 = logit or log of the odd with odd = \frac{P_1(Market = 1)}{P_1(Market = 0)}$, ln = natural logarithm, $P_1 = probability = \frac{1}{1+e^{-Z_i}}$, *Market = dummy variable* for *digital marketing utilization* = {1 if yes, 0 if not}, a_0 = constant of model (1), a_j = regression coefficient of variable j = {*Revenue*, *Labor*, *Lifetime*, *AgriInd*, *Service*, *Age*, *Sex*}, i = indices for the business unit sample, *Revenue* = the average revenue (IDR/month), *Labor* = total (full-time and part-time) labor, *Lifetime* = business experience (year), *AgriInd* = *dummy variable* for agriculture, plantation, farming, fishery, and processing industry = {1 if yes, 0 if no}, *Service* = *dummy variable* for services = {1 if yes, 0 if no}, *Age* = the respondent's age, *Sex* = the respondent's gender = {1 if male, 2 if female}, and *e* = residual of model (1).

The multinomial logistic regression model is used to examine factors that influence the preferences on the type of digital marketing platform:

$$L_{2i} = \ln \left(\frac{P_2(Digital = k)}{P_2(Digital = 0)} \right) = Z_{2i}$$

= b₀ + b₁·Revenue_i + b₂·Labor_i + b₃·Lifetime_i + b₄·AgriInd_i + b₅·Service_i + b₆·Age_i + b₈·Sex_i + ε_i (2)

Where: L₂ = logit or log of the odd ratio with odd ratio $=\frac{P_2(Digital = 1)}{P_2(Digital = 0)}$, P_2 = probability $=\frac{1}{1+e^{-Z_2}}$, *Digital* = type of digital marketing platform being used = {0 if not using digital marketing, 1 if use social media, 2 if use local range platform, 3 if use other than social media or local range platform, 4 if use social media and local range platform, 5 if use social media and other platform} with {1, 2, 3, 4, 5} = k, b_0 = constant of model (2), b_j = regression coefficient of variable j and ε = residual of model (2). Notice that a respondent might use more than one platform of digital marketing. The local range platform is a digital marketing platform with a local market range, such as GoFood, GrabFood, Jegg Boy & Girl, and OSaga in which motorcycle taxi service is used to send goods from a business unit to a consumer.

Sometimes the regression coefficients in the logistic regression are displayed in odds ratio. Odds ratios is ratio between two odds or the exponent of a regression coefficient. An odds ratio above one represents a positive effect and vice versa.

Although we recorded data for before and during the covid-19 period, but because one of the assumption in the logistic regression is that the observations have to be independent of each other, which means that the MSE data must not be measured repeatedly, then we do not include time period of covid-19 pandemic (before and during



the pandemic) into the model and therefore, cannot analyze the effect of covid-19 pandemic. We only estimate the model using data during the covid-19 pandemic.

Further, because it's difficult to interpret the regression coefficient in the binomial and multinomial logistic regression, usually the marginal effects are used instead. Model (1) and model (2) are estimated using robust standard error to avoid the heteroscedasticity problem. Both models are free from a multicollinearity problem because there is no strong correlation between quantitative explanatory variables in the models.

	Revenue	Labor	Lifetime	Age	Sex
Revenue	1.0000				
Labor	0.2676	1.0000			
Lifetime	0.0631	0.1403	1.0000		
Age	-0.1932	-0.0457	0.3811	1.0000	
Sex	-0.0758	-0.0743	-0.0450	0.2515	1.0000

Tabel 4. Pearson Correlation Among Quantitative Independent Variables

Source: Author's calculation, 2021

RESULTS AND DISCUSSION

Description of MSEs

Respondents of this research are the owner of MSEs or labors of MSEs who runs the business. Most of our respondents are female and people aged 25-56 years old. Most of them have been doing their business for around 11-12 years (see Figure 1 and Table 5). The Covid-19 pandemic hit their business and reduced their average monthly revenue by more than 40% and decreased their average labor by almost 20% (see Table 5). Most of them are merchants.



Source: Author's survey, 2021

Figure 1. Respondents Distribution by Sex, Age Group and Business Field

Figure 1. illustrates the distribution of respondents based on three key factors: sex, age group, and business field. This visual representation provides insights into the demographics and characteristics of the participants in the study.



Table 5. displays the summary statistics of the respondents. This table provides a concise overview of key statistical information related to the participants in the study. It typically includes important metrics such as means, standard deviations, minimum and maximum values, and possibly other relevant statistics depending on the data collected. This summary statistics table offers a quick reference for understanding the central tendencies and variations in the data collected from the respondents.

	Variables	Unit	n	Mean	St. Dev	Min.	Max.
Respondent	t's age	years old	135	42,66	13,11	18	71
Business life	etime	years	135	11,5	11,1	3	74
Monthly	before pandemic	million IDR	135	18,7	30,5	0,1	300
Revenue	during pandemic	million IDR	135	10,1	17,2	0,125	150
Labor	before pandemic	people	135	2,1	2,8	1	31
Labor	during pandemic	people	135	1,7	1,0	1	7

Table 5. Summary Statistics of Respondents

Source: Author's survey, 2021

Notes: St. Dev = standard deviation, Min. = minimum dan Max. = maximum.

As we said previously, we were only able to record the business asset in terms of its type. Since assets in the form of business equipment are various for different types of business, then we only display assets in the form of the business place and motor vehicle (see Figure 2). Most of MSEs already own motorcycles (92%). However, despite that most of them do not own cars (83%), almost 50% of MSEs have already owned their business place.



Source: Author's survey, 2021

Note: missing = respondent did not give any answer.

Figure 2. Respondents Distribution by Asset Type

Figure 2. illustrates the recorded business assets, specifically focusing on the types of assets related to the business place and motor vehicles. In the case of micro and small enterprises (MSEs), the data shows that a significant majority of them own motorcycles, with a 92% ownership rate. However, a large percentage of MSEs do not own cars, with



83% not having car ownership. Interestingly, nearly 50% of MSEs have acquired their own business premises or places.

Figure 3. represents the distribution of respondents based on their level of digital marketing utilization. This figure provides an overview of how extensively the respondents in this study use digital marketing strategies. It can help in understanding whether the respondents tend to actively adopt digital marketing or if there is variation in the levels of utilization among them.



Source: Author's survey, 2021

Note: missing = respondent did not give any answer.

Figure 3. Respondents Distribution by Digital Marketing Utilization

Further, the Covid-19 pandemic does not affect much on the application of digital marketing. Before and during the pandemic, the proportion of MSEs that uses digital marketing is between 30% - 40% (see Figure 3). Most of them use social media platforms as a digital marketing tool (around 70%) and some of them combine it with other platforms (around 20%), i.e. local range platforms such as Grabfood, Gofood, Osaga, Jekboy, etc., and other platforms such as google (google ads or google maps) or various marketplace such as shopee, etc. As explained before, we define a local range platform as a digital marketing platform with a local market range (in or around Salatiga City).

Binomial Logistic Regression Analysis

As explained previously, we do not design this study to analyze factors that determine the usage of digital marketing but we utilize our survey data in the study of how digital marketing usage influences business revenue. Hence, the explanatory variables in this study are the unit business characteristics and the respondent characteristics so we could only study the first and the fourth elements of the UTAUT theory, viz. the performance expectancy and the facilitating conditions. The indicator of the performance of the business unit in our study is the revenue while the indicator facilitation condition in our study includes the MSEs characteristics and the respondent characteristics, i.e. labor quantity, the business lifetime, the business field, age, and sex of the respondent.



Table 6. displays the results of the binomial logistic regression model and Table 7. displays the marginal effect of the independent variables in the model. Based on the Wald test, all of the explanatory variables simultaneously have a significant effect on the possibility of using digital marketing but the model can only explain the probability of utilizing digital marketing by 10.98%.

Based on Table 6., the MSEs' revenue, lifetime, types of the business field, and sex of the respondent do not have any influence on the probability of utilizing digital marketing. That type of business field does not have any influence on the probability of using digital marketing shows that no specific business field that encourages the usage of digital marketing more than other business fields.

Table 6. also shows that labor quantity has a positive effect on the chance of using digital marketing. More labor can encourage a business unit to use digital marketing. It is perhaps because greater labor reflects more output to be sold and digital marketing could be an effective tool to do that. Some respondents argue that the obstacle to employing digital marketing is that they do not have enough labor to take care of digital marketing (24.59%). Our finding also reinforces Mapunda's (2021) outcome that supporting resource, such as labor quantity, influences the usage of digital marketing.

Besides labor, the respondent's age has a negative effect on the probability of utilizing digital marketing. Thus, the younger generation seems to have greater capability to adopt digital marketing technology. On the other hand, older people tend to have difficulties in applying digital marketing technology. Some respondents (6.76%) told us they do not want to use digital marketing because they are old and some respondents (8.2%) reveal that age becomes an obstacle for them to employ digital marketing. Our result is also in line with the studies by Barroso et al. (2019), Huda et al. (2020), and Kanchanatanee et al. (2014) that entrepreneur profile, such as age, affects the utilization of digital marketing.

Variables	Odds Ratio	Robust St. Error	Z	P > z
Revenue	1.0000	9.96e-09	-1.49	0.1367
Labor	2.3114	0.5462	3.55	0.0004 ***
Lifetime	0.9857	0.0193	-0.74	0.4623
AgriInd	1.1150	1.1030	0.11	0.9124
Service	0.8715	0.4253	-0.28	0.7781
Age	0.9692	0.0180	-1.69	0.0914 **
Sex	0.7082	0.2945	-0.83	0.4067
_cons	1.3027	1.1818	0.29	0.7706

Table 6. Results of The Binomial Logistic Regression Model

Source: Author's calculation, 2021

Notes: (1) Dependent variable = digital marketing usage, (2) *, **, *** = significant at 10%, 5%, 1%.

Table 7. The	e Marginal	Effect o	f the l	Binomial	Logistic	Regres	sion	Model
					- 0	- 0		

Variables	dy/dx	Delta-Method St. Error	Z	P> z
Revenue	-3.01e-09	1.99e-09	-1.52	0.1291
Labor	0.1703	0.0420	4.05	0.0001 ***
Lifetimes	-0.0029	0.0040	-0.74	0.4621
AgriInd	0.0221	0.2012	0.11	0.9124
Service	-0.0280	0.0990	-0.28	0.7777
Age	-0.0064	0.0036	-1.76	0.0789 *
Sex	-0.0702	0.0847	-0.83	0.4074

Source: Author's calculation

Note: *, **, *** = *significant at 10%, 5%, 1%.*



However, according to Table 7., the effect of respondents' age is very small. Holding other independent variables to be constant, an increase in the respondent's age by one-year-old decreases the probability of using digital marketing by 0.64% while additional one labor could increase the probability of using digital marketing by 17.03%.

Multinomial Logistic Regression Analysis

Table 8. displays the results of the multinomial logistic regression model and Table 9. displays its marginal effect. Table 8 shows that revenue has a negative effect, but labor quantity has a positive effect on the chance of using social media platforms which is a type of the digital market. The more labor, the higher the probability to use social media platforms, either it is used alone or combined with local range platforms or other platforms. If the MSEs do not employ other platforms than social media, then revenue also has a negative impact on the change of MSEs using social media and has a positive effect on the probability of not using digital marketing. Hence, the lower the revenue, the lower the chance of not using digital marketing. In other words, the lower the revenue, the bigger the probability to apply digital marketing, especially the social media platforms, which is probably because they need to market their products or services. It indicates that social media as digital marketing is needed mostly by MSEs who still need to grow their business. During the survey, some respondents reveal that they do not interested to apply digital marketing because they already have many customers or that their business has been known well by many consumers (17.57%). Our finding provides a prove for Barroso et al. (2019) and Dahnil et al. (2014) that the need to market and promote, like for business units with low revenue, can push the usage of social media as digital marketing.

Variables	Odds Ratio	Robust St. Error	Z	P> z
Not Using Digital Marketing				
Social Media Platform				
Revenue	e 1.0000	3.57e-08	-1.90	0.0573*
Laboi	· 2.5248	0.7556	3.09	0.0020***
Lifetime	e 0.9437	0.0376	-1.46	0.1452
AgriInc	<i>l</i> 1.2249	1.5391	0.16	0.8717
Service	e 1.0190	0.5851	0.03	0.9739
Age	e 0.9704	0.0216	-1.35	0.1774
Sex	c 0.7333	0.4002	-0.57	0.5697
_cons	5 1.1001	1.3505	0.08	0.9381
Local Range Platform				
Revenue	e 1.0000	3.37e-08	-1.30	0.1938
Labor	r 1.4282	0.5928	0.86	0.3905
Lifetime	e 0.9652	0.0458	-0.75	0.4559
AgriInc	l 7.65e-08	0.0003	-0.00	0.9971
Service	e 5.87e-08	0.0001	-0.01	0.9900
Age	e 0.9387	0.0268	-2.22	0.0265**
Sex	c 0.8294	0.5284	-0.29	0.7690
_cons	6.5228	9.1046	1.34	0.1791
Other Platform				
Revenue	e 1.0000	5.47e-07	-0.40	0.6871
Labor	7.15e-06	0.0073	-0.01	0.9908
Lifetime	e 0.7513	0.2731	-0.79	0.4315
AgriInc	<i>l</i> 0.4138	5284.7998	-0.00	0.9999
Service	e 3.41e+06	6.26e+09	0.01	0.9935
Age	e 1.0467	0.1329	0.36	0.7193
Ç				

Table 8. Results of The Multinomial Logistic Regression Model



Sex	1.00e-06	0.0016	-0.01	0.9930	
_cons	9566.7876	2.52e+07	0.00	0.9972	
Social Media & Local Range Platform					
Revenue	1.0000	0.0000	-0.16	0.8710	
Labor	2.2818	0.9074	2.07	0.0380**	
Lifetime	0.9563	0.0603	-0.71	0.4786	
AgriInd	3.68e-08	0.0003	-0.00	0.9984	
Service	6.77e-08	0.0002	-0.01	0.9942	
Age	0.9880	0.0402	-0.30	0.7668	
Sex	0.2944	0.2912	-1.24	0.2163	
_cons	0.4320	0.8561	-0.42	0.6719	
Social Media & Other Platform					
Revenue	1.0000	1.67e-08	0.70	0.4859	
Labor	2.7944	1.0983	2.61	0.0089***	
Lifetime	1.0242	0.0294	0.83	0.4041	
AgriInd	5.8001	8.8905	1.15	0.2515	
Service	3.8737	4.3828	1.20	0.2313	
Age	0.9925	0.0378	-0.20	0.8441	
Sex	0.1374	0.1826	-1.49	0.1353	
_cons	0.0631	0.1525	-1.14	0.2530	

Source: Author's calculation, 2021

Notes: (1) Dependent variable = digital marketing usage, (2) *, **, *** = significant at 10%, 5%, 1%.

Despite that labor has a positive effect, but because revenue has a weak correlation with labor quantity ($r_{revenue-labor} = 0,1653$), which means that greater labor is not always followed by bigger revenue, then revenue does not have a positive effect, but it has a negative effect on the usage of social media platforms. Therefore, MSEs with lower revenue have a bigger probability to utilize digital marketing because they might have a higher fighting spirit to grow their revenue compared to MSEs with higher revenue. Digital marketing could be a means to introduce their product to a wider market.

Variables	dy/dx	Delta-Method St. Error	Z	P > z
Revenue _predict 1	9.61e-09	4.81e-09	1.99	0.0461**
2	-7.76e-09	4.60e-09	-1.69	0.0916*
3	-2.43e-09	2.87e-09	-0.85	0.3977
4	-1.35e-09	3.74e-09	-0.36	0.7175
5	6.86e-10	7.47e-10	0.92	0.3580
6	1.25e-09	7.54e-10	1.66	0.0977*
Labor_predict 1	-0.0958	4.7103	-0.02	0.9838
2	0.1192	1.6920	0.07	0.9438
3	0.0034	0.0325	0.10	0.9167
4	-0.0806	6.7896	-1.01	0.9905
5	0.0195	0.0134	1.45	0.1463
6	0.0343	0.3881	0.09	0.9296
Lifetime_predict 1	0.0091	0.0055	1.65	0.0998*
2	-0.0063	0.0051	-1.24	0.2155
3	-0.0016	0.0042	-0.39	0.6999
4	-0.0018	0.0027	-0.68	0.4979
5	-0.0011	0.0024	-0.47	0.6419
6	0.0018	0.0011	1.58	0.1151
AgriInd _predict 1	1.2565	321.6563	0.00	0.9969
2	0.5089	120.8705	0.00	0.9966
3	-1.3513	407.4065	-0.00	0.9974
4	-0.0069	84.7913	-0.00	0.9999

Table 9. The Marginal Effect of the Multinomial Logistic Regression Model



5	-0.5642	335.8663	-0.00	0.9987
6	0.1570	29.5053	0.01	0.9958
Service_predict 1	1.2131	91.6100	0.01	0.9894
2	0.4628	34.5034	0.01	0.9893
3	-1.3747	120.5139	-0.01	0.9909
4	0.0993	12.1858	0.01	0.9935
5	-0.5353	90.9622	-0.01	0.9953
6	0.1348	7.9721	0.02	0.9865
Age_predict 1	0.0067	0.0034	2.00	0.0455**
2	-0.0025	0.0027	-0.92	0.3550
3	-0.0049	0.0023	-2.09	0.0363**
4	0.0004	0.0009	0.41	0.6810
5	0.0003	0.0015	0.17	0.8675
6	0.0001	0.0015	0.07	0.9423
Sex _predict 1	0.1804	7.2819	0.02	0.9802
2	0.0129	2.6161	0.00	0.9961
3	0.0029	0.0541	0.05	0.9566
4	-0.0904	10.4962	-0.01	0.9931
5	-0.0381	0.0396	-0.96	0.3356
6	-0.0677	0.6019	-0.11	0.9105

Source: Author's calculation

Note: *, **, *** = significant at 10%, 5%, 1%.

Some respondents say that the usage of digital marketing helps them to promote their products or services (22.6%) and makes their business known fast by consumers (9.4%). It also makes them able to reach a wider market (52.8%). It is a huge benefit during the pandemic because they can serve many consumers without having to worry that their business place will be full (11.3%) so they will break the rule during the pandemic that they must make sure to arrange the specific distance between 2 consumers. It is also a great advantage during the pandemic because they can serve consumers without having to meet them face to face (9.4%) which can reduce the risk of being infected by the covid-19 virus.

Our outcome supports the finding by Kanchanatanee et al. (2014), Ritz et al. (2019), and Shaltoni (2017) that the perceived advantage of digital marketing, such as revenue, can drive the adoption of digital marketing; by Barroso et al. (2019) and Dahnil et al. (2014) that organizational factor such as the need to market and promote their products or services can encourage the application of digital marketing; and by Junusi (2020), Schwarzl and Grabowska (2015) that one of digital marketing's benefit is that it can develop sales.

If MSEs only apply local range platforms (do not combine it with social media platforms), then age also has a negative effect on the chance of using it and has a positive effect on the probability of not using digital marketing. The negative effect of age shows that older people tend to refuse the use of digital marketing, including local range platforms. Several of the local range platforms are platforms developed digitally in Indonesia to serve a local market, such as Gofood and Grabfood. Those platforms need some IT skills such as how to register the programs and to run the program by mobile smartphone. The lack of IT skills (29.51%), the uneasiness in employing the program of such platforms (22.97%), and the lack of digital equipment ownership (13.11%) have been reported by some respondents as an obstacle to digital marketing usage or a reason why they do not interest to use digital marketing.

However, Table 9 shows that the effects of revenue and age on the possibility of using a certain type of digital marketing platform are very small. An increase in the



revenue by 1 IDR/month only reduces the probability of using social media platforms by 0.776% and an increase in the respondent's age by one-year-old decreases the probability of using local range platforms by 0.49% while additional one labor could increase the probability of social media platforms by 11.92%.

Further, Table 9. presents that MSEs' lifetime can increase the possibility of MSEs do not employ any type of digital marketing. Hence, the longer the MSEs are in the business, the bigger the probability it will not use digital marketing. In other words, the newer the MSEs in the business, the higher probability they will use digital marketing because they have a bigger need to promote their products or services. It indicates that digital marketing is needed mostly by MSEs which still need to develop their business. During the survey, some respondents reveal that they do not interested to apply digital marketing because they already have many customers or that their business has been known well by many consumers (17.57%). Our finding provides a prove for Barroso *et al.* (2019) and Dahnil *et al.* (2014) that the need to market and promote, like for new business units, can push the usage of social media as digital marketing; and to Pollak and Markovic (2021) that previous lifetime, which is reflected by lifetime, can encourage the utilization of social media as digital marketing.

Last, based on our interview with respondents, we also get additional information such that one of the benefits of digital marketing utilization is that they can do their business cashless (11.3%), that it makes them easier to communicate with consumers without having to meet them face to face (9.4%), that it can encourage people to come to their business place (9.4%), and that it can save the promotion cost because they do not have to print any brochures (1.9%). We were also informed that one of the reasons they do not want to use digital marketing is because the process to register local range digital platforms such as Grabfood and Gofood is difficult (5.41%). Therefore, about 6.56% of respondents claim their obstacle to using digital marketing is the complexity of the requirements and process in the enrolment of the digital platform (6.56%) and that the enrolment process takes a long time.

CONCLUSION

We find evidence for UTAUT theory, i.e. the performance expectancy and the facilitating conditions have a significant effect on the probability of using digital marketing. Revenue, which is an indicator of performance expectancy in the business world, has a negative effect on the usage of digital marketing, especially on social media platforms. It indicates that a business with lower revenue has a higher probability to use social media as a digital marketing.

On the other hand, a business with a high revenue are reluctant to use digital marketing because they are not interested to expand their business or are already satisfy by serving local market. Some respondents claim that they are already have enough consumers (to support their business). Thus, digital marketing is needed mostly by business that wants to expand their business.

The facilitating conditions, i.e. the supporting condition to apply that new technology, which have a significant effect on the usage of digital marketing are labor quantity, the business lifetime, and the age of the business owner or manager. Business lifetime has a positive influence on the use of digital marketing. It indicates that newcomers tend to have a higher probability of using digital marketing because they still need to expand their business.



Labor quantity has a positive significant effect on the chance of MSEs utilizing digital marketing. Hence, the bigger the size of a business (based on their labor numbers and not based on their revenue), the bigger the chance of utilizing digital marketing, particularly the social media platforms. Some respondents that do not use digital marketing said that they do not have employee to help them taking care digital marketing order while they do the business or on the other hand, to help them taking care the business while they take care of digital marketing order. Age has a negative effect on the utilization of digital marketing, specifically on the local range platforms.

Some respondents state they are not interested to use digital marketing because technology seems complicated for their (old) age. They are afraid to making mistakes while they operate the advance technology. Therefore, if the government wants to increase the use of digital marketing, then the government must arrange workshops and guidance, typically for MSEs whose owner or manager is quite old.

RECOMMENDATIONS

The development of the digital world has impacts and consequences for MSMEs in Indonesia. These developments require MSME actors to adapt and keep up with the changes that occur. This research provides theoretical implications that the utilization and use of digital marketing is useful for increasing the productivity of MSMEs. In addition, this research finds driving determinants in the use of digital marketing for MSMEs, even though digital marketing has its own complexities. Various limitations were encountered in conducting this research, which included field obstacles in order to meet with respondents and filling in data.

During the survey, some respondents reveal that they do not interested to apply digital marketing because they already have many customers or that their business has been known well by many consumers. In addition, the topics examined in this study are topics that have not been widely studied in various studies. Recommendations for further research are to explore and expand the scope of research in other sectors along with the use of other variables that are considered influential in digital marketing for MSMEs, such as capital or government policy.

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