

Financial Education, Digital Innovation and Financial Behavior: Evidence from Entrepreneurs in Indonesia

Zahroh Zainal Abidin^{1*}, Maria Goretti Wi Endang Nirowati Pamungkas², Rachma Bhakti Utami³, Saiful Rahman Yuniarto⁴, Gunawan Eko Nurtjahjono⁵

*zahrohza@ub.ac.id

Universitas Brawijaya, Indonesia^{1,2,4,5}
Politeknik Negeri Malang, Indonesia³

Abstract. This study aims to determine how financial education, digital innovation, and financial behavior relate. Data were analyzed using Partial Least Squares (PLS). This study covers 50 Small and Medium Enterprises (SMEs) in Malang, East Java, Indonesia. This study shows that financial education and digital innovation significantly impact SMEs and economic behavior in Indonesia. This study recommends applying financial education and digital innovation to SMEs. In addition, this study suggests that the government pays more attention to the digitization of SMEs in general and the development of SMEs in Malang City. It is important to note that in the pandemic crisis, technology has significantly helped SMEs survive. The infrastructure supporting digitization, such as easily accessible internet connections, can be improved, especially in remote areas of the country.

Keywords: financial education, digital innovation, financial behavior

1. Introduction

Kampoeng Heritage Kajoetangan, located in the area of Jalan Jenderal Basuki Rachmat Gang VI, Kauman, Klojen, Malang City, Indonesia, is a cultural area (Heritage) after obtaining a determination by the Malang City Government. As a reasonably old area, Kajoetangan holds heritage and historical and cultural relics. Kampoeng Kajoetangan offers culture-based tours with historical education content, highlighting the architecture of Dutch colonial heritage houses. In addition, ancient equipment such as cooking utensils, windows, lights, bicycles, cameras, and telephones become a tourist attraction in this location.

The development of Kampoeng Heritage Kajoetangan has been expanded to increase the scale of business since the issuance of the Decree of the Head of the Malang City Culture and Tourism Office No. 171/ 2018 concerning the Determination of Tourism Conscious Groups (Pokdarwis) Kampoeng Heritage Kajoetangan Malang City. This determination is expected to increase the knowledge and insights of Pokdarwis members related to tourism and improve members' abilities and skills in managing tourism and other related businesses (Decree of the Head of the Malang City Culture and Tourism Office [1]). Of course, there is expected to be an increase in cultural tourism in Kampoeng Heritage Kajoetangan after the issuance of this decree. Cultural tourism itself is a trip carried out based on the desire to broaden their views or learn customs and customs, ways of life, culture, and art, as well as historically motivated activities of a group of people by conducting a direct review of the source location [1].

Apart from tourism, many people living in Kampoeng Heritage Kajoetangan have tried to improve their living standards. Although it is still on a small scale, if appropriately managed,

then the efforts of these residents can develop. Unfortunately, until now, entrepreneurs in Kampoeng Heritage Kajoetangan still do not understand the importance of knowledge of finance, one of which is that few entrepreneurs record accounting for their business transactions. In addition, entrepreneurs in this area are not fluent in digitalization, such as online media marketing.

According to [2], financial knowledge can be acquired through formal education, such as schools, training, and seminars, and informal education through parents, friends, and professional and personal experiences. According to [3], financial literacy is understanding, analyzing, and managing the economy in order to make informed financial decisions and avoid financial problems. Assuming that a good education can improve financial knowledge, it will influence more effective financial decision-making. According to [4], good financial education means that the better the financial information, the more financial management skills. Financial knowledge positively affects financial behavior. Research that tests the effect of financial education on financial behavior is based on Azjen's Theory of Planned Behavior (TPB) [5], which states that adequate financial education is related to financial attitudes, especially financial behavior. This theory is used to understand and predict human behavior based on the factors that influence it.

In addition to financial-related education that is still lacking, another problem experienced by Pokdarwis Kampoeng Heritage Kajoetangan Malang City is not optimal digitalization in their business, such as not many entrepreneurs who do marketing through online media. Adopting digital technology is empirically proven to improve enterprises' competence, productivity, and performance [5–7]. However, the condition of MSMEs in Indonesia is not enough to apply technological innovation to their business operations. Data from Deloitte Access Economics [25] revealed information that only 9% of the total MSME units have digital marketing capabilities. There, 37% of MSMEs in 2015 did not have internet access. Figure 1.2 shows the level of use of digital technology in these MSMEs. Indonesia's population of 259 million is an excellent opportunity for MSMEs to market their products. Of the 326 million mobile phone users, more than 88 million internet users and more than 79 million Facebook users will further open opportunities and make it easier for MSMEs to promote and develop businesses through digital media.

Research to test the influence of Digital Innovation on Financial Behavior is based on Porter's theory of competitive advantage [8], which states that the ability obtained through company resources will also have better performance through good behavior. The development and potential of Kampoeng Heritage Kajoetangan is no exception to be an opportunity for the economy of Malang City itself. By looking at the results of previous studies, this study intends to look at financial education, digital innovation, and financial behavior. The results of previous studies with the same variables but with different places and times will give the same or different results. In addition, the combination of several variables, namely financial education, digital innovation, and financial behavior, is a gap that allows it to be tested and researched empirically so that it becomes the newest of this research. For this reason, we are interested in conducting this study.

2. Literature review

2.1. Financial Education and Financial Behavior

This research uses the Theory of Planned Behavior (TPB) popularized by Azjen in 1985-1991 [9], following the Theory of Reasoned Action (TRA). TPB is necessary because the TRA model is incapable of managing the behavior of individuals. The TPB provides a solid theoretical basis for examining whether financial education or adequate financial knowledge is

related to financial attitudes to engage in some of the more specific behaviors toward financial literacy. Individuals' positive or negative emotions are associated with performing a particular behavior. An individual will have a good attitude toward a specific behavior if they believe that performing that behavior will lead to the most positive results. Previous studies have found a direct and significant relationship between financial attitudes and behavior [9].

Comprehensive and structured financial education can effectively improve individual financial behavior. Individuals who receive a good financial education will hopefully better understand basic financial concepts, including budget management, investing, savings, and debt management. With better financial knowledge, individuals become more aware of the importance of managing their money wisely. They will also be more likely to take full responsibility for their personal finances. Individuals who receive good financial education tend to have better abilities in planning short-term and long-term financial goals. They can prioritize expenses and set realistic goals. Financially educated individuals are expected to be more likely to make smart investment decisions and understand the risks and benefits of various investment options.

[10] shows that financial education can influence financial satisfaction through different financial knowledge, financial behavior, and financial management abilities. [11] shows that knowledge positively influences confidence, which positively affects behavior, and knowledge positively influences behavior directly or indirectly through its relationship with self-confidence.

Based on theory and previous research, the hypothesis of this research is:

H₁: Financial Education has a significant effect on financial behavior

2.2. Digital Innovation and Financial Behavior

In the development of the economy today, digital technology plays a vital role in facing change and facilitating connections between business people and business supporters. Digitalization leads to the growth of technology use in every aspect of business [12]. Digital technology can foster value-creating or new value-creation and revenue-creating opportunities [13]. Digital innovation can provide competitive advantages for companies, including Micro, Small and Medium Enterprises. Through digital platforms, MSMEs can reach more significant and global markets without having to incur considerable costs to open physical stores or branch offices in different locations. The use of technology can help MSMEs improve operational efficiency. Automating business processes, such as inventory management, sales, and administration, can save time and resources.

Digital innovation allows individuals to access financial information instantly through various platforms and applications. This can improve their understanding of their personal financial situation and enable them to make smarter financial decisions. Digital payment innovations, such as e-wallets and digital payment cards, enable individuals to make transactions more easily and quickly. This can help reduce cash usage and increase transaction security. Digital innovation has also improved the security and protection of financial data. Advanced encryption and security technology Help protect sensitive information from unauthorized access.

[14] aims to see the influence of digitalization on changes in people's behavior, primarily related to finance and consumer. The results showed a positive influence on a person's financial behavior, especially in consumption, when using digital media. At the same time, [15] showed that digital financial literacy significantly affected millennials' financial behavior regarding savings and spending.

Based on theory and previous research, the hypothesis of this research is:

H₂: Digital Innovation has a significant effect on financial behavior

3. Research Methodology

3.1 Type of Research, Population, and Sample

This research can be classified as explanatory research, which seeks to explain the presence or absence of a relationship between the study variables. According to [16], explanatory research aims to explain the location of the variables under study and the relationship between one variable and another. This study explains the influence of financial education on financial behavior and the influence of digital innovation on financial behavior.

Table 1. Population and Sample

Category	Unit
MSMEs in Kampoeng Heritage Malang City	125
MSMEs that have not received accounting training	90
Number of research samples	50
Percentage of research samples	55.5%

Source: Data processed by the author

3.2 Data Collection and Measurement of Constructs

The data were primary and secondary data. The primary data were taken directly from 50 MSMEs with business locations in Kampoeng Heritage, Malang City. The primary data was explicitly collected through a questionnaire containing statements related to the study. At the same time, the secondary data of this study included supplementary data collected from various sources, such as the East Java Provincial Office of Cooperatives and Small and Medium Enterprises, Office of Cooperatives and Small and Medium Enterprises of Malang City, Ministry of Trade, Ministry of Industry, and other organizations related to this research. The following are the properties of the variables used in the study.

Table 2. Research Variable Measurements

Variable	Attribute	Source
Financial Education		
1. My knowledge of financial matters is critical to the success of my business in the present and future.		[10]
2. Business assets easily converted to cash are reduced by debts that must be paid immediately, called the business's working capital.		
3. I know about credit (loans) to avoid losses.		
4. I know the benefit of a financial budget is the proper use of money to avoid waste.		
5. A person's level of education in his work will affect his income.		
6. If I have savings in the bank, I can use an ATM card.		
7. To purchase large amounts of business goods, I can make an installment loan of less than 20% of the monthly profit.		
8. The use of ATMs is not appropriate for paying for the purchase of large amounts of business goods.		
9. Forms of securities can be stocks and bonds.		
Digital Innovation		

<ol style="list-style-type: none"> 1. Do you agree that promotion needs to use technology (laptops, mobile phones) in business activities? 2. Do you agree that technology (laptops, mobile phones) is part of digitalization? 3. Do you always use technology (laptops, mobile phones) for business development? 4. Do you agree that using social media (Instagram, YouTube, etc.) is essential for entrepreneurs? 5. Do you agree that the use of social media (Instagram, YouTube, etc.) is part of digitalization? 6. Do you use social media (Instagram, YouTube, etc.) for business development? 	[17]
Financial Behavior	
<ol style="list-style-type: none"> 1. I made a financial note. 2. I record daily receipts and expenses/shopping per date. 3. Before shopping, I look at the prices of the places I want to shop. 4. I'm trying to make expenses less than my income. 5. I keep funds for unexpected expenses in savings. 6. I have insurance. 7. I'm trying to pay taxes. 8. I pay regular bills such as electricity, water, and phone on time every month. 9. I am being frugal, determining the priority scale, and acting rationally in spending money. 10. I have a record of all the expenses I do. 	[10]

Source: Processed by the Researchers

4. Results

4.1. Research Instrument Testing

4.1.1 Research Instrument Testing

Questionnaires used as data collection tools are the first and foremost tested research tools. The test performed is a test of validity and reliability. This test aims to measure the accuracy and reliability of the questionnaire as a data collection tool. The results of testing the validity and reliability of the research questionnaire can be explained as follows:

4.1.2 Instrument Validity Testing

Validity testing was performed by comparing the scores of each item/indicator with the total score using the Pearson correlation technique (Product-Moment). The test criterion determines whether the correlation coefficient (r_{iT}) \geq the panel correlation coefficient (0.279), meaning that the indicator is declared valid or capable of measuring the variables it measures so that it can be used as a data collection tool. Table 3 presents the summary of validity testing.

Table 3: Validity Test

Variable	Indicators	Correlation Coefficient	Information
Financial Education	X1.1	0.527	Valid
	X1.2	0.51	Valid
	X1.3	0.501	Valid
	X1.4	0.312	Valid

	X1.5	0.528	Valid
	X1.6	0.614	Valid
	X1.7	0.604	Valid
	X1.8	0.666	Valid
	X1.9	0.744	Valid
Digital Innovation	X2.1	0.899	Valid
	X2.2	0.858	Valid
	X2.3	0.86	Valid
	X2.4	0.883	Valid
	X2.5	0.847	Valid
	X2.6	0.832	Valid
Financial Behavior	Y.1	0.804	Valid
	Y.2	0.704	Valid
	Y.3	0.62	Valid
	Y.4	0.771	Valid
	Y.5	0.656	Valid
	Y.6	0.735	Valid
	Y.7	0.482	Valid
	Y.8	0.458	Valid
	Y.9	0.442	Valid
	Y.10	0.845	Valid

Source: Processed by the Researchers

Based on the summary of the results of testing the validity of the research tool, it is known that all correlation coefficients > correlation coefficient (0.279). Therefore, the indicators of financial education, digital innovation, and financial behavioral variables are declared valid or capable of measuring them for use as data collection tools in research.

4.1.3 Instrument Reliability Testing

Instrument reliability testing aims to determine the reliability and consistency of the research instrument as a measurement tool for the variables it measures. Reliability testing was performed using Cronbach's Alpha technique. The testing criteria determine that a Cronbach's Alpha coefficient ≥ 0.6 means that the indicator is claimed to be reliable or consistent in measuring the variables it measures. Table 4 presents the summary of reliability testing.

Table 4. Reliability Test

Variable	Cronbach Alpha	Information
Financial Education	0.726	Reliable
Digital Innovation	0.927	Reliable
Financial Behavior	0.844	Reliable

Source: Processed by the Researchers

Based on the summary of the results of the reliability test of the research instrument, it is known that all Cronbach's alpha > 0.6. Thus, financial education, digital innovation, and

financial behavior indicators are declared reliable or consistent in measuring these variables to be used as data collection tools in this study.

4.1.4 Respondent's Identity

The identity of respondents by gender is informed through the following frequency distribution and explanation.

Table 5. Respondent's Identity

Gender	Frequency	Percentage
Man	18	36%
Woman	32	64%
Total	50	100%

Source: Processed by the Researchers

Table 5 shows that among the 50 financial interest groups of Kampoeng Heritage Kajoetangan Malang that participated in the study, 36% of the respondents were male, and 64% were female. This shows that most entrepreneurs in Kampoeng Heritage Kajoetangan Malang in this study are women.

4.2. Partial Least Square

4.2.1 Measurement Model Evaluation

This research model consists of three latent variables: *financial education*, *digital innovation*, and *financial behavior*. Measurement model evaluation is a stage to test the validity and reliability of a latent variable.

4.2.1.1 Validity Testing

4.2.1.1.1 Convergent Validity

Convergent validity aims to determine the value of indicators in measured variables. The magnitude of the small factor loading indicates the convergent validity of each indicator in measuring the variables. An indicator is declared valid if the factor loading is favorable and more significant than 0.5. The results of the convergent validity test are presented in Table 6:

Table 6: Convergent Validity Test

Variable	Indicators	Loading Factor	ONE	P value	Loading Factor	ONE	P Value	Loading Factor
Financial Education	X1.1	0.649	0.11	<0.001	0.703	0.108	<0.001	0.703
	X1.2	0.472	0.118	<0.001				
	X1.3	0.468	0.118	<0.001				
	X1.4	0.34	0.124	0.004				
	X1.5	0.411	0.121	<0.001				
	X1.6	0.712	0.108	<0.001	0.886	0.101	<0.001	0.886
	X1.7	0.538	0.115	<0.001				
	X1.8	0.644	0.11	<0.001	0.636	0.111	<0.001	0.636
	X1.9	0.778	0.105	<0.001	0.822	0.103	<0.001	0.822
Digital	X2.1	0.905	0.1	<0.001	0.905	0.100	<0.001	0.905

Innovation	X2.2	0.874	0.101	<0.001	0.874	0.101	<0.001	0.874
	X2.3	0.842	0.102	<0.001	0.842	0.102	<0.001	0.842
	X2.4	0.889	0.1	<0.001	0.889	0.100	<0.001	0.889
	X2.5	0.867	0.101	<0.001	0.867	0.101	<0.001	0.867
	X2.6	0.808	0.104	<0.001	0.808	0.104	<0.001	0.808
Financial Behavior	Y.1	0.838	0.102	<0.001	0.861	0.102	<0.001	0.861
	Y.2	0.785	0.105	<0.001	0.833	0.103	<0.001	0.833
	Y.3	0.717	0.107	<0.001	0.74	0.106	<0.001	0.74
	Y.4	0.841	0.102	<0.001	0.836	0.103	<0.001	0.836
	Y.5	0.56	0.114	<0.001	0.573	0.113	<0.001	0.573
	Y.6	0.62	0.111	<0.001	0.598	0.112	<0.001	0.598
	Y.7	0.343	0.124	0.004				
	Y.8	0.446	0.119	<0.001				
	Y.9	0.492	0.117	<0.001				
	Y.10	0.874	0.101	<0.001	0.879	0.101	<0.001	0.879

Source: Processed by the Researchers

Table 6 shows that the financial education variables are still four valid indicators. After retesting, all indicators produced factor loading values greater than 0.5. Therefore, all these indicators are declared valid for measuring the variables of financial education.

The digital innovation variable was measured using six indicators, with all indicators generating factor loading values greater than 0.5. Therefore, all these indices are declared valid for measuring numerical inference variables.

The financial behavioral variables still had seven valid indicators, where after retesting, all the indicators produced factor loading values greater than 0.5. Therefore, all these indices are declared valid for measuring financial behavioral variables. Additionally, the reworked tests do not include the following invalid flags:

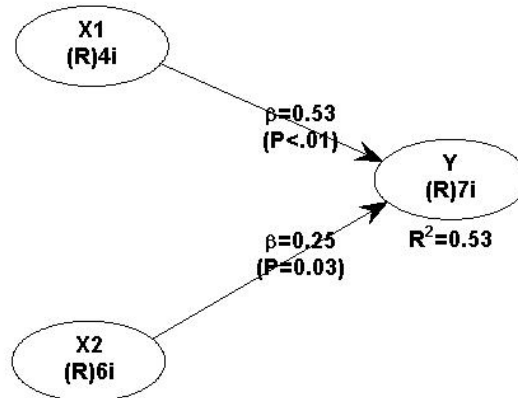


Figure 1: Path Diagram

Source: Processed by the Researchers

Validity testing can also be known by AVE (Average Variance Extracted). An instrument is said to meet convergent validity tests with an average variance (AVE) greater than 0.5. The results of the convergent validity tests are presented in the following table:

Table 7. Validity Test

Variable	AVE
Financial Education	0.590
Digital Innovation	0.748
Financial Behavior	0.592

Table 7 shows that the variables of financial education, digital innovation, and financial behavior all produce an average variance extracted (AVE) value greater than 0.5. Therefore, indicators measuring financial education, digital innovation, and financial behavior are valuable.

4.2.1.1.2 Discriminant Validity

The value of the discriminant is calculated using the cross-loading method with the criterion that if the value of the loading factor is greater than the correlation between the indicator and other variables, the indicator is recognized as valid when measuring the corresponding variable. The calculation results of the transverse load are given in Table 8:

Table 8. Discriminant Validity Test

Indicators	Financial Education	Digital Innovation	Financial Behavior
X1.1	0.703	0.527	-0.23
X1.6	0.886	-0.092	0.28
X1.8	0.636	-0.436	0.177
X1.9	0.822	-0.014	-0.242
X2.1	0.075	0.905	-0.189
X2.2	0.29	0.874	-0.314
X2.3	0.144	0.842	0.186
X2.4	-0.309	0.889	0.124
X2.5	0.068	0.867	-0.162
X2.6	-0.281	0.808	0.393
Y.1	0.052	0.194	0.861
Y.2	0.113	-0.038	0.833
Y.3	-0.502	0.455	0.74
Y.4	-0.059	0.01	0.836
Y.5	0.497	-0.508	0.573
Y.6	0.043	-0.379	0.598
Y.1	-0.033	0.043	0.879

Based on the cross-impact measures in Table 8, it can be known that the overall indexes measuring financial education, digital innovation, and financial behavioral variables produce more excellent cross-impact coefficients. Compared to the cross-impact effects on other

variables. Therefore, indicators measuring financial education, digital innovation, and financial behavior can be declared valid.

4.2.1.2 Reliability Testing

Calculations that can be used to test construct reliability are composite reliability and Cronbach's alpha coefficient. The test criteria stipulate that the construct is declared reliable if the composite reliability is more significant than 0.7. On the other hand, if Cronbach's Alpha has a value greater than 0.6, the construct is declared reliable. Calculation results of Composite Reliability and Cronbach Alpha can be referred to through the summary in Table 8:

Table 8: Reliability Testing

Variable	Composite Reliability	Cronbach's Alpha
Financial Education	0.850	0.761
Digital Innovation	0.947	0.932
Financial Behavior	0.908	0.880

Table 8 shows that the value of *Composite Reliability* in financial education, digital innovation, and financial behavior variables is more significant than 0.7. Thus, all indicators measuring financial education, digital innovation, and financial behavior are declared reliable based on composite reliability calculations. *Cronbach's Alpha* values in variables financial education, digital innovation, and financial behavior are more significant than 0.6. Thus, all indicators measuring financial education, digital innovation, and financial behavior are declared reliable based on Cronbach's Alpha calculations.

4.2.1.3 Goodness of Fit Model

The Goodness of Fit model is used to determine the extent and ability of a variable exogenously to explain the variation of endogenous variables, in other words, to determine the extent to which exogenous variables influence endogenous variables. The importance model for PLS analysis uses the coefficient of determination (R-squared) and the Q-squared predictive importance (Q²).

The results of the goodness-of-fit models are summarized in the following table:

Table 9: Goodness of Fit Model

Endogenous	R Square	Q Square
Financial Behavior	0.530	0.525

The R-squared financial behavior variable is 0.530 or 53.0%. It can be shown that the financial behavior variable that can be explained by the financial education and digital innovation variables is 53.0%, or in other words, the contribution of the financial education variables and digital innovation to financial behavioral variables is 53.0%. In comparison, the remaining 47.0% contributed to other factors not mentioned in this study. Then, the financial behavior variable Q squared is 0.525. It shows that diverse financial education and digital innovation strongly predict financial behavioral variables.

4.2.2 Direct Influence Hypothesis Testing

Direct effect hypothesis testing is used to test the direct effect of exogenous variables on endogenous variables. If the p-value is \leq significance level ($\alpha = 5\%$), then according to the

test criteria, the exogenous variable has a significant effect on the endogenous variable. The following table shows the results of the hypothesis testing:

Table 10. Hypothesis Testing

Exogenous	Endogenous	Path Coefficient	ONE	P Value
Financial Education	Financial Behavior	0.527	0.115	<0.001
Digital Innovation	Financial Behavior	0.247	0.129	0.03

Based on the tests listed in the table above, it is known that the influence of financial education on financial behavior produces a p-value of <0.001. The test results showed the p-value < the significance level (alpha = 5%). It means financial education has a significant influence on financial behavior.

The influence of digital innovation on financial behavior results in a p-value of 0.03. The experimental results show the p-value < Significance level (alpha = 5%). It means that digital innovation has a significant influence on financial behavior.

4.2.3 Convert Path Diagrams into Structural Models

The conversion of path diagrams in structural models is intended to predict how exogenous variables affect endogenous variables, as presented in the following table:

Table 11: Structural Model Testing

Exogenous	Endogenous	Path Coefficient
Financial Education	Financial Behavior	0.527
Digital Innovation	Financial Behavior	0.247

Description: * (Significant)

Based on the table above, it can be known that the structural models formed are:

$$\text{Equation 1: } Y = 0.527 X_1 + 0.247 X_2$$

From Equation 1, it can be informed that:

- The coefficient of a direct effect of financial education on financial behavior** of 0.527 states that financial education has a positive and significant effect on financial behavior. It means that the better financial education is, it tends to increase financial behavior.
- The coefficient of a direct effect of digital innovation on the financial behavior** of 0.247 states that digital innovation has a positive and significant effect on financial behavior. It means that the higher the digital innovation, the more it tends to increase financial behavior.

5. Discussion

5.1 The Influence of Financial Education on Financial Behavior

Based on statistical tests, the effect of financial education on economic behavior can give a p-value of <0.001. The test results show the p-value and level of significance (alpha = 5%). This means that financial education has a significant impact on financial behavior.

According to (18), financial knowledge can be obtained from formal education, such as schools, seminars, and training, as well as from informal education, such as parents, friends,

family, work experiences, and personal experiences. Experience According to [19], financial education is to understand, analyze, and manage the economy in order to make sound financial decisions and avoid financial problems. Assuming that a good education can increase financial knowledge, it contributes to more effective financial decision-making. According to [19], financial education means that the better the financial knowledge, the better the financial skills in financial management. In other words, financial knowledge positively affects financial behavior. Financial education refers to what people know about personal finance, as measured by their knowledge of various concepts [20]. A person's financial knowledge (financial literacy) influences financial behavior [21]. [22] said that a person with low financial literacy is less likely to understand financial problems, perform worse in the economy, and is less adept at dealing with financial disruptions. Financial education not only makes a person spend money wisely, but it can also benefit the economy. A person with higher financial knowledge can make good decisions for his family and thus improve their financial security and well-being in addition to a person who is financially literate and makes the informed choices necessary for effective and efficient markets [23]. A person with financial education has a better understanding of financial problems and has better financial behavior. Therefore, the better the financial information, the better people manage their finances.

5.2 The Influence of Digital Innovation on Financial Behavior

The influence of digital innovation on financial behavior results in a p-value of 0.03. The test results showed the p-value < the significance level (alpha = 5%). It means there is a significant influence of digital innovation on financial behavior.

Technological developments have changed the human lifestyle from generation to generation through how one looks and thinks in communicating and interacting [24]. The development of technology has given birth to a digital revolution where technological developments change how people transact. It shows that information and communication technology development has brought significant changes in everyday life.

Information and communication technology is a system or technology that can retrieve, move, analyze, present, store, and convey data into information. The development of information technology has significantly impacted many aspects and lifestyles of society, including those related to financial or financial factors. Consumers demanding intelligence regarding easy-to-use financial services are no longer limited by location and time. It is undeniable that today, the wave of revolution in digital technology continues to increase. The advancement of digital technology as an innovation disruption has changed the world's face in conducting social interactions and personal relationships. Disruption of innovation is the answer to the times that demand everything is fast-paced, easy, convenient, and practical. The development of digitalization is faster than the development of other sectors, including the industrial and agricultural sectors. The development of digital technology affects the improvement of the internet-based economy, making it easier for customers to find financial information, and customers can make financial transactions in digital devices or media patterns. The development of digitalization is driving cost savings and convenience for new users. With the advent of the internet, offline business is no longer the only alternative for people in transacting. The presence of the Industrial Revolution 4.0 has changed society's way of life and behavior. It can be seen from the changes in community activities carried out from manuals to automation through a combination of digital technology. Digital-based information technology became an essential and integral part of business behavior in the era of the Industrial Revolution 4.0

6. Conclusions and Suggestions

A total of 0.527 stated that financial education positively and significantly affected financial behavior. It means that the better financial education is, it tends to increase financial behavior. A total of 0.247 states that digital innovation positively and significantly affects financial behavior. It means that the higher the digital innovation, the more it tends to increase financial behavior. The influence of digital innovation on financial behavior results in a p-value of 0.03. The test results showed the p-value < the significance level ($\alpha = 5\%$). It means there is a significant influence of digital innovation on financial behavior. Financial education equips individuals with better knowledge and understanding of financial concepts, including money management, investments, savings, debt, and other aspects of finance.

By understanding basic financial principles, individuals can better make wise financial decisions. Financial education has a significant impact on a person's financial behavior. Financial education helps increase awareness of the importance of managing money wisely. It includes understanding how to budget, manage debt, and make intelligent investments. With better knowledge of financial concepts, one can make wiser financial decisions. They will be more likely to weigh the risks and benefits before making financial decisions. People with good financial education tend to be more aware of the risks and consequences of certain financial decisions. It can help prevent often costly financial mistakes. Financial education also teaches the importance of short-term and long-term financial planning. It includes financial goals, investments, and preparation for emergencies. The results of the research found that financial education affects financial behavior. It shows that MSMEs, in general and Kajoetangan Heritage, are expected to improve finance-related education.

In addition, digital innovation also needs to be the focus of MSMEs because it is proven to affect financial behavior significantly. Digital innovation significantly impacts financial behavior by changing how individuals interact with the financial system and enabling more accessible, efficient, and sophisticated financial access and management. Digital innovation enables access to various financial products and services via electronic devices such as mobile phones, tablets, and computers. It allows individuals to access bank accounts, investment platforms, payment apps, and more without going to a physical location. Digital technology allows individuals to carry out financial transactions easily and quickly, even remotely. Users can transfer money, pay bills, shop online, and carry out other financial transactions without going to the bank or filling out manual forms. Digital innovation has great potential to influence a person's financial behavior positively. Digital innovations like digital payments allow individuals to make transactions quickly and easily without carrying cash. It can help reduce the risk of loss or theft of physical money. Digital banking apps and investment platforms allow individuals to manage their finances anywhere and at any time. They are no longer limited by bank branch office hours. Technology allows individuals to set automation in the investment and saving process. It can help ensure that a portion of their income is allocated to long-term financial goals. The results of the research found that digital innovation affects financial behavior. It shows that MSMEs and Kajoetangan Heritage are expected to improve digital innovation along their operations.

References

- [1] Prima Lita R, Fitriana Faisal R, Meuthia M. Enhancing small and medium enterprises performance through innovation in Indonesia: A framework for creative industries supporting tourism. *Journal of Hospitality and Tourism Technology*. 2020;11(1):155–76.

- [2] Losada-Otalora M, Valencia Garcés CA, Juliao-Rossi J, Donado PM, Ramírez F E. Enhancing customer knowledge: the role of banks in financial well-being. *Journal of Service Theory and Practice*. 2020;30(4–5):459–582.
- [3] Liu B, Wang J, Chan KC, Fung A. The impact of entrepreneurs’s financial literacy on innovation within small and medium-sized enterprises. *International Small Business Journal: Researching Entrepreneurship*. 2020;39(3):228–46.
- [4] Widiansyah A. Peran Ekonomi dalam Pendidikan dan Pendidikan dalam Pembangunan Ekonomi. *Cakrawala*. 2017;17(2):207–15.
- [5] Rana NP, Luthra S, Rao HR. Key challenges to digital financial services in emerging economies: the Indian context. *Information Technology and People*. 2020;33(1):198–229.
- [6] Miele F, Tirabeni L. Digital technologies and power dynamics in the organization: A conceptual review of remote working and wearable technologies at work. *Sociol Compass*. 2020;(March):1–13.
- [7] Sia SK, Weill P, Zhang N. Designing a Future-Ready Enterprise: The Digital Transformation of DBS Bank. *Calif Manage Rev*. 2021;63(3):35–57.
- [8] Porter ME. Competitive strategy: Techniques for analysing industries and competitors. Vol. 11, *Industrial Marketing Management*. 1982. 318–319 p.
- [9] Zhou FL, Wang X, Lin Y, He YD, Wu N. Influence research of multi-dimensional tech-innovation behavior on tech-innovation performance. *International Journal of Innovation Science*. 2016;8(2):148–60.
- [10] Xiao JJ, Porto N. Financial education and financial satisfaction. *International Journal of Bank Marketing* [Internet]. 2017 Jan 1;35(5):805–17. Available from: <https://doi.org/10.1108/IJBM-01-2016-0009>
- [11] Ramalho TB, Forte D. Financial literacy in Brazil – do knowledge and self-confidence relate with behavior? *RAUSP Management Journal* [Internet]. 2019 Jan 1;54(1):77–95. Available from: <https://doi.org/10.1108/RAUSP-04-2018-0008>
- [12] Hsu C. Scaling with digital connection: Services innovation. In: 2007 IEEE International Conference on Systems, Man and Cybernetics. 2007. p. 4057–61.
- [13] Spremic M, Ivančić L, Vuksic V. Fostering Innovation and Value Creation Through Ecosystems: Case of Digital Business Models and Digital Platforms. In 2020. p. 25–44.
- [14] Sima V, Gheorghe IG, Subić J, Nancu D. Influences of the Industry 4.0 Revolution on the Human Capital Development and Consumer Behavior: A Systematic Review. *Sustainability*. 2020 May 14;12(10):4035.
- [15] Setiawan M, Effendi N, Santoso T, Dewi VI, Sapulette MS. Digital financial literacy, current behavior of saving and spending and its future foresight. *Economics of Innovation and New Technology*. 2022 May 19;31(4):320–38.
- [16] Sugiyono. Metode penelitian pendidikan pendekatan kuantitatif, kualitatif dan R&D. 2013.
- [17] Bowman D, Hovorka D. Efficiency Engine vs. Entrepreneurial Innovation: A Conceptual Comparison. In: *ACIS 2017 Proceedings* [Internet]. The Australasian (ACIS) at AIS Electronic Library (AISeL); 2017. Available from: <https://aisel.aisnet.org/acis2017/108>
- [18] Agus Zainul Arifin, Kevin Kevin, Halim Putera Siswanto. The influence of financial knowledge, financial confidence, and income on financial behavior among the workforce in Jakarta. *MIX: Jurnal Ilmiah Manajemen*. 2017;7(1).
- [19] Astuti F, Nugroho M. THE INFLUENCE OF DIGITAL MARKETING, LEVEL OF EDUCATION, FINANCIAL LITERACY AND BUSINESS SUSTAINABILITY ON THE PERFORMANCE MSMEs IN KENDAL DISTRICT INFO ARTIKEL. *Journal Economic Insights* [Internet]. 2023;2(1):193–203. Available from: <https://jei.uniss.ac.id/>

- [20] Brent A. Marsh. Examining the personal finance attitudes, behaviors, and knowledge levels of first-year and senior students at Baptist universities in the state of Texas [Doctoral dissertation]. [Ohio]: Bowling Green State University; 2006.
- [21] Sabri MF, Anthony M, Wijekoon R, Suhaimi SSA, Abdul Rahim H, Magli AS, et al. The Influence of Financial Knowledge, Financial Socialization, Financial Behaviour, and Financial Strain on Young Adults' Financial Well-Being. *International Journal of Academic Research in Business and Social Sciences*. 2021 Dec 18;11(12).
- [22] Hung A, Parker AM, Yoong J. Defining and Measuring Financial Literacy. *SSRN Electronic Journal*. 2009;
- [23] Hilgert MA, Hogarth JM, Beverly S. Household financial management: the connection between knowledge and behavior. *Federal Reserve Bulletin* [Internet]. 2003;(Jul):309–22. Available from: <https://EconPapers.repec.org/RePEc:fip:fedgrb:y:2003:i:jul:p:309-322:n:v.89no.7>
- [24] Voinov A, Kolagani N, McCall MK, Glynn PD, Kragt ME, Ostermann FO, et al. Modelling with stakeholders – Next generation. *Environmental Modelling & Software*. 2016 Mar;77:196–220.
- [25] Deloitte Access Economics, *SMEs Powering Indonesia's Success: The Connected Archipelago's Growth Engine*, Deloitte Access Economics, Indonesia, 2015.