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Financial Technology in Recovery: Behavioral Usage of Payment Systems by Indonesian MSMEs in the Post-Pandemic Era

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Abstract: The COVID-19 pandemic's outbreak hastened the digital transformation within Indonesian MSMEs. The crisis necessitated an immediate transition to online platforms to sustain business activities, driving many MSMEs to surmount previous reluctance and embrace digital technologies. This research focused on the determinant of intention and use behaviour of fintech payment system among Indonesia MSME's. This study highlights the importance and urgency of understanding the evolving dynamics of digital adoption among Indonesian MSMEs in the post-COVID era, using the UTAUT to shed light on these specific factors. The approach used in this research is quantitative. The sampling technique used was purposive sampling which has selection criteria MSMEs that have engaged with fintech payment systems for at least one year. The sample size calculation utilized the Slovin formula, incorporating a margin of error of 5% got 399 respondents of MSMEs from Surabaya, Indonesia. Data analysis techniques used are the SEM-PLS using SmartPLS-4. The result finding indicate that Performance Expectancy, Effort Expectancy, and Social Influences significantly influence Behavioural Intention. However, Facilitating Conditions do not have a notable impact on either Behavioural Intention or. In addition, Behavioral Intention significantly influence Use Behaviour of fintech payment system in MSMEs. This research enhances theoretical understanding by utilizing the UTAUT model in a novel context, this study not only extends the model's relevance but also definitively ascertains the influence of factors such as performance expectancy, effort expectancy, social influence, and facilitating conditions on the acceptance of FinTech payment solutions. Practically, this study offers government to make MSMEs valuable guidance on formulating digital strategies and surmounting obstacles in FinTech integration. Further exploration into these facets is required in future studies and that policy formulation should better align with the unique necessities of MSMEs during their digital transformation processes.

Keywords: MSMEs, Post-Covid19, FinTech Payment System , Technology Acceptance, UTAUT

1. Introduction

In the era following COVID-19, the necessity for digitalization in Indonesian Micro, Small, and Medium Enterprises (MSMEs) has transcended mere trendiness, becoming crucial for their survival and competitive edge. The pandemic has profoundly transformed consumer behaviors and market dynamics, resulting in a heightened dependence on digital platforms for conducting business operations [1]. The pandemic accelerated digital adoption among MSMEs in Indonesia, with many moving online to sustain operations [2]. This shift was also reflected in a survey by the Ministry of Cooperatives and MSMEs, which found that approximately 30% of Indonesian MSMEs had started using digital platforms since the pandemic [3]. The changing consumer preferences towards online shopping and digital transactions underscore the urgency for digitalization in the MSME sector. A study revealed that Southeast Asia, including Indonesia, saw a surge in new digital consumers, with 8 out of 10 continuing to use digital services post-pandemic [4]. This shift presents both a challenge and an opportunity for MSMEs. While digital platforms offer a broader market reach and streamlined operations, they also require MSMEs to develop new skills and strategies to compete in the digital marketplace effectively [5].

Furthermore, the Indonesian government's focus on the digital economy, as seen in the Indonesia Digital Roadmap 2021-2024, emphasizes the importance of digital literacy

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and infrastructure for MSMEs [6]. This roadmap outlines strategies to enhance digital infrastructure and skills, which are crucial for MSMEs to thrive in the digital economy. The post-COVID-19 era has significantly accelerated the digital transformation of MSMEs in Indonesia [7]. This transition is about adopting new technologies and adapting to a digital-first business environment. The increased digitalization of MSMEs is crucial for tapping into new market opportunities, enhancing competitiveness, and ensuring long-term sustainability in an increasingly digital world.

Following the COVID-19 pandemic, the national economy's foundational MSME sectors underwent significant transformations. In 2023, it was documented by the Republic of Indonesia's Ministry of Cooperatives and SMEs that the country's business entities were overwhelmingly comprised of MSME units, totaling 9,137,376 [3]. This sector contributes substantially to the GDP and plays a crucial role in addressing human resource challenges, such as poverty. The statistics provided by the Badan Pusat Statistik (Indonesia Central Bureau of Statistics) show a steady rise in the workforce of MSMEs, which escalated to 114,144,082 between 1997 and 2020, along with a notable impact on the growth of the GDP [8]. In response to the industry 4.0 era, MSMEs must integrate advanced technologies, a process facilitated by governmental efforts such as the MSME Go Online initiative.

However, the path to digitalization has been challenging. As [9] points out, MSMEs need help with human resources, product diversity, and facility constraints. Many MSME workforce needs more digital literacy, limiting their ability to leverage technology effectively. This gap in digital knowledge and skills, coupled with perceptions of technology as complex and costly, has hindered broader technological adoption within the sector [10]. Despite these challenges, the rise of Financial Technology (FinTech) has offered new avenues for growth and efficiency.

The COVID-19 pandemic's outbreak hastened the digital transformation within Indonesian MSMEs. The crisis necessitated an immediate transition to online platforms to sustain business activities, driving many MSMEs to surmount previous reluctance and embrace digital technologies. This transition was not merely a reaction to the immediate obstacles presented by the pandemic but also a strategic effort to safeguard their businesses against future disruptions. In this context, governmental assistance through initiatives such as the MSMEs Go Online program became increasingly vital, offering essential support and direction for this digital transformation [11].

In the context of the rapid digitalization of Indonesian MSMEs post-COVID19, a notable research and practical gap exists. While the acceleration of digital adoption is evident, the depth of understanding regarding how MSMEs adapt to this new digital landscape, particularly their internal capabilities and external support systems, still needs to be explored [12]. The current body of research and documentation offers a broad overview of digital integration yet frequently neglects individual MSMEs' nuanced challenges and prospects [13]. The utilization of the Unified Theory of Acceptance and Use of Technology (UTAUT) model, as introduced by Venkatesh, enables an in-depth analysis that bridges the gap between theoretical study and practical application, especially regarding the digital evolution of Indonesian MSMEs following the COVID-19 pandemic [14]. This framework provides a systematic approach to identifying key factors influencing the adoption and use of technology. This framework is particularly pertinent for elucidating the obstacles and opportunities MSMEs face as they navigate digitization. Given these advancements, a deeper comprehension of MSMEs' Behavior toward adopting digital tools, especially in the FinTech sector, has become increasingly imperative [15].

This research centers on the examination of Surabaya City to investigate the influence of diverse elements, including Performance Expectancy (PE), the inclination and actual implementation of FinTech payment system by MSMEs influenced by Effort Expectancy (EE), Social Influence (SI), and Facilitating Conditions (FC). This study highlights the importance and urgency of understanding the evolving dynamics of digital adoption among Indonesian MSMEs in the post-COVID era, using the UTAUT to shed light on these specific factors.

2. Theoretical Background and Hypotheses Development

A. *Financial Technology (FINTECH)*

According to Bank Indonesia's regulations, the term 'financial technology, 'often abbreviated as FinTech, refers to integrating technological advancements within the financial industry. This integration facilitates the emergence of innovative products, services, technologies, and business models. These developments could influence the stability of monetary and financial systems while improving the payment system's efficiency, fluidity, security, and reliability [16]. Technological innovation in financial services, known as FinTech, is characterized by Liu et al. [17] as a catalyst for developing new business models, applications, processes, or products, profoundly transforming the delivery of financial services.

According to Bank Indonesia, the FinTech sector is experiencing rapid growth and is characterized by various business models. It benefits consumers, FinTech organizations, and the government, showcasing the industry's broad-reaching advantages [3], [7]. The benefits for FinTech consumers include enhanced service quality, a broader selection of financial methods, and reduced costs. The FinTech payment system encompasses several processes: payment execution, final settlement, clearing, and authorization [18]. Examples of FinTech applications within the payment system domain involve employing blockchain technology or distributed ledgers to organize transactions related to electronic money, fund transfers, mobile payments, and

electronic wallets [19], [20].

B. Unified Theory of Acceptance And Use of Technology (UTAUT)

Several processes, including the execution of payments, final settlement, authorization, and clearing, are encapsulated within the FinTech payment system [18]. Within this domain, FinTech applications notably leverage blockchain technology or distributed ledger systems for organizing electronic money transactions, mobile payments, fund transfers, and the management of electronic wallets. The UTAUT, formulated by Venkatesh et al.[21], amalgamates elements from eight foundational theories critical to comprehending technology adoption. This amalgamation integrates the Technology Acceptance Model (TAM), the Theory of Reasoned Action (TRA), motivation-based models, the Theory of Planned Behavior (TPB), theories about Personal Computer utilization, the innovation diffusion theory, a synthesized model combining TAM and TPB, and principles stemming from social cognition theory [22]. At the heart of the UTAUT model lie four primary constructs: performance expectancy (PE), effort expectancy (EE), social influence (SI), and facilitating conditions (FC).

The research community has shown growing interest in the UTAUT model. This model integrates similar ideas from earlier frameworks, consolidating them into unified constructs [15], [23]. Its application has extended to examining the acceptance of mobile technologies, and it has been progressively adapted and examined in various technological contexts, both for individual and organizational purposes across different nations [24]. In the UTAUT framework, like its forerunners, behavioral intention (BI) and use Behavior (UB) are defined as the degree to which an individual plans to partake in a particular activity soon. These elements serve as a crucial dependent variable [25].

C. Performance Expectancy (PE)

The concept of PE posits that individuals are more inclined to embrace digital technologies when they anticipate favorable outcomes. This is understood as the extent to which a person is convinced that their efficiency in executing financial transactions will improve using Fintech [14]. The expectation of enhanced experiences through Fintech, encompassing elements like transaction speed, convenience, ubiquity, and immediacy, is encapsulated by PE [26]. The proposition introduced posits that a significant factor influencing the readiness to embrace fintech innovations is PE, a conclusion supported by various scholarly investigations [27]. Owusu et al. [28], utilizing the UTAUT as a basis, explored the process of technological adoption and identified a correlation between PE and BI, a finding further substantiated by Slade et al.'s study [29]. Moreover, the linkage between performance expectancy and the predisposition towards technology utilization has been further substantiated by studies [11], [30], [31], which employed the UTAUT model:

Hypothesis 1 (H1): PE has a significant positive influence on the BI FinTech payment system.

D. Effort Expectancy (EE)

Effort expectancy, or the anticipated ease of use, plays a pivotal role in the early adoption of fintech platforms. The belief that a technology can be employed effortlessly and with little difficulty substantially impacts users' initial readiness to embrace it. Nevertheless, as users gain familiarity with the technology and master its navigation, the significance of effort expectancy in influencing ongoing usage tends to wane over time [32], [33]. The argument posits that as a user's proficiency with the technology grows, the initial emphasis on ease of use diminishes in significance [34], [35]. Consumers' familiarity and proficiency with digital technology vary within the fintech domain. As a result, those more adept with digital interfaces anticipate fewer challenges and adapt more rapidly to fintech services [36]. The proposed hypothesis suggests that an enhancement in the usage of fintech platforms for financial transactions is expected when customers find these systems to be user-friendly and simple to navigate. Hence, the user-friendliness of fintech payment platforms considerably impacts the involvement of customers in financial transactions.

Hypothesis 2 (H2): EE has a significant positive influence on the BI FinTech payment system.

E. Social Influences (SI)

Within the UTAUT framework, the concept of Social Influence (SI) is identified as a pivotal factor. It is defined by how much individuals believe that important figures, such as family members and friends, support adopting particular technologies [37]. Venkatesh et al. [14] have recognized that factors including age, gender, experience, and the inclination towards embracing new technologies significantly impact the perceived intensity of social influence. The belief held by an individual that their significant others anticipate their adoption of a new system markedly influences their perception of control [38]. The UTAUT model [39] underscores the theory that a positive and explicit correlation exists between the influence of social circles and the intention to behave in a certain way. Specifically, in the context of fintech payment systems, it is believed that the encouragement or approval from one's friends and family to use such systems constitutes social influence [21]. It is intimately linked with an individual's consciousness of the significant others' anticipations concerning their embracement of novel technology or system [40]. Consequently, it is proposed that:

Hypothesis 3 (H3): SI has a significant positive influence on the BI FinTech payment system.

F. Facilitating Conditions (FC)

Habibi et al. [41] characterize facilitating conditions (FC) as the degree to which individuals perceive the assistance offered by organizational and technical frameworks in utilizing systems. Additionally, in scholarly studies, FC is used to evaluate user perceptions regarding the requisite organizational support and infrastructure essential for adopting novel technologies [42]. In this context, FC relates to the perception that adequate technical infrastructures are

available to assist users in utilizing the system as needed. Engaging with Fintech payment services necessitates certain competencies, such as proficiency in using digital devices like smartphones or tablets, internet connectivity, app installation, and understanding service providers and cybersecurity measures [43]. The suggestion posits that elements like customer service accessibility, online tutorials, and hands-on demonstrations significantly influence the readiness to embrace and the actual use of fintech payment systems. It is expected that individuals having access to these supportive conditions are more inclined to use these systems. Consequently, the hypothesis put forward is as follows:

Hypothesis 4 (H4): FC has a significant positive influence on the BI FinTech payment system.

Hypothesis 5 (H5): FC has a significant positive influence on the UB FinTech payment system.

G. Behavioral Intention (BI) and Use Behaviour (UB)

Behavioral Intention (BI), defined as an individual's readiness to undertake certain actions, is a pivotal precursor to the manifestation of actual Behavior. In the context of fintech payment systems, BI embodies an individual's conscious decision to adopt or reject certain behaviors in the future. The TPB employs BI to assess the subjective probability that an individual will engage in particular actions, focusing on the intention to utilize FinTech Payment Systems. This notion is fundamentally based on the perceived probability that an individual is prepared to execute a given action. Various studies [4], [22], [44] have confirmed that behavioral intention acts as a reliable empirical predictor of the probability of using a system. Numerous empirical studies across various domains, such as digital learning platform adoption and online air ticket booking systems, have consistently demonstrated a robust association between BI and UB [16], [45]. In financial technology, research by Tomić et al. [19] has revealed a significant impact of consumer behavioral intentions on technology adoption. Consequently, a hypothesis has been proposed regarding the use of fintech payment systems:

Hypothesis 6 (H6): BI has a significant positive influence on the UB FinTech payment system.

3. Research Methodology

A cross-sectional and ex post facto (non-experimental) methodology was employed in the study, which refrained from manipulating any variables. Data gathering was confined to a singular group. Surabaya was chosen as the study site due to its significant concentration of MSMEs, numbering 60,007, which represent a considerable portion of the total 6,825,931 MSMEs in the East Java Province of Indonesia. These enterprises span a diverse range of sectors such as agriculture, mining and quarrying, manufacturing, and the provision of electricity, gas, and water, construction activities, services in hospitality and catering, transportation, finance, and various other service industries. This research employs a methodology that combines survey and correlation methods to study these MSMEs. Surveys are utilized in this research, which are conducted among extensive populations. On the other hand, the correlation method employs statistical correlation tests to ascertain and quantify the relationship intensity among two or more variables [46], [47]. A quantitative approach is employed in this study.

A. Participant

This research's subject population consisted of 60,007 MSME actors located in Surabaya. Considering the population's considerable magnitude and the limitations the investigators encountered, involving the whole group could have been more practical. Therefore, a sample that represents the MSME population was chosen. The method of sampling used was a non-probability approach known as purposive sampling. The selection criteria centered on MSMEs that have engaged with fintech payment systems for at least one year. This approach ensures the inclusion of participants with sufficient experience and engagement with fintech solutions, providing relevant insights into their usage and impacts. The sample size calculation utilized the Slovin formula, incorporating a margin of error of 5% [47]. Applying this equation yielded a sample size 397, subsequently rounded up to 398. Based on that calculation, we got 399 respondents.

TABLE I. CHARACTERISTICS RESPONDENTS' SUMMARY

Characteristics	Category	N	Percentage
Gender	Male	125	31,33%
	Famale	274	68,67%
Years of experience using Fintech	0 - 1 year	204	51,13%
	1 - 2 years	175	43,86%
	2 - 3 years	20	5,01%
Marriage Status	Single	50	12,53%
	Married	339	84,96%
	Widower/widow	10	2,51%
Age	<20 year	37	9,27%
	21 - 30 years	83	20,80%
	31 - 40 years	102	25,56%
	41 - 50 years	105	26,32%
	51 - 60 years	72	18,05%
Education	Elementary school	37	9,27%
	Junior high school	88	22,06%
	Senior high school	235	58,90%
	Diploma	12	3,01%
	Bachelor years	27	6,77%

B. Instrument Development

The study examined how MSMEs in Surabaya have embraced FinTech payment systems, applying the principles of the UTAUT as introduced by Venkatesh [21]. This model analyzes various constructs, each evaluated by four specific items. The relevance and effect of each item on its respective construct are demonstrated through the measurements of cross-loading and outer loading.

In the development stage of the instrument, a five-point Likert scale was utilized, spanning from 1, which signifies strong disagreement, to 5, representing strong agreement. After the data collection phase, tasks, including filtering, processing, and analyzing, were conducted using the SmartPLS-4 statistical software. The choice of SmartPLS-4 as the analytical tool was motivated by its capability to accurately model the interactions among the different constructs within the study's research framework [48]. The instrument's reliability was evaluated by investigating the sample's internal consistency through Cronbach's proposed statistical methods [49]. Moreover, the questionnaire's validity was assessed by considering both discriminant and convergent validity. The subsequent section will present a more comprehensive discussion of the instrument's validity and reliability in the context of external model results.

C. Research Procedure

Initially, a scholarly literature review was undertaken to identify the most reliable tools for the research. Data collection was performed using a cross-sectional method, which involved gathering information from all samples at a specific time. Primary data for the analysis was gathered using a questionnaire distributed on paper. The survey focused on MSMEs registered with the Trade Office of Surabaya City, which had already implemented the FinTech payment system. In the subsequent stage, demographic information, including gender, age, educational background, and experience in FinTech, was collected anonymously. Following this, responses to 24 Fintech-related questions were acquired, with participants responding on a five-point Likert scale [49].

Before the initial data collection, the preparatory phase focused on developing and submitting the questionnaire. The primary goal at this stage was to ensure that the questionnaire enabled participants to express their views accurately. It must be highlighted that poorly structured questionnaires can result in inaccurate data, potentially causing erroneous conclusions to be drawn [50].

4. Data Analysis and Result

This study's analysis was divided into two primary sections: evaluating the measurement model and examining the structural model. The research adopted a Structural Equation Modeling (SEM) strategy, utilizing path diagrams for analytical functions. Specifically, the SEM investigation employed the Partial Least Square (PLS) method, using the SmartPLS-4 software [50] to perform necessary calculations. The assessment of measurement models places significant importance on verifying discriminant and convergent validity, achieved through the application of metrics such as Average Variance Extracted (AVE), Outer-Loading (OL), and Fornell-Larcker (FL) criterion. The reliability analysis was also executed by employing Composite Reliability (CR) and Cronbach's alpha (CA). When testing the Structural Model (Inner Model), emphasis is mainly placed on determining the effect of one latent variable on others, which is assessed by examining the Path Coefficient and R2 values, reflecting the explained variance percentage.

A. Measurement Model

Indicators in the construct are deemed valid when their correlation value, also known as outer loading, exceeds 0.70 [51]. In the initial phases of developmental research, an outer loading ranging from 0.60 to 0.70 is considered acceptable [50]. In evaluating convergent validity, employing the AVE is essential, where validity is confirmed if the AVE surpasses the 0.50 threshold.

Furthermore, the assessment of discriminant validity is imperative to verify that the reflective indicators truly reflect the intended specific variable for measurement and not indicate other extraneous variables within the study's context. To verify discriminant validity, one must ensure that the OL values for each construct exceed 0.70 [47],[50]. The external model's concluding assessment focuses on conducting reliability tests to verify the indicators' accuracy, consistency, and precision in variable measurement.

Within the framework of Partial Least Squares Structural Equation Modeling (PLS-SEM), the assessment of reliability is conducted through the examination of the CR and CA metrics for every variable. CR is attained for a variable when its CR and CA indices exceed the threshold value of 0.70. Table II reveals that the outer loading values for each question indicator within all variable of the study model surpass the 0.6 threshold.

This confirms that the question indicators meet the criteria for convergent validity. Moreover, each instrument item's OL values fall within the range of 0.60 to 0.70, thus meeting the predetermined standards.

Hence, it is established that the construct under investigation possesses substantial discriminant validity. Analysis of results based on the Fornell-Larcker criterion clearly shows that each variable's square root of the AVE exceeds the correlation values in the diagonal row. According to the evaluation using FL, the SEM-PLS analysis has determined that the research model has satisfactorily achieved discriminant validity, as suggested by the findings—additionally, the values of CR and CA for each variable.

This research utilizes a tool that has been validated and is deemed reliable, as evidenced by the model surpassing the benchmark threshold of 0.7 [8], [49]. The correlation coefficients capture the distinctiveness of each variable in the technology acceptance framework, which is vital for evaluating discriminant validity. Table III displays the evidence for discriminant validity through the heterotrait-monotrait ratio of correlations (HTMT), evidenced by the differing strengths of correlations. The variance in the strength of these correlations effectively encapsulates the interactions between different constructs, thus confirming the discriminant validity of the research. Each construct uniquely contributes to understanding the UB and BI re-

TABLE II. CONSTRUCT VALIDITY AND RELIABILITY RESULT

Code	Item Description	OL	AVE	FL	CA	CR
Behavior Intention (BI)			**0.851**	**0.922**	**0.940**	**0.943**
B11	Using the FinTech Payment System can make it easier for my customers to make payments	0.824				
B12	The FinTech Payment System can help MSMEs in Surabaya City get many things done quickly.	0.946				
B13	Using the FinTech Payment System can increase the number of MSME consumers.	0.961				
B14	The use of the FinTech Payment System which can provide opportunities to increase my income.	0.952				
Effort Expectancy (EE)			**0.843**	**0.918**	**0.938**	**0.954**
EE1	Surabaya City SMEs will easily understand the use of the FinTech Payment System.	0.878				
EE2	The ease of using the FinTech Payment System makes Surabaya City SMEs more skilled in using FinTech.	0.936				
EE3	The FinTech Payment System will be easy for MSMEs to use in Surabaya City.	0.948				
EE4	The use of the FinTech Payment System is easy for MSMEs to learn about FinTech.	0.909				
Facilitating Conditions (FC)			**0.602**	**0.776**	**0.786**	**0.784**
FC1	Adequate Facilities/Resources for MSME in Surabaya City for the use of the FinTech Payment System.	0.717				
FC2	Adequate knowledge of MSMEs in Surabaya City for the use of the FinTech Payment System.	0.765				
FC3	The use of the FinTech Payment System does not match the system currently used by MSME in Surabaya City.	0.842				
FC4	Availability of individuals or institutions who are ready to help Surabaya City MSMEs if they experience difficulties using the FinTech Payment System.	0.774				
Performance Expectancy (PE)			**0.806**	**0.898**	**0.922**	**0.961**
PE1	Adequate Using the FinTech Payment System can make it easier for my customers to make payments.	0.897				
PE2	The FinTech Payment System can help MSMEs in Surabaya City get many things done quickly.	0.915				
PE3	Using the FinTech Payment System can increase the number of MSME consumers.	0.883				
PE4	The use of the FinTech Payment System which can provide opportunities to increase MSME income.	0.896				
Social Influence (SI)			**0.622**	**0.789**	**0.800**	**0.814**
S11	Opinions of people who are considered influential for MSME actors who suggest using the FinTech Payment System	0.767				
S12	Opinions of people who are important to MSME actors who suggest using the FinTech Payment System.	0.832				
S13	Business owners and or the government suggest using the FinTech Payment System.	0.744				
S14	We get general support for the use of FinTech Payment Systems.	0.809				
Use Behavioral (UB)			**0.0762**	**0.873**	**0.894**	**0.901**
UB1	I frequently use FinTech Payment Systems for business financial transactions.	0.769				
UB2	I often use the FinTech Payment System for electricity bill payments for businesses.	0.925				
UB3	I often use the FinTech Payment System for credit purchases.	0.861				
UB4	often use the FinTech Payment System to purchase internet packages.	0.926				

garding technology usage, confirming their distinctiveness.

B. Structural Model

The bootstrapping test estimation results elucidate the significance of each path's influence on the research model, as presented in Table IV. The results of the estimation reveal a positive direction in the path coefficient value () from the variables PE, EE, and SI towards BI. The observed t-value surpasses 1.64, and the p-value falls below 0.05, which signifies a significant positive impact of PE, EE, and SI on BI. This, in turn, statistically validates the hypotheses H1, H2, and H3 of the research (accepted).

The FC to BI route estimation results get a path coefficient value of 0.075, with a positive direction. The path from FC to BI yielded a t-value of 1.214, less than 1.64, and a p-value of 0.225, exceeding 0.05. The results suggest a positive correlation between FC and BI, though it lacks statistical significance. Therefore, H4 remains unverified statistically (rejected).

TABLE III. DISCRIMINANT VALIDITY HTMT RESULT

	BI	EE	FC	PE	SI	UB
BI						
EE	0.206					
FC	0.075	0.067				
PE	0.142	0.058	0.038			
SI	0.329	0.156	0.052	0.066		
UB	0.559	0.085	0.056	0.092	0.475	

On the route from FC to UB, the path coefficient was determined to be 0.003, indicating a positive trajectory. A t value of 0.039 was obtained from the FC to UB pathway, below the critical value of 1.64, and a p-value of 0.969 exceeded the significance threshold of 0.05. These results suggest that while FC positively affects UB, this impact is not statistically significant. Consequently, H5 is statistically untenable and must be (rejected).

The conclusion drawn from the data indicates that FC does not affect BI or UB. A positive path coefficient value is observed on the BI to UB route. Furthermore, the analysis revealed that the transition from Behavioral Intention (BI) to Usage Behavior (UB) yielded a t-value of 19.212, surpassing the threshold value of 1.64, along with a p-value of 0.000, which falls beneath the significance level of 0.05. Such findings suggest a significant positive association between BI and UB, thereby offering empirical validation for the sixth hypothesis (H6) (accepted).

Known as R2, the coefficient of determination illustrates the fraction of the variance in the dependent variables attributable to the independent variables. It assesses how fluctuations in exogenous variables influence endogenous variables, with values ranging between zero and one. A value nearing one indicates a considerable influence of the independent variable on the dependent variable's value [23], [51].

Figure 1 demonstrates that 13.30% of the influence on the dependent variable is collectively attributed to PE, EE, SI, and FC. The rest of the variance, amounting to 86.70%, is accounted for by external variables not encompassed within the model. Regarding UB, a 27.10% influence is exerted by the BI variable, as denoted by an R2 value of 0.271. Variables not incorporated in the current model explain the remaining 72.90% of the variance.

5. Discussion

In the post-COVID-19 era, consumer behavior and business operations dynamics have undergone significant transformations, particularly in the context of MSMEs in Surabaya, where the adoption of FinTech Payment Systems has become increasingly relevant. The first hypothesis posits a significant and positive influence of PE on the BI to implement Fintech payment solutions within these entities. Additionally, characteristics of the respondents, who are predominantly entrepreneurs from MSMEs with business experience spanning two to three years, demonstrate a predisposition towards the adoption of innovative technologies and business expansion, with a specific focus on integrating Fintech payment systems. The MSMEs sector is increasingly adopting technology to improve efficiency, expand customer base, and manage finances more effectively, reflecting a broader trend. The findings support Previous research, which confirms that performance expectations greatly influence behavioral intentions, particularly in the digital finance and entrepreneurship sectors, which have evolved since COVID-19 [52], [53]. Chang et al. [54] carried out research that corroborates earlier discussions, highlighting the positive impact of PE on BI toward embracing FinTech payment systems.

Furthermore, the investigation by Tan & Leby [32] highlights the importance of trust, data security, and the caliber of staff service as pivotal factors in encouraging the adoption of FinTech, which cultivates loyalty among consumers. These observations align with the notion that high-performance expectations significantly propel MSMEs' readiness to embrace FinTech. Both studies highlight the evolving landscape of digital finance and entrepreneurship in the post-pandemic era, where factors like perceived usefulness, trust, and service quality play crucial roles in shaping behavioral intentions toward FinTech adoption.

Hypothesis H2, positing that BI in FinTech Payment Systems is substantially positively affected by EE, is corroborated. Recent post-COVID-19 research aligns with these results, highlighting the significance of technology's ease of use and adaptability in shaping business conduct and decision-making processes [33], [55]. Research conducted by sources [32], [56], and [57] reveals a strong correlation between business expectations and the inclination towards technology use, particularly in a fast-changing digital environment. The observation aligns with the fact that many MSME participants belong to the younger demographics. Research in India has extensively focused on the role of digital payment systems within the FinTech industry, emphasizing the significant impact of PE and EE on shaping the BI of users. The UTAUT and the TAM [30], [31], and [58] provide the theoretical framework for this investigation.

Additionally, the effect of EE on consumer satisfaction has been thoroughly examined, with a particular emphasis on the importance of perceived enjoyment in this context. Concurrently, in Latin America [25], [28], [59] has shown that, according to the UTAUT2 model, EE significantly influences the decision to adopt mobile payment services, indicating a parallel interest in understanding the dynamics of mobile payment systems adoption. These studies also expose the intricate relationship among EE, PE, and trust in banks, as they collectively mold consumer BI and UB regarding mobile payment solutions [60].

Confirming Hypothesis H3 has substantiated that SI

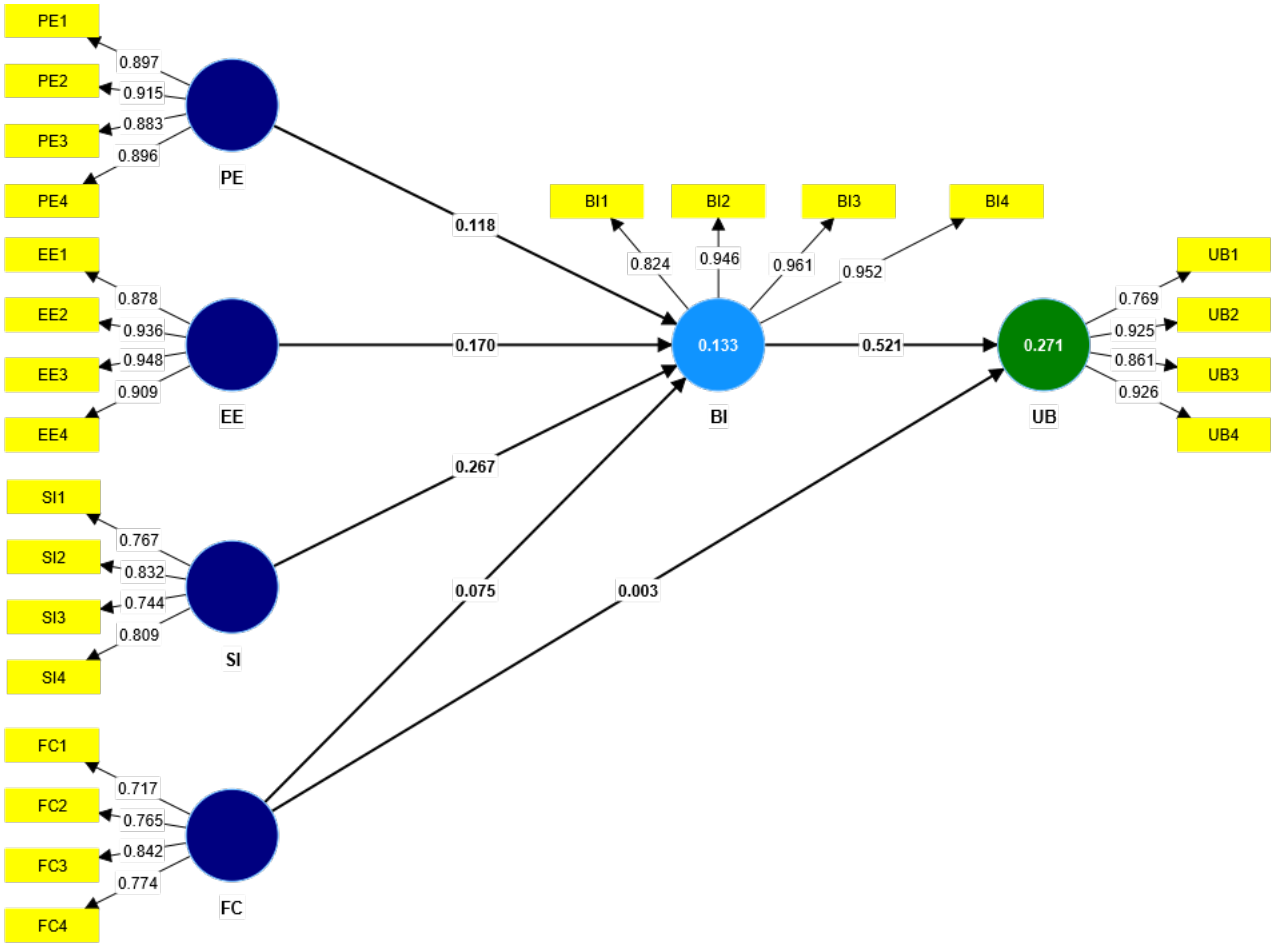

Figure 1. Estimation Results

TABLE IV. HYPOTHESIS TEST

H	PATH	*B*	*STDEV*	*T-VALUES*	*P-VALUES*	R^2	RESULT
H1	PE → BI	0.118	0.034	3.480	0.001	0.133	ACCEPT
H2	EE → BI	0.170	0.036	4.697	0.000		ACCEPT
H3	SI → BI	0.267	0.043	6.131	0.000		ACCEPT
H4	FC → BI	0.075	0.062	1.214	0.225		REJECT
H5	FC → UB	0.003	0.070	0.039	0.969	0.271	REJECT
H6	BI → UB	0.520	0.027	19.212	0.000		ACCEPT

significantly influences BI. This supports the idea that social influence, especially from family and consumer interactions, is a crucial factor in the decision-making processes of MSMEs when adopting FinTech Payment Systems. Furthermore, the notable proportion of married MSMEs, accounting for 84.96%, highlights the crucial influence of family dynamics in their decision-making process regarding adopting FinTech Payment Systems.

In the era following COVID-19, the emphasis on digital solutions and platforms has notably increased, driven by the pandemic. Technology adoption has been greatly influenced by peer recommendations, familial impacts, and current consumer trends, making these elements more crucial. Recent research [61], [62], [63] has uncovered that social influence significantly affects the willingness to adopt FinTech systems, challenging previous studies that indicated the impact of social factors on adoption intentions might be minimal. This phenomenon is notably apparent within particular environments, such as the MSME sector in Surabaya. This may be attributed to this region's unique social and business dynamics, especially in the post-pandemic landscape where digital and contactless transactions have gained more acceptance and popularity.

Supporting H3 found that SI significantly affects BI [46], [64]. The hypothesis suggests that social elements, including the views and beliefs of influential individuals, motivate the inclination toward FinTech service adoption. The influence of SI on UB was also substantiated by Singh et al. [35], [46], underscoring the social environment's influence on shaping the perceptions and intentions of individuals towards embracing FinTech services. Within the MSMEs framework in Surabaya City, it is significantly emphasized how social dynamics influence the eagerness to adopt advanced technologies, including Fintech.

Hypothesis 4 posits a substantial and affirmative influence of FC on BI. Nonetheless, empirical evidence does not validate this hypothesis. The lack of supporting data primarily stems from insufficient free internet access facilities for attendees and participants associated with MSMEs in Surabaya. Such access is vital for embracing the Fintech payment system. Consistent with research suggesting that FC fails to influence usage interest directly, these outcomes highlight the enhanced importance of FC's influence on BI regarding the adoption of FinTech [3], [41]. The pandemic has accelerated the shift towards digital transactions and online business operations, heightening the need for robust technological infrastructure, including reliable internet access and supportive government policies [29], [65].

However, in contexts like Surabaya, where these facilitating conditions may be lacking or inconsistent, their influence on BI could be limited. The absence of adequate internet connectivity and other technological support systems post-COVID could be key reasons why FC does not significantly impact the BI to adopt FinTech Payment Systems [66], [67]. This highlights the necessity for improved infrastructure and supportive policies to enhance FinTech adoption in the evolving post-pandemic business landscape.

Additionally, the proposition known as Hypothesis 5 (H5), indicating that FC significantly and positively influence UB, does not receive confirmation. Despite the presence of a positive correlation, its significance is notably minimal. Various factors, including insufficient infrastructure support, like dependable internet services and other technological resources, could account for this outcome. In the era following the pandemic, the swift transition towards digital platforms might have resulted in a scenario where the genuine utilization of FinTech services is more significantly affected by aspects like perceived value, user-friendliness, and social impact instead of the enabling conditions.

The finding that FC do not have a notable impact on BI and UB warrants further exploration, especially in the context of Surabaya. Surabaya, like many other regions, faces challenges in providing adequate technological infrastructure, such as reliable internet access, which is crucial for the adoption of FinTech systems [68], [69], [70]. Without robust and consistent internet connectivity, users may find it difficult to utilize FinTech services effectively, thereby diminishing their intention to adopt such technologies.

Furthermore, the lack of supportive government policies can also impede the adoption of FinTech, as insufficient prioritization of technological advancements and digital infrastructure hampers businesses and individuals from leveraging FinTech systems [71]. [72]. Awareness and education about the benefits and usage of FinTech systems are essential for driving behavioral intention. In areas where there is limited dissemination of information and education about FinTech, the intention to adopt such systems may remain low, particularly among MSMEs that may lack the resources to implement new technologies independently [73].

Additionally, in the post-pandemic era, the swift transition towards digital platforms might have led to a scenario where the genuine utilization of FinTech services is more significantly affected by aspects like perceived value, user-friendliness, and social impact rather than the enabling conditions [74], [75], [76]. If the infrastructure is not in place, even those who have the intention to use FinTech systems may find themselves unable to do so effectively, leading to lower actual use behavior. The pandemic has accelerated the shift towards digital transactions, underscoring the need for robust technological infrastructure, including reliable internet access and supportive government policies. However, in contexts like Surabaya, where these facilitating conditions may be lacking or inconsistent, their influence on BI and UB could be limited. The rapid shift may have outpaced the development and implementation of necessary support systems, leading to gaps in usage.

After the COVID-19 epidemic, researchers have discovered a strong correlation between the willingness of Micro, Small, and Medium Enterprises (MSMEs) to embrace Fintech Payment Systems (Behavioral Intention - BI) and their actual usage of these systems (Usage Behavior - UB). This observation supports the confirmation of hypothesis H6. This indicates that a strong intention to utilize these systems is closely associated with a higher frequency of actual usage in conducting business transactions. The pandemic may have expedited the embracement of digital payment solutions, with MSMEs pursuing methods of transaction that are both convenient and economically beneficial. The trend of increasing FinTech usage over the years, as evidenced by MSMEs with 1 to 3 years of experience using these systems, reflects the growing reliance on digital financial solutions in the evolving business landscape post-COVID-19

6. Conclussion and Implication

This study provides both theoretical and practical insights. It highlights how PE, EE, and SI significantly influence BI towards FinTech adoption. Contrarily, FC, in terms of BI and UB, does show little impact, potentially due to inadequate infrastructure like internet connectivity. The pandemic has underscored the importance of digital solutions, accelerating FinTech adoption. The research also uncovers a significant positive link between BI and UB, enhancing comprehension of digital finance adoption, especially in

the post-COVID-19 era. It provides actionable advice for MSMEs and policymakers to improve the incorporation of FinTech payment systems into business processes.

This study contributes to the theoretical knowledge and provides significant insights on the implementation of FinTech payment systems by MSMEs in Indonesia after the COVID-19 outbreak. This study expands the applicability of the UTAUT model by applying it in a new context. It also confirms the impact of factors like performance expectancy, effort expectancy, social influence, and facilitating conditions on the acceptance of FinTech payment solutions. Furthermore, the study sheds light on the rapid digital evolution within MSMEs, spurred by the COVID-19 pandemic, and deepens the understanding of the challenges and opportunities these businesses, particularly in emerging economies like Indonesia, encounter in embracing new technological advancements. Integrating diverse behavioral and social elements, it strives to construct an elaborate theoretical model for scrutinizing technology acceptance and application within the commercial domain, emphasizing MSMEs. This study presents numerous essential practical implications. Initially, it offers MSMEs valuable guidance on formulating digital strategies and surmounting obstacles in FinTech integration. Highlighting the necessity to tackle both performance expectancy and effort expectancy, the research facilitates more seamless digital transitions for these businesses. This guidance is crucial for MSMEs navigating the complexities of digital adoption in the post-COVID19 era. Second, for governments and institutional policymakers, the research offers evidence-based recommendations to support the digitalization of MSMEs. This includes enhancing digital infrastructure, providing training in digital literacy, and establishing a supportive regulatory environment conducive to FinTech adoption. Such policies are essential for creating an ecosystem where MSMEs can thrive digitally. Third, for governments and institutional policymakers, the research offers evidence-based recommendations to support the digitalization of MSMEs. This includes enhancing digital infrastructure, providing training in digital literacy, and establishing a supportive regulatory environment conducive to FinTech adoption. Such policies are essential for creating an ecosystem where MSMEs can thrive digitally. Fourth, the research also aids in developing a supportive entrepreneurial ecosystem, which is particularly crucial in the post-pandemic landscape. It highlights the importance of collaborative efforts among various stakeholders, including governments, the private sector, and MSMEs themselves, to facilitate the digital empowerment of these businesses.

Future studies investigate the impact of better-facilitating conditions, such as enhanced internet infrastructure and increased government assistance, on the uptake of FinTech Payment Systems. Furthermore, it is crucial to examine the performance of technological innovations and novel payment solutions across diverse economic and cultural settings to achieve a more comprehensive understanding. Research could also focus on the long-term behavioral changes post-COVID-19 in the MSMEs sector regarding digital finance adoption, considering evolving consumer behaviors and market trends. This indicates that further exploration into these facets is required in future studies and that policy formulation should better align with the unique necessities of MSMEs during their digital transformation processes.

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