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Determinants of Decisions to Implement Digital Payments for MSME Actors: A Study of Technological, Organizational, and Environmental Theory

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A B S T R A C T

Micro, Small, and Medium Enterprises (MSMEs) play an essential role in the Indonesian economy. However, many MSME actors, particularly those in Salatiga City, have yet to integrate digital payments in their business operations. This study aims to identify the influence of technological aspect (perceived benefits of implementing the digital payments), organizational aspect (length of business operations), and environmental aspect (the presence of competitors) on the MSME actors' decisions to implement the digital payments in Salatiga City using the Technological, Organizational, and Environmental (TOE) Theory. By employing the logit regression analysis, the results of this study demonstrate that the TOE theory does not completely apply to the MSME actors' decision-making behavior of implementing the digital payments in Salatiga City. Further, this study highlights that only the perceived benefits of implementing the digital payments of the technological aspect which have a positive and significant influence on the MSME actors' decisions to implement the digital payments in Salatiga City. Meanwhile, the organizational aspect of technology infrastructure and length of business operations, and the environmental aspect of the presence of competitors have been confirmed to have no influence. The policy implications of these findings suggest the government as the stakeholders to adopt policies related to the issues in implementing the digital payments and the Bank Indonesia program towards a cashless society in 2025, and there is a need to increase digital literacy for the MSME actors in Salatiga City to remain competitive in this increasingly fast era of technology advancement.

Keywords: *digital Payment, MSME, technological, organizational and environmental theory*
JEL Classification Code: *O14, O32, O25*

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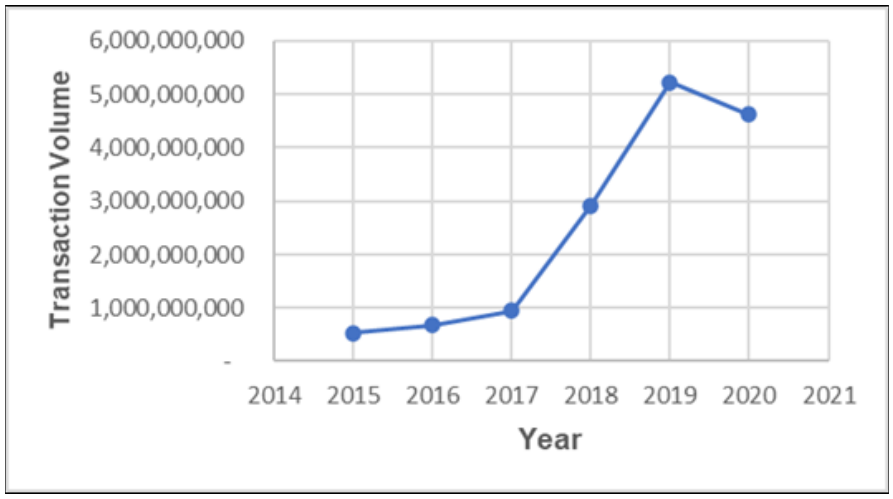
INTRODUCTION

The rapid development of technology makes unlimited business opportunities through technology more promising. Humans develop the technology to encourage / support individual or company activities to be more effective and efficient (Sudjana & Rivai, 2015). In addition, these technological developments that have continued to this day offer more conveniences for humans. Financial technology is one of various fields where these technological developments occur. However, this particular technology has resulted in a shift in the role of cash as a means of payment in the payment system. It has been replaced by non-cash or cashless payments, either in the form of electronic payments using electronic money (e-money), or any digital payments using digital money, which are more efficient and economical.

In Indonesia, the adoption of cashless payment technology continues to increase (Figure 1). This is in accordance with the implementation of Bank Indonesia regulation No. 11/12/PBI/2009 of 2009 concerning e-money and the government program known as the National Non-Cash Movement (Gerakan Nasional Non-Tunai (GNNT)), initiated since August 14, 2014. The GNNT program has a positive impact on the use of non-cash payments in Indonesia. The GNNT program encourages the community to make more cashless than cash transactions (Ramadhani et al., 2019). The presence of cashless payment instruments mentioned earlier is not only driven by innovations developed by the banking sector, but also by the public's demand for practical payment instruments, providing them with conveniences in making transactions (Tarantang et al., 2019). The ease of use offered by the cashless payment motivates the community to behave consumptively. These payment transactions toward a cashless society are such an unavoidable trend.

Figure 1 shows that the e-money transaction volume increased over the period of 2015-2020. In 2018 and 2019, there were significant increases, where the transaction volume in 2018 reached 2,922,698,905 transactions. This number had climbed by 209% compared to those in 2017, which only had 943,319,933 transactions. Similarly, the e-money transactions surged by 78% in 2019, rising from 2,922,698,905 transactions in 2018 to 5,226,699,919 transactions in 2019. However, in 2020, the e-money transactions



Source: Bank Indonesia, 2021

Figure 1.
Development of E-Money Payment Volume in Indonesia in 2015-2020

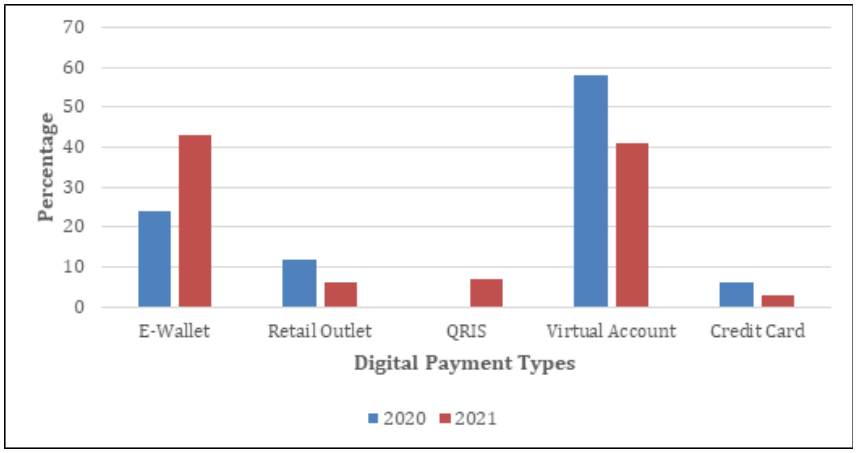
dropped due to the COVID-19 pandemic, which began in March 2020. The COVID-19 pandemic, where there were restrictions on community activities, had resulted in an economic downturn indicated by a 0.07% decrease in public consumption and a -2.63% decrease in economic growth.

The data from Bank Indonesia is consistent with Nugraha et al. (2022), who discovered that the number of e-money transactions decreased, but not dramatically, during the COVID-19 pandemic. Indeed, at the beginning of the COVID-19 pandemic, the use of transportations, parking lots, and other transportation facilities had decreased as a result of declining purchasing power and the implementation of restrictions on social activities. Simultaneously, the volume of e-money transactions had dropped to less than 300 million transactions in May 2020. However, as public awareness of its conveniences and benefits grew in an effort to minimize the risks of virus transmission, the interest in using e-money was slowly returning (Nugraha et al., 2022).

Various offers of ease and convenience of use, as well as appealing promotions, created by companies providing the digital payment services have proven to promote public interest in utiizing the e-money. According to Yogananda & Dirgantara (2017), perceived benefits, ease of use, and trust have a significant and positive effect on the intention to use e-money, while the perceived risks have an insignigicant and negative effect on it. Similarly, Hakim et al. (2022) explained that in addition to the perceived benefits and convenience, promotion is also a factor determining the decisions to use electronic wallet (e-wallet). Ratu et al. (2022) examined physical distancing issues and increased public awareness of the risk of spreading the COVID-19 virus when making transactions using the e-money.

In addition to the cashless payments using the e-money, the cashless payments using digital money are also gaining more popularity in Indonesia. The e-wallet, retail outlet, Quick Response Code Indonesian Standard (QRIS), virtual account and credit cards are examples of the cashless payments made using the digital money. According to Xendit, Xendit had handled more than 150 million transactions in 2021, where 43% of them used the e-wallet (Javier, 2022).

Figure 2 above depicts a shift in the use of digital payment types in 2021. The virtual accounts dominated digital payments in 2020 (58%), while the e-wallet



Source: Bank Indonesia, 2021

Figure 2.

Figure 2. The Use of Digital Payment Types in Indonesia (%)

prevailed in 2021 (43%). Despite being the newest type of payment, the digital payment by QRIS might rank third, ahead of the digital payment via credit cards. This demonstrates that Indonesia's digital payment business is expanding rapidly. Virtual accounts will continue to dominate as it appears that Indonesians are quite comfortable with them, but QRIS innovation is no less significant in this digital payment transformation process, considering that it is increasingly encouraging the adoption of digital payments, particularly the QRIS. This is in line with the smatphone ownership by 80% of the total Indonesian population.

The trend of switching to the digital payments gives ease and numerous benefits, not only from the customer side, but also from the producer side as merchants employing the online shopping application. The Micro, Small, and Medium Enterprises (MSMEs) – as the online merchants – have several advantages in using digital payment applications in the context of business improvement and development, including: 1) faster transactions; 2) easier and more systematic transaction recording; and 3) a more accurate database of customer requests (Widyayanti, 2020). The development of this payment system necessitates the use of digital payment instruments in business transactions by business actors in the trade and MSME sector to survive during the COVID-19 pandemic era as a result of pressure from the business partners who demanded all payments by transfer system, customers who followed trends and wanted fast, practical, and valid transactions, as well as in order to develop their business in the current post-pandemic era.

The MSMEs play a significant role in the Indonesian economy. They were able to survive when the Indonesian economy was rocked by the economic crisis in 1997/1998. On the other hand, Salatiga City, with its favorable geographical location which is located in a strategic position, on the main land transportation route of

Table 1.
Distribution of GRDP Based on Current Prices According to Business Fields in Salatiga City in 2018-2020 (%)

GRDP Sector	Year 2018	2019	2020
A. Agriculture, Forestry and Fisheries	4.60	4.50	4.57
B. Mining and Quarrying	0.04	0.04	0.04
C. Processing Industry	31.08	31.26	32.23
D. Procurement of Electricity and Gas	0.19	0.18	0.19
E. Water Procurement, and Waste and Recycling Management	0.07	0.07	0.07
F. Construction	14.51	14.41	13.95
G. Wholesale and Retail Trade; Car Repair	**13.20**	**13.19**	**12.84**
H. Transportation and Warehousing	2.94	3.01	2.28
I. Provision of Accomodation and Provision of Food and Beverages	7.46	7.53	7.15
J. Information and Communication	3.12	3.22	3.85
K. Financial and Insurance Service	3.57	3.48	3.56
L. Real Estate	4.70	4.58	4.62
M,N. Company Service	1.25	1.32	1.26
O. Government Administration, Defense and Compulsory Social Security	5.29	5.18	5.20
P. Education Service	5.37	5.39	5.44
Q. Health Service and Social Activity	1.60	1.61	1.80
R,S,T,U. Other Service	1.00	1.02	0.96
GRDP of Business Fields	100	100	100

Sources: (Statistics Indonesia, 2021)

Jakarta - Semarang - Solo - Surabaya, and is located between two development centers (Semarang City and Surakarta City), provides benefits for its developmenet in the trade sector. The Salatiga City's trade sector is the third greatest contributor to their total Gross Regional Domestic Product (GRDP).

According to Table 1, the trade sector contribution to the total GRDP has dropped in the period of 2018 - 2020 as a result of the COVID-19 pandemic. However, it is still the third greatest contributor to the GRDP, following the manufacturing sector which ranks first, and the construction sector which ranks second. The growth of the trade sector in Salatiga City corresponds to the growing number of MSME actors in Salatiga City. According to the data of Statistics Indonesia, Salatiga City has a total of 1,969 MSME actors who employ 14,647 individuals in their businesses (Statistics Indonesia, 2021).

The MSMEs have also been playing an essential part in the economy of Salatiga City. Nevertheless, in an effort to prepare for the post-COVID-19 pandemic era and its economic recovery strategies, the MSME actors must be creative and innovative in implementing better marketing strategies, such as digitizing their businesses and implementing the digital payments. At the same time, many MSME actors have yet to implement the digital payments in their business operations. For these reasons, it is important to examine variables influencing the MSME actors' decisions to use the digital payments in Salatiga City.

There are many variables influencing the business actors' decisions to adopt a new technology, particularly the adoption of digital payments. According to Tornatzky, Fleischer, and Chakrabarti (1990), there are three factors that affect companies to accept an innovation or a new technology in the Technological, Organizational, and Environmental (TOE) theoretical framework (Rahayu & Day, 2015). The TOE theory describes that the decision to adopt an innovation is influenced by technological, organizational, and environmental aspects.

The technological aspect refers to the benefits experienced, such as the benefits received after implemeting the innovation, as well as the costs and the technology required to adopt the innovation (Rahayu & Day, 2015). It is related to the expectation that implementing the digital payments will improve the firm performance (Kumar et al., 2021). Tam & Oliveira (2017) defined the digital paymenets as cashless transactions made using smartphones, tablets, or smartwatches. It is a method of replacing conventional business transactions that used cash or coins. In addition, Karnouskos (2004) defined it as a system for transaction initiation, activation, and payment confirmation. Meanwhile, electronic payment is a payment system that makes payment transactions simple and convenient for the users. They just need to make transactions over the internet without having to meet or travel long distances to meet the sellers. The electroninc payment can be defined as any cashless payments made between businesses, customers, and sellers using savings accounts over the internet or electronic networks (Teoh et al., 2013). The digital payment option in the society has resulted in the core notion of a cashless society, emphasizing the electronic payment transactions (Jain & Jain, 2017). The cashless society, on the other hand, does not necessarily imply that there are no cash transactions at all; rather, the quantity of cash-based transactions persists but is minimized at the lowest level (Yaqub et al., 2013).

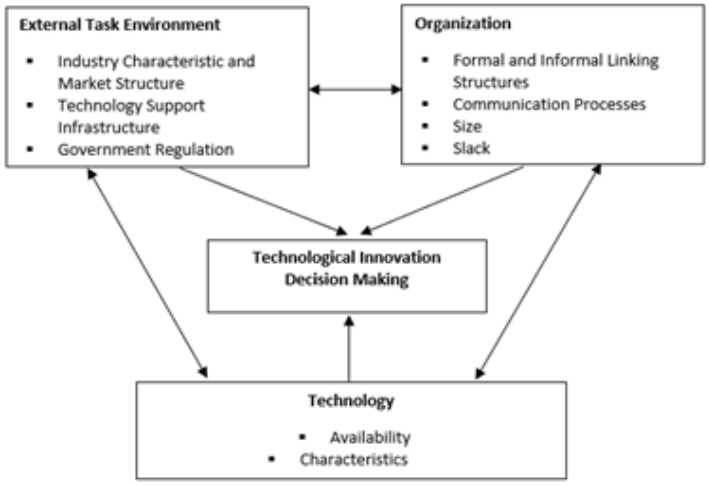
Factors related to the technology, such as smartphone ownership, has a beneficial influence on the use of digital payments (Setiyani & Yeny Rostiani, 2021). Similarly, website ownership has an effect on the business actors' decisions to adopt

the digital payments (Amornkitvikai & Lee, 2020). In their study, Puspitawati & Gurning (2019) specifically stated that while implementing the digital payments provides many benefits for the business actors, the digital payments require complex rules, which create a challenge for them in their business operations.

The organizational aspect is the second factor driving individual decisions to accept a new technology. This aspect refers to company conditions, such as business scale as well as the availability of resources, both financial and human resources, to allow for the adoption of a new technology. According to Amornkitvikai & Lee (2020), the organizational aspect consisting of the length of business operations and business size influenced the business actors' decisions to implement the digital payments in Thailand.

Other examples of organizational aspect are in an individual context, such as educational level, experience, and educational background of business actors. Further, Muntahasar et al. (2020) discovered that knowledge had an influence, but not significant, on the digital payment financial literacy in Banda Aceh, but the education level had a positive and significant effect. Similarly, Rahayu & Day (2015) demonstrated that technology readiness, whose one of the elements included technical capabilities of human resources in operating a business, had a favorable and substantial relationship with the Indonesian MSME actors' decisions to adopt electronic commerce (e-commerce). The digital payments, as a technological innovation, impose several risks, particularly when they are implemented in the MSMEs in developing countries. As a result, the more innovative the MSME actors, the higher the possibility for them to adopt the e-commerce (Ghobakhloo & Tang, 2013). Besides, Ghobakhloo & Tang (2013) also proved that a business owner's innovativeness, and IT experience and knowledge had a significant and positive relationship with the decision to adopt the e-commerce.

Furthermore, the third aspect influencing individual decisions to accept a new technology in the Technological, Organizational, and Environmental (TOE) theory is the environmental aspect. This aspect is related to external pressures, such as pressures from customer / supplier and competitors, and external support that will influence the decisions to adopt the e-commerce (Rahayu & Day, 2015).



Source: Tornatzky & Fleischer, 1990

Figure 3.
The TOE Theory in the Context of Innovation Decisions

In addition, the presence of business competitors also influences the individual decisions to adopt a new technology. Amornkitvikai & Lee (2020) found that businesses in the food and beverages sector were more likely to adopt new technologies. The following Figure 3 depicts the TOE theoretical framework.

Despite the fact that the MSMEs play an essential part in the Salatiga economy, there are still many MSME actors that have not implemented the digital payments in their business operations. Previous research results have shown inconsistency, such as on the organizational aspect, where some have proven that the organizational aspect had a positive influence on the decisions to use digital payments (Amornkitvikai & Lee (2020), and some other studies found the contradictory (Rahayu & Day, 2015). By referring to the TOE theory, this study aims to determine the influence of technological aspect (perceived benefits of implementing the digital payments), organizational aspect (technology infrastructure and length of business operations), and environmental aspect (the presence of competitors) on the MSME actors' decisions to implement the digital payments in Salatiga City. The novelty of this research is the incorporation of the TOE theory in the theoretical framework, which includes the technological aspect as a determining factor, and the competitors as a factor driving the decisions to implement the digital payments. Meanwhile, previous studies only used the Unified Theory of Acceptance and Use of Technology (UTAUT), and had not included the technological aspect as the determining factor in the decisions to implement the digital payments.

METHODOLOGY

Population and Sample

The population of this study was all MSMEs in Salatiga City. The following Table 2 presents the total number of population which reaches 1,969 business units (Statistics Indonesia, 2021).

One of the data estimated in this study was the use of the digital payments by the business actors, given that previous studies did not offer information on the proportion of Salatiga City's MSME actors who had used the digital payments. However, Afifah et al. (2018) found that only 4.2% of Indonesians owned a small business with a website, and only 9.2% of them who

Table 2.
Number of MSMEs and MSME Labor in Salatiga City in 2020

District	Business Unit	Labor
Argomulyo	306	6,865
Tingkir	477	3,329
Sidomukti	585	1,237
Sidorejo	601	3,216
Total	1,969	14,647

Source: Statistics Indonesia, 2021

Table 3.
Number of Samples per District

District	N_l	Total Sample (n_l) of the Group	Round Up
Argomulyo	N_1 = 306	n_1 = (306 / 1,969) x 132 = **20.51397**	**21**
Tingkir	N_2 = 477	n_2 = (477 / 1,969) x 132 = **31.97765**	**32**
Sidomukti	N_3 = 585	n_3 = (585 / 1,969) x 132 = **39.21788**	**39**
Sidorejo	N_4 = 601	n_4 = (601 / 1,969) x 132 = **40.2905**	**40**
Total	**N = 1,969**	**n = 132**	**132**

Sources: Secondary Data, Processed (2022)

Table 4.
Research Variables and Measurements

Variable	Definition	Item	Measurement
Independent Variable			
Perceived Benefits of Implementing the Digital Payments	Usability features perceived by the users in adopting the digital technology service (Rahayu & Day, 2015).	1. The digital payment system facilitates daily activities. 2. The digital payment system responds quickly to user requests and concerns. 3. The digital payment system makes transactions easier. 4. The users find it challenging to use the digital payment system. 5. Transaction volume uses the current and future the digital payments.	1. A five-point Likert Scale
Technology Infrastructure	Infrstructures supporting the company's readiness for implementing technology (Rahayu & Day, 2015).	1. The users understand how the digital payment system works. 2. The digital payment system is highly dependent on the internet access at the place of business. 3. Difficulties in adopting the digital paymenet system are due to limited resources. 4. There is a sense of security in making transactions using the digital payment system. 5. The digital payment system is extremely accurate and error-free.	1. A five-point Likert Scale
Length of Business Operations	A firm's life time service which indicates that the company still exists, is capable of competing in the industry, can maintain its business continuity, and is part of the documentation that demonstrates its objective (Andarayani, 2016).	1. Ratio data	2. Ratio
The Presence of Competitors	The presence of compettitors in the business both from the same or different industries (Amornkitvikai & Lee, 2020).	1. Food & Beverages 2. Non-Food & Baverages	1. Dummy variabel (1: food & beverages; 0: non-food & beverages)
Dependent Variable			
Decision to Implement the Digital Payments	Someone's decision to implement the digital payments in their business (Tam & Oliveira, 2017).	1. Yes 2. No	1. Dummy variabel (1: Yes; 0: No)

used e-mails. Meanwhile, according to the survey done by Statistics Indonesia, only 5.76% of the business actors had benefitted from the internet during the pandemic (Santia, 2020). It was predicted that the proportion of MSME actors in Salatiga City who had employed the digital payments was similar to, if not lower than, the results of the study by Statistics Indonesia.

In this study, the number of sam-

ples was determined using the method employed by Sekaran (2016), who mentioned that the number of samples must be at least 5 times the number of indicators of the variables examined. In this study, there was a total of 22 indicators examined, thus the minimum number of samples used was 110 respondents. However, the researchers added 20% of the sample in case of invalid data. Therefore, there was a total of 132 respondents participating in this study.

Furthermore, the sample was collected using non-probability sampling method, precisely the proportional sampling method and convenience sampling method. The proportional sampling method took into account the categories in the study population (Sugiyono, 2013). The following Table 3 presents the number of samples per district.

Variable Operational Definitions

Table 4 shows operational definitions of the independent variables and independent variable, as well as their indicators.

Validity and Reliability Test

Before examining the logit model to answer the research questions, it was important to ensure that the data used was valid and reliable. According to Malhotra (2012), the validity test measured related characteristics instead of systemic errors. In order for these indicators to accurately reflect the characteristics of the variables employed in the study, the basic for determining whether the data was valid was as follows: if the value of RCount > RTable, the indicator is valid; and if the value of RCount < RTable, the indicator is not valid.

Meanwhile, the data reliability demonstrated the consistency of research variables, even when measured several times at various periods. A variable was reliable if the respondents' responses to the questions were consistent over the time. The data reliability was measured by looking at the value of composite reliability of the indicator measuring the construct (variable / dimension). The composite reliability value must be higher than 0.7 (Ghozali, 2014). Further, Ghozali (2014) also added that the Cronbach's Alpha value must be higher than 0.6. In this study, the data is reliable if the Cronbach's Alpha value > 0.6, and if the Cronbach's Alpha < 0.6, the data is not reliable.

Table 5 and Table 6 show that all indicators of perceived benefits of implementing the digital payments (M1, M2, M3, M4 and M5) dan technology infrastructure (T2, T4 and T5) are all valid and reliable.

Analysis Technique

The hypothesis testing was done using the logit regression / logistic regression technique analyzed in E-Views 11. The logistic regression referred to a statistical

Table 5.
Results of Validity and Reliability Test of Perceived Benefits in Implementing the Digital Payments (n = 131)

Code	Indicators of Perceived Benefits in Implementing the Digital Payments	Corrected Item–Total Correlation	Conclusion	Cronbach's Alpha
M1	The digital payment system facilitates my daily activities.	0.713	Valid	0.889
M2	The digital payment system responds quickly to user requests and concerns.	0.748	Valid	
M3	The digital payment system makes transactions easy for me.	0.787	Valid	
M4	The digital payment system is simple to use.	0.758	Valid	
M5	The digital payment system will increase the transaction volume.	0.667	Valid	

Sources: Primary Data, Processed (2023)

Table 6.
Results of Validity and Reliability Test of Technology Infrastructure (n = 131)

Code	Indicators of Technology Infrastructure	Corrected Item–Total Correlation	Conclusion	Cronbach's Alpha
T2	The digital payment system is highly dependent on the internet access in my place of business.	0.215	Valid	0.624
T4	I feel safe making transactions using the digital payment system.	0.601	Valid	
T5	The digital payment system is extremely accurate and error-free.	0.525	Valid	

Sources: processed data, 2023

analysis method describing the relationships between the qualitative dependent variable with two or more categories with one or more independent variable on a category / interval scale (Hendayana, 2013). Meanwhile, the basic regression analysis approach was employed to determine the influence of the decision to implement the digital payments on the business performance.

The logit regression equation of this study is as follows (Widarjono, 2013):

$$L_{1i} = ln\left(\frac{P_{1(digital=1)}}{P_{1\,(digital=0)}}\right) = Z_{1i} = \beta_0 + \beta_2 X_{2i} + \beta_3 X_{3i} + \beta_4 X_{4i} + e_i$$

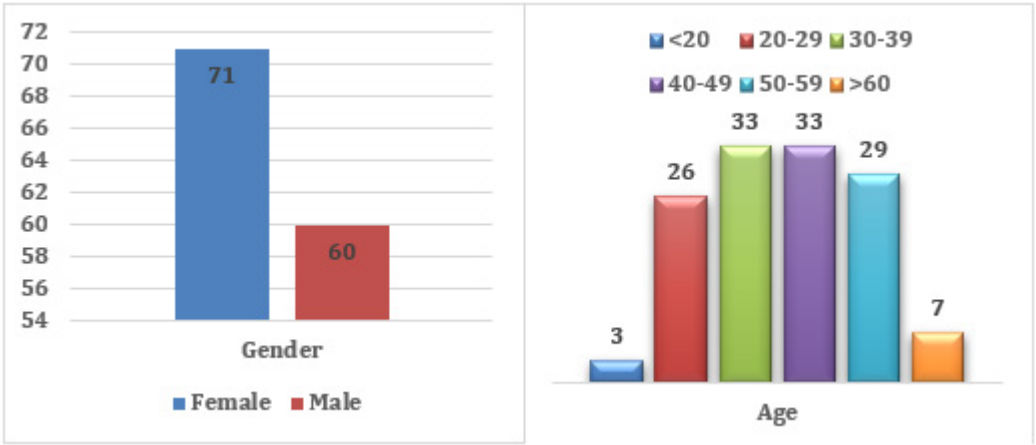
Whereas L1 IS logit or log of the odd ratio with odd ratio, $\frac{P_1(\text{digital}=1)}{P_1(\text{digital}=0)}$, ln is natural logarithm, P1 is probability $= \frac{1}{1+e^{-Z_i}}$, Digital is dummy variable for the use of the digital payments = {1 if yes, 0 if no}, β_0 is constant of model (1), β_j is regression coefficient of variable j (X1: perceived benefits of implementing the digital payments, X2: technology infrastructure, X3: length of business operations, X4: presence of competitors is dummy of food and beverages business {1 if yes, 0 if no}) and e is residual in the model.

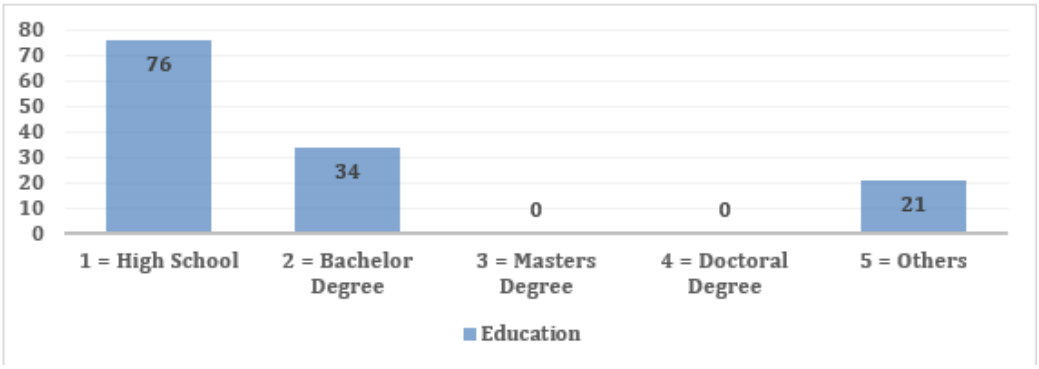
RESULTS AND DISCUSSION

Respondent Profile

Most of the respondents of this study were male (46%). Based on their age group, most of them were still in the productive age group of 30 – 49 years old, with the latest education being high school graduates (58%). The respondent profile is summarized in the Figure 5.

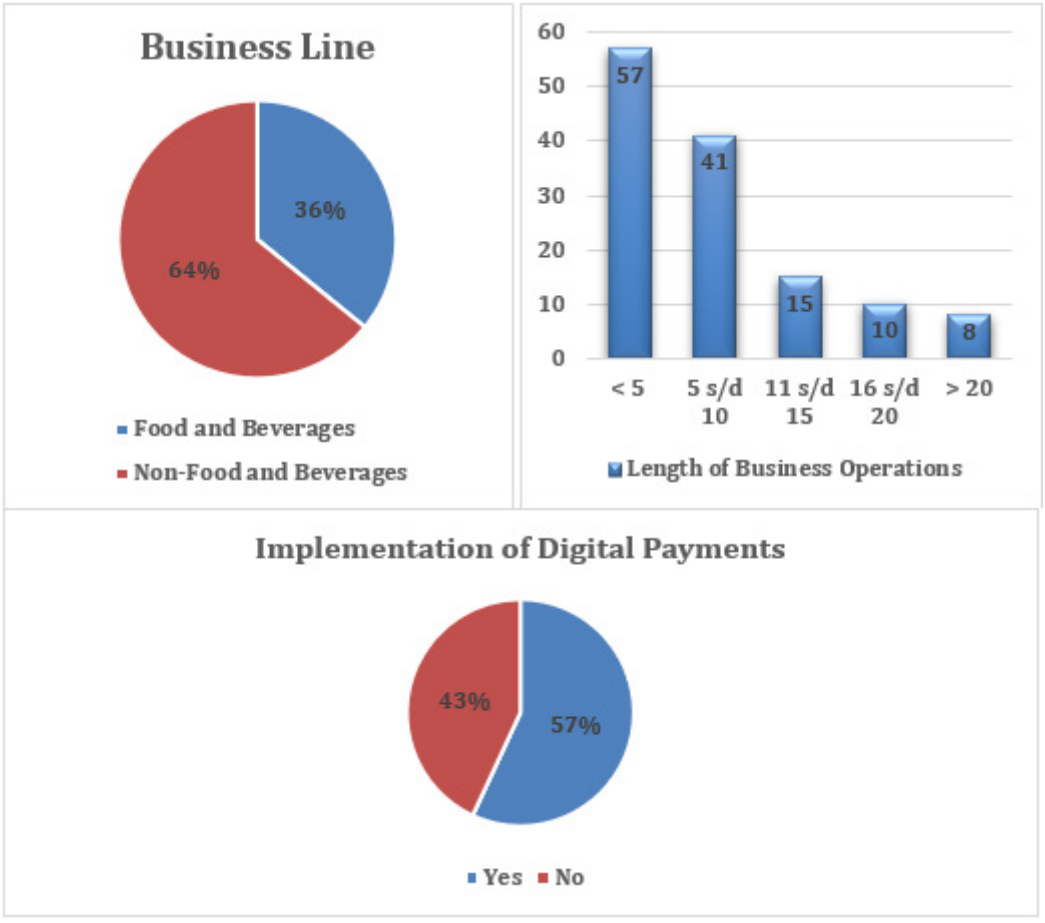
Based on the respondents' line of business, most of the MSME actors in Salatiga City were in the non-food and beverages sector (64%). The respondents





Sources: Primary Data, Processed (2023)

Figure 4.
Respondent Profile by Gender, Age Group, and Latest Education Level



Sources: Primary Data, Processed (2023)

Figure 5.
Respondent Profile by Field of Business, Length of Business Operations, and The Use of The Digital Payments

were also relatively new MSME actors (57%) with less than 5 years of length of business operations. Similarly, only 57% of MSME actors in Salatiga City who had

used the digital payments in their business operations.

The logit model was estimated to address the research questions, which were to assess the influence of perceived benefits of implementing the digital payments, technology infrastructure, length of business operations, and the presence of competitors on the decisions to implement the digital payments. The results can be seen in the following Table 7.

The results of logit model estimation suggest that the technological aspect represented by the perceived benefits of implementing the digital payments have shown to have a positive and significant influence on the MSME actors' decisions to implement the digital payments in Salatiga City. This variable has an Odd ratio of 13.2984 (e^coefficient = 2.72^2.586008). This suggests that as the perceived benefits of implementing the digital payments improved, the MSME actors' decisions to implement the digital payments increased 13.298 times compared to the MSME actors with poor perceived benefits. This finding confirms the first hypothesis of this study proposing that the perceived benefits of implementing the digital payments have a positive and significant inlfuence on the decisions to implement the digital payments. This finding also supported the results found by Rahayu & Day (2015) who found there was a positive and signficant correlation between the benefits experienced after implementing the innovation on the decision to use the digital payments.

This finding indicated that the MSME actors in Salatiga City believed that using the digital payments in their business operations would benefit them in assisting daily activities, responding quickly to user requests and concerns, facilitating transactions, offering ease of use for the users, and producing higher transaction volume when using the digital payments at the moment and in the future. This condition was reflected in the indicators on the variable of perceived benefits of implementing the digital payments. This study finds that there were 57% of the total respondents who had used the digital payments in their business operations.

However, the second hypothesis proposing that the technology infrastructure has a positive and significant influence on the decisions to implement the digital payments cannot be supported empirically. The technology infrastructure as part of the organizational aspect did not influence the MSME actors' decisions to implement the digital payments in Salatiga City. This finding contradicted the TOE theory, which argued that the organizational aspect would drive individuals to use a technology. This finding was not in line with Rahayu & Day (2015) and Ghobakhloo & Tang (2013) who proved the opposite. Furthermore, this finding indicated that the decisions to implement the digital payments might not be

Table 7.
Logit Model Estimation

Dependent Variable: USE_DP
Method: ML - Binary Logit (Newton Raphson / Marquardt steps)

Variable	Coefficient	Prob.
Perceived_Benefits	2.586008	0.0000
Technology_Infrastructure	0.450417	0.3519
Length_Of_Business_Operations	-0.011515	0.6944
Competitor_Environment	0.441972	0.3500
McFadden R-squared	0.329286	

Sources: Primary Data, Processed (2023)

supported by the availability of supporting infrastructure, such as the ownership of smartphones and internet network. However, although the technology infrastructure existed, the MSME actors had not decided to implement the digital payments allegedly because most of the respondents run the food and beverages businesses (64%). Customers of this type of business were students, and those who were less than 17 years old might not own a bank account. Thus, most of them did not use any digital payments. This condition simultaneously caused the availability of technology infrastructure to have no influence on the decisions to implement the digital payments in the business operations.

In parallel, the third hypothesis proposing that the length of business operations has a positive and significant influence on the decisions to implement the digital payments cannot be supported empirically. The length of business operations as part of the organizational aspect failed to influence the MSME actors' decisions to implement the digital payments in Salatiga City. This finding is not in line with the ones found by Amornkitvikai & Lee (2020) and Rahayu & Day (2015) who found that this factor could influence the decisions to implement the digital payments in Thailand and Indonesia. Besides, this could happen allegedly because most of the respondents had just started doing their business for less than 5 years (43.51%), between 5-10 years (31%), and more than 10 years (25.19%).

Lastly, the fourth hypothesis proposing that the presence of competitors has a positive and significant influence on the decisions to implement the digital payments cannot be supported empirically. This finding is not in line with the TOE theory which explained the opposite. In addition, this finding is also in contrast with the ones found by Rahayu & Day (2015) and Amornkitvikai & Lee (2020). The presence of competitors for the MSME actors in Salatiga City did not influence them to decide to implement the digital payments. Even with or without the digital payments, many continued to believe that they would still have customers coming to them naturally. Furthermore, they were still comfortable with cash payments. This was particularly supported by the findings of this study where 42.75% of the MSME actors had not used the digital payments. In addition, 21.43% of the respondents (21 respondents) stated that they preferred the cash and another 5 respondents claimed that there were still many customers who did not look for other alternatives of cash payments.

Besides, the value of McFadden R-squared of 0.329286 from the estimation results in Table 7 indicates that all variables examined in this study could explain 32.9286% of the variances on the decisions to implement the digital payments, and the rest 32.92% could be explained by other variables not included in this study.

Theoretical implications of this study highlight the application of TOE theory in the research context of this study. Based on the findings, the TOE theory did not apply to the behavior of MSME actors in Salatiga city. According to the TOE theory, three aspects influencing individuals' decision to adopt a new technology include the technological aspect – defined as the technical knowledge required to implement a new innovation; organizational aspect – including company structure, managerial decision-making styles, and company management skills; and environmental aspect – including the industry competition. However, this study proves that only the technological aspect which influence the MSME actors' decisions to adopt the new technologies. This demonstrates that the decision to implement a new technology is affected only by the individuals' knowledge and capacity to keep up with technological development, as well as the idea that using a new technology will increase revenues

for their business. The company structure, including the business management system, and competitors, is not a variable driving the business actors to incorporate a new technology into their operations.

CONCLUSIONS

The results of this study have several policy implications. The government, as the stakeholders in making policies related to the issues of implementing the digital payments and the Bank Indonesia program towards a cashless society by 2025, need to increase digital literacy for the MSME actors in Salatiga City in order for them to remain competitive in this increasingly fast era of technological advancements. It is expected that the digital literacy do not only include the knowledge about the current the digital payments, but also about various sectors that have been benefitted from the digitalization.

However, this study has several limitations. In fact, the smartphone ownership was initially one of the variables examined in this study, particularly in the technological aspect. However, the data could not be used as there was an imbalance during the data processing, where only 5% of the respondents who did not have a smartphone. In other words, the smartphone ownership data was homogeneous, dominated by the respondents who owned a smartphone. Future researches are suggested to increase the number of respondents to produce more objective results.

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