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The Effect of Covid 19 on Bitung Micro Business Performance

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ABSTRACT

Microbusinesses under Dinas Koperasi Usaha Kecil Menengah Bitung faced plenty of struggles to make ends meet given the uncertainty of the Covid19 pandemic. The micro-business owners have to adapt and adjust their businesses for survivability.

Objectives: *This study aims to analyze the effect of Covid19 and market competition on these micro and small enterprises in Bitung, Indonesia which survived and still has business performance, either financial or non-financial. In addition, this study seeks to analyze the effect of Covid19 on the adoption of digital marketing that might influence business performance.*

Methodology: *The study uses data from 38 micro-business in Bitung that are currently active and has been surviving through the Covid19 pandemic. Data analysis and hypothesis testing are done using Partial Least Squared Modelling (PLS-SEM) using SMART PLS.*

Finding: *Results of this study shows that competition intensity has a positive influence on the adoption of digital marketing. In addition, digital marketing adoption positively influences both financial and non-financial performances.*

Conclusion: *Contrary to common belief, it is competition intensity rather than the perception of Covid19 that has contributed to the adoption of digital marketing which in turn contributed to the business financial performance of micro businesses in Bitung.*

Keywords: *Bitun; Business performance; Covid19 Competition intensity; Micro business.*

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INTRODUCTION

Indonesia has gone through many dynamic economic challenges from 2019 to 2021. An economic rebound was later moderated by the Covid19 Delta variant resulting in tighter mobility restrictions and weaker external demand. According to the report by The World Bank, (2021), the economy was projected to rebound by 3.7 percent in 2021 with a growth of 5.2 percent in 2022. However, in December 2021, the World Health Organization reinstated the importance of preparedness for the Covid19 pandemic of another highly transmissible Covid19 Omicron variant and recommended priority actions for enhancing surveillance, sequencing efforts, and continuing to implement effective public health protocols and measures. During the last years of the Covid19 pandemic, Indonesia has implemented restrictions on community mobility (*Pemberlakuan Pembatasan Kegiatan Masyarakat (PPKM)*) in Java and Bali up until 3 January 2022 (World Health Organization, 2021).

With the pandemic progression in mind, looking ahead there will be challenges for the country to contain the variants of the Covid19 pandemic and maintain the economy. Budget flexibility was needed to swiftly respond to these Covid19 waves including cash transfers and loan payment deferrals better targeted at Micro, Small, and Medium Enterprises (MSMEs). Support to MSMEs has also increased in the form of cash flow assistance which aimed to help MSMEs to cope during these lockdowns and the economic downturn.

Amongst the Indonesian cities, Bitung located in the North of Sulawesi is prominent with an abundant number of micro-businesses. According to *Dinas Koperasi Usaha Kecil Menengah Bitung* (Bitung, 2022) there is an estimated 4.534 active micro businesses in Bitung area. According to the National Statistic Center (2022), a survey was conducted online on 13 - 20 July 2021 by 2,493 respondents. The results show that the level of adherence of the people of North Sulawesi to the implementation of the health protocol is quite good, except for the use of 2 layers of masks, which showed that still more than half of the respondents have not complied. More than 25 percent of respondents have not been vaccinated, partly because they are worried about the side effects of the vaccine or do not believe in the effectiveness of the vaccine (idem). In December 2021, Manado City experienced inflation of 0.95 percent with a Consumer Price Index (CPI) of 108.56 (idem).

According to a pre-research interview with three micro-businesses in Bitung under *Dinas Koperasi Usaha Kecil Menengah Bitung*, there are plenty of struggles to make ends meet given the uncertainty of the pandemic. The micro-business owners have to adapt and adjust their businesses for survivability. One adjustment that these micro-businesses showcased is in the jump to online channels to introduce their product and services. This is also demonstrated by the plethora of studies of Indonesia's SMEs in other areas in Indonesia that talk about digital marketing adoption. These studies argue the effect of the Covid19 pandemic and the intensity of competition has a negative and significant effect on both financial and non-financial performance (Giantari, 2022). Therefore, this study aims to investigate the perception of these micro-businesses in Bitung and the effect of the pandemic on their business performances, including their adoption of digital marketing implemented in their micro-businesses.

LITERATURE REVIEW

The Covid19 pandemic is associated with drastic market changes that pressured many businesses' transformation, from the decision-making process to the implementation with consideration of the country's health protocols and measures. Within the last couple of years, an influx of studies on how Covid19 affects various industry businesses were about, including changes in operations, working from home, the use of the internet, and faster speed from the decision to execution of strategies and business models (Li, 2022). Small- and medium-sized enterprises (MSMEs) are much affected by the changes in the pandemic era. Human capital readiness has directly influenced MSMEs' business performance, with those having global market orientation also mediating the effect of human capital readiness on business performance (Tjahjadi et al., 2022).

Previous studies have found that MSMEs managers and owners with intellectual agility positively influence the innovativeness of micro and small businesses, strongly mediated through entrepreneurial leadership (Gherhes et al., 2021). MSMEs leaders who possess entrepreneurial leadership with future orientation contribute to its innovation efforts. Other research also suggests the importance of e-business adoption. The actual cost of adoption depends upon the technology-organization environment strategies which simultaneously lowers some adoption barriers outside of just the cost (Mkansi, 2021). In a rapidly changing environment, the innovativeness of the business environment has an impact on the level of business model activities and further on overall business performance (Pucihar et al., 2019) and (Arief, H., 2019).

In Indonesia micro and small enterprises in Indonesia use technological-based innovation including digital finance technologies and online sales. It is argued that during Covid19, MSME's owner characteristics and other business factors mostly adopt digital technologies for their businesses (Trinugroho et al., 2021). With such adoption of technology, they are able to increase sales. The use of technology to help MSMEs stay in business. Furthermore, critical thinking and innovation in MSME had a significant effect on performance with higher levels of profitability (Mujanah, 2022). Additionally, to improve the approach of MSMEs to survivability, This study was conducted with consideration to the variables of the perceptions of the Covid19 pandemic, competition intensity, digital marketing adoption, and the overall influence on financial and non-financial performance when faced with the Covid19 pandemic.

Previous studies (Table 1) show that most investigated the digital platform adoption and success in B2B using theories such as stakeholder theory, network theory, technology acceptance models, etc. (Shree et al., 2021). Furthermore, the determinants of digital platform success come down to customer orientation and customer loyalty (idem). Further studies also find performance antecedent dimensions associated with organizational impact on the adoption of digital technologies or digitalization. Isensee (2020) argues that there are key dimensions to this including strategic orientation, management, and internal capabilities attitudes. Digital transformation is then a term introduced to talk about the various changes in business and society due to the increased usage of digital technologies (Van Veldhoven & Vanthienen, 2021).

Table 1 Previous Study on MSME Digitalization

Title	Author, Year
Towards Strategic Support and Guidance of the Digital Transformation: A Conceptual Model	Aghakhani et al., 2021
Critical Success Factors of Data Integration on Digital Human Capital Information System to Support Digital Transformation - A Case Study at PTXYZ	Gabriel et al., 2020
Digital transformation as an interaction-driven perspective between business, society, and technology	Van Veldhoven & Vanthienen, 2021
Digital Transformation and Industry 4.0	Yamani & Elsigini, 2021
Role of Government to Enhance Digital Transformation in Small Service Business	Chen et al., 2021
Digital transformation in the maritime transport sector	Tijan et al., 2021
A Strategy to Promote the Competitiveness of Micro, Small, and Medium Enterprises (MSME) During the Condition of Covid 19 Pandemics	Rahmadani & Jefriyanto, 2021
Development of synergistic between digitalization MSMEs and digital society in Indonesia	Hetami & Aransyah, 2021
Readiness factor identification Bandung city MSMEs use blockchain technology	Wahyuni et al., 2021
Efforts to Improve MSME Commodity Marketing in Tasikmalaya Regency during the Covid19 Pandemic through Training and Mentoring Programs	Setiawan et al., 2021

During the Covid19 pandemic, almost all of the regions in Indonesia outside Java Island have vulnerable businesses, meanwhile, JABODETABEK area businesses are not vulnerable (Caraka, 2021). Micro and small enterprises in Indonesia survived with lower direct selling, facing competitive markets, and having consumers' payment preferences have a higher probability to adopt digital technologies. However, there are still barriers to digital adoption of micro and small enterprises, such as practical digital literacy and internet coverage (Trinugroho et al., 2021). In addition, there is still a lack of awareness of how digital transformation may affect the business, and the lack of standards and cooperation among stakeholders (Tijan et al., 2021).

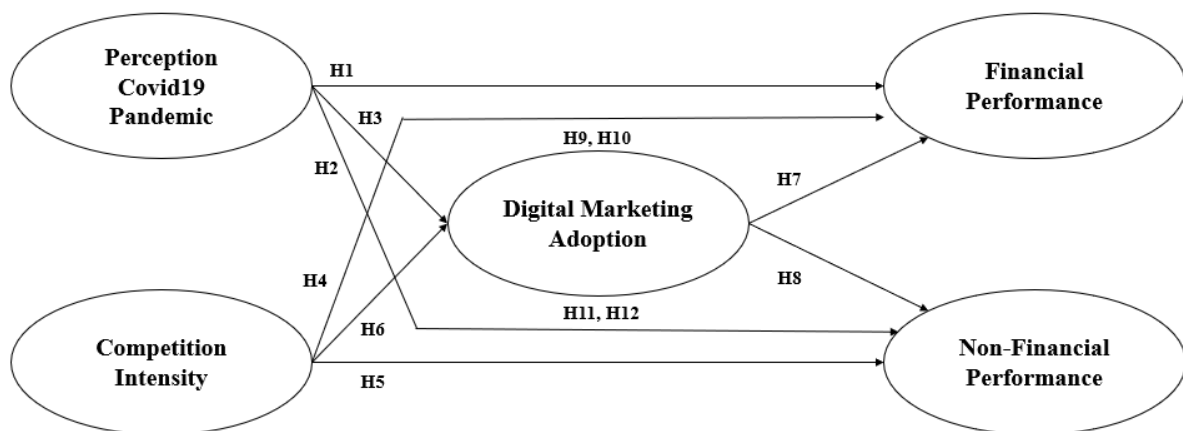


Figure 1 Proposed Research Model

Therefore, this research proposes several hypotheses as follows (Figure 1):

- **H1:** Perception of the Covid19 pandemic influences financial performance.
- **H2:** Perception of the Covid19 pandemic influences non-financial performance.

- **H3:** Perception of the Covid19 pandemic influences digital marketing.
- **H4:** The competition intensity influences financial performance.
- **H5:** The competition intensity influences non-financial performance.
- **H6:** The competition intensity influences digital marketing.
- **H7:** Digital marketing influences financial performance.
- **H8:** Digital marketing influences non-financial performance.
- **H9:** Digital marketing adoption can mediate the impact of the Covid19 pandemic on financial performance.
- **H10:** Digital marketing adoption can mediate the impact of the Covid19 pandemic on non-financial financial performance.
- **H11:** The adoption of digital marketing can mediate the effect of the intensity of competition on financial performance.
- **H12:** The adoption of digital marketing can mediate the effect of the intensity of competition on non-financial performance.

METHOD

This study uses quantitative methods, using data analysis to produce conclusions from the data that has been obtained. Data collection will be done through a questionnaire instrument that will be given to owners of active micro-businesses in Bitung. Micro-enterprises are productive businesses owned by individuals and/or individual business entities. The criteria of such enterprises is having a maximum net worth of IDR 50,000,000 excluding land and buildings for business premises and having annual sales results of a maximum of IDR 300,000,000.00 (*Undang-Undang Republik Indonesia Nomor 20 Tahun 2008 Tentang Usaha Mikro, Kecil, dan Menengah*, 2008). Respondents will rate their perception of items in Table 2 using a five Likert Scale. Hypothesis analysis will then be tested using Structural Equation Modelling using SmartPLS.

Table 2 Variable Constructs

No.	Variables	Indicators
1	Perception of Covid19 Pandemic (CO)	Covid19 pandemic has limited the operations of businesses.
		Covid19 pandemic has affected the capacity of businesses.
		Covid19 pandemic has limited how businesses serve their customers.
		Covid19 pandemic has made it difficult for a business to get their supplies.
		Covid19 pandemic has declined business customers' purchasing power.
2	Competition Intensity (CI)	The competition in the business sector is getting fiercer.
		The bargaining power of buyers is increasing.
		The presence of new entrants in is increasing.
		The number of substitute products is increasing.
3	Digital Marketing Adoption (DA)	Our business uses digital marketing to communicate with customers.
		Our business uses digital marketing to share information.
		Our business uses digital marketing to build relationships with customers.
		Our business uses digital marketing to manage the community.

		Our business uses digital marketing to feel close to customers.
4	Financial Performance (FP)	Our business experienced an increase in sales.
		Our business experienced an increase in business transactions.
		Our business experienced an increase in profit.
5	Non-Financial Performance (NP)	Our business has increased customer satisfaction.
		Our business has increased customer loyalty.
		Our business has increasing brand equity.

PLS-SEM in this study is used under several assumptions. The first assumption is that in PLS-SEM there is no need to meet the conditions for the normality assumption. The second assumption is that PLS-SEM can use a smaller sample size than covariance SEM. The third assumption is that PLS-SEM does not have to use a random sample. The fourth assumption is that PLS-SEM can use formative indicators in measuring latent variables other than reflective indicators. The fifth assumption is that in PLS-SEM researchers can use a measurement scale other than intervals. The sixth assumption is that PLS-SEM is not required to use the residual distribution. Based on the above theory, this research uses PLS-SEM as a multivariate testing technique. There are several reasons why this study uses PLS-SEM. The first reason is that PLS-SEM can handle multicollinearity among independent variables (Garson, 2016).

Although the original sample size is relatively small, this research utilizes the advantage of PLS-SEM that even in this case of small samples it is still justifiable when it is relative to the underlying population (Hair et al., 2014). The data set is then treated with the bootstrap method which involves iteratively resampling a dataset with replacement, in this study the data was bootstrapped to 1000 subsamples.

RESULTS AND DISCUSSION

In this study, 38 respondents are all owners of micro-businesses in Bitung, North of Sulawesi, Indonesia. The majority of respondents are female (74%) and the rest are male owners (26%) The respondents are also mostly SMA/SMK, high school graduates, and around the ages of 31-43 years old (39%). The majority of business in this study are involved in food and beverages and has operated for 1-3 years (Table 3). Furthermore, most of the respondents (71%) are not familiar with business proposal writing.

Table 3 Respondent Profile

Profile		Total	Percentage
Gender	Male	10	26%
	Female	28	74%
Age	18 - 30	8	21%
	31 - 43	15	39%
	44 - 56	10	26%
	57 - 70	5	13%
Education	S1	7	18%
	D3 -D4	3	8%
	SMA	21	55%

	SMK	6	16%
	SMP	1	3%
Industry	F&B	25	66%
	Service	13	34%
Business length	1-3	13	4%
	4-6	9	24%
	7-10	10	26%
	> 10	6	16%
Business Proposal	Yes	27	71%
	No	11	29%

The data sense test can be done with the help of descriptive statistics that explain the average, minimum (1), and maximum (5), contained in the processed data conducted on 38 respondents. An initial look into the descriptive data collected (Table 4), showcases a “strongly agree” (a score of > 4.00) found in many of the indicators. However, the data also indicate that final performance (FP) is mostly neutral or uncertain based on the respondent’s perspective, especially in terms of increase in business transactions and profit during business operations at Covid -19 times.

Table 4 Mean of Indicators

Indicators	1	2	3	4	5	Mean
CO1	1	2	13	12	10	3,74
CO2	1	1	8	16	12	3,97
CO3	2	5	7	10	14	3,76
CO4	1	10	4	14	9	3,53
CO5	0	1	7	17	13	4,11
CI1	0	1	4	22	11	4,13
CI2	0	0	9	15	14	4,13
CI3	0	3	4	15	16	4,16
CI4	0	0	3	19	16	4,34
DA1	0	0	7	16	15	4,21
DA2	0	0	7	16	15	4,21
DA3	0	0	5	19	14	4,24
DA4	0	0	7	19	12	4,13
DA5	0	0	3	19	16	4,34
FP1	3	10	10	8	7	3,16
FP2	3	7	14	8	6	3,18
FP3	4	11	10	9	4	2,95
NP1	2	1	6	14	15	4,03
NP2	2	4	9	15	8	3,61
NP3	2	3	8	14	11	3,76

In the reliability test, this study uses internal inter-item consistency reliability by looking at Cronbach's alpha value ($> 0,6$) as a reference value in the reliability test (Sekaran & Bougie, 2016). Based on the results shown in Table 5 we conclude that all the variables are reliable.

Table 5 Construct Reliability and Validity

	Cronbach Alpha	rho A	CR	AVE	Results
CO	0,83	0,879	0,884	0,658	Reliable & Valid
CI	0,894	0,94	0,92	0,698	Reliable & Valid
DA	0,929	0,934	0,946	0,78	Reliable & Valid
FP	0,947	0,953	0,966	0,904	Reliable & Valid
NP	0,923	0,98	0,95	0,864	Reliable & Valid

Next, to meet the requirements of the convergent validity test looking to the loading factors with a value of more than 0.7 while the average variance extracted (AVE) value had to be greater than 0.5. Furthermore, the discriminant validity test is seen from the results of the AVE square, if the AVE square results in each of the existing construction variables are greater than the correlations of the other constructs in this model, the discriminant validity test is declared to be achieved and fulfills the requirements. This was also concluded based on Table 6 that all variables are indeed reliable and valid.

Table 6 Outer Loadings

CO	CI	DA	FP	NP
0,858				
0,923				
0,843				
0,677				
0,857				
	0,865			
	0,686			
	0,791			
	0,872			
		0,91		
		0,909		
		0,924		
		0,867		
		0,8		
			0,943	
			0,973	
			0,937	
				0,907
				0,922
				0,958

The study included 20 indicators that measure 5 variables, namely perception of Covid19 (CO), competition intensity (CI), Digital marketing adoption (DA), Financial Performance (FP), and Non-Financial Performance (NP). All indicator values contained in Table 7 have met the

requirements of the predetermined loading factor value, which must be greater than 0.7, thus all indicators are accepted. After identifying convergent validity, the data is determined to have discriminant validity, by looking at the square root of the AVE for each construct is greater than the correlation between constructs contained in the research model. As seen in Table 7, all variables have discriminant validity.

Table 7 Discriminant Validity

CO	CI	DA	FP	NP
0,811				
0,335	0,836			
0,289	-0,124	0,883		
-0,108	-0,221	0,342	0,951	
0,047	-0,085	0,352	0,579	0,929

After measuring the model, the next step is to carry out a structural model. The structural model is a model that applies structural theory by showing constructs that have a relationship with one another and the nature of each relationship. To test the structural model, several measuring tools are needed, namely the t-value and p-value (Joseph F Hair et al., 2012). The T-value has a minimum limit requirement of 1.96 and a p-value of below 0.05 so that the hypothesis can be accepted. The study then tested the hypothesis using SMART PLS, bootstrapping 1000 subsamples with a two-tail analysis. The results are shown in Table 8 and Figure 2, there are only three hypotheses that are accepted which are H6, H7, and H8.

Table 8 Hypothesis Testing

	Hypothesis	Original Sample	Std Deviation	T Statistic	P Values
H1	CO -> FP	-0,114	0,224	0,51	0,61
H2	CO -> NP	-0,023	0,206	0,114	0,909
H3	CO -> DA	-0,248	0,23	1,079	0,281
H4	CI -> FP	-0,18	0,208	0,867	0,386
H5	CI -> NP	-0,051	0,273	0,185	0,853
H6	CI -> DA	0,372	0,17	2,194	0,028**
H7	DA -> FP	0,38	0,172	2,206	0,028**
H8	DA -> NP	0,364	0,195	1,868	0,062*
H9	CO -> DA -> FP	-0,094	0,11	0,857	0,392
H10	CO -> DA -> NP	-0,09	0,104	0,868	0,386
H11	CI -> DA -> FP	0,141	0,088	1,609	0,108
H12	CI -> DA -> NP	0,136	0,094	1,437	0,151

* significant at pvalue < 0,10

** significant at pvalue < 0,05

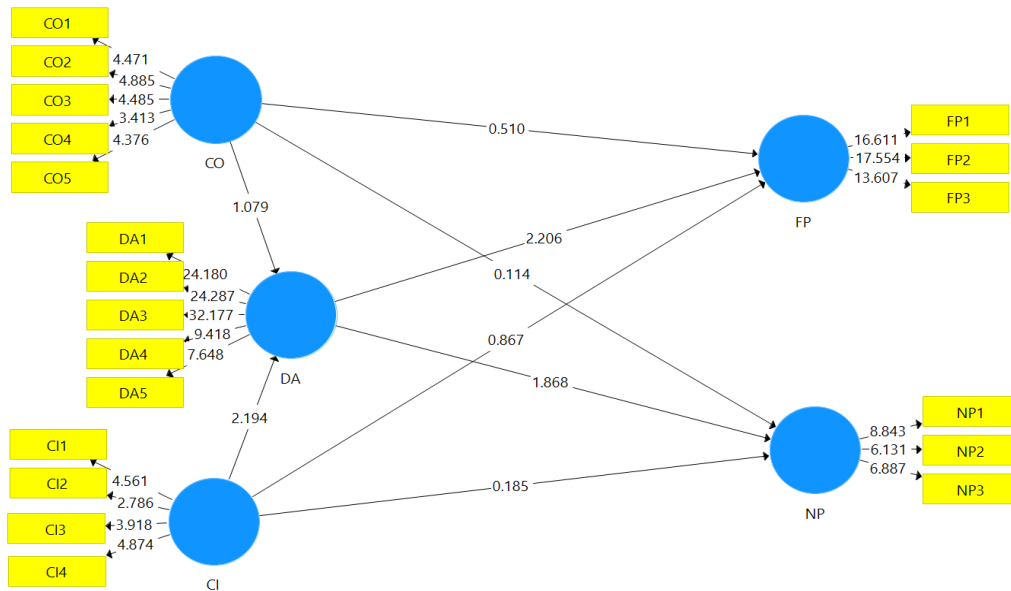


Figure 2 Structural Model

For most of the hypothesis being rejected there is speculations that barriers are still prominent for most of the micro business in Bitung. As suggested previously, barriers can appear in the external environment (TOE), including the costs, organization policies, awareness, reluctance, user demand, tech integration, and government support (Ullah, 2021). Yet digital marketing can still be found as interactive marketing giving the SMEs to share information about products or services they offer. This is even more important when Covid19 started which created social distancing and strict health protocols mandatory. E-marketing has a positive and significant influence on customer satisfaction, while the effect of e-marketing has a negative and insignificant influence on repurchase intention (Fawzeeza, 2019).

The results of the hypothesis testing show H6, that the competition intensity has a positive influence on digital marketing ($p = 0.028 < 0.05$). In response to the Covid19 crisis, SMEs' efforts toward digitalization manifested through the adoption of digital technologies to battle rising competition and secure sales and profit (Guo, 2020). The results of the hypothesis testing show that H7, digital marketing has a positive influence on financial performance ($p = 0.028 < 0.05$). This result is also supported by past studies, that digitalization significantly relates to performance, mediating the effect of information technology on performance (Eller, 2020). Businesses with entrepreneurial orientation are also found to have a higher level of performance. Meanwhile, they have a strategic vision of digitalization, associated with innovation to result in better performance (Niemand, 2021).

The results of the hypothesis testing show H8: Digital marketing has a positive influence on non-financial performance ($p = 0.062 < 0.05$). In addition, the government also has a supporting role in the MSME digital transformation to build a digital platform for small service businesses, promote mobile/digital payment, provide digital training, and build a digital collaboration ecosystem (Chen et al., 2021). Further going into the data, a crosstab analysis was also done to determine whether there are significant effects between the data profiles to the composite variables. The results show age has a significant influence on the perception of competition intensity, and financial and non-financial performance (Table 9).

Table 9 Crosstab Analysis

	Gender	Age	Education	Industry	Length
CO1					
CO2					
CO3				0,060*	
CO4					0,018**
CO5					
CI1		0,016**			
CI2					
CI3		0,05**		0,048**	
CI4		0,003**			
DA1					0,095*
DA2					
DA3					
DA4					
DA5					
FP1		0,087*			
FP2		0,10*			
FP3		0,007**			
NP1		0,011**			
NP2					
NP3					

* significant at pvalue < 0,10

** significant at pvalue < 0,05

The industry has a significant influence on the perception of the Covid19 pandemic has limited how businesses serve their customers (CO3) and the perception of new entrants in are increasing (CI3). This stipulates that different businesses might have different difficulties in competing. Given that most of the respondents involved are food and beverages vendors, a low barrier of entry might be predominant.

The experience of the micro-business has a significant influence on the perception of the Covid19 pandemic has made it difficult for a business to get their supplies (CO4) and the use of digital marketing to communicate with customers (DA1). The longer the businesses had experience in running and strategizing, it can be assumed the more necessary it that their customers to gain access to information about their product/services.

Age has also been found to significant influence on the competition in the business sector is getting fiercer (CI1), the presence of new entrants in are increasing (CI3), and the bargaining power of buyers is increasing (CI4). In addition, age also has a significant influence on an increase in business sales (FP1), an increase in business transactions (FP2), an increase in profit (FP3), and business has increased customer satisfaction. This can be contributed to how mature and experienced the owners are in performance, including customer satisfaction.

Similarly, the business size does not play a role in adopting online marketing tools. Most organizations, regardless of their size, still have reservations about investing in digital marketing. On the other hand, previous experience is a key determinant to perceive the benefits

of using the internet for business purposes. Businesses that are actively using online marketing tools evaluate their contribution to their business very positively (Pollák, 2021). This digitalization includes using online marketplaces as an intermediary and social media (Hetami & Aransyah, 2021). HRM digitalization and HRM system maturity on firm performance as well as the moderating role played by HR strategic and business involvement, and is positively related to firm performance (Zhou, 2021). The growing expectations about the added value brought by digitalization for pursuing the Sustainable Development Goals (SDGs), through novel data sources, enhanced analytical capacities, and collaborative digital ecosystems. (Castro, 2021).

CONCLUSION

With the backdrop of the Covid19 pandemic that has paralyzed many of Indonesia's businesses, many MSME has consciously changed their tactics through digitalization schemes and strategies. Micro and small businesses are businesses that are built with a variety of vulnerabilities both in terms of capital capacity and stakeholder involvement which is maintained and accommodated through the integration of digitalized data so that more comprehensive, updated, and continuous information and communication can be used as material for decision making in the development of micro and small businesses (Meriam, 2021). The results of this study reemphasize that competition intensity has a positive significant influence on the adoption of digital marketing. In turn, digital marketing adoption positively influences both financial and non-financial performances. The results further emphasize the effect of context of where the micro-businesses are doing business and the type of industry. Facing external changes enforces the MSME to adopt the digital approach for continuous sales and sustainable business operations.

Contrary to common belief, it is competition intensity rather than the perception of Covid19 that has contributed to the adoption of digital marketing which in turn contributed to both financial and non-financial performance of the micro business in Bitung. Digitalization is still an ongoing process in Indonesia, with still a long effort for transformation to follow. Based on this study, there is still a need to realign the sustainable development and digitalization policies to pave way for the promising nexus of micro-business digitalization. Government units such as *Dinas Koperasi Usaha Kecil Menengah Bitung* play an integral part in the survivability of MSME in Bitung. They could provide support in the infrastructure and educate digital literacy for micro business owners.

Several limitations to this study include the small sample size. Due to Covid19 and the social restrictions during the time of this study, the questionnaires returned were very low. Therefore, it is recommended that future studies include a large number of respondents and different MSME industries. Further studies could also include a further look into the digitalization experience of each SME prior and post the Covid19 pandemic.

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