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DETERMINANTS OF MSMEs SUSTAINABILITY MODERATED BY GOVERNMENT POLICY ON MSME IN BATAM CITY

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ABSTRAK

This research was conducted at the Cooperative and MSME Office of Batam City, with the survey location covering all business actors registered with the Cooperative and MSMEs Office of Batam City. Based on the research results, there is a positive and significant influence between digital literacy and the effectiveness of digital accounting among MSMEs in Batam City. High digital literacy helps organizations understand, implement, and use technology more effectively, in accordance with the TOE framework. There is a positive and significant influence between relative advantage and the effectiveness of digital accounting among MSMEs in Batam City. The effectiveness of using digital accounting for MSMEs, especially those in Batam City, is particularly viewed from the perspective of relative advantage. There is a positive and significant influence between competitive pressure and the effectiveness of digital accounting among MSMEs in Batam City. These findings provide a better understanding of how competitive pressure plays an important role in increasing the use of digital accounting technology in the MSME sector. There is a positive and significant influence between compatibility and the effectiveness of digital accounting among MSME actors in Batam City. This research can provide a comprehensive picture of how the factor of compatibility plays a crucial role in the effectiveness of digital accounting use among SMEs, focusing on aspects that can certainly help MSME make better decisions regarding the implementation, application, and development of digital accounting technology. Digital literacy, relative advantage, competitive pressure, and compatibility influence the effectiveness of digital accounting for MSMEs actors in Batam City.

INTRODUCTION

Micro, small, and medium enterprises (MSMEs) are a business sector that has proven to play a strategic or important role in addressing the consequences and impacts of the Covid-19 pandemic that has affected the Indonesian nation. On the other hand, it has also been able to contribute to driving Indonesia's economic growth.

The MSME sector has proven to be more resilient in facing crises and capable of saving Indonesia's economy, as well as becoming a transformation of economic growth post-Covid-19 pandemic. SMEs are also a source of social and economic life for a large part of the Indonesian population, capable of absorbing a significant amount of labor. The development of information technology in the current era of globalization has made a significant contribution to the rapid pace of information. The need for information is greatly required without regard to time and place; the information available must be accessible anytime and anywhere. The rapid development of technology makes business competition in any field more varied. Many business methods are employed by a company to attract as many consumers as possible. Starting from giving bonuses, placing advertisements, distributing brochures, and marketing products through electronic media. Electronic-based marketing activities are carried out to market a product or service using electronic media. building a good relationship between Small and Medium Enterprises (SMEs).

This pandemic can at least be seen as the right momentum for Indonesia to accelerate the digitalization of MSMEs. The development of MSMEs based on Digital Accounting and Digital Marketing has great and strategic potential in boosting national economic activities, including providing domestic goods and services. The local government, particularly the Provincial Cooperative Office of Batam City, in carrying out its role and realizing the significant Digitalization of MSMEs, still faces various problems. One of the focuses among them is the still underdeveloped Digitalization of Accounting and Marketing, which includes (1) bookkeeping aspects that are not bankable; (2) business and marketing practices that are not profitable; (3) uncertainty of business locations; and (4) weak inter-agency coordination in empowering the Digitalization of MSMEs.

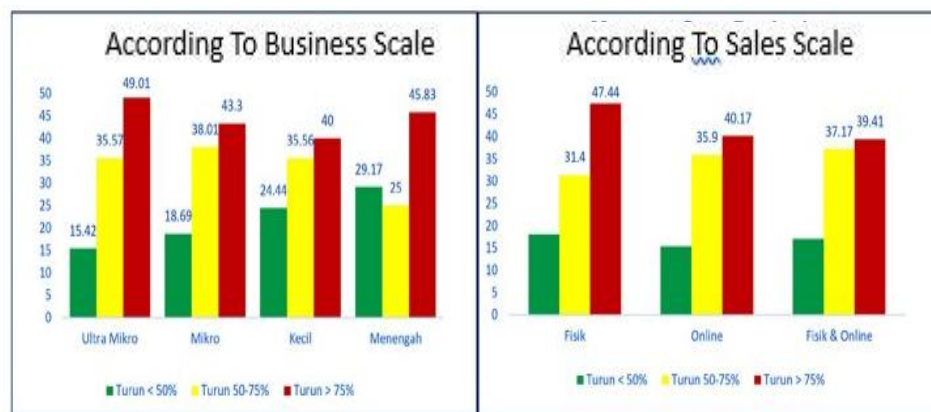


Figure 1. MSMEs Performance

Figure 1 shows a 75% decline in MSME sales results based on business scale characteristics and sales methods. Physical sales need special attention because they have the largest decline, which is 47.44%. Traditional sales are vulnerable to degradation due to the Covid-19 pandemic. This problem is caused by the minimal development of MSME businesses in terms of Accounting and Marketing Digitalization. This issue also leads to a decrease in revenue, limited management and business development practices, difficulties in distribution and marketing,

underutilization of Accounting and Marketing Digitalization, and reliance solely on manual bookkeeping.

This issue certainly becomes an important focus for the MSME sector in the national economy. This role can certainly be assured to have strategic value when the issue is linked to the quite complicated problems that MSMEs have faced for a long time and which have never been resolved by the local government, namely the development of digital-based MSMEs. Therefore, if all components and stakeholders do not make serious efforts to develop the MSME sector, it can be assured that it will become a serious social problem and a burden for the local government.

Based on the initial survey conducted, it was found that there are 40 MSMEs that actively use digital media in their trading activities, with a composition of business groups consisting of small businesses amounting to 34 businesses (85%) and medium businesses amounting to 6 businesses (15%). This explains the still low use of digital media in business activities (digital accounting and digital marketing) among MSMEs in the Province of Batam City. This certainly needs special attention, considering the still low perception of most MSME owners in the Province of Batam City regarding the use of digital for the advancement of their businesses. Therefore, an empirical study is needed to reveal the extent of the impact of digital utilization on the development of MSME businesses, in order to obtain a real picture of the contribution of digital usage benefits to MSMEs in Batam City Province.

Hebert & Link (2018) describe the concept of "entrepreneurial action" by defining it as "the creation of opportunity as well as a response to existing circumstance." Meanwhile, recent research on entrepreneurship has been more dominated by the desire to define entrepreneurs through the identification of entrepreneurial traits. The main premise of this personality view is the idea that certain individuals possess unique, prominent, stable, and long-lasting personal characteristics that influence entrepreneurial activities. In this case, the most significant thought is that these traits are permanent and consistently unaffected by time, situation, or environment. GAP research in this study uses the formula (model) developed by Ropke (2012) and Soewardi (2015) as the theoretical foundation. The Ropke model is structured with the formula $EA = f(Pr, C, E)$, where EA stands for Entrepreneurial Activity (activities such as marketing processes and Customer Satisfaction), f is the function, Pr = Property Right (Rights to wealth/action), C = Competency or Ability (Competitive advantage), and E = External Environment. The model developed by Soewardi (2015) states that the growth and competitive advantage of Cooperatives are determined by two synergistic variables that interact with each other, namely Digital Marketing and Customer Relationship Marketing.

Then, to find a better alternative model, it is necessary to understand the two stages of this research process. The first stage is the goal of achieving effectiveness (doing the right thing) in helping to develop Cooperative products. The main challenge is to find competitive advantages on a national and international scale. This stage is also called the opportunity recognition stage, which is followed by efforts to implement those opportunities. The core of this process is problem solving, because initially the level of entrepreneurial knowledge is low, marketing is ineffective, many mistakes occur until fundamental issues in competitive advantage are identified. The second stage for

effectiveness is carried out based on a "top down" approach both theoretically and empirically, where many cooperatives face difficulties in competing effectively to advance their partners (SMEs).

TOE, or technology, organization, and environment, is a general framework or model used to explore various information system issues. In the context of SMEs, the TOE model serves as an appropriate framework for understanding technology-based adoption (Ahmad et al., 2018). The focus of this research lies in the fact that technological advancements and intense business competition demand the ability of SME actors to utilize digital accounting to manage their businesses. Several important elements to be discussed include digital literacy, relative advantage, competitive pressure, and compatibility, reviewed from the effectiveness of implementing digital accounting using the TOE method.

The grand theory used for this research is Institutional Theory, with the middle-range theory being Resource-Based Theory and the applied theory being Digital Transformation and MSME Development. The continuity of a business is the responsibility of every entrepreneur or businessman, requiring foresight, motivation, and creativity (Shavira Nurhalisa, 2020). Business development is a set of activities carried out to create something by developing and transforming various resources into goods or services desired by consumers. The development of an analytical preparation process regarding potential growth opportunities by utilizing expertise, technology, intellectual property, and external guidance to improve quality as an effort aimed at expanding the business (Kartika, 2014). Digital transformation is the process of organizational change involving people, strategy, and structure through the use of digital technology and adaptive business models to improve organizational performance (Malik & Tajuddin, 2008).

Digital Accounting is a system within an organization that meets the need for processing daily transactions, supporting the managerial operational functions of the organization, and aligning with the strategic activities of the organization to produce reports required by external parties (Supriyanto, 2008). Another definition of Digital Accounting is a system that functions to organize forms, records, and reports that are coordinated to generate financial information needed in management decision-making and company leadership, and can facilitate the management of the company. The process of change that occurs is from printed documents to electronic documents (Miftahurrohman and Febi, 2020). The conceptual framework used in this research is:

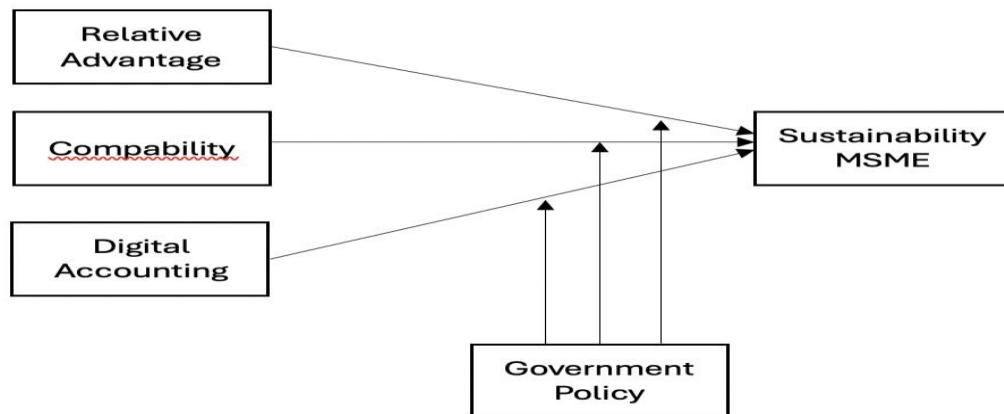


Figure 2. Conceptual Framework

Based on the conceptual framework of the research, the hypotheses of this dissertation are as follows: The Effectiveness of Digital Accounting in Terms of Digital Literacy Using the TOE Method. The Effectiveness of Digital Accounting in Terms of Relative Advantage Using the TOE Method. The Effectiveness of Digital Accounting in Terms of Competitive Pressure Using the TOE Method. The Effectiveness of Digital Accounting in Terms of Compatibility Using the TOE Method. The Effectiveness of Digital Accounting in Terms of Digital Literacy, Relative Advantage, Competitive Pressure, and Compatibility Using the Technology Organization Environment Method for MSME Actors in Batam City.

METHODS

Research design (also known as research plan, research proposal, or research project) is an explanation of the various components that will be used by the researcher as well as the activities that will be carried out during the research process. On the other hand, (Sugiyono, 2016) states that a research design or proposal is a guideline containing systematic activities or steps that will be followed by the researcher to conduct their research. This research is of a quantitative type with descriptive statistics. Quantitative testing is conducted to examine field data collected based on theoretical and empirical studies, validity and reliability tests of the relationship between indicators and latent variables (outer model or measurement model), and the relationship between variables, culminating in testing the research hypothesis (inner model or structural model). The nature of the research is explanatory research. Sugiyono (2010) states that explanatory research is research that aims to explain the position of the variables being studied and the relationship between one variable and another. This research was conducted at the Department of Cooperatives and SMEs of Batam City, with the survey location covering all business actors registered with the Department of Cooperatives and SMEs of Batam City.

The data analysis technique in this research uses Partial Least Square (PLS). PLS is a Structural Equation Modeling (SEM) model with a variance-based or component-based structural equation modeling approach. According to Imam Ghazali (2016:417), the Partial Least Square (PLS) method is described as a variance-based structural equation model (PLS) capable of depicting latent variables (not directly measurable)

and measured using indicators (manifest variables). The author uses Partial Least Square (PLS) because the variables used in this research are latent variables (not directly measurable) that can be measured based on their indicators (manifest variables), and collectively involve the measurement error level. Thus, the author can analyze in more detail the indicators of the latent variables that reflect the strongest and weakest latent variables, including their measurement error levels. The PLS-SEM approach is based on the shift of analysis from measuring model parameter estimates to measuring relevant model predictions. Data analysis in PLS-SEM is conducted in three stages, namely outer model testing, inner model testing, and hypothesis testing (Sarwono and Narimawati, 2015:18).

PLS-SEM itself uses software such as SmartPLS, WarpPLS, PLS-Graph, and VisualGraph. PLS has two indicator models in its representation, namely: (1) the reflective indicator model and (2) the formative indicator model. The reflective indicator model reflects that each indicator is a measurement error imposed on the latent variable. The cause-and-effect direction is from the latent variable to the indicator. Thus, the indicators are reflections of the variations of the latent variable (Sugiyono, 2013). Sedangkan model indikator formatif adalah hubungan sebab akibat berasal dari indikator menuju ke variabel laten. Hal ini dapat terjadi jika suatu variabel laten didefinisikan sebagai kombinasi dari indikator-indikatornya. Dengan demikian perubahan yang terjadi pada indikator-indikator akan tercermin pada perubahan variabel latennya. Penelitian ini menggunakan model indikator reflektif dalam mendeskriptifkan hubungan antar variabel laten dengan indikatornya.

The steps of the Partial Least Square (PLS) method carried out in this study are as follows: Designing the Structural Model (inner model). At this stage, the researcher formulates the model of the relationship between constructs. Designing the Measurement Model (outer model). At this stage, researchers define and specify the relationship between latent constructs and their indicators, whether they are reflective or formative. Constructing Path Diagrams The main function of building path diagrams is to visualize the relationships between indicators and their constructs, as well as between constructs, which will make it easier for researchers to see the overall model. Next, Model Estimation. In this step, there are three weighting selection schemes in the model estimation process, namely the factor weighting scheme, centroid weighting scheme, and path weighting scheme, as well as Goodness of Fit or model evaluation, which includes measurement model evaluation and structural model evaluation. And Hypothesis Testing and Interpretation.

Statistical Hypothesis The significance test aims to determine the extent of the influence of independent variables (exogenous) on dependent variables (endogenous). The significance measure of hypothesis support can be assessed using the comparison of T-table and T-statistic values. The criteria for accepting/rejecting the hypothesis are that if the T-statistic is higher than the T-table value, the hypothesis is accepted. Conversely, if the T-statistic is lower than the T-table, the hypothesis is rejected.

Hypothesis testing is conducted using the bootstrap resampling method with a minimum of 5000 bootstraps, and the number of cases must be equal to the number of observations in the original sample. The formulation of the hypothesis in the significance test is as follows: H0: The independent variable does not significantly

affect the dependent variable and H1: The independent variable significantly affects the dependent variable.

RESULTS AND DISCUSSION

The object of this research is MSMEs located in the city of Batam. The number of questionnaires distributed for each MSME is one questionnaire for one taxpayer. The questionnaire was distributed through online media, specifically using the Google Form application to make it easier for respondents to answer. Out of the total number of questionnaires distributed and sent, which amounted to 100 questionnaires, the number of questionnaires that were completely filled out and returned was 100 questionnaires. In accordance with the sample determination using the Slovin's formula, which is a formula to calculate the minimum sample size, the author distributed the questionnaire to 100 respondents. The distribution of the questionnaire was conducted among individual taxpayers who run businesses or are self-employed, as mentioned in the previous chapter and in accordance with the established sample requirements. From the distribution of the questionnaire, all responses were collected and filled out properly, resulting in 100% of the returned samples being usable.

Based on the number of variables and referring to the research phenomenon, the variables in this study are: Digital Literacy (X1), Relative Advantage (X2), Competitive Pressure (X3), Compatibility (X4), and Digital Accounting Effectiveness (Y). The results of the descriptive statistical tests for each variable can be seen and described as follows:

Table 1. Results of Descriptive Statistical Test

Descriptive Statistics						
	N	Minimum	Maximum	Sum	Mean	Std. Deviation
Digital Literacy	100	16	30	2380	24,29	2,115
Relative Advantage	100	16	29	2447	24,97	2,038
Competitive Pressure	100	18	23	1978	20,18	1,134
Compatibility	100	20	27	2276	23,22	1,336
Efektivitas Akuntansi Digital	100	30	47	4029	41,11	2,701
Valid N (listwise)	100					

Source: Data processed in 2023 (SPSS Output)

Based on Table 1, it is known that the digital literacy variable with 98 respondents has an average score of 24.29, a minimum score of 16, and a maximum score of 30, with a total score of 2380 and a standard deviation of 2.115. The Relative Advantage variable with 98 respondents has an average score of 24.97, a minimum score of 16, and a maximum score of 29, with a total score of 2447 and a standard deviation of 2.038. The Competitive Pressure variable with 98 respondents has an average score of 20.18, a minimum score of 18, and a maximum score of 23, with a total score of 1978 and a standard deviation of 1.134. The Compatibility variable with 98 respondents has an average score of 23.22, a minimum score of 20, and a maximum score of 27, with a total score of 2276 and a standard deviation of 1.336. The Digital Accounting Effectiveness variable with 98 respondents has an average score of 41.11, a minimum score of 30, and a maximum score of 47, with a total score of 4029 and a standard deviation of 2.701. Based on the data processing results, the regression test results are as follows:

Table 2. Regression Coefficient Test Results

		Coefficients ^a			t	Sig.
Model		Unstandardized Coefficients		Standardized Coefficients Beta		
		B	Std. Error			
1	(Constant)	7,021	4,875		1,440	,153
	Digital Literacy	,025	,132	,019	,188	,851
	Relative Advantage	,358	,133	,270	2,699	,008
	Competitive Pressure	,729	,227	,306	3,219	,002
	Compability	,424	,186	,209	2,272	,025

Source: Data processed in 2023 (SPSS Output)

Based on Table 2, the structural equation obtained is as follows:

$$Y = 0,019X_1 + 0,270X_2 + 0,306X_3 + 0,209X_4 + \epsilon$$

The equation can be interpreted as:

The constant of 7.021 indicates that without the influence of the three independent variables Digital Literacy (X1), Relative Advantage (X2), Competitive Pressure (X3), and Compatibility (X4), as well as other factors, the effect of the Digital Accounting Effectiveness variable (Y) is 7.021 or 70.2%. With a positive coefficient of 0.019, it can be interpreted that each increase of one unit in digital literacy increases the effectiveness of digital accounting by 0.019 units. In percentage terms, this means an increase of 1.9%. This implies that the higher the digital literacy, the more effective the digital accounting, without considering the influence of other factors that may be present. With a positive coefficient of 0.270, it can be interpreted that an increase in relative advantage by one unit will increase the effectiveness of digital accounting by 0.270 units. In percentage terms, this means that each one-unit increase in comparative advantage boosts the effectiveness of digital accounting by 27%. Therefore, the greater the relative advantage, the more effective the digital accounting, without considering the influence of other factors that may be present. With a positive coefficient of 0.306, it can be interpreted that an increase of one unit in competitive pressure will increase the effectiveness of digital accounting by 0.306 units. In percentage terms, this means that each increase in competitive pressure by one unit will increase the effectiveness of digital accounting by 30.6%. Therefore, the greater the competitive pressure, the more effective the digital accounting, without considering the influence of other factors that may be present.

With a positive coefficient of 0.209, it can be interpreted that an increase in Compatibility by one unit will increase digital accounting efficiency by 0.209 units. In percentage terms, this means that each increase in compatibility enhances the effectiveness of digital accounting by 20.9%.

Therefore, the greater the compatibility, the more effective digital accounting will be, without considering the influence of other factors that may exist. From the explanation, it can be concluded that the most dominant variable affecting the effectiveness of digital accounting (Y) is the competitive pressure variable (X3) at 0.306 or 30.6%, followed by the relative advantage variable (X2) at 0.270 or 27%, then the compatibility variable at 0.209 or 20.9%, and finally the digital literacy variable (X1) at 0.019 or 1.9%. The results of the partial tests for each variable can be seen in

the table below:

Table 3. T test

Variabel	thitung: ttabel	Prob. Sig	Ket
	thitung	ttabel	Sig.
			$\alpha=5\%$
Digital Literacy (X1)	3,942	1,985 0,000	0,05 Ha1 "Accepted"
Relative Advantage (X2)	5,280	1,985 0,000	0,05 Ha2 "Accepted"
Competitive Preasure (X3)	5,578	1,985 0,000	0,05 Ha3 "Accepted"
Compability (X4)	4,223	1,985 0,000	0,05 Ha4 "Accepted"

The effectiveness of digital accounting in terms of digital literacy. Based on the data processing results, the beta coefficient value of the digital literacy variable is 3.942 > the t-table value (1.985) with a significance value of 0.000 < 0.05. Thus, it can be interpreted that H01 is "REJECTED" and Ha1 is "ACCEPTED." This means that digital literacy has a positive and significant impact on the implementation of digital accounting in MSMEs in Batam City.

The effectiveness of digital accounting in terms of relative advantage. Based on the data processing results, the beta coefficient value for the relative advantage variable is 5.280 > the t-table value (1.985) with a significance value of 0.000 < 0.05. Thus, it can be interpreted that H02 is "REJECTED" and Ha2 is "ACCEPTED." This means that relative advantage has a positive and significant effect on the implementation of digital accounting in MSMEs in Batam City.

The effectiveness of digital accounting in terms of competitive pressure. Based on the data processing results, the beta coefficient value for the competitive pressure variable is 5.578 > the t-table value (1.985) with a significance value of 0.000 < 0.05. Therefore, it can be interpreted that H03 is "REJECTED" and Ha3 is "ACCEPTED." This means that competitive pressure has a positive and significant effect on the implementation of digital accounting in MSMEs in Batam City.

The effectiveness of digital accounting in terms of compatibility. Based on the data processing results, the beta coefficient value for the compatibility variable is 4.223 > the t-table value (1.985) with a significance value of 0.000 < 0.05. Thus, it can be interpreted that H04 is "REJECTED" and Ha4 is "ACCEPTED." This means that compatibility has a positive and significant effect on the implementation of digital accounting in MSMEs in Batam City. Based on the data processing results, the F-test results can be seen in the following table:

Table of F-Test Results (Simultaneous)

ANOVA ^a					
Model		Sum of Squares	df	Mean Square	F
1	Regression	261,628	4	65,407	13,634
	Residual	446,138	93	4,797	
	Total	707,765	97		

a. Dependent Variable: Sustainability MSMEs

b. Predictors: (Constant), Compability, Relative Advantage, Competitive Preasure, Digital Literacy

Source: Processed Primary Data 2023 (SPSS Output)

Based on Table 4, it can be seen that the calculated F value of 13.634 > the table F value of 2.47 with a significance level of 0.000 < $\alpha = 0.05$. Thus, it can be interpreted

that H05 is "REJECTED" and Ha5 is "ACCEPTED." This means that, simultaneously, the variables of digital literacy, relative advantage, competitive pressure, and compatibility have an influence on the effectiveness of digital accounting. The results of the Determination Test can be seen in the table below:

Table of Determination Test Results (R²)

Model Summary				
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	,608 ^a	,370	,343	2,190

a. Predictors: (Constant), Compatibility, Relative Advantage, Competitive Pressure, Digital Literacy

Source: Processed Primary Data 2023 (SPSS Output)

Based on the results of the determination test (R²), it is known that the adjusted R square value is 0.370, which means that the variable of digital accounting effectiveness can be explained by the variables of digital literacy, relative advantage, competitive pressure, and compatibility by 37%. Meanwhile, the remaining 63% is explained by other variables outside the analyzed variables.

The Effectiveness of Digital Accounting from the Perspective of Digital Literacy Using the TOE Method. The results of the hypothesis testing show that there is a positive and significant influence between digital literacy and the effectiveness of digital accounting among MSME actors in Batam City. High digital literacy helps organizations understand, implement, and use technology more effectively, in accordance with the TOE framework. This relationship is reciprocal, as better digital literacy enables more effective TOE implementation and vice versa. Training and development of digital literacy are important to make digital accounting with the TOE method more effective. In this context, the higher the digital literacy of SMEs, the greater the likelihood that they will be interested in or willing to use digital accounting applications. Digital literacy can help SMEs better understand and manage applications, thereby increasing user interest in producing high-quality financial reports. Additionally, financial reporting becomes more efficient and competent (Warren, 2014). Referring to SAK EMKM, MSME actors are required to prepare financial statements in the form of income statements, balance sheets, and statement of changes in equity (Ikatan Akuntan Indonesia, 2018). The need for quality financial reporting serves as a background that can be utilized by SMEs to gain digital literacy, understand, and use accounting applications. The accounting applications offered through smartphones leave SMEs confused in making a choice.

This research is in line with the findings of Ratnasari's 2017 study, which stated that the perception of ease of use significantly influences the interest in using accounting software. Next is the research by Maulida, Farida, and Karunia in 2021, which states that the use of smartphone-based applications that can be downloaded for free can be influenced by the efficiency and effectiveness of using those applications. Furthermore, the research conducted by Sularsih and Wibisono in 2021 stated that information technology and literacy have also produced quality financial reports for SMEs. Based on several studies, it can be assumed that digital literacy is certainly very necessary to influence interest in digital-based accounting applications for MSME actors, especially those located in the Talaga Biru District.

The Effectiveness of Digital Accounting from the Perspective of Relative Advantage Using the TOE Method. The results of the hypothesis testing show that there is a positive and significant influence between relative advantage and the effectiveness of digital accounting among MSME actors in Batam City. The effectiveness of digital accounting use for MSMEs, especially those in Batam City, particularly from the perspective of relative advantage, evaluated using the TOE methodology, indicates that a considerable number of MSMEs that have implemented digital accounting report significant progress in their business development. However, this study contradicts the research conducted by Dlodlo, et al. in 2003, which stated that the majority of SME CEOs were not confident in the relative advantages that could be generated by the implementation of e-commerce. In this case, SMEs see that the implementation of digital accounting can offer relative advantages such as efficiency and better performance compared to manual methods, so SME actors will be more interested in adopting this technology. This certainly reflects the existence of relative advantages in encouraging technology adoption among SMEs.

The Effectiveness of Digital Accounting from the Perspective of Competitive Pressure Using the TOE Method. The results of the hypothesis testing show that there is a positive and significant influence between competitive pressure and the effectiveness of digital accounting among MSME actors in Batam City. These findings provide a better understanding of how competitive pressure plays an important role in increasing the use of digital accounting technology in the MSME sector. The implications of these findings can help SMEs make more informed decisions regarding the implementation and application of digital accounting. Competitive pressure in the MSME sector can be seen as an important driver of innovation, and digital accounting is the main tool to address the quite intense competition challenges. This research also emphasizes the importance of understanding environmental factors, particularly competitive pressure, in the use of digital accounting by SMEs. A deeper understanding of how competitive pressure influences the adoption of digital accounting technology can help SMEs design better strategies to respond to changes in the business environment. By understanding how competitive pressure can motivate SMEs to adopt digital accounting technology, SMEs can plan concrete steps to implement these solutions.

This research is in line with the study conducted by Aryanto et al. in 2023, which stated that competitive pressure has a significant impact on the implementation of digital accounting in SMEs. This indicates that the greater the competitive pressure, the greater the need for SMEs to adopt digital accounting to compete with their competitors. Next, the research conducted by Yuliantari et al. in 2012 stated that the right decisions in implementing accounting software and e-commerce in small and medium enterprises can help overcome competitive pressure in both the MSME and large business sectors. Furthermore, the research conducted by Aprisca in 2023 showed that competitive pressure has a positive and significant impact on the adoption of mobile payments in SMEs. This indicates that the greater the competitive pressure, the greater the need for SMEs to adopt mobile payment technology to compete with their rivals. Overall, this research emphasizes the importance of digital accounting as a strategic tool for SMEs to face strong competitive pressure in a competitive market. By using this technology effectively, SMEs can enhance their competitiveness, respond better to market changes, and survive in business competition.

Overall, this research provides a better understanding of how the compatibility between digital accounting technology and the characteristics of SMEs can affect the effectiveness of using this technology. This can help SMEs make smarter decisions regarding the adoption, implementation, and development of digital accounting technology in their efforts to enhance their competitiveness in an increasingly digital market.

REFERENCES

- A, Made S. W., & Sudjarni, L. K. (2016). The Influence of Interest Rates, Inflation Rates, Rupiah Exchange Rates and Gross Domestic Product on Stock Returns. *E-Jurnal Manajemen Universitas Udayana*, 5(6), 254288.
- Andes, S. L., Puspitaningtyas, Z., & Prakoso, D. A. (2017). The Effect of Inflation, Rupiah Exchange Rate and Interest Rate on Stock Returns of Manufacturing Companies. *Jurnal Akuntansi Keuangan Dan Bisnis*, 10(2), 8–16. <http://jurnal.pcr.ac.id>
- Asmirantho, E., Mulya, Y., & Firmansyah, D. A. (2016). The Influence of Financial and Macroeconomic Performance on Stock Returns in the Food and Beverage Subsector Period 2011-2015. *JIMFE*, 2(2), 17–25. <https://doi.org/10.34203/jimfe.v2i2.445>
- Frima, R., & Surya, F. (2018). The Influence of Education Level and Use of Management Accounting Information on MSME Performance in Padang City. *Jurnal Akuntansi & Manajemen*, 13(1), 93–111.
- Ghozali, I. (2013). *A Multivariate Analysis Application With IBM SPSS 21 Program*. Badan Penerbit Universitas Ponorogo.
- Hidayat, L. R., Setyadi, D., & Azis, M. (2018). The Effect of Inflation and Interest Rates and Rupiah Exchange Rates and Money Supply on Stock Returns. *Economic Forum*, 19(2), 148. <https://doi.org/10.29264/jfor.v19i2.2121>
- Julia, T. T., & Diyani, L. A. (2015). The Influence of Financial and Macroeconomic Fundamental Factors on Stock Prices. *Jurnal Bisnis Dan Komunikasi*, 2(2), 109–119, ISSN 2356-4385.
- Mankiw, & Gregory, N. (2014). *Introduction to Macroeconomics Asian Edition*. Salemba Empat.
- Purba, N. M. B. (2019). The Influence of Profitability, Liquidity, and Leverage on Stock Returns of Manufacturing Companies on the IDX. *Jurnal Akuntansi Keuangan Dan Bisnis*, 12 No. 2(2), 67–76.
- Sunayah, S., & Ibrahim, Z. (2016). Analysis of the Influence of Changes in Macroeconomic Variables on Sharia Stock Returns of PT. Telekomunikasi Indonesia, Tbk. Period 2011-2013. *ISLAMICONOMIC: Jurnal Ekonomi Islam*, 7(1), 113–139. <https://doi.org/10.32678/ije.v7i1.37>
- Suriyani, N. K., & Sudiartha, G. M. (2018). The Effect of Interest Rates, Inflation and Exchange Rates on Stock Returns on the Indonesia Stock Exchange. *E-Journal of Management, Udayana University*, 7(6), 255328. <https://doi.org/10.24843/EJMUNUD.2018.v07.i06.p12>
- Sutriani, A. (2014). The Effect of Profitability, Leverage, and Liquidity on Stock Returns with Exchange Rates as a Moderating Variable on LQ-45 Stocks. *Journal of Business and Banking*, 4(1), 67–80. <https://doi.org/10.14414/jbb.v4i1.294>

- Wardani, D. K., & Andarini, D. F. T. (2016). The Influence of Fundamental Conditions, Inflation, and Bank Indonesia Certificate Interest Rates on Stock Prices (Case Study on Real Estate and Property Companies Listed on the Indonesia Stock Exchange). *Jurnal Akuntansi*, 4(2), 77–90. <https://doi.org/10.24964/ja.v4i2.233>
- Yulianto, & Widyasasi. (2020). Analysis of Factors Affecting Company Value. *Journal of Accounting*, 9(2), 218–232. <https://doi.org/10.37932/ja.v9i2.154>