Does Perceived Credibility Increase the Adoption of Fintech Digital Payment Systems for Transactions in MSMEs?

IRA SETIAWATI[1,2], IMAM GHOZALI[3,*], PAULUS TH BASUKI HADIPRAJITNO[3]
[1]Economics Doctoral Program,
Diponegoro University,
INDONESIA

[2]Faculty of Economics and Business,
Universitas Persatuan Guru Republik Indonesia Semarang,
INDONESIA

[3]Accounting Department, Faculty of Economics and Business,
Diponegoro University,
INDONESIA

[*]*Corresponding Author*

Abstract: - This study aims to analyze the role of Perceived Credibility (PC) in increasing the influence of Effort Expectancy (EE) and Price Value (PV) on fintech digital payment transactions in MSMEs. The data processed were from 110 respondents, and SMART PLS 4.0 was applied as an analysis tool. The results showed that effort expectancy (EE) had a positive and significant influence on the adoption of fintech digital payment systems for transactions, as observed through the path coefficient of 0.230 with a t-statistic of 2.436 and a p-value of **0.007.** Meanwhile, the price value variable did not significantly affect the adoption of fintech digital payment systems, as shown by the path coefficient value of 0.088, t-statistic of 0.846, and p-value of 0.199. The SEM-PLS data analysis further showed that the perceived credibility (PC) could strengthen the influence of price value on the adoption of fintech digital payment systems for transactions, with a significance level of **0.043**. Meanwhile, the p-value of 0.324 showed that the perceived credibility does not moderate the effect of effort expectation on the adoption of fintech digital payment systems for transactions in MSMEs.

Key-Words: - Effort Expectancy, Price Value, Perceived Credibility, fintech digital payment systems, transactions, MSMEs.

Received: November 8, 2025. Revised: March 18, 2026. Accepted: April 11, 2026. Published: August 3, 2026.

1 Introduction

Several entities are developing and paying special attention to information technology investment as a process to facilitate the effective collection, processing, and use of information. This process focuses on utilizing information technology that can provide convenience for entities in conducting most daily business transactions.

The main function of utilizing technology is to facilitate every transaction. Moreover, the rapid expansion of the Internet has transformed payment transaction behaviors.

This is because computers and the internet have always been essential technologies that support accounting, particularly in processing business transactions. There are several financial service providers using technology to manage and distribute funds. As a result, technology has become a critical driver of efficiency, security, and accessibility in modern financial operations.

The development of Micro, Small, and Medium Enterprises (MSMEs) is increasing annually, as observed by the existence of different clusters and quantities, as well as relevant technology.

Based on the latest data from Figure 1, the Central Java Provincial Cooperative and Micro, Small, and Medium Enterprises (MSME) Office, the number of MSMEs under the guidance of the Central Java Provincial Government in 2024 reached 193,200 units. This number increased in the third quarter of 2025, reaching 197,539 units.

Furthermore, the increase recorded in Central Java shows the potential to enhance the capacity and competitiveness of MSMEs, as well as

empowerment strategies, and the potential for economic growth in the province. This significant figure shows the great potential for technology integration, especially financial technology (fintech), that can accelerate the payment process, facilitate access to financing, and increase the efficiency of financial management for MSME actors.

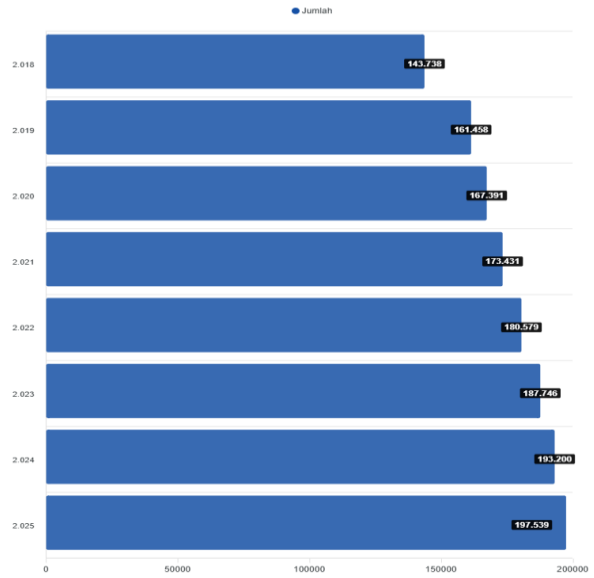


Fig. 1: Data Table of MSMEs Assisted by Central Java Province
Source: [1]

The development of fintech has led to a significant transformation in the global payment system by driving a shift from traditional payment methods to more efficient and innovative digital solutions. Moreover, digital payment systems, such as e-wallets, mobile banking, and application-based payment platforms, have become the backbone of the digital economy by facilitating faster, safer, and more affordable payment transactions. The OJK (Otoritas Jasa Keuangan) released the data, which showed the total fintech transactions in 2024 to be IDR 448.40 billion, [2]. The increase in transaction volume was caused by the improvement of the role of fintech in the financial ecosystem of Indonesia, [1]. Even though fintech is continuously adopted, there are some challenges to ensure that the factors influencing the acceptance and usage of technology by MSMEs are understood. Some of these include the lack of knowledge related to the technology, concerns about data security, and distrust of digital platforms, [3]. Therefore, the factors influencing fintech adoption need to be understood to ensure the benefits are experienced. This is important mostly in the context of increasingly rapid digital transformation.

Fintech is often adopted due to the ease of use or lower costs, as well as psychological and social factors such as trust, risk perception, system security, and platform credibility. Therefore, there is a need to understand the factors influencing fintech adoption to ensure an even experience of the benefits. Effort or user expectations are examples of the factors associated with the ease of using a technology. According to [4], [5], there is a greater possibility of adopting a technology considered easier to use. This is in line with the observation of [6] that ease of use is a dominant factor in mobile banking adoption. Another important factor is price value because users tend to prefer platforms that offer low or even free transaction fees, as well as provide added value, such as cashback or discounts. This was confirmed by [7], that price value had a significant influence on the intention to use mobile banking. The study [5] also applied the Unified Theory of Acceptance and Use of Technology 2 (UTAUT-2) model and reported that effort expectation (ease of use expectation) and price value (price value) significantly influenced user intentions and behavior in adopting technology.

Trust in the security and reliability of the platform is a critical aspect capable of strengthening or weakening the influence of factors such as effort expectation and price value on the adoption of fintech digital payment systems. This is because the use of information technology is often associated with security and privacy risks. A previous study conducted by [8] showed that the risk of system security increased the potential for computerized accounting fraud. A greater risk to the security of the computerized accounting system led to a smaller opportunity for misuse. Moreover, [9], [10] explored perceived credibility as a factor influencing usage intention but did not test the moderating effect on effort expectation and price value in adopting fintech digital payment systems. Previous studies emphasized technology in general without specific attention to fintech digital payment systems, considering the unique characteristics such as higher security and privacy risks.

Security and privacy factors influencing the applications used for transactions have been studied. This further motivated the addition of the perceived credibility variable, predicted to strengthen or weaken the intention of users (MSMEs) to adopt fintech digital payment systems in business transactions. Perceived credibility is related to two important dimensions, including security and privacy, which are identified in most studies to influence user intentions to adopt online transaction systems. For example, [11] explained that the desire

or intention to adopt an electronic tax system (e-tax filing) could be influenced by the perceived credibility of users regarding security and privacy issues. The concept is defined in this study as the extent to which users believe a fintech platform is safe, reliable, and trustworthy. The integration of the perceived credibility variable into this study model is expected to improve and provide a more comprehensive understanding of the factors influencing the adoption of fintech digital payment systems. The trend is related to the consideration of trust and security of digital systems as very important because of the sensitivity of financial transactions.

The conduct of this study is justified by several reasons. First, fintech digital payment systems are a rapidly growing area, but there is uncertainty among consumers regarding the security and credibility of the platform. Second, the UTAUT-2 model, which is the theoretical basis of this study, has been widely used to predict technology adoption but has not fully accommodated the role of perceived credibility as a moderating variable, especially in the context of using fintech digital payment systems. Third, the results are expected to provide new insights for fintech service providers and regulators in designing strategies to increase the adoption of digital payment systems by improving ease of use, offering competitive price value, and building platform credibility through security, reliability, and transparency.

Therefore, this study contributes to the development of academic literature and has significant practical implications for the fintech industry. The aim is to analyze the effect of effort expectation and price value on the adoption of fintech digital payment systems. The moderating role of perceived credibility in the influence of effort expectation and price value on the adoption of fintech digital payment systems for transactions was also examined.

2 Problem Formulation

An effort to understand the efficiencies and constraints of the digital payment systems governance is presented through the spectacles of transaction theory. The reason this is possible is that digital transactions enable real-time access to standardized pricing information, services, and payment options, thereby reducing the search and negotiation costs. Furthermore, fintech digital payment systems like e-wallets can partly reduce traditional transaction costs, for example, the need for financial intermediaries or manual contracts.

Transaction theory states that other forms of transaction costs are required in managing platform monopoly risk and technology access imbalances between large corporate users and MSMEs. These include cybersecurity costs, opportunism risk management, and compliance with developing regulations, [12], [13], [14].

2.1 Fintech Digital Payment Systems

Fintech digital payment systems are defined as the integration of technology into payment transactions by financial services, companies, institutions, or start-ups. The introduction of these systems has transformed traditional banking practices by enabling faster transactions, greater accessibility, and improved user experience through innovative payment applications and platforms. The rapid evolution of digital payment systems has also transformed consumer behavior and motivated MSME owners to adopt and implement secure platforms that foster trust in fintech.

The study [15] defined fintech as an innovation from the financial sector that is associated with the integration of technology in business models to facilitate the elimination of intermediaries. It is also intended to change the method often applied by existing companies to produce and provide products and services, address privacy issues, regulations, and legal challenges, and allow opportunities for inclusive growth.

A similar definition was also expressed by [16], who showed the concept as a form of technology-based financial services currently trending in the world, both in terms of devices and business. The current economy is getting more dependent on digital financial transactions. This is because financial services are easier to access with a subsequent increase in transaction efficiency, which is very important in economic growth, [17].

The studies regarding fintech transactions indicated that there was a huge number of consumers and MSME owners who were switching to digital payment methods. As a result, financial institutions have been compelled to adopt more sophisticated and secure systems in order to satisfy the demand.

This also provides fintech startups the opportunity to innovate and come up with more creative solutions to offer better quality of service and healthy competition in the market. As digital tools become more advanced, consumers increasingly expect seamless, personalized, and reliable financial experiences. But the security and

privacy of the user data matter to all the parties for maintaining trust in the digital services. The collaboration between the government, financial institutions, and technology companies is very important in the successful provision of a safe and innovative ecosystem. The regulations can be set up to support and protect the interests of all parties.

2.2 Effort Expectation

The main factors of the Unified Theory of Acceptance and Use of Technology model (UTAUT) [18] include effort expectation. This is a concept that refers to how much individuals think it is easy to use a technological system and how little effort is needed. The variable is viewed as a key factor in determining whether an individual will use digital payment systems in the context of fintech transactions. In particular, effort expectancy is defined as the ease of using a system. The studies [19], [20], [21], [22] further explained that the concept is similar to three constructs, including perceived ease of use (TAM/TAM2), complexity (Model of PC Utilization/ MPCU), and ease of use (Innovation Diffusion Theory/ IDT).

Effort expectancy is related to the reluctance of users to use any technology or information system. This is because there is a need to put in place efforts to ensure the effective utilization of financial information systems with a view to improving overall satisfaction, [23]. According to [24], business expectations had a significant impact on the user intention to adopt Internet banking in Pakistan.

Also, [25] examined the adoption of financial information systems using respondents from small and medium enterprises in Jordan and found business expectations to have a positive and significant effect on behavioral intention. In addition, the ease of application, the ease of navigation, the intuitive user interface, and efficient transaction processes could enhance the adoption of the technology, [26], [27].

Several past studies found that effort expectation significantly influenced the user's intention to use fintech services. According to [27], [28], the perception of ease of use could increase the user's trust in the payment system, thereby leading to the intention to use. Also, [26] demonstrated that users were prone to adopt a technology considered easier to use. In the world of users who are not very digitally literate or have had no experience with fintech, this factor is even more important.

This explanation generated the assumption that, in the case of higher effort expectations for fintech digital payment transactions, they could increase the level of adoption by users. Therefore, the following hypothesis is proposed in this study:

Hypothesis 1: Effort expectation has a positive effect on the adoption of fintech digital payment systems for transactions.

2.3 Price Value

Price value is the extent to which cost and pricing structures have a significant impact on the use of a system or technology, [29]. This concept is part of the main factor influencing the decision to adopt fintech-based digital payment services. [30], reported that price value may affect consumer decisions in relation to intention to use technology (Behavioral Intention), with moderating variables of gender and age. Price value is also indicated by the consideration of the benefits received and the costs incurred when using a technology, [30].

According to [31], price value had a very significant influence on the behavioral intention of Go-Pay users as a non-cash payment transaction service in the city of Bandung. [32], also explained the concept as the perception of the gap between the monetary costs of using a technology and its benefits. The predictor of behavioral intention to use a technology was also the price value. The study [33] conducted a similar study that reported price value had a positive effect on the behavioral intention of using Go-Pay in the Special Region of Yogyakarta. Moreover, it was also found that high price value perception could increase the intention to use digital payment systems. When users believed that digital transactions were cheaper than the conventional payment methods, the possibility of switching to a fintech system increased, [28].

Users in the current digital economy want solutions that strike a balance between convenience, security, and low cost, and this shows that price value is related to the psychological aspects, [26]. Therefore, fintech digital payment systems would have higher chances of adoption when a higher perception of benefits than costs is experienced. This study predicts that price value is significant and has a positive effect on the adoption of fintech digital payment systems for transactions.

Hypothesis 2: Price value has a positive effect on the adoption of fintech digital payment systems for transactions.

2.4 Perceived Credibility

Perceived credibility is explained as the confidence of users in relation to the reliability and security of fintech digital payment systems. This belief includes

the perception that the systems are safe enough to protect users' personal and financial information from risks such as fraud or data leaks. The trend also increased the adoption of fintech services due to the fact that high perceptions of security and privacy significantly increased consumer confidence in the services. Security and privacy were two important dimensions of the construct of perceived credibility in the fintech, as explained by [9], [34]. Moreover, [35] defined security further as the protection of information or systems from unauthorized intrusions or outflows. On the other hand, privacy is interpreted as the protection of different types of data given or received with or without the knowledge of users using an electronic system.

It cannot be ignored that perceived credibility is important in increasing the adoption of fintech digital payment systems for transactions. Furthermore, positive attitudes and intentions to use fintech systems depend on the trust of users in security and privacy. In a recent study, [36], found that strong security perceptions were associated with the intention to adopt fintech services. The wider adoption of fintech services was also reported to be driven by high trust, [37].

This study determines the determinants of decisions to adopt a fintech digital payment system for transactions. It was found that effort expectation and price value were important for MSMEs, but the influence of these two exogenous variables was not often direct and linear. Therefore, perceived credibility was predicted as a factor that could strengthen or weaken the effect of exogenous factors on the adoption.

This is possible because a high level of trust in the security and reliability of the fintech system tends to increase the willingness to adopt, despite challenges in terms of ease of use or service costs. Meanwhile, low perceived credibility can lead to more skepticism and less motivation to use fintech systems, even when the service is easy to use and has a competitive price value.

Strategies that focus on improving security, privacy, and transparency can assist in building trust among users in order to increase the adoption of fintech digital payment systems for transactions. The existence of several underlying arguments has motivated studies to propose two moderation hypotheses as follows:

Hypothesis 3: Perceived credibility increases the influence of effort expectation on the adoption of fintech digital payment systems for transactions.

Hypothesis 4: Perceived credibility increases the influence of price value on the adoption of fintech digital payment systems for transactions.

The population in this study included the owners of MSMEs using fintech digital payment systems for transactions in Central Java. Moreover, the random sampling method was used to provide an equal opportunity for each individual in the population to be selected as a respondent. This led to the selection of 110 owners as respondents, and the number was considered adequate for statistical analysis in studies related to the adoption of fintech digital payment systems for transactions.

Primary data were collected through structured questionnaires developed with a 5-point Likert scale from 1 (strongly disagree) to 5 (strongly agree), and a quantitative design with a survey method was used. In addition, the data collected were subjected to analysis using Structural Equation Modeling (SEM-PLS) using SmartPLS 4.09 software as an analysis tool. In addition, the Partial Least Squares (PLS) is a powerful analysis method that does not require several assumptions, and the data do not need to be multivariate or normally distributed, [38], [39].

The application of the SEM method enabled a comprehensive evaluation of the relationship among study variables to show the moderating effect of perceived credibility and the factors that influenced the use of fintech digital payment systems for transactions in Central Java.

3 Problem Solution

The respondents studied are based on age, gender, business model, annual turnover or sales, transaction methods, and types of fintech digital payment systems used by MSMEs in their business transactions. Table 1 presents the frequency distribution of the data respondent profile.

Different transaction methods are being used by business actors in MSMEs based on customer needs and preferences, target markets, increased operational efficiency, adoption and acceptance of relevant systems, and business conditions. The selection of the appropriate method can assist in minimizing risk and maximizing profits.

Figure 2 shows that MSMEs more widely use the combination of cash and non-cash transaction methods due to the greater flexibility and accessibility provided for different types of customers. The results further showed some interesting trends related to the adoption of fintech

digital payment systems as transaction tools by MSMEs.

The results of Figure 3 showed that the fintech digital payment systems used for transactions by MSMEs were based on e-wallet applications such as online bank transfers or m-banking. The others include transactions conducted through QR codes using smartphones connected to the internet, such as Go-Pay, Shopee Pay, OVO, Link Aja, and DANA. The research instrument was tested for validity and reliability with a focus on PLS-SEM analysis. The complete descriptive data underlying Figures 2 and 3, including the frequency distribution of transaction methods and fintech digital payment system usage, are presented in Appendix 1.

Table 1. Frequency distribution of respondent profiles

Respondent Data	Amount	%
I. Gender		
Woman	68	61.82
Man	42	38.18
Number of Respondents	110	100
2. Average Age of Owner		
<20 Years	2	1.82
21-35 Years	63	57.27
36-45 Years	25	22.73
>45 Years	20	18.18
Number of Respondents	110	100
3. Business Process		
Manufacturing / Production	39	35.45
Services	20	18.18
Trade / Distributor	51	46.36
	110	100
4. Business Model		
Physical Store	34	30.91
Online store	20	18.18
Combination	56	50.91
	110	100
5. MSME Level		
Micro Business	65	59.09
Small business	24	21.82
Medium Enterprises	21	19.09
Total Respondent Data =	110	100

Source: Primary data processed by the author

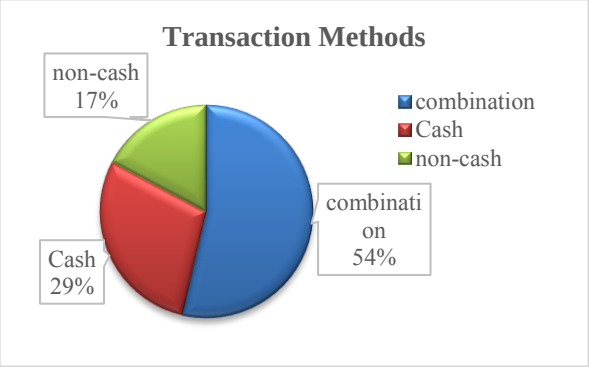


Fig. 2: Graph of Transaction Methods Used by MSMEs
Source: Author's elaboration

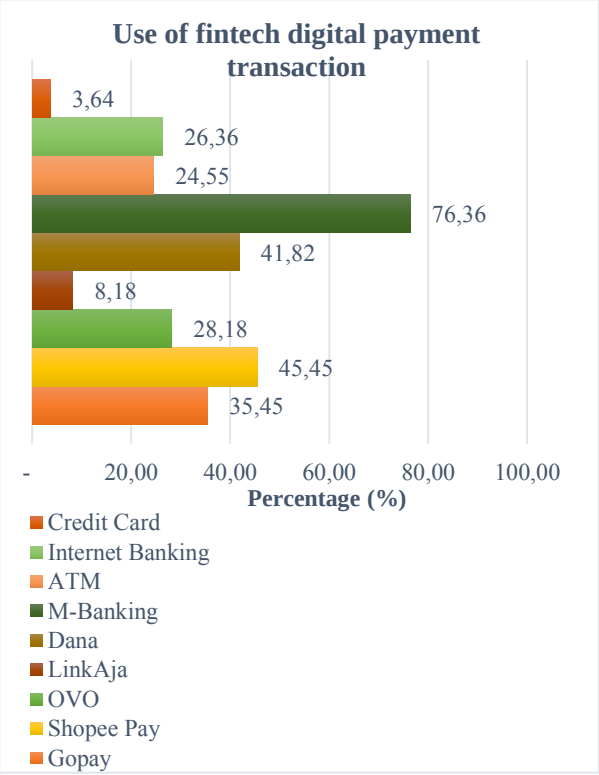


Fig. 3: Adoption of Fintech Digital Payment Systems for Transactions
Source: Author's elaboration

Convergent validity was evaluated through correlations between indicators in a single construct, which was considered adequate if the outer loading exceeded 0.7 and the Average Variance Extracted (AVE) value was greater than 0.5, so that the construct was deemed capable of optimally explaining the variance of its indicators.

The results in Table 2 show that all indicators are valid and significant, with outer loading values exceeding the recommended threshold of 0.70. This confirms that the indicators strongly represent their

respective constructs, and no issues related to outer loadings were identified.

Based on the results in Table 3, convergent validity is fulfilled because all AVE values are > 0.5, confirming that the latent construct is able to explain more than half of the indicator variance effectively, so that the indicator is considered valid.

Meanwhile, discriminant validity was tested using the Heterotrait-Monotrait Ratio of Correlations (HTMT) method, which assesses the extent to which two constructs differ empirically according to their basic concepts. An HTMT value below 0.9 indicates that each construct has clear differences and there is no excessive correlation.

Table 2. Outer Loading

Variable	Outer loadings
Me.1 <- Perceived Credibility	0.929
Me.2 <- Perceived Credibility	0.941
Me.3 <- Perceived Credibility	0.931
X2.1 <- Effort expectancy (EE)	0.815
X2.2 <- Effort expectancy (EE)	0.859
X2.3 <- Effort expectancy (EE)	0.921
X2.4 <- Effort expectancy (EE)	0.844
X6.1 <- price value (PV)	0.906
X6.2 <- price value (PV)	0.883
X6.3 <- price value (PV)	0.909
X6.4 <- price value (PV)	0.874
X6.5 <- price value (PV)	0.834
Y.1 <- Fintech digital payment transaction adoption	0.789
Y.2 <- Fintech digital payment transaction adoption	0.939
Y.3 <- Fintech digital payment transaction adoption	0.906
Y.4 <- Fintech digital payment transaction adoption	0.927
Perceived Credibility x price value (PV) -> Perceived Credibility x price value (PV)	1.000
Perceived Credibility x Effort expectancy (EE) -> Perceived Credibility x Effort expectancy (EE)	1.000

Source: Primary data processed by the author

Table 3. Average variance extracted

Construct	Average variance extracted (AVE)
Effort expectancy (EE)	0.741
Perceived Credibility	0.872
Fintech digital payment transaction adoption	0.796
Price value (PV)	0.777

Source: Primary data processed by the author

The threshold of 0.90 recorded in Heterotrait-Monotrait Ratio (HTMT) analysis using the Smart-PLS method showed that all pairs of constructs satisfied discriminant validity. This shows that each construct in the model is distinct and does not overlap. Therefore, the study instrument was considered valid and feasible for further analysis.

In this study, a reliability test was used to examine the reliability or consistency of data from a research instrument. The questionnaire was considered reliable if the Cronbach's Alpha value was greater than 0.70, indicating that the measurement results would be consistent and unchanged if repeated at different times or under different conditions.

Table 4. Discriminant Validity of HTMT

Heterotrait-Monotrait ratio (HTMT) – List	**Heterotrait-Monotrait ratio (HTMT)**
Perceived Credibility <-> Effort Expectancy (EE)	0.457
fintech digital payment transaction adoption <-> Effort expectancy (EE)	0.559
fintech digital payment transaction adoption <-> Perceived Credibility	0.853
price value (PV) <-> Effort expectancy (EE)	0.542
price value (PV) <-> Perceived Credibility	0.540
price value (PV) <-> fintech digital payment transaction adoption	0.505

Source: Created by the authors

Table 5. Reliability

Construct	Cronbach's alpha	Composite reliability (rho_a)	Composite reliability (rho_c)
Effort expectancy (EE)	0.883	0.892	0.919
Perceived Credibility	0.927	0.931	0.953
Fintech digital payment transaction adoption	0.913	0.921	0.94
Price value (PV)	0.928	0.939	0.946

Source: Created by the authors

The results of the reliability and construct validity analysis proved that all variables were highly consistent and reliable. This was confirmed through the Cronbach's alpha and composite reliability (rho_a & rho_c) values, which were all above 0.7. The values showed that the indicators in each construct had strong internal consistency. Additionally, the AVE values exceeded the recommended threshold, further supporting the convergent validity of the constructs. The measurement items also demonstrated strong factor

loadings, indicating that each item appropriately represented its underlying variable.

These results showed that the instrument was valid and reliable and could be used for further analysis in testing the model developed.

Based on the following Table 6, the VIF test results generally showed that there were no significant multicollinearity problems in the model. This trend was confirmed by the fact that all VIF values were found to be < 5.

Table 6. Collinearity statistics (VIF)

***Outer model*– List**	**VIF**
Mo.1	3.190
Mo.2	4.079
Mo.3	3,830
X1.1	2.231
X1.2	2.392
X1.3	3.635
X1.4	2.152
X2.1	3,535
X2.2	4.188
X2.3	4.308
X2.4	3,707
X2.5	3.343
Y.1	1,828
Y.2	4,647
Y.3	3,941
Y.4	4.111
Perceived Credibility x Effort Expectancy (EE)	1,000
Perceived Credibility x Price Value (PV)	1,000

Source: Primary data processed by the author

Table 7. R-Square

R-square	***R-square***	***R-square adjusted***
Fintech digital payment transaction adoption	0.685	0.670

Source: Created by the authors

The adjusted R-square value showed that 67.0% of the variability in the adoption of fintech digital payment systems for transactions by MSMEs could be explained by the independent variables in the model, while the rest was associated with other factors. This shows that the model has good predictive accuracy.

Table 8. Model Fit

Fit Summary	**Saturated model**	**Estimated model**
SRMR	0.063	0.063
d_ULS	0.538	0.534
d_G	0.528	0.527
Chi-square	323,893	320,096
NFI	0.811	0.813

Source: Created by the authors

The Model Fit was considered a good fit based on the data collected from 110 respondents through a survey. This was confirmed by SRMR 0.063, which was a good model fit, and NFI 0.813, classified as close to the strong fit category. There is no indication of major problems in the model fit. Moreover, the analysis results could be used even though the number of samples was within the minimum limit.

Table 9. Hypotheses Tests

Path coefficients	**Original sample (O)**	**T statistics (O/STDEV)**	**P values**
Effort expectancy (EE) -> fintech digital payment transaction adoption	0.230	2.436	**0.007**
price value (PV) -> fintech digital payment transaction adoption	0.088	0.846	**0.199**
Perceived Credibility x price value (PV) -> fintech digital payment transaction adoption	0.157	1,723	**0.043**
Perceived Credibility x Effort Expectancy (EE) -> fintech digital payment transaction adoption	-0.037	0.455	**0.324**

Source: Created by the authors

The results showed that effort expectancy (EE) had a positive and significant influence on the adoption of fintech digital payment systems for transactions. As previously stated, [18], defined EE as the level of ease associated with using a system or technology. This shows the important role of the factor in the intention to adopt the technology. Moreover, the path coefficient was recorded to be 0.230 with a t-statistic of 2.436 and a p-value of 0.007 (significant at the 0.05 level).

The trend showed that the ease with which individuals used fintech digital payment systems to interact increased the possibility of adoption by MSME owners. Meanwhile, price value (PV) did not have a significant effect on the adoption. This shows that cost perception is not a major factor in transaction decisions. The path coefficient value was 0.088 with a t-statistic of 0.846 and a p-value of 0.199. The values showed that the perceptions of individuals about the price or costs of using fintech digital payment systems for transactions did not directly influence the decision of MSMEs to adopt. However, a previous study by [40] showed that price had a relative influence on the decision to use digital products or services.

The consideration of perceived credibility (PC) as a moderating variable strengthened the influence of price value on adoption, with a significance level

of 0.043. This showed that price value did not have a significant direct effect, but the possession of a high perception of credibility by MSME owners towards fintech digital payment systems improved the influence. However, the p-value of 0.324 showed that perceived credibility did not moderate the effect of effort expectancy on the adoption of fintech digital payment systems for transactions. This is an indication that the ease of use of fintech digital payment systems remains an independent factor directly influencing the usage for transactions in MSMEs, despite the level of credibility perceived towards the platform.

4 Conclusion

The findings of this study underscore the significance of perceived credibility (PC) in shaping the adoption of fintech digital payment systems by MSMEs, highlighting its role in moderating the impact of price value, but not effort expectancy. While effort expectancy (EE) emerged as a key driver of adoption, the lack of a direct relationship between price value (PV) and adoption suggests that factors beyond cost considerations, such as trust and system security, are more critical for MSMEs in Central Java. These insights contribute to a deeper understanding of the dynamic interplay between technological ease of use, pricing structures, and the perception of platform reliability. In the following section, we summarize the key findings, their implications for MSME stakeholders, and provide suggestions for future research in the fintech sector.

4.1 Conclusion

In conclusion, this study showed that the perception of credibility could increase the adoption of fintech digital payment systems for transactions in MSMEs. The results were based on the analysis of the primary data collected from the field through questionnaires and processed in SMART PLS 4.0 software through SEM PLS analysis. The importance of building credibility in fintech digital payment systems was identified to increase the adoption and usage for transactions in MSMEs. The other results recorded are as follows:

1. *Effort Expectancy* (EE) positively influenced the adoption of fintech digital payment systems for transactions, with a p-value of 0.007.
2. *Price Value* (PV) did not significantly affect the adoption of fintech digital payment systems by MSMEs for transactions, with a p-value of 0.199.
3. *Perceived Credibility* (PC) strengthened the influence of price value on the adoption of fintech digital payment systems for transactions, with a significance level of 0.043
4. *Perceived Credibility* does not moderate the effect of the influence of effort expectancy on the adoption of fintech digital payment systems for transactions, with a p-value of 0.324.

4.2 Study Limitations

Some limitations identified include (1) the difficulty in meeting respondents who were MSME owners, which increased the time required to conduct the study. (2) Some respondents were not willing to fill out the questionnaire, which led to the provision of assistance. (3) There was no data available on MSMEs using fintech digital payment systems, such as digital wallets, in Central Java, which led to the conduct of a direct survey to collect the data in the field.

The results are anticipated to contribute to academic knowledge and serve as a practical guide for professionals working in the fintech digital payment systems sector, particularly in relation to the application in MSMEs.

Acknowledgement:
The authors greatly appreciate the helpful comments of anonymous reviewers on this article. The MSMEs in Central Java who voluntarily participated in this study are also appreciated.

References:

[1] Dinas Koperasi, Usaha Kecil dan Menengah Provinsi Jawa Tengah. UMKM. Satu Data UMKM Jawa Tengah. 2024 [cited 2025 Aug 2]. Available from: https://satudata.dinkop-umkm.jatengprov.go.id/umkm

[2] D. F. Risalah and G. Amanda, "OJK Catatkan Transaksi Fintech Rp 448,40 Miliar pada 2024," 2024.

[3] F. Riggins and S. Dewan, "The Digital Divide: Current and Future Research Directions," *J. Assoc. Inf. Syst.*, vol. 6, no. 12, pp. 298–337, 2005, doi: 10.17705/1jais.00074.

[4] V. Venkatesh, M. G. Morris, G. Davis, and F. D. Davis, "User Acceptance of Information Technology: Toward a Unified View," 2003, doi: 10.2307/30036540.

[5] V. Venkatesh, J. Y. L. Thong, and X. Xu, "Consumer acceptance and use of information technology: Extending the unified theory of

acceptance and use of technology," *MIS Q. Manag. Inf. Syst.*, vol. 36, no. 1, pp. 157–178, 2012, doi: 10.2307/41410412.

[6] H. Hoehle, E. Scornavacca, and S. Huff, "Three decades of research on consumer adoption and utilization of electronic banking channels: A literature analysis," *Decis. Support Syst.*, vol. 54, no. 1, pp. 122–132, 2012, doi: 10.1016/j.dss.2012.04.010.

[7] A. A. Alalwan, Y. K. Dwivedi, and N. P. Rana, "Factors influencing adoption of mobile banking by Jordanian bank customers: Extending UTAUT2 with trust," *Int. J. Inf. Manag.*, vol. 37, no. 3, pp. 99–110, 2017, doi: 10.1016/j.ijinfomgt.2017.01.002.

[8] A. A. Abu-Musa, "Exploring perceived threats of CAIS in developing countries: The case of Saudi Arabia," *Manag. Audit. J.*, vol. 21, no. 4, pp. 387–407, 2006, doi: 10.1108/02686900610661405.

[9] P. Luarn and H. H. Lin, "Toward an understanding of the behavioral intention to use mobile banking," *Comput. Hum. Behav.*, vol. 21, no. 6, pp. 873–891, 2005, doi: 10.1016/j.chb.2004.03.003.

[10] T. Zhou, "Understanding online community user participation: A social influence perspective," *Internet Res.*, vol. 21, no. 1, pp. 67–81, 2011, doi: 10.1108/10662241111104884.

[11] Y. Wang, "The adoption of electronic tax filing systems : an empirical study," *Gov. Inf. Q.*, vol. 20, pp. 333–352, 2002, doi: 10.1016/j.giq.2003.08.005.

[12] W. J. Baumol, "Williamson's The Economic Institutions of Capitalism," *RAND J. Econ.*, vol. 17, no. 2, pp. 279–286, 1986.

[13] R. H. Coase, "The nature of the Firm," *Econ. Nat. Firm Read. Third Ed.*, vol. 4, no. 16, pp. 386–405, 1937, doi: 10.1017/CBO9780511817410.009.

[14] O. Williamson, "Transaction-Cost Economics: The Governance Of Contractual Relations," *J. Law Econ.*, vol. 22, no. 2, pp. 233–261, 1979.

[15] R. M. Dhar, V., Stein, "FinTech platforms and strategy Communications of the ACM."

[16] J. Amalia, F., Chishti, S., & Barberis, "The Fintech Book : The Financial Technology Handbook For Investors, Entrepreneurs And Visionaries," in *Book Review*, 2016, pp. 345–348.

[17] K. Kajol, R. Singh, and J. Paul, "Adoption of digital financial transactions: A review of literature and future research agenda," *Technol. Forecast. Soc. Change*, vol. 184, no. January, p. 121991, 2022, doi: 10.1016/j.techfore.2022.121991.

[18] V. Venkatesh, M. G. Morris, G. B. Davis, and F. D. Davis, "User acceptance of information technology: Toward a unified view," *MIS Q. Manag. Inf. Syst.*, vol. 27, no. 3, pp. 425–478, 2003, doi: 10.2307/30036540.

[19] C. R. Plouffe, J. S. Hulland, and M. Vandenbosch, "Research Report : Richness Versus Parsimony in Modeling Technology Adoption Decisions — Understanding Merchant Adoption of a Smart Card-Based Payment System," *Inf. Syst. Res.*, vol. 12, no. 2, pp. 208–222, 2001.

[20] F. D. Davis, "Perceived Usefulness, Perceived Ease of Use, and User Acceptance of Information Technology," *MIS Q.*, vol. 3, no. SEPTEMBER 1989, 1989, doi: 10.2307/249008.

[21] G. C. Moore and I. Benbasat, "Development of an instrument to measure the perceptions of adopting an information technology innovation," *Inf. Syst. Res.*, vol. 2, no. 3, pp. 192–222, 1991, doi: 10.1287/isre.2.3.192.

[22] R. L. Thompson, C. A. Higgins, and J. M. Howell, "Personal Computing: Toward a Conceptual Model of Utilization," *MIS Q.*, vol. 15, no. 1, pp. 125–143, 1991.

[23] J. L. Chen, "The effects of education compatibility and technological expectancy on e-learning acceptance," *Comput. Educ.*, vol. 57, no. 2, pp. 1501–1511, 2011, doi: 10.1016/j.compedu.2011.02.009.

[24] S. Rahi and A. H. Ngah, "Investigating the role of unified theory of acceptance and use of technology (UTAUT) in internet banking adoption context," *Manag. Sci. Lett.*, vol. 8, pp. 173–186, 2018, doi: 10.5267/j.msl.2018.1.001.

[25] M. H. Odeh, "Factors Affecting the Adoption of Financial Information Systems Based on UTAUT Model," *Int. J. Acad. Res. Account. Finance Manag. Sci.*, vol. 9, no. 2, pp. 108–116,2019.
https://www.researchgate.net/.../UTAUT_ Mode (Accessed Date: October 24, 2025)

[26] T. Oliveira, M. Thomas, G. Baptista, and F. Campos, "Mobile payment: Understanding the determinants of customer adoption and intention to recommend the technology," *Comput. Hum. Behav.*, vol. 61, no. 2016, pp. 404–414, 2016, doi: 10.1016/j.chb.2016.03.030.

[27] A. A. Alalwan, Yogesh K. Dwiwedi, N. P. P. Rana, and M. D. Williams, "Consumer

adoption of mobile banking in Jordan: Examining the role of usefulness, ease of use, perceived risk and self-efficacy," *J. Enterp. Inf. Manag.*, vol. 29, no. 1, pp. 118–139, 2016, doi: http://dx.doi.org/10.1108/JEIM-04-2015-0035.

[28] A. M. Baabdullah, A. A. Alalwan, N. P. Rana, H. Kizgin, and P. Patil, "Consumer use of mobile banking (M-Banking) in Saudi Arabia: Towards an integrated model," *Int. J. Inf. Manag.*, vol. 44, no. July 2018, pp. 38–52, 2019, doi: 10.1016/j.ijinfomgt.2018.09.002.

[29] *(text in Indonesian)* R. Daud Mahande and Jasruddin, "UTAUT Model: Suatu Pendekatan Evaluasi Penerimaan E-Learning pada Program Pascasarjana," *Pros. Semin. Nas. Membangun Indones. Melalui Has. Ris.*, pp. 784–788, 2017.

[30] Venkatesh, V., Thong, J. Y. L., & Xu, X, "Consumer Acceptance and Use of Information Technology: Extending the Unified Theory of Acceptance and Use of Technology," *MIS Q.*, vol. 36, no. 1, pp. 157–178, 2012.

[31] F. Deningtyas and M. Ariyanti, "Factors Affecting the Adoption of E-Payment on Transportation Service Application Using Modified Unified Technology of Acceptance and Use of Technology 2 Model," *Int. J. Manag. Appl. Sci.*, vol. 3, no. 7, pp. 38–43, 2017.

[32] W. B. Dodds, K. B. Monroe, D. Grewal, and B. Monroe, "Effects of Price, Brand, and Store Information on Buyers' Product and Store Information," *J. Mark. Res.*, vol. 28, no. 3, pp. 307–319, 1991.

[33] A. Nuriska, S. Asakdiyah, and R. R. Setyawan, "Factors Affecting Behavioral Intention in Using Go-Pay with the Modified Theory of Acceptance and Use of Technology 2 Model (UTAUT2)," *Muhammadiyah Int. J. Econ. Bus.*, vol. 1, no. 2, pp. 107–114, 2018.

[34] H. Amin, "Factors affecting the intentions of customers in Malaysia to use mobile phone credit cards," *Manag. Res. News*, vol. 31, no. 7, pp. 493–503, 2008, doi: 10.1108/01409170810876062.

[35] Y. S. Wang, "The adoption of electronic tax filing systems: An empirical study," *Gov. Inf. Q.*, vol. 20, no. 4, pp. 333–352, 2003, doi: 10.1016/j.giq.2003.08.005.

[36] U. Chawla, R. Mohnot, H. V. Singh, and A. Banerjee, "The Mediating Effect of Perceived Trust in the Adoption of Cutting-Edge Financial Technology among Digital Natives in the Post-COVID-19 Era," *Economies*, vol. 11, no. 12, p. 21, 2023, doi: 10.3390/economies11120286.

[37] M. B. Amnas, M. Selvam, M. Raja, S. Santhoshkumar, and S. Parayitam, "Understanding the Determinants of FinTech Adoption: Integrating UTAUT2 with Trust Theoretic Model," *J. Risk Financ. Manag.*, vol. 16, no. 12, 2023, doi: 10.3390/jrfm16120505.

[38] Jr. J. F. Hair, W. C. Black, B. J. Babin, and R. E. Anderson, *Multivariate Data Analysis*, Eighth Edition. United Kingdom: CENGAGE, 2018. doi: 10.1002/9781119409137.ch4.

[39] Ph. D. Prof. H. Imam Ghozali, M.Com, C.A, *Structural Equation Modeling Metode Alternatif dengan Partial Least Squares (PLS)*. Semarang: Badan Penerbit Universitas Diponegoro, 2014.

[40] E. M. Sangadji and Sopiah, *Perilaku Konsumen: Pendekatan Praktis Disertai Himpunan Jurnal Penelitian*. Yogyakarta: Penerbit Andi, 2013.

Contribution of Individual Authors to the Creation of a Scientific Article (Ghostwriting Policy)

The authors equally contributed to the present research, at all stages from the formulation of the problem to the final findings and solution.

Sources of Funding for Research Presented in a Scientific Article or Scientific Article Itself

No funding was received for conducting this study.

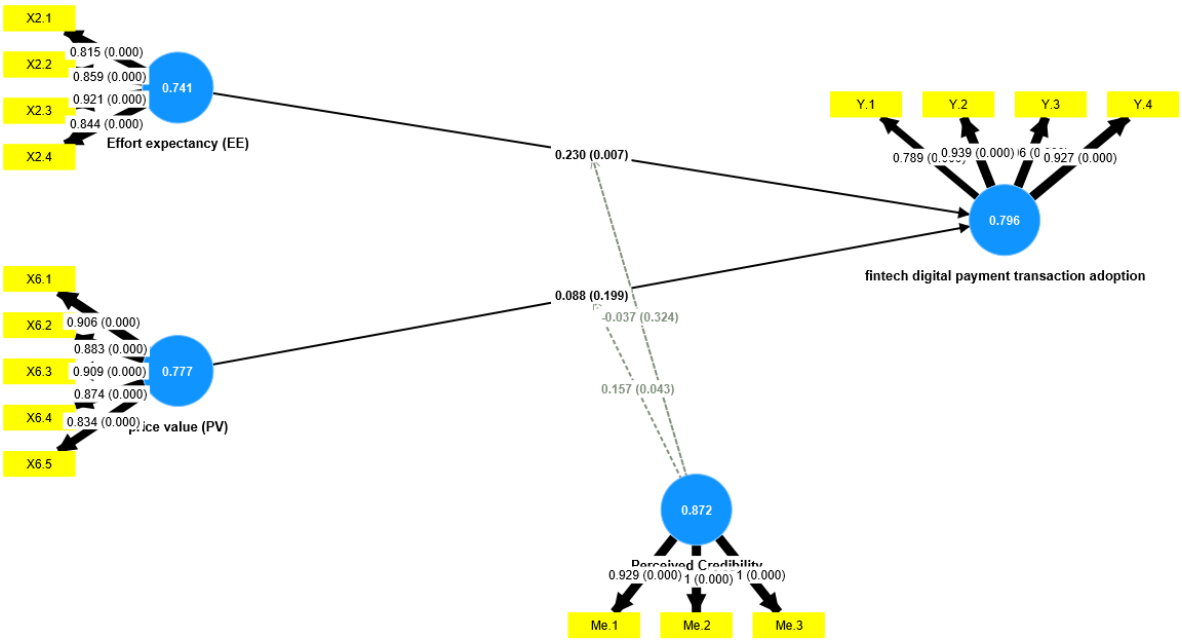
Conflict of Interest

The authors have no conflicts of interest to declare that are relevant to the content of this article.

Creative Commons Attribution License 4.0 (Attribution 4.0 International, CC BY 4.0)

This article is published under the terms of the Creative Commons Attribution License 4.0
https://creativecommons.org/licenses/by/4.0/deed.en_US

APPENDIX



Appendix 1. Data processing results
Source: Author's elaboration