# THE EFFECT OF IMPLEMENTING INFORMATION TECHNOLOGY AND INNOVATION ON PERFORMANCE (Study on MSMEs in Rokan Hilir Riau Regency)

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#### Abstract

The Covid-19 pandemic has greatly impacted MSMEs where many MSMEs have experienced a decline in performance and even closed. In the new normal era, MSMEs are slowly starting to rise, business actors are utilizing online media or the use of technology and innovating to boost sales again. The goal of the research is to analyze the impact of information technology and innovation on MSMEs performance in the Rokan Hilir Regency of Riau. There are 34,036 registered MSMEs in the Rokan Hilir regency, according to the Regency Office of Cooperatives and MSMEs. In contrast, the study's sample size was determined using the Slovin and criterion-based sampling methods, and it totaled 100 MSMEs. The information gathered is called "primary data," and it consists of questionnaires and interviews with a small number of MSMEs participants. The data was analyzed using a robust linear regression model. The findings of the research hypothesis indicate that information technology and innovation have a positive and significant impact on MSMEs performance. MSMEs will find it much simpler to market their products with the help of information technologies such as the use of online media, expanding the reach of their product sales. Similarly, innovative approaches to the products the company manufactures give it an edge over the competition and boost MSMEs performance.

Key words: Information Technology, Innovation, MSMEs Performance

### Introduction

One of the main priorities for economic development in Indonesia is the growth of small and medium enterprises. These efforts form the basic foundation for a micro economic, which aims not only to reduce poverty and employment, but also to close the gap between different income groups and employers. It is important to note that MSMEs have a number of benefits, including the ability to start a business with small capital, a special focus, fast innovation and adaptability. Despite its advantages, MSMEs cannot eliminate problems that can hinder expansion. Some of the common obstacles faced by MSMEs are: limited human resources, lack of venture capital, marketing limitations such as not yet going online, weak financial management, not yet

conducting business planning, not having branding for the products being produced and not having a qualified strategy (https: // idntrepreneur.com/ March 25, 2023 ).

To overcome the above obstacles, appropriate, comprehensive and continuous strategies and policies are needed so that MSMEs can continue to improve as a role in supporting the national economy. To overcome the lack of capital, the government's role is needed, especially in providing assistance financial, relaxation, discretion, to stimulus and many other relaxation programs are presented to help MSMEs in Indonesia. To overcome the limitations of human resources and financial management, there must be continuous guidance for MSMEs actors. This can be done by providing financial management training for MSMEs. MSMEs also have to be able to take advantage of the sophistication of information technology, for example using a smartphone for online sales. In a business, there are competitors who also have the same business. So that the business position is unrivaled, MSMEs actors must develop products by innovating, including by improving quality, finishing products, and creating unique packaging. Branding of products in production is also required. The absence of branding of the products produced will make the product less valuable in the eyes of customers. With branding, customers will easily remember the advantages of the products being sold (https://ginee.com/en/insights/example-problem-business-dansolusinya).

During the Covid-19 era, many MSMEs experienced a decline in performance and even closed their businesses. To be able to recover from adversity due to the Covid-19 pandemic, various strategies are needed that will help MSMEs to improve their performance again. Several strategies that can be carried out by MSMEs to improve performance include the use of information technology and product innovation. The development of digital technology allows MSMEs players to market their products online and make transactions through the online banking system. The development of digital technology has changed the marketing of small and medium companies from conventional to digital by leveraging the use of social media and websites to market their products. The use of online media is the right choice for MSMEs to develop their business. They can get many advantages. For example, using online media in business will reduce sales costs because MSMEs players do not need to pay for shop rental costs and they also do not need to conduct market surveys. Several research results prove that the use of technology has a significant effect on improving business performance. Desmiyawati et al's research (2022) conducted on Pelalawan Regency MSMEs proves that the use of information technology improves business performance. Anjum's (2018) research conducted on MSMEs in India shows that technology adoption by MSMEs affects performance. The existence of technological innovation helps MSMEs in India to gain market share and also helps MSMEs survive in the long term. Research Cuevas *et al.* (2016) on MSMEs in Mexico show that information & communication technology are important factors that drive increased performance which can consequently support growth and increase competitiveness in the market.

The company's goal to improve its competitiveness is highly dependent on innovation. Business owners must seek new methods to improve the quality of the products they sell, even though customer preferences are constantly changing. Environmental uncertainty encourages entrepreneurs to continue to innovate to compete. Highly imaginative organizations will better respond to climate and drive new capacities that will further improve business execution. MSMEs that adopt open innovation programs will be able to face competition from larger companies (Zhang and Chen, 2014). Research by Rezaei and Ortt (2018) on MSMEs in the Netherlands shows that innovation can have a positive effect on R&D performance (measured by the number of patents, the number of ideas and the percentage of sales by new products). Choo and Lee's (2018) research on MSMEs in Korea also shows the results of innovation that proactively affect non-financial performance as measured by employee growth ratios, CSR, organizational learning and development potential. The results of Fitriati's research, et al (2020) on MSMEs in Indonesia also show that innovation has a positive effect on performance.

The purpose of conducting this research is to examine the effect of Information Technology and Innovation on the Performance of MSMEs in Rokan Hilir Regency. Rokan Hilir Regency is a regency in Riau Province. MSMEs in Rokan Hilir Regency are thriving and able to answer for the welfare of the Rohil community, so the government is committed to continuing to increase their number so that many people have businesses. The Rokan Hilir Regency Government encourages the existence of MSMEs to remain healthy and advanced business centers. At this time in Rokan Hilir Regency there are many newly established MSMEs such as Moringa leaves from Bagan Batu, batik from Panipahan, songket cloth from Tanah Putih District and various other MSMEs (Dahmudi, Dedi. Vice Regent Rohil: MSMEs are important pillars of driving the regional economy- ANTARA News Riau). In Rokan Hilir Regency, the government has also committed to providing cheap & fast internet services. This aims to help move and develop the community's economy which is done online. Through the internet, it is hoped that MSMEs players will be able to promote their products using social media (Not a figment of thumbs up, Rokan Hilir Regent Will Soon Launch a Cheap Internet Program in Bangko Pusako (rohilkab.go.id). Innovations are being made to improve performance, especially the number of product sales in Rokan Hilir including making product packaging more attractive and using a halal certification so as to attract buyers of these MSMEs products.

The benefit of this research is to add insight into how the use of information technology and innovation can help MSMEs to improve their business performance. The practical benefit is that researchers can apply various theories learned and gain additional knowledge and insight on how MSMEs maintain and improve performance, especially in the post-Covid 19 era.

Research on the performance of MSMEs has been carried out by many previous researchers. However, some research results show gaps or different results. Research Cuevas et al. (2016), Susilatri et al. (2022), Safrizal, (2023) and Desmiyawati et.al (2022) it is proven that technology can improve performance. Some research results such as Abebaw et al. (2018) proves that technology has no effect on the performance of MSMEs. Cuevas et al. research results. Rezaei and Ortt (2018), Cho and Lee (2018), and Hariadi et al. (2022) proven innovation significantly improves the performance of MSMEs. In contrast, the results of research by Bereket and Buli (2017), Al Mamun and Fazal (2018), and Desmiyawati et.al (2022) shows that innovation has no effect on the performance of MSMEs.

The urgency of the research is that the Covid-19 pandemic has resulted in many MSMEs businesses experiencing a decline in performance and some even closing because they were unable to survive. In order for MSMEs businesses to revive, a survival strategy is needed that can be carried out through MSMEs product innovation and the application of information technology in marketing these MSMEs products. Based on this, it is important to conduct research that examines more deeply whether

innovation and the use of information technology is a solution for MSMEs to survive, especially in the post Covid-19 era.

The novelty of this research is the application of the mixed methods (a mixture of qualitative and quantitative methods). Besides using quantitative testing through multiple regression, the test results were also strengthened through qualitative analysis by conducting interviews and analyzing the results of interviews with several MSMEs owners who identified the impact of using information technology and innovation on MSMEs performance. The mixed methods are important to do this to produce more comprehensive facts and answers. This is because researchers can use various appropriate data collection tools on the type of data needed. With the addition of qualitative testing methods (through interviews), researchers can ensure that the results of quantitative testing can be confirmed in more depth.

# Literature Review Diffusion of Innovation Theory (DOI)

Theory seeks to explain how, why, and at what rate new ideas and technologies spread. This theory was developed by Everett Rogers in 1962. Rogers argued that diffusion is an innovation process that is communicated from time to time between participants in a social system.

The Theory of Innovation Diffusion approach has a main focus on how potential adopters perceive an innovation in terms of relative advantages or disadvantages; hence several factors of the DOI approach help shape the framework: innovation, complexity, compatibility, and relative advantage. In addition, companies that make intensive use of a particular technology are often prime candidates for early adoption of the next generation of that technology. There is a discourse that focuses on adoption by organizations as well as by individuals. Both types of adoption come into play when investigating the diffusion and adoption of innovations by MSMEs.

This approach is important for understanding the dynamics that play a role in the adoption and use of innovation in MSMEs. However, in MSMEs many of the major decisions are made by the owner-manager. Organizational decisions to adopt technology become related to the personal perceptions and attitudes of owner-managers towards the technology. Diffusion within MSMEs is mostly through interpersonal or inter-company networks.

#### **MSMEs**

The grouping and arrangement of small and medium enterprises as stipulated in Government Regulations No. 7 of 2021, article 35 is presented in table:

No	Criteria	Venture capital	Sale	
1	Micro business	Maximum IDR 1 billion	Maximum IDR 2 billion	
2	Small business	> IDR 1 to 5 billion	> 2 to IDR 15 billion	
3	Medium Business	> IDR 5 to 10 billion	> 15 to IDR 50 billion	

Table 1.	Classification	of MSMEs

Source: Government Regulations No. 71, 2021

#### **MSMEs Performance**

Performance can be defined as the result of the efforts made by the owners and managers of the company. It's possible to classify a company's performance into two broad categories: financial and operational. Financial performance shows the company's financial condition over a certain period of time. Non-financial performance metrics are indicators of a company's health and growth. employee improvement ratio, CSR, firm learning capability, and expansion power are all taken into account when calculating non-economic performance (Cho & Lee, 2018).

# Information Technology

Information Technology (IT) is, according to Wikipedia's definition, methods developed to assist humans in generating, modifying, storing, communicating, and disseminating data. Data mining, data preprocessing, data collection, data storage and data manipulation are all part of information technology, which aims to provide users with high-quality information. The combination of new systems and information technology can facilitate business planning and promote the development and execution of production programs, all at once motivating process and product control. Information and communication technology as an innovation facilitator allows companies to improve all administrative activities, provides significant efficiency improvements, helps companies follow customer trends in monitoring competitor behavior so that they get feedback quickly, helps them get opportunities to carry out different innovations. Efficient use of technology can also quickly improve performance (Cuevas, et al, 2016). In today's interconnected world, when information technology advancing, it is necessary for businesses to develop marketing strategies that can reach consumers worldwide. One such strategy is E-Commerce, or online marketing (Harini and Handayani, 2019).

# Innovation

According to the Big Indonesian Dictionary (KBBI), innovation is a way of introducing the renewal of a product/service or introducing a new way of seeing differences from what existed before. Innovation is a process of producing new technology (Lukas and Ferrell, 2000). Innovation is split into indicators:

- a) Product Line Expansion, is a product that is still familiar to business organizations but new to the market.
- b) Counterfeit or Imitation Products, are products that are considered new by businesses but are familiar to the market.
- c) New Product, that is considered new both by the business and the market.

### **Thinking Framework and Research Hypothesis**

### The Effect of Information Technology on MSMEs Performance

The use of information technology as a methodological procedure used to carry out an activity refers to a collection of various tools that include hardware, information theory, network data, workstations, and robots. Technology effectively supports business operations as a result (Aslizadeh, 2014). The use of information technology helps companies manage finances, especially for small and medium-sized companies (Muafil & Roostika, 2014).

Research Cuevas et al. (2 016), Sekarsari (2019), Desmiyawati, et al (2022), and Susilatri et al. (2022) proves that information technology has an effect on the performance of MSMEs. Based on research results from formulated hypothesis:

### H1: Information Technology affects MSMEs Performance

#### The Effect of Innovation on MSMEs Performance

Minds that engage creatively in the process of experimenting with new ideas that may create production methods to create goods (new services) for old or new markets are called innovative. Successful entrepreneurs setting a business does not only depend on its role, this can also be seen in his ability to see company as a whole. Because of this, having an innovative perspective can be encouraging someone to achieve strategic corporate goals. Study (Abdilahi et al., 2017), Ranto (2016), Rezaei and Ortt (2018), Cho and Lee (2018), and Hariadi et al. (2022) proves that innovation has an effect on the performance of MSMEs. Based on the description above, the hypothesis is:

# H2: Innovation has an effect on MSMEs performance.

Based on the framework above, the research model is made as follows:





### **Methods of Research**

### **Population and Sample**

The population in the research conducted was 34,036 business actors who were registered as MSMEs at the Rokan Hilir Cooperative and MSMEs Office (It is estimated that 100 MSMEs). Sampling aims to be representative of the population with MSMEs criteria in business more than 1 year. This research uses primary and secondary data. Research data comes from questionnaires and interviews. Observation, distribution, and conversational data collection technologies.

No	Variable	Definition	Measure
1	MSMEs Performance	An output of optimal work performance carried out by a person or group/business entity	Adopted by Cho and Lee (2018) includes eight indicators, ROA, ROE, revenue growth and sales return, loyalty, and competitiveness, stability, customer satisfaction.
2	Information Technology	A different set of tools includes hardware, information theory, data	The research adopted by Ali & Wangdra (2010) includes information technology

Table 2. Operational Definition and Variable I
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		networks, workstations and	systems, computer
		artificial intelligence	technology systems and
		(robotics), that use	communication technology
		information as a systematic	systems.
		process used to carry out an	
		activity (Aslizadeh, 2014)	
3	Innovation	A valuable new product,	Adopted from Setiawardani's
		process, or service that is the	research (2022) includes;
		application, combination, or	product line extensions,
		synthesis of original and	imitations, and new
		relevant scientific	products.
		knowledge, to make a	
		specific and measurable	
		difference in the world,	
		innovation involves action	
		(Ofori, 2015)	

Source: Previous Research, 2023

### Data analysis method

Research method uses a mixed method, namely observing a phenomenon using two approaches, which consist of quantitative descriptive and qualitative. Mixed methods research design is a procedure for collecting, analyzing and combining qualitative and quantitative methods into one study or several studies aimed at solving problem research (Creswell and Plato Clark, 2011) in Abdurrohman (2018). The goal is to create a combination of advantages each method in order to gain increased understanding as well as answer research questions and produce superior research findings.

Research method according to Sugiyono (2013) shared become the following 4 stages:

- 1. Method sequential explanatory (sequence proof)
- 2. Method Combination Model/Design Sequential exploratory (order invention).
- 3. Concurrent Design Combination Method triangulation
- 4. concurrent method embedded (mixture No balanced)

The method used on research we, *Concurrent* Design Combination *triangulation*. The following is a picture of the research method used:



**Figure 2. Concurrent Triangulation Method** 

The stages of work carried out on this research are:

1) Quantitative Method

Starting with the existence of a quantitative formulation of the problem, then a theoretical basis is prepared, followed by the formulation of hypotheses. Researchers collected quantitative data using a questionnaire given to MSMEs according to the research sample criteria. Furthermore, data analysis was performed using multiple linear regression analysis. To test the hypothesis, the following equation is used: Performance = a + b1 TI + b2 Inov + e Furthermore, an interpretation is made of the results of testing the hypothesis. Acceptance or assessment of the hypothesis is determined based on  $\alpha < 0.05$ , which means that the test results accept Ha (there is an influence of technology or innovation on performance). If  $\alpha > 0.05$ , it means that the research results reject the proposed Ha, meaning that there is no influence of technology or innovation on performance.

In order to deepen and obtain further explanation on the results of the quantitative test, a qualitative test was carried out.

### 2) Qualitative Method

Starting with the formulation of problems qualitatively (the same problem as quantitative), strengthening researchers as human instruments, then collecting qualitative data by conducting in-depth interviews with several MSMEs actors about the impact of the use of technology and innovation on performance. Next is the process data reduction, namely focusing on important things related to research. Then present measurable information, and make conclusions or verification.

The stages of the qualitative method consist of: (Miles and Huberman), 1992:20):

a. Collecting data

Is an integral part of activities for data analysis a

b. Data reduction

The process of selecting important data according to the theme and method as well as output data which is not appropriate.

c. Data presentation

Presenting measurable and systematic information in giving the possibility of drawing conclusions. Data is generally in the form of narrative, so it needs to be analyzed to keep it simple.

d. Conclusion or verification

Collection of data for research, connections, similarities, and differences are the tools used in this activity to find meaningful data. Exploration should be possible by comparing the basic ideas and their implied implications.

### **Result and Discussion**

#### **Respondent Characteristics**

This study examines how information technology and innovation affect the performance of MSMEs in Rokan Hilir Regency. This study uses a list of questions to obtain quantitative data and conducts interviews to obtain qualitative information by distributing questionnaires or direct interviews to MSMEs actors in Rokan Hilir Regency. Questionnaires that can be used for analysis are 100 respondents, as many as 56 MSMEs actors, 41 industries, and 3 services. 57 men and 43 women. Years of business 1-2 years 22 people; 2-5 years 35 people; over the year 43 people. The average education level is 68% high school, and 45% are > 40 years old.

#### **Results of Descriptive Statistics**

Descriptive statistical testing was carried out in order to see the distribution of research and data classification as for the descriptive analysis of the research variables, namely:

Variables	Ν	Min	Max	Means	Std. Dev.
Performance	100	35	60	45.73	4.932
Information Technology	100	17	29	23.62	2.390
Innovation	100	23	41	34.45	3.860

**Table 3. Descriptive Statistics Results** 

Source: Processed Data, 2023

The consequences of the engaging measurable tests above show that MSMEs Execution (Y) has a base score of 35 with a greatest score of 60, while the mean worth is 45.73 demonstrating that the typical level of respondents who finished up the concur and unequivocally concur choices in the survey. Because the average mean has a standard deviation of 4.932, the data spread isn't too big.

Information technology as a free factor has a base worth of 17 and a most extreme worth of 29. The mean of 23.62 demonstrates that most respondents concur and emphatically settle on the survey and the standard deviation is 2.390 which implies that the information is ordinarily disseminated on the grounds that the default deviation is < the mean worth.

Innovation as an independent variable that can range from 23 to 41. The innovation questionnaire's average response rate, 34.45 percent, with a standard deviation of 3.860, reflects the proportion of respondents who selected the agreed-upon options. Because the standard deviation equals the average value, this indicates that the data spread is normal.

### **Data Quality Test Results**

#### a) Data Validity Test Results

Testing shows the respondent's accuracy and thoroughness. For the validity of each variable, compare r count with r table, which can be calculated by df = N - 2. This study has 100 respondents, so df = 100 - 2 = 98, r (0.05; 98) = 0.196, valid if r <sub>count</sub> > r <sub>table</sub>, according to the test results all statements are valid, *Corrected Item-Total Correlation* > 0.196.

#### b) Data Reliability Test Results

Reliability shows how much the instrument can be trusted and used to collect data. Cronbach's alpha used. An instrument is reliable if alpha > 0.60. The results of reliability describe all variables for reliable instruments, as shown by the performance alpha coefficient of 0.874, information technology 0.739, and innovation 0.828.

### c) Data Normality Test Results

The normal probability plot shows the normality of the data in this study. This plot analysis is based on Ghozali (2018), namely a good model that meets normality has data spread around and follows a diagonal line and vice versa. Normal probability plots in this study show that the data spreads around and follows a diagonal line.

### **Results of Research Data Testing**

#### a) Quantitative

Quantitative testing was carried out on research data obtained through giving questionnaires to 100 MSMEs actors. To quantitatively test the impact of technology on MSMEs performance, several linear regression tests were performed. This is done to determine the extent to which the independent variable has an impact on the dependent variable. Multiple regression can be used to determine differences between variables. The table below displays the results of multiple linear regression tests:

Model		ndardized fficients	Standardized Coefficients			
	В	std. Error	Betas	Q	Sig.	
(Constant t)	20.291	5.060		4.010	.000	
Technology	.485	.201	.235	2.415	.018	
Innovation	.406	.124	.317	3.258	.002	

Tab	le 4.	Μ	ultiple	Linear	Regression	Test	Results
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Source: Processed Data, 2023

In accordance with the output of data processing carried out through the SPSS 23.0 program, the following regression equation is formed:

$$Y = 20.291 + 0.485 X_1 + 0.406 X_2 + e$$

Above equation shows that the constant value ( $\beta$ 0) is 20.291, this means:

- 1. If there is no change in the information technology variable  $(X_1)$ , and innovation  $(X_2)$ , then the performance of MSMEs which occurred at 20.291.
- The regression coefficient value for β<sub>1</sub> is equal to R 0.485. It can be stated that information technology (X<sub>1</sub>) has an effect on the performance of MSMEs (Y). This shows that for every increase in information technology by one unit, the MSMEs Performance (Y) will increase by 0.485 units.
- The regression coefficient value for β2 is R 0.406. In this study, it can be stated that innovation (X<sub>2</sub>) has an effect on the performance of MSMEs (Y). This shows that when innovation increases by one unit, MSMEs Performance (Y) will increase by 0.406 units.

#### Discussion

### **First Hypothesis Testing Results**

The first hypothesis of this study is that information technology affects the performance of micro, small and medium enterprises (MSMEs). To find out whether each independent variable has a significant effect, the calculated t value is compared to t table and the significance value of t is compared to the significance level ( $\alpha$ ). The significance level value used in this study is 5%. If sig t is less than 0.05 then H0 is rejected. Rejecting H0 means that there is a significant relationship between the independent variables and the dependent variable. The results of the first hypothesis testing are presented in the table below:

Table 5. The Influence of Technology on Performance

Independent Variable	Betas	t <sub>count</sub>	t <sub>table</sub>	Sig	Information
Information Technology	.485	2.415	1.984	0.018	Influential
Source SPSS Processed De	nta 2023				

Source: SPSS Processed Data, 2023

The calculated t value of 2.415, the significance value of 0.018, and the <sub>table</sub> t value of 1.984 are all shown in the table. It can be concluded that Ho1 is rejected and Ha1 is accepted because t <sub>count</sub> > t <sub>table</sub> (2.415 > 1.984) and significance (0.018 < 0.05). This shows that the performance of small and medium companies is strongly influenced by

information technology. This supports the first hypothesis, which states that MSMEs performance is significantly influenced by IT.

The term information technology refers to any communication technology, including the Internet, that can improve the efficiency of an organization or business (Nurcaya et al., 2022). This shows that information technology can ease work for entities (Safrizal et al., 2022). In the era of globalization and the rapid development of information technology, it is necessary to develop enterprise marketing that can reach all consumers around the world through online marketing or shopping (Harini and Handayani, 2019). The results of this study are in line with Cuevas *et al.* (2016), Sekarsari (2019), and Desmiyawati *et al* (2022) show that information technology has an impact on MSMEs performance.

#### **Second Hypothesis Testing Results**

The second hypothesis put forward by innovation affects the performance of Micro, Small and Medium Enterprises (MSMEs). The results of the second hypothesis test are as follows:

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Independent	Betas	t <sub>count</sub>	t <sub>table</sub>	Sig	Information	
Variable						
Innovation	0.406	3.285	1.984	0.002	Influential	
Source: SPSS Processed Data, 2023						

**Table 6. Effect of Innovation on Performance** 

The table shows t <sub>count</sub> 3.285 > t <sub>table</sub> 1.984 with a significance of 0.002, it can be concluded that Ho1 is rejected and Ha 2 is accepted. This shows that innovation has a significant impact on the performance of MSMEs. Thus, the second hypothesis supports that innovation has a significant impact on MSMEs performance.

Innovative means having an entrepreneurial attitude, being creatively involved in the process of experimenting with new ideas. Innovation orientation can help individuals achieve the strategic goals of the organization they lead (Rauch et al., 2009) . The results of this study are consistent with Lumpkin and Dess (1996), Ranto (2016), Rezaei and Ortt (2018), Cho and Lee (2018), and Hariadi *et al.* (2022) shows that innovation affects the performance of MSMEs.

# Test Results for the Coefficient of Determination $(\mathbf{R}^2)$

Analysis of the test of the coefficient of determination is carried out in order to see the percentage contribution to the effect of each independent variable on the dependent variable in the research model.

Table 7. Test l	Results for th	e Coefficient of	f Determination (	$(\mathbf{R}^2)$	)
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Model	R	R Square	Adjusted R Square	std. Error of the Estimate	Durbin- Watson		
1	.462 <sup>a</sup>	.213	.197	4.420	1.696		
Source: SPSS Processed Data, 2023							

The results of the test for the coefficient of determination obtained, it can be seen that the adjusted R-squared value is 0.197, indicating that the performance of MSMEs in the research sample is 19.7% and 80.3% is another factor besides information technology and innovation.

#### b. Qualitative Testing

Qualitative analysis was applied to research data obtained through in-depth interviews with several MSMEs actors. The sampling method is done by Snow Ball, where the sample is obtained by repeating from one respondent to get the next respondent. The selected respondents have structural interests. The characteristics of the first sample are selected from individuals or groups who behave according to the research objectives. In addition, respondents were first asked to identify the closest sample candidate who is known to have more detailed characteristics.

From the results of interviews with several MSMEs owners in Rokan Hilir Regency, we can conclude that product innovation and the use of information technology are needed in order to improve MSMEs performance. With innovations in product packaging such as giving halal label, business names, expiration dates and ingredient compositions, these products are made more attractive to consumers. Likewise with the use of technology both for production and marketing such as the use of online applications can increase the number of sales because it can reach a wider marketing area. We can see this from the following statement by a Peanut Business owner in Rokan Hilir Regency: " One of our ways to deal with competitors who sell the same product is to innovate the product, either by improving the quality of the beans, attractive packaging and there is a halal certification from Indonesian Ulama Council (MUI). Besides that, apart from selling conventionally, we also market our products online, namely through Shopee and Open Stalls so that buyers from outside the area can get products easily and quickly.

We can see another example of innovation from Pak Lani's Tofu Business. Initially the production process was done manually due to very limited capital. Along with the many competitors, innovations were made by using machines for production starting from stripping the skin of soybeans to the process of cooking soybeans so that they become tofu. Innovation with the use of machines can improve the quality of tofu so that the number of customers increases. This business has not used technology applications to market its products, so the number of customers is limited to the area around Rokan Hilir.

Mrs. Ayu's Brown Sugar Business. Initially starting this business was very difficult so that it got to the point of wanting to give up due to difficulties in marketing the product because there were already other competitors with similar products. On the other hand, little by little Mrs. Ayu is innovating by improving the quality of the products produced so that the number of sales is increasing. The marketing system used is still conventional, so consumers are still not familiar with it, as well as its marketing reach around Bagan si Api-api. Ayu's brown sugar also doesn't have a business label, the way to package the product is also not modern, it's still packed in cardboard on a plastic backing.

#### Conclusion

Based on the test results of research that looked at how innovation and information technology affected the performance of MSMEs in Rokan Hilir Regency. Information technology has an impact on the performance of MSMEs in Rokan Hilir Regency, according to an analysis of 100 MSMEs. This situation demonstrates that MSMEs will benefit from information technology, particularly in terms of distribution and marketing. Making use of online media will make marketing their products simpler, expanding the scope of product marketing. The findings of the study also demonstrate that innovation has an impact on MSMEs performance in Rokan Hilir Regency, or MSMEs that innovate their products will increase the product's appeal to customers in order to boost its performance.

The test results for qualitative data (results of interviews) also concluded that MSMEs besides using conventional methods also use technology, both for production and marketing such as using Shopee and Open Stalls so that buyers from outside the area can get products easily and quickly. They also innovate product packaging and make halal labels so that they attract buyers and the products are also more durable. With the use of technology and innovation, MSMEs can improve their product sales performance.

#### Suggestion

This examination was just directed on MSMEs entertainers in Rokan Hilir Regency. In order to make the findings of this study more widely applicable, additional areas of the Riau Province such as Siak, Indragiri Hulu, Indragiri Hilir, Kampar, Bengkalis, and Pekanbaru City will be examined in subsequent research. Only a small number of respondents (less than 10%) were interviewed for this study; the remaining respondents were provided with questionnaires to answer research questions. In order to obtain a greater number of valid responses, subsequent research conducts Focus Group Discussions and interviews. This examination just proposes data innovation and advancement as an exploration variable, so it is normal then, at that point, add and foster other free factors that influence execution like HR skill, level of schooling, upper hand, etc.

### **Bibliography**

- Abdilahi, M. H., Hassan, A. A., & Muhumed, M. M. (2017). The Impact of Innovation on Small and Medium Enterprises Performance: Empirical Evidence from Hargeisa, Somaliland. *International Journal of Academic Research in Business* and Social Sciences, 7(8), 14–28. <u>https://doi.org/10.6007/ijarbss/v7-i8/3202</u>
- Abdurrohman, Irfan Malik. 2018, Complete Mixed Research Methods IrfanMalikA (pengetahuanku13.net)
- Abebaw, W. K., Mulate, S., & Nigussie, L. (2018). Factors Affecting the Performance of Micro and Small Scale Enterprises: Experience from North Shewa Zone, Ethiopia. *Journal of Investment and Management*, 7(2), 70. https://doi.org/10.11648/j.jim.20180702.14

- Al Mamun, A., & Fazal, S. A. (2018). Effect of entrepreneurial orientation on competency and micro-enterprise performance. Asia Pacific Journal of Innovation and Entrepreneurship, 12(3), 379–398. https://doi.org/10.1108/apjie-05-2018-0033
- Anjum, 2018, Impact of Technology Adoption on the Performance of Small and Medium Enterprises in India, *The Journal of Social Sciences Research*, Special Issue. 5, pp: 857-867
- Aslizadeh, A. (2014). Impact of Using Information Technology on Creating a Sustainable Competitive Advantage for Companies; (Case Study: Golestan Food Companies). *Indian Journal*, 4, 1595–1603.
- Bereket, Mamo Buli. (2017). Entrepreneurial orientation, market orientation and performance of MSMEs in the manufacturing industry: evidence from Ethiopian enterprises Bereket. *Management Research Review*, 40 (3).
- Bryan Lukas, & O.C. Ferrell. (2000). The Effect of Market Orientation on Product Innovation. *Journal of the Academy of Marketing Science*, 28(2), 239–247.
- Cho, Y. H., & Lee, J.-H. (2018). Entrepreneurial orientation, entrepreneurial education and performance. *Asia Pacific Journal of Innovation and Entrepreneurship*, *12*(2), 124–134. https://doi.org/10.1108/apjie-05-2018-0028
- Cicik Harini and SB Handayani. (2019). Entrepreneurial Marketing through E-Commerce to Improve MSMEs Performance. *Derivatif Jurnal Manajemen*, *3*(2252), 58–66.
- Cuevas-Vargas, H., Estrada, S., & Larios-Gómez, E. (2016). The Effects of ICTs As Innovation Facilitators for a Greater Business Performance. Evidence from Mexico. *Procedia Computer Science*, 91(Itqm), 47–56. https://doi.org/10.1016/j.procs.2016.07.040
- Desmiyawati, Yusralaini, Ramaiyanti, S., & Azlina, N. (2022). The Utilization Of Digital Technology In Improving MSMEs Performance In The New Normal Era, *International Scientific Journal Theoretical & Applied Science*, Issue: 10 Volume: 11, 26 Oct 2022, e-ISSN: 2409-0085
- Fitriati, Titi Kurnia. Dedi Purwana. Agung Dharmawan Buchdadi, 2020, The Role of Innovation in Improving Small Medium Enterprise (SME) Performanc, International Journal of Innovation, Creativity and Change. www.ijicc.net Volume 11, Issue 2
- Hariadi, Humairoh, F., Desmiyawati & Azlina, N. (2022). MSMEs Performance Effectiveness During Covid 19 Pandemic Period. *Jurnal Riset Akuntansi Kontemporer*, Vol 14 No 1: April Edition
- Miles, Mattew B. dan A. Michael Huberman. 1992. *Qualitative Data Analysis: A Sourcebook of New Method*. Translation of Tjetjep Rohendi Rohidi. *Qualitative Data Analysis: A Sourcebook on New Methods*. Jakarta: Publisher Universitas Indonesia (UI-PRESS)

- Muafil, & Roostika, R. (2014). Organizational Performance and Competitive Advantage Determinants of Creative MSMEs. *European Journal of Economics and Management*, *CXVI*(February 2001), 1–53. http://www.ejemjournal.com/EJEM\_2014\_Vol.1\_No.2.pdf
- Nurcaya, I. N., Rahyuda, I. K., Giantari, G. A. K., & Ekawati, N. W. (2022). The Effect of Information Technology on The Performance of MSMEs During the Covid-19 Pandemic. *International Journal of Social Science and Business*, 6(2), 262–267. https://doi.org/10.23887/ijssb.v6i2.44260
- Ofori, D. (2015). Innovation and Knowledge Sharing: A New Competitive Advantage in the Mobile Telecommunication Industry in Ghana. *Science Journal of Business and Management*, 3(5), 157. https://doi.org/10.11648/j.sjbm.20150305.14
- Ranto, D. W. P. (2016). The influence of Entrepreneurship orientation on the performance of MSMEs in the culinary sector in Yogyakarta. *Jurnal Bisnis, Manajemen, Dan Akuntansi, III*(2), 1–11.
- Rezaei, J., & Ortt, R. (2018). Entrepreneurial orientation and firm performance: the mediating role of functional performances. *Management Research Review*, 41(7), 878–900. https://doi.org/10.1108/MRR-03-2017-0092
- Safrizal, S., Taufik, T., & Basri, Y. M. (2022). Good Governance on Village Fund Management with The Use of Information Technology as A Moderating Variable. *Indonesian Journal of Economics, Social, and Humanities*, 4(1), 15–28. https://doi.org/10.31258/ijesh.4.1.15-28
- Safrizal, Y. (2023). Financial Management Strategy in the Success of MSMEs Business After the Covid-19 Pandemic (Case Study of Charcoal Business with Kalapa Shell in Margorejo Pati Village). 5(1), 189–198.
- Sekarsari, N. (2019). ICT and Organizational Performance: The Mediating Role of Innovation. *E- Jurnal Akuntansi*, 28(3), 1948. https://doi.org/10.24843/eja.2019.v28.i03.p20
- Setiawardani, M. (2022). The Role of Innovation in Building the Competitive Advantage of the MSMEs Sector in the Culinary Sector After Disruption Due to the Covid 19 Pandemic in Bandung City. Jurnal Riset Bisnis dan Investasi, 8(1), 25–38.
- Sugiyono, 2013, Educational Research Methods Quantitative, Qualitative and R&D Approaches, Bandung Publisher: Alfabeta
- Susilatri, Azlina, N., & Desmiyawati. (2022). How To Improve The Performance Of MSMEs During The Covid 19 Pandemic. Webology, (ISSN: 1735-188X) Volume 19, Number 2.
- Zhang, J. and Chen, L. (2014). The review of MSMEs open innovation performance. American Journal of Industrial and Business Management, 4: 716-20

Government Regulation No. 7 of 2021, MSMEs Criteria