

Digital Transformation for MSME Resilience in The Era of Society 5.0

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Abstract

The purpose of this paper is to discuss the effect of digital transformation on the resilience of MSMEs in the era of society 5.0 in Palembang City and determine the digital adoption rate among MSMEs, identify barriers to digital transformation, understand factors behind MSMEs' success or failure in the digital transition. The use of digital transformation certainly has an impact on both MSME players and consumers, who get convenience and are able to survive in the era of society 5.0. In this paper, researchers used quantitative analysis and linear regression analysis with the help of SPSS 22. The population in this study was 1,103 MSMEs in Palembang City, with a sample size of 110 MSMEs. The results of the research obtained using the t test and F test show that digital transformation has a positive and significant effect on the resilience of MSMEs. The magnitude of the relationship or correlation value obtained from the data is 60.2%, which can be explained by business actors carrying out data-based digital transformation, adopting a work culture, determining a simple roadmap, digital awareness, and an environment that supports the success of digital transformation, while the remaining 40.8% can be explained by the influence of other variables not examined by the author. Digital Transformation Challenges for MSMEs, such as Capital Limitations, Lack of Technology Knowledge, Lack of Trained Human Resources, Cyber Security Issues, Business Model Changes, Reliance on Third-Party Platforms, and Integration Difficulties with Legacy Systems, Cultural Adaptation Challenges, and Infrastructure. In the future, this research can provide a comprehensive understanding of MSMEs' digital transformation landscape. Recommendations for MSMEs to harness digital opportunities and policy suggestions for governments to support MSMEs in their digital journey

Keywords:

digital transformation; MSME; Resilience

Introduction

Digitalization and digital transformation have become important topics in the context of sustainable growth of micro, small and medium enterprises (MSMEs). Different industry sectors have different needs and requirements in achieving sustainable growth. Digital transformation has changed the business models of MSMEs, which can be beneficial or detrimental depending on the industry sector (Kim, 2021). Gender also plays a role in digital transformation among MSMEs, with women-led MSMEs less likely to adopt digital technologies compared to male-led MSMEs. Women-led MSMEs face barriers to digital transformation, such as limited access to capital, lack of technical skills, and limited access to digital networks. However, women-led MSMEs can also benefit from digital transformation, such as increased efficiency, better customer service, and wider market reach (Alam et al., 2022)

The digital transformation process in MSMEs is a comprehensive process that drives technological, organizational, and social changes. The success of digital transformation in MSMEs is highly dependent on the availability of resources such as money, people, and technology. The success of digital transformation in MSMEs is also influenced by organizational culture, religious organization, and employee turnover (Teng et al., 2022). This document also shows that digital transformation has a positive impact on MSME productivity. MSMEs that have implemented digital transformation strategies have a higher rate of return than those that have not. Digital transformation strategies can help MSMEs improve day-to-day operations and profitability (Teng et al., 2022).

Small business development is an important factor in ensuring the sustainable success of MSMEs in Africa. There is a positive relationship, such as increased business efficiency and individual and organizational success in Southeast Africa. The Connor-Davidson Performance Scale 10 (CD-RISC 10) was used to improve business performance. Descriptive statistics, confirmatory factor analysis, correlation analysis, and regression analysis were used to analyse the data (Fatoki, 2018). In the global context, there are a number of issues facing MSMEs in terms of pandemic preparedness, as well as methods to prepare and respond to pandemic preparedness (Nazaruddin, et al., 2022).

Currently, of the 64 million MSMEs in Indonesia, around 20.2 million have adopted the digital economy, while another 40 million MSMEs are waiting to start their studies. One of the strengths of MSMEs is their advancement, with the success rate of companies in e-commerce only around 4 per cent. Of the 1000 assisted, only 400 opened an account, and of those 400, only 40 made a transaction when reordering. The presence of several digital currency platforms has been a strategic tool for the government in its MSME digitization agenda.

Electronic payments use various platforms such as Qris, Dana, Ovo, Shoopepay, Gopay, LinkAJa, and others. The existence of these platforms makes payments easier, faster, and safer. Both buyers and sellers are switching or transforming to make transactions through digital payments rather than paying with cash. The Office of Cooperatives and Small and Medium Enterprises of Palembang City is an implementing element of government affairs in the field of Cooperatives and Small and Medium Enterprises. The establishment of the Palembang City Office of Cooperatives and Small and Medium Enterprises is in accordance with Palembang Mayor Regulation Number 59 of 2016 concerning Position, Organizational Structure, Duties and Functions and Work Procedures of the Palembang City Office of Cooperatives and Small and Medium Enterprises. Based on data from the Palembang UMKM Office, in 2019 there were around 37,000 registered MSMEs, and data on the number of MSMEs assisted by the Palembang

UMKM Office based on records as of 2020 were 257 MSMEs which were divided into various sub-sectors, namely culinary, handicrafts, and household appliances (Umairi et al., 2021).

The majority of businesses are in the food industry. The Palembang City Cooperative and MSME Office has a programme to foster MSME players, but only 10.8% or around 4,000 MSMEs participate in this programme from the total MSME businesses in the city. According to statistical data from the Office of Cooperatives and MSMEs of Palembang City in 2019, the most culinary MSMEs found in Palembang are *empek-empek* MSMEs, which are 209 MSMEs out of a total of 607 culinary MSMEs in Palembang.

With the declining number of MSMEs in Palembang, there is no reason to believe that there will be MSMEs that are too old or too young, especially for MSMEs that cannot adjust to the Covid-19 pandemic. However, many MSMEs are successful and thriving because of their ability to adapt to consumer and environmental needs. Since the beginning, several issues have emerged in MSMEs in Palembang, such as the phenomenon of success and the ability of MSMEs to thrive in the Covid-19 era, especially with the advent of digitalization. Therefore, we would like to conduct further research with the title "Digital Transformation for MSME Education in the Era of Society 5.0.

This research will look at the impact of digital transformation on the performance of MSMEs, as well as the factors that influence the success of digital transformation. This research will also look at how the Palembang City Office of Cooperatives and Small and Medium Enterprises can help MSMEs adapt to digital change. This research has important implications for understanding how MSMEs can improve their performance in an increasingly complex business environment. To fill this gap, and considering the important role of local governments in managing and empowering MSMEs, this paper examines the resilience capabilities of MSMEs with the onset of the digital transformation era.

Methods

This research used quantitative causal method. The respondents in this study were MSMEs in Palembang City. This population amounts to 1,103 MSMEs in Palembang City, so the sampling technique used in this study is to use a saturated sampling technique (census sample). The definition of Saturated Sample according to Arikunto (2012, p. 104) is: Saturated sampling is a sampling technique when all populations are used as samples and also known as census, if the population is less than 100 people, then the total sample is taken as a whole, but if the population is greater than 100 people, Then 10-15% or 20-25% of the population can be taken. Based on this study because the population is greater than 100 respondents, the author took

10% of the total MSME population in Palembang City, which is 110 respondents. To collect data, observations and tests are then analyzed using descriptive analysis techniques by looking for the average price, standard deviation, and mean. The hypothesis testing technique used is simple regression with the data analysis requirements test used is a normality and homogeneity test. To provide an overview, the research design is shown in the following figure:

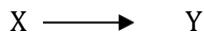


Figure 1. Research Design

Description:

X: Digital Transformation

Y: Resilience of MSMEs

The data used in this study consisted of two main types: primary data and secondary data. Primary data is data obtained directly from MSME respondents in Palembang City. The primary data collection method involves observations and tests performed by the researcher. The primary data collection process involves surveys and filling out questionnaires by respondents. These respondents are owners or representatives of MSMEs that are the subject of research. They were asked to answer questions in a questionnaire specifically designed to collect information related to digital transformation and MSME resilience. This primary data includes direct responses and responses from respondents to questions in the questionnaire, reflecting their views, knowledge, and experience related to the research topic.

Secondary Data: In addition to primary data, this study also used secondary data. Secondary data are data obtained from pre-existing sources and not collected directly by the researcher in the context of this study. Secondary data can include information from previous research relevant to the research topic, published literature, or statistics related to MSMEs and digital transformation. Secondary data were used to support or supplement the analysis and findings in the study.

So, primary data were obtained through surveys and filling out questionnaires by MSME respondents, while secondary data were obtained from pre-existing sources to provide additional foundation and support in this study. The combination of these two types of data will be used to analyze the relationship between digital transformation and MSME resilience in Palembang City

Results and Discussion

Description of respondents

This research was conducted at the Palembang City Cooperative and SME Office which is located at Jalan Merdeka Number 6 Bukit Kecil Subdistrict, 22 Ilir Village, Palembang City and MSMEs affected by the post-pandemic Covid 19. The sample of this research is MSME actors, namely:

In this study, the number of female respondents reached 87 people (79%), while male respondents were 23 people (21%). In addition, when viewed from the age group, 34 people (31%) are in the age range of 17-26 years, 22 people (20%) are in the age range of 27-36 years, 23 people (21%) are in the age range of 37-46 years, 23 people (21%) are in the age range of 47-56 years, and 5 people (5%) are above 56 years. This shows that the MSME players who are the subjects of the study are mainly young people with mature and developed thinking, which allows them to be more effective by utilizing social media in their business.

Table 1.

Description respondents

| Description | total | % |
|-------------|-------|-----|
| Female | 87 | 79% |
| Male | 23 | 21% |
| Age | | |
| 17-26 years | 34 | 31% |
| 27-36 years | 22 | 20% |
| 37-46 years | 23 | 21% |
| 47-56 years | 23 | 21% |
| >56 years | 5 | 5% |

Source: Primary Data Processed, 2023

In terms of education level, we can observe that as many as 4 people (3%) of the respondents did not continue their formal education, 13 people (12%) have an elementary/junior high school educational background, while 65 people (59%) are high school graduates and as many as 28 people (26%) have a higher level of education, namely Strata One (S1). In terms of education, most of the MSME actors who were the subject of the study have a higher educational background, such as high school and undergraduate graduates. This indicates that most of them have completed high school. Thus, these MSME actors are considered to have good capacity in managing their businesses and utilizing digital technology as a strategy to improve their business resilience and competitiveness, as well as maintaining the sustainability of their businesses

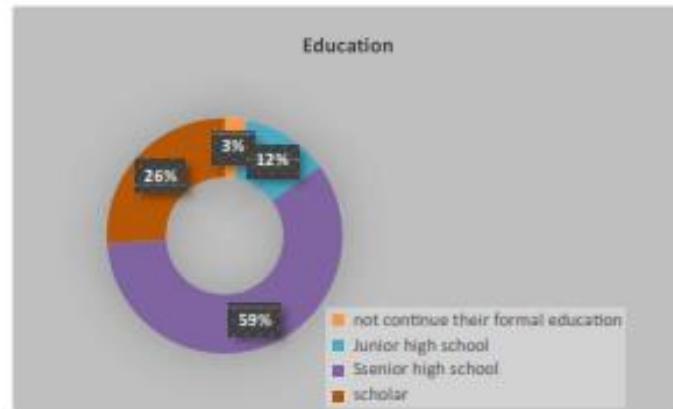


Figure 2. Education Respondents

The amount of monthly income of MSME players varies, with 26 people (24%) earning less than 1,000,000 per month, 54 people (50%) earning between 1,000,000 to 5,000,000 per month, 16 people (15%) earning between 5,000,000 to 10,000,000 per month, and 7 people (6%) exceeding the 10,000,000 per month mark. This analysis shows that in general, MSME actors earn an average income of between 1,000,000 and 5,000,000 per month

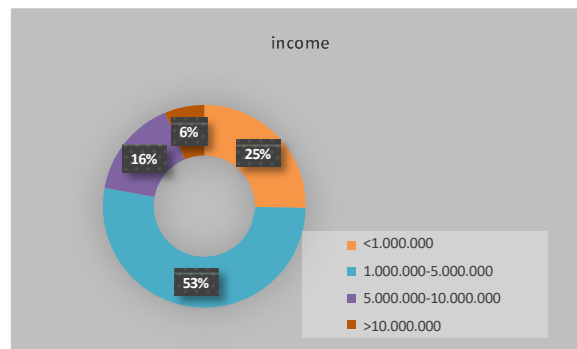


Figure 3. Income Respondents

In terms of the duration of the business, there are 8 people (7%) who have been in business for less than 1 year, 57 people (52%) who have been in business for 1-5 years, 15 people (14%) who have 6 - 10 years of experience, and 27 people (25%) who have been in business for more than 10 years. These results indicate that the majority of MSME players who were the subject of the study have been running their businesses for 1-5 years.

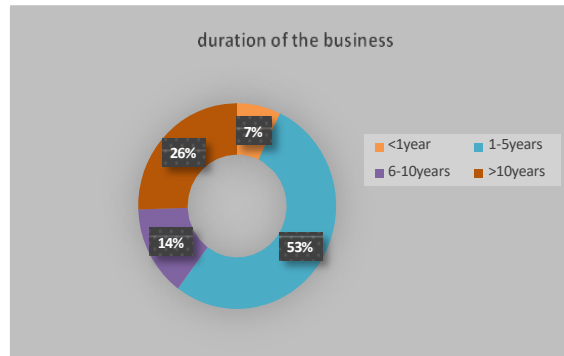


Figure 4. duration of the business

Results and Discussion

Regression Analysis

Regression analysis aims to find the effect of two or more independent variables (X) on the dependent variable (Y). The results of the regression calculation with the SPSS program in this study are as follows:

Table 2.

ANOVA^a

| ANOVA ^a | | | | | | |
|--------------------|------------|----------------|-----|-------------|--------|-------------------|
| Model | | Sum of Squares | df | Mean Square | F | Sig. |
| 1 | Regression | 7911.715 | 1 | 7911.715 | 61.245 | .000 ^b |
| | Residual | 13951.639 | 108 | 129.182 | | |
| | Total | 21863.355 | 109 | | | |

a. Dependent Variable: Transformasi_digital
 b. Predictors: (Constant), Ketahanan_UMKM

Based on the results of this analysis, the significance value is 0.000 and the Alpha value is 0.05, so $\text{Sig} < \text{Alpha}$ research ($0.000 < 0.05$) means reject H_0 and H_1 is accepted. It can be concluded that the digital transformation variable simultaneously has a significant effect on the resilience of MSMEs.

Classical Assumption Test

The purpose of testing this classical assumption is to provide certainty that the regression equation obtained has accuracy in estimation, is unbiased and consistent.

Classical Assumption Test Histogram Normality

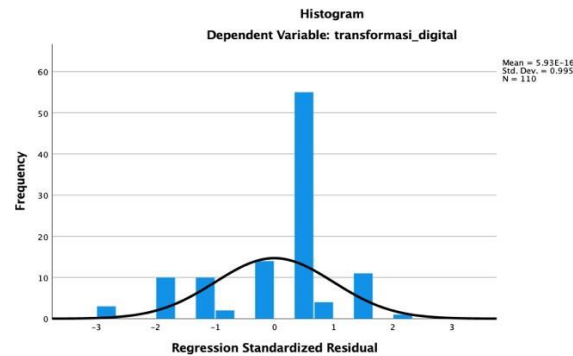


Figure 5. Histogram

The histogram graph gives a distribution pattern that deviates to the right, which means that the data is normally distributed.

Heteroscedasticity test

The heteroscedasticity test is carried out with the aim of testing whether there is an inequality of variance or residuals from one observation to another. The heteroscedasticity test is carried out to determine whether in a regression model there is an inconvenience in the variance of the residuals from one observation to another.

Table 3.
Heteroscedasticity test

| Model | | Unstandardized Coefficients | | Standardized Coefficients | t | Sig. |
|-------|-----------------------|-----------------------------|------------|---------------------------|--------|------|
| | | B | Std. Error | Beta | | |
| 1 | (Constant) | .949 | .153 | | 6.211 | .000 |
| | Upaya_ketahanan_UMK M | -.178 | .058 | -.282 | -3.058 | .003 |

a. Dependent Variable: Abs_RES

Based on the output table above, it is known that the significance value (Sig) for the MSME resilience effort variable is 0.003 because the variable significance value is smaller than 0.05, it can be concluded that there are symptoms of heteroscedasticity in the regression model.

Multicollinearity Test

The multicollinearity test aims to test whether the regression model forms a high or perfect correlation between independent variables. If a high correlation relationship is found between the independent variables, it can be stated that there are multicorlinear symptoms in the study.

Table 4.
Multikolinieritas Test

Coefficients^a

| Model | | Unstandardized Coefficients | | Standardized Coefficients | t | Sig. | Collinearity Statistics | |
|-------|----------------------|-----------------------------|------------|---------------------------|-------|------|-------------------------|-------|
| | | B | Std. Error | Beta | | | Tolerance | VIF |
| 1 | (Constant) | .974 | .259 | | 3.758 | .000 | | |
| | Upaya_ketahanan_UNKM | .587 | .099 | .497 | 5.952 | .000 | 1.000 | 1.000 |

a. Dependent Variable: transformasi_digital

Based on the figure above, it is known that the VIF value is 1,000, $VIF < 10$, which means there is no multicollinearity problem.

Autocorrelation Test

The Autocorrelation test uses the Durbin Watson test. If the resulting Durbin-Watson value is between DL / DU and $(4 - DL) / (4 - DU)$ then there is no autocorrelation.

Table 5.
Autocorrelation test

Model Summary^b

| Model | R | R Square | Adjusted R Square | Std. Error of the Estimate | R Square Change | Change Statistics | | | Durbin-Watson | |
|-------|-------------------|----------|-------------------|----------------------------|-----------------|-------------------|-----|-----|---------------|-------|
| | | | | | | F Change | df1 | df2 | | |
| 1 | .497 ^a | .247 | .240 | .63273 | .247 | 35.423 | 1 | 108 | .000 | 1.960 |

a. Predictors: (Constant), Upaya_ketahanan_UNKM

b. Dependent Variable: transformasi_digital

The calculated Durbin Watson value is 1.960 at $K = 2$ and $t = 110$, $DL = 1.67076$, $DU = 1.70741$. The value of $dw > dU$ so $1.960 > 1.70741$ then there is no positive autocorrelation and the value $(4 - dw) > dU$, so $(4 - 1.960) > 1.7074$ then there is no negative autocorrelation. So it can be concluded that there is no autocorrelation.

Linearity Test

The linearity test aims to determine whether two variables have a linear relationship significantly or not.

Table 6.
Linearity Test

ANOVA Table

| | | Sum of Squares | df | Mean Square | F | Sig. |
|--|--------------------------|----------------|-----|-------------|--------|------|
| transformasi_digital * Upaya_ketahanan_UNKM | Between Groups | | | | | |
| | (Combined) | 15.354 | 2 | 7.677 | 19.529 | .000 |
| | Linearity | 14.181 | 1 | 14.181 | 36.074 | .000 |
| | Deviation from Linearity | 1.173 | 1 | 1.173 | 2.984 | .087 |
| | Within Groups | 42.064 | 107 | .393 | | |
| | Total | 57.418 | 109 | | | |

The deviation from linearity sig. value is 0.087 greater than 0.05, so it can be concluded that there is a significant linear relationship between the digital transformation variable and the

MSME resilience variable.

F-Test (Simultaneous Test)

The F test aims to find whether the independent variables together (stimultan) affect the dependent variable. The F test was conducted to see the effect of all independent variables together on the dependent variable.

Table 7.

F -Test

ANOVA^a

| Model | | Sum of Squares | df | Mean Square | F | Sig. |
|-------|------------|----------------|-----|-------------|--------|-------------------|
| 1 | Regression | 14.181 | 1 | 14.181 | 35.423 | .000 ^b |
| | Residual | 43.237 | 108 | .400 | | |
| | Total | 57.418 | 109 | | | |

a. Dependent Variable: transformasi_digital

b. Predictors: (Constant), Upaya_ketahanan_UMKM

F count = 35.423 and F table = 3.93. if the value of F count is greater than F table, it is concluded that there is a significant influence between digital transformation (X1) simultaneously on MSME resilience (Y) and vice versa.

T-test (Partial Test)

T test analysis is known as a partial test, which is to test how the influence of each independent variable individually on the dependent variable. This test can be done by comparing t count with t table or by looking at the significance column in each t count.

Table 8. T-test

Coefficients^a

| Model | | Unstandardized Coefficients | | Standardized Coefficients | t | Sig. |
|-------|----------------|-----------------------------|------------|---------------------------|--------|------|
| | | B | Std. Error | Beta | | |
| 1 | (Constant) | 30.828 | 2.859 | | 10.781 | .000 |
| | Ketahanan_UMKM | .948 | .121 | .602 | 7.826 | .000 |

a. Dependent Variable: Trasformasi_digital

Based on the image data for the MSME resilience variable, t count = 7.826, With df = 108 then t table = 1.98217. Because t count > t table, 7.826 > 1.98217, H1 is accepted.

Table 9.

Model Summary

Model Summary

| Model | R | R Square | Adjusted R Square | Std. Error of the Estimate |
|-------|-------------------|----------|-------------------|----------------------------|
| 1 | .602 ^a | .362 | .356 | 11.36582 |

a. Predictors: (Constant), Ketahanan_UMKM

The R square value of 0.602 means that the variation of all dependent variables is 0.602 (60.2%) which can be explained by business actors carrying out data-based digital transformation, adopting a work culture, determining a simple roadmap, digital awareness, and

an environment that supports the success of digital transformation. While the remaining 40.8% is influenced by other variables outside the study.

Digital Transformation Challenges for MSME Resilience

The low participation of MSMEs in following the changing times is a challenge in the resilience of MSMEs in the current society 5.0 era. Based on the results of researcher observations while distributing questionnaires to MSMEs in Palembang City. The number of closed MSMEs, quiet market conditions and also the decline in income from MSMEs are phenomena felt by entrepreneurs in the current era. The low level of community participation in changing times by utilizing technology is quite low in Palembang City.

Government policies that limit outdoor social interaction have led to changes in the behavior and needs of customers who want to use digital technology as a means of interaction. This is an accelerator of digital transformation. In addition, the development of digital technology and strong market competition also contribute to the acceleration of digital transformation. The Office of Cooperatives and Small and Medium Enterprises is trying to invite MSMEs in Palembang city to join e-catalog. This program aims to increase sales and support the digital ecosystem so that small and medium enterprises can survive the Covid-19 pandemic. Lack of knowledge about digital technology and social media makes it difficult for SMEs to run their businesses. SME operators must master and master the use of marketplaces, applications and social media. Second, take steps to improve SME business processes which will then be implemented in various programs. It is indeed important to know these marketing techniques. However, financial knowledge is also necessary for medium-sized enterprises. Financial skills enable interested SMEs to manage their business systematically, especially with regard to debt and loans. (Susanti, 2021) Accounting documentation procedures are covered in financial literacy, so that small and medium enterprises know and maintain records according to the Financial Accounting Standards for Entities Without Public Accountability (SAK ETAP) in order to avoid obstacles, namely H. quality, to avoid financial documentation that is still lost at the time of implementation. (Fitriyani, 2020) Third: encourage synergy between the Government Goods/Services Procurement Policy Agency (LKPP) and the Ministry of Cooperatives and SMEs. The goal is to increase market access, one of which is by implementing e-catalog, but not all MSMEs are registered.

The lack of data collection and supervision from the government on the development of the number of MSMEs, before and after the co-19 pandemic is also a challenge because the results of distributing questionnaires show that there is a very low rate of digital transformation in

MSMEs in Palembang City.

Digital transformation is not just about adopting new technologies, it also involves changing culture, business processes and business models. The pandemic has accelerated technology adoption and the need for digital transformation. Many companies that were initially reluctant to change suddenly find themselves accelerating their digital initiatives to survive.

E-commerce Growth One sector that experienced rapid growth during this period was e-commerce. Many traditional retail companies are moving towards digitally-based operations to survive and compete. Cybersecurity As digital technology grows, the issue of cybersecurity becomes increasingly important. Research shows that investment in cybersecurity is becoming a priority for many organizations. Many studies focus on how to devise an effective digital transformation strategy and how best to implement it. Digital transformation is also having a major impact on employment, with some jobs becoming obsolete and new jobs emerging as a result of technological change.

Digital transformation for MSMEs (Micro, Small and Medium Enterprises) has been a major topic of research over the past few years, especially in developing countries. Digital transformation in this sector is considered crucial as it can improve the competitiveness and survival of MSMEs in the digital economy era.

Condition of Digital Transformation of MSMEs in the Era of Society 5.0 in Palembang City

Society 5.0 represents the envisioned next phase of societal evolution following the hunting (Society 1.0), agrarian (Society 2.0), industrial (Society 3.0), and information (Society 4.0) societies. In this "super-smart" society, there's a harmonious integration of cyberspace and physical space. Key drivers are technologies like Artificial Intelligence (AI), the Internet of Things (IoT), robotics, and big data analytics. Based on the questionnaire survey conducted by the researchers, the results related to digital transformation of SMEs in Palembang City are as follows:

- a. Business operators and management are engaged in data-driven digital transformation. However, the adoption of data-driven digital transformation, such as financial reports and sales reports using applications, remains very low.

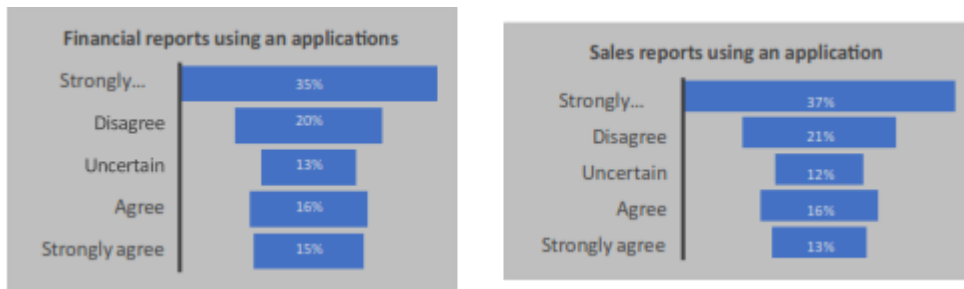


Figure 6. Business operators and management

b. The adoption of a work culture in digital transformation among business operators in Palembang City, especially in terms of sales and online ordering through applications, is still very low.

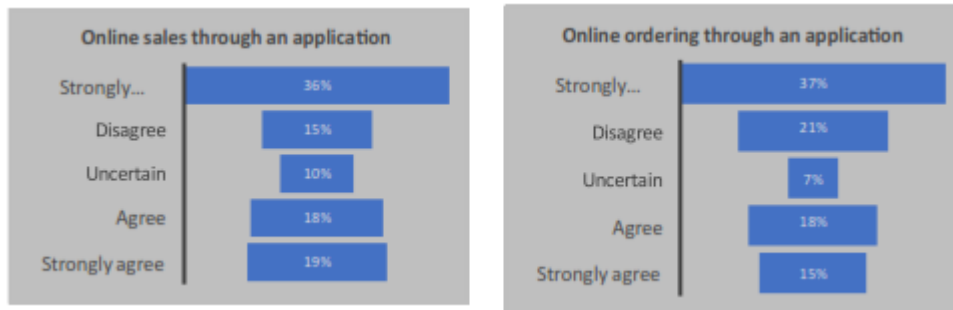


Figure 7. The adoption of a work

c. Business operators in Palembang City have a very low level of creating a simple roadmap related to the implementation of digital transformation for generating new packaging variations in their products.

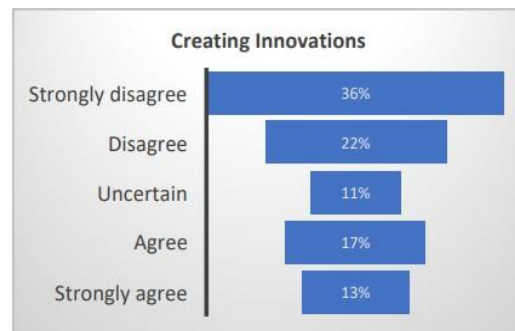


Figure 8. Business Operators

d. Creating digital awareness and an environment that can support the success of digital transformation for SMEs through product promotion to attract buyers and promoting products through collaborations with influencers is still very low.

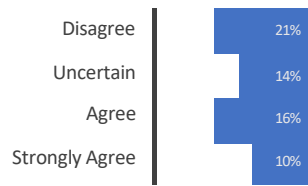


Figure 9. Creating digital

The Resilience of SMEs in the Era of Society 5.0.

a. The active online presence of business operators in Palembang City, using social media as a sales platform such as WhatsApp, Facebook, Instagram, etc., with a sales history of more than 3 years, and a daily social media usage duration of more than 6 hours for selling purposes, is still very low.

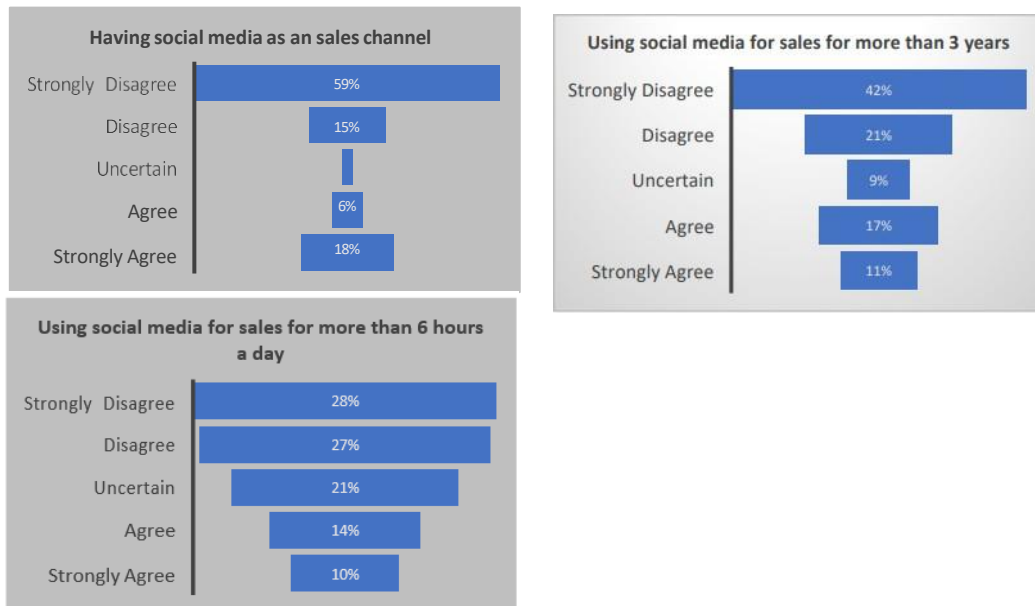


Figure 10. Active online presence of business operators

b. The sales coordination of business operators in Palembang City, which includes the utilization of online payment methods such as QRIS (Dana, M-Banking, Shopeepay, Gopay, etc.) as a means of transaction payment, as well as the management of the transition from offline to online sales, remains suboptimal. Additionally, the presence of an admin tasked with managing sales operations is still very low.

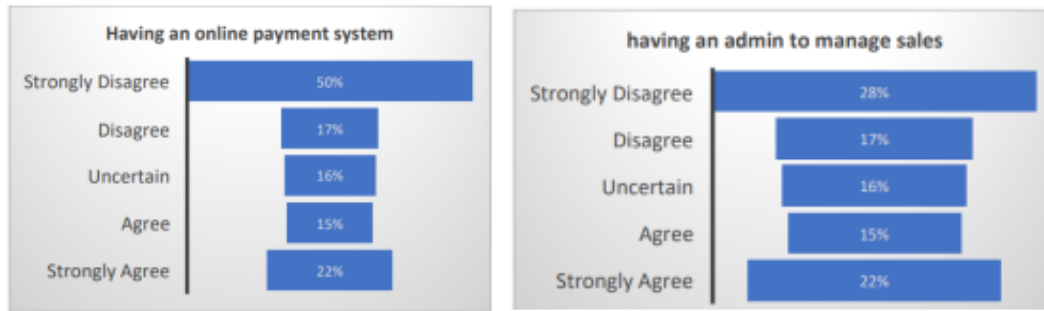


Figure 11. sales coordination

- c. Collaboration among business operators in Palembang City through participation in a community has a very low level of engagement.

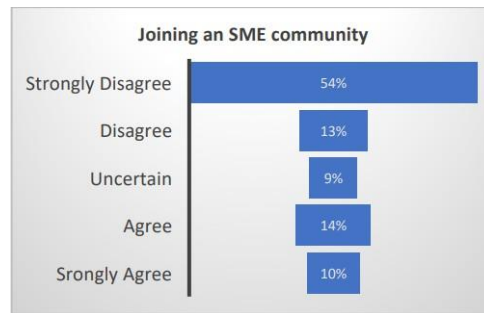


Figure 12. Collaboration among business operators

- d. Simplifying operations by using practical packaging for more efficient product packaging and producing products at home without the need for mobility still has a very low adoption rate.

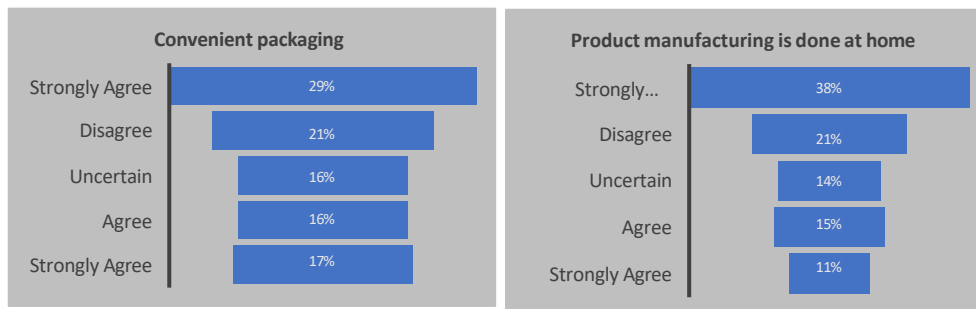


Figure 13. Simplifying operations

- e. The current work pattern and business operations of SMEs involve delivering orders to customers and also having physical outlets as an alternative for direct order acceptance. However, the adoption rate of this business model is still relatively low among SMEs.

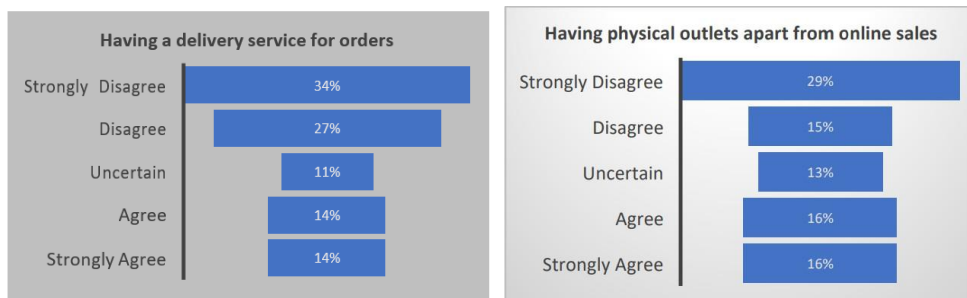


Figure 14. current work pattern and business operations

- f. The sustainability of SMEs in Palembang City during the pandemic, using the strategy of offering discounts through online platforms, is still very low.

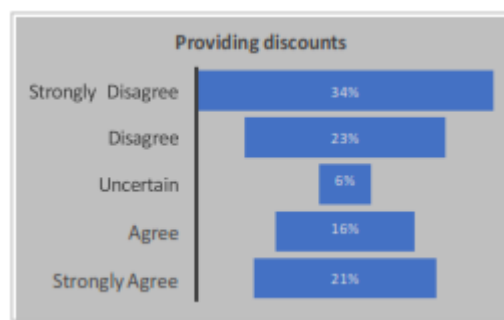


Figure 15. The sustainability of SMEs

- g. The process of utilizing digital technology to transform the way raw materials are purchased through agents using an online approach and the delivery of raw materials for products is still very low among SMEs in Palembang City.

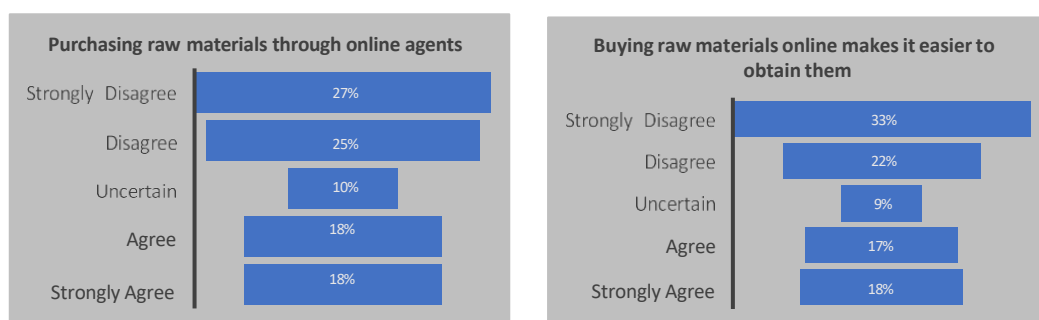


Figure 16. The process of utilizing digital technology to transform

While business owners might be aware of the broad concept of digital transformation, they might not understand how to implement it effectively. They may not know which tools to choose or how to use them to derive actionable insights from their data. Many MSMEs operate on tight budgets. Investing in new technologies might be seen as a luxury rather than a necessity. The perceived short-term costs can overshadow the long-term benefits. For a business to successfully adopt and utilize data-driven tools, its workforce must possess the necessary skills.

In many cases, employees might not have the required digital literacy, making it a challenge to adopt new digital systems. Many businesses have been operating in a certain way for years, if not decades. There's a comfort in familiarity, and the idea of overhauling processes to incorporate new digital tools can be daunting. Some businesses may have tried to adopt digital systems in the past and faced challenges in integrating them with their existing processes. This can discourage them from making further attempts. Encouraging partnerships between tech firms and MSMEs can help in providing tailored solutions and hands-on guidance for businesses on their digital transformation journey. In many traditional markets, business has been conducted face- to-face for generations. There's a deep-rooted belief in building relationships through personal interactions, which can make the switch to online platforms challenging.

The Importance of Digital Transformation for MSMEs

The low results obtained from MSMEs in Palembang city show that there is still low public awareness, especially among UMKM, for digital transformation, even though in the current era if you do not transform, you will be left behind. Some UMKM in Palembang city still do not have social media, do not utilize e-commerce, and still sell in traditional ways. They continue to sell even though turnover has decreased, and some have decided to close.

MSMEs that embrace digital technology can improve operational efficiency, access a wider market, and increase profitability. Some MSMEs face constraints in digital transformation, including limited capital, lack of knowledge about technology, and lack of trained human resources. Some popular technologies adopted by MSMEs include e- commerce platforms, social media for marketing, digital inventory management systems, and financial applications. Digital transformation of MSMEs has the potential to boost economic growth, create jobs, and improve people's welfare. In many countries, governments have launched initiatives to support the digital transformation of MSMEs, such as training, financial incentives, and education programs. The adoption of digital business models allows MSMEs to innovate their product or service offerings, reach previously untapped market segments, and improve operational efficiency. The importance of education and training for MSME owners and employees to understand and adopt new technologies.

The COVID-19 pandemic has accelerated the need for MSMEs to digitize, especially in the areas of e-commerce and digital payment solutions. Cooperation between MSMEs and technology companies or digital start-ups can help accelerate the transformation process. With digital transformation, MSMEs must also consider cybersecurity aspects to protect their data and transactions.

Digital Transformation Challenges for MSMEs

Digital transformation for MSMEs (Micro, Small and Medium Enterprises) does offer many opportunities, such as increased efficiency, access to wider markets, and improved competitiveness. However, this transformation process also brings various challenges that can affect the resilience of MSMEs. Here are some common challenges faced by MSMEs in digital transformation:

1. **Capital Limitations** e.g. Many MSMEs have limited funds, which can be a barrier to investing in new technology or upgrading existing technology infrastructure.
2. **Lack of Technology Knowledge** e.g. MSME owners or managers may not have a deep understanding of the latest digital technologies, which can hinder the adoption and optimal utilization of technology.
3. **Lack of Trained Human Resources** e.g. While MSMEs that embrace digital technology can improve operational efficiency, access a wider market, and increase profitability. Some MSMEs face constraints in digital transformation, including limited capital, lack of knowledge about technology, and lack of trained human resources. Some popular technologies adopted by MSMEs include e-commerce platforms, social media for marketing, digital inventory management systems, and financial applications. Digital transformation of MSMEs has the potential to boost economic growth, create jobs, and MSMEs may invest in technology, they may not have employees with the necessary expertise to manage or utilize the technology.
4. **Cyber Security Issues** e.g. with the increase in online activities, MSMEs have become more vulnerable to cybersecurity threats. Many MSMEs may not have the resources or knowledge to implement effective security measures.
5. **Business Model Changes** e.g. Digital transformation may require changes in MSME business models, which can be challenging for many business owners who have been accustomed to traditional ways of working.
6. **Reliance on Third-Party Platforms** e.g. While e-commerce and social media platforms offer access to a wider market, MSMEs may become overly dependent on these platforms, which have policies and rates that can change at any time.
7. **Integration Difficulties with Legacy Systems:** e.g. Integrating new technology with legacy systems can be a complex process and requires an investment of time and resources.
8. **Cultural Adaptation Challenges** e.g. Some MSMEs may encounter resistance from employees or other stakeholders who are more comfortable with traditional working methods.
9. **Infrastructure Availability** e.g. In some areas, the availability of digital infrastructure such as high-speed internet access may still be limited.

10. Regulations and Compliance e.g. Adopting digital solutions may require understanding and complying with new regulations, which many MSMEs may not fully understand.
11. Collaboration between MSMEs, educational institutions, and the private sector.

The progress of MSME in Palembang City is also the responsibility of the government. The government has an important role in the sustainability of MSME in various eras, and the support and involvement of the government's role will have a good impact. Recommendations on the role of government to enhance the digital transformation of MSME such as: Governments and industry associations can run campaigns to educate business owners about the benefits of digital transformation and provide success stories, providing training programs for MSME employees can help bridge the digital literacy gap. These can be in the form of workshops, online courses, or even on-site training by tech experts, offering tax breaks, subsidies, or grants for businesses that invest in digital tools can be an effective way to boost adoption, Tech companies can develop intuitive, user-friendly solutions specifically tailored for MSMEs. This can reduce the intimidation factor, offering tools and training on data security can alleviate some of the fears businesses have about digitizing their operations. Infrastructure Development: at a macro level, governments can invest in improving digital infrastructure to ensure businesses have the necessary foundation to adopt digital tools and Encouraging partnerships between tech firms and MSMEs can help in providing tailored solutions and hands-on guidance for businesses on their digital transformation journey.

Conclusion

Digital transformation presents both challenges and opportunities for SMEs. As stated, industry specific needs influence the reception and benefits of digital interventions. Digital Transformation Challenges for MSMEs e.g. Capital Limitations, Lack of Technology Knowledge, Lack of Trained Human Resources, Cyber Security Issues, Business Model Changes, Reliance on Third-Party Platforms, Integration Difficulties with Legacy Systems, Cultural Adaptation Challenges, Infrastructure.

Availability, Regulations and Compliance and collaboration between MSMEs, educational institutions, and the private sector. while the challenges are manifold, the potential rewards from digital transformation for MSMEs are substantial. With a strategic approach, the right partnerships, and continuous learning, MSMEs can navigate these challenges and position themselves for success in the digital age.

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