Asian Journal of Innovation and Policy (2025) 14.1:043-062
DOI: https://doi.org/10.7545/ajip.2025.14.1.043

Quality, Satisfaction, and Continuance Usage Intention of Mobile Payment Services in South Korea

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Abstract This study investigates how different dimensions of quality affect user satisfaction and trust, and how these, in turn, influence users' intention to continue using Mobile Payment Services (MPS) in South Korea. Combining the Information-System-Service Quality (ISS) and Stimulus-Organism-Response (SOR) models, we explore the cognitive mechanisms that shape users' post-adoption behaviours. Our findings show that the system and service quality of MPS significantly contribute to user satisfaction, which positively influences the intention to continue using these services. Our results offer insights for MPS providers in South Korea to better tailor their services to market needs and highlight the need for policymakers to establish inclusive legal frameworks that enhance user security and support the technological standards of MPS platforms.

Keywords Mobile Payment Services (MPS), Information-System-Service (ISS) model, Stimulus-Organism-Response (SOR) model, System Quality, Service Quality

I. Introduction

Smartphone technology has significantly changed human lives worldwide, particularly with mobile payment services (MPS), which have enabled online shopping, food ordering, flights or hotel reservations, and other activities using smartphones. These services, which employ mobile applications, have converted mobile devices into digital wallets, with the potential to replace conventional payment methods such as cash, credit cards, and bank accounts (Liébana-Cabanillas et al., 2021). This transition is especially evident in South Korea, characterized by high smartphone penetration rates of 96 % (Statista, 2025) across sectors such as transportation, e-commerce, and dining — making physical cards unnecessary. As of 2024, 33.4 million people, that is 64.55

Submitted, May 6, 2025; Accepted, May 23, 2025
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percent[1] of the overall population, were using 5G networks in this country (Statista, 2024c). This smartphone availability and high internet penetration have enabled users to use MPSs conveniently with cashless transactions through passcode or fingerprint scans. The average daily transaction value of mobile payment services in South Korea was approximately 428 billion South Korean won (291.8 million US dollars)[2] in 2023 (Statista, 2024a).

This transition from the traditional payment system to MPSs in South Korea started when the Bank of Korea initiated the implementation plan of a coinless society in 2016, leading to significant growth in the MPS industry in this country (Bank of Korea, 2016). In South Korea, companies such as Naver Pay, Kakao Pay, Samsung Pay, and TOSS Pay are commercialized and offer diverse and customized services to users (Kim, 2023). Because of the similarity in the fundamental actions of the MPSs, user switching rates increase, intensifying competition (Yuan et al., 2020). To guarantee sustainability and profitability, establishing a long-term connection with consumers becomes crucial (Peng et al., 2013).

However, not many studies have focused on the continuous usage intention of MPS. Choi and Choi (2016) analyse South Korean MPSs but confine the study to a specific region. Nan et al. (2020) focus solely on KakaoPay as a social mobile payment service. This situation points towards a gap in research that considers multiple MPSs active in South Korea, nationwide users of MPSs, and addresses users' psychological mechanisms and MPS qualities.

We address these gaps in the literature by focusing on the influence on users' satisfaction and trust on the continuous usage intention of multiple MPSs in South Korea. We combine two conceptual frameworks: DeLone and McLean's (2003) Information-System-Service Quality (ISS) and Mehrabian and Russell's (1974) Stimulus-Organism-Response (SOR) models. By combining these two, we assess the impact of external quality factors on users' satisfaction and trust. We expect the combined approach to overcome the shortcomings of each framework, such as ISS's lack of provisions for considering user psychological mechanisms and SOR's oversimplified structure that does not consider the product's distinguished quality features.

To the best of our knowledge, this study is the first to integrate the ISS and SOR frameworks to analyse Mobile Payment Services (MPS) in the South Korean context. Our findings indicate that the system and service quality of MPS play a key role in driving user satisfaction. While trust in the MPS does

[1] As per KOSIS (Korean Statistical Information Service) the population of South Korea in 2024 was 51.75 million.

[2] As of April 7, 2025, the exchange rate from South Korean won (KRW) to US dollars (USD) is approximately 10,000 KRW = 6.8 USD, resulting in an equivalent of approximately $291.78 million USD for 428 billion KRW.

not significantly influence users' intention to continue using the service, satisfying user experiences do.

In the following sections, we cover the MPS market in South Korea, review the theoretical and empirical background on MPS users, and propose hypotheses. The methodology section discusses data collection and the survey method. Finally, we present the results and their implications for providers and policymakers.

II. MPS in South Korea

MPS is a system that allows users to transfer cash using mobile devices. As part of the broader Fintech sector, MPSs provide services such as remittance, payment, financing, and asset management that serve a diverse customer base and are guaranteed by multinational ICT firms or financial institutions (Kim & Oh, 2018). Choi et al. (2020) discuss aspects of mobile payment options and structures in South Korea. They include MPSs under Mobile Financial Services (MFS), mobile banking, mobile wallet, and mobile money. Based on the previous studies, we define MPS as a payment process that can be executed using mobile devices.

As of 2023, Naver Pay was the country's leading MPS provider with a market size of 43.5 trillion won (29.57 billion US dollars)[3], followed by Kakao Pay, which had a market size of around 26 trillion won (17.63 billion US dollars) (Statista, 2024b). These MPSs may be device-centric (e.g., Samsung Pay, Apple Pay), related to banking sectors (e.g., SOL Pay, NH Pay) or connected with delivery services (e.g., SSG Pay, Coupang Pay). Kakao Pay and Naver Pay are part of online platforms such as Naver or Kakao. They target users of their other services, such as the Naver search engine, Kakao Talk and Coupang online market.

III. Theoretical framework and literature review

The ISS model, initially proposed by DeLone and McLean (2003), assesses the success of information systems in three aspects of quality - information, system, and service. Therefore, studies of e-commerce, e-learning, and online

[3] As of April 7, 2025, the exchange rate from South Korean won (KRW) to US dollars (USD) is approximately 1 KRW = 0.00067977509 USD, resulting in an equivalent of approximately $29.57 billion USD for 43.5 trillion KRW.

health information sites have applied this framework (e.g., Shim & Jo, 2020; Yakubu & Dasuki, 2018).

Some studies combine the ISS with the Unified Theory of Acceptance and Use of Technology (UTAUT) model in Metaverse technology in emerging economies and mobile payment studies (e.g., Alkhwaldi, 2023; Singu & Chakraborty, 2022). Integrating the ISS model with UTAUT by earlier researchers demonstrates that the ISS framework is essential to address the gap left by UTAUT's omission of post-adoption consumer behaviours.

The SOR model comprises the stimuli, the organism, and the user responses toward the MPSs and attempts to clarify the users' emotions and internal perceptions concerning external stimuli and the resulting positive or negative behaviours (Mehrabian & Russell, 1974). The organism represents the users' internal psychological prospects and works as a mediator between the external stimuli and the responses of the user. Significant implementation of this model can be found in the studies of online reviews, purchase behaviour and user behaviour in virtual reality tourism (e.g., Chang et al., 2011; Kim et al., 2020; Zhu et al., 2020). The SOR model has been applied in studying customers' MPS usage intentions, sustainability plans of MPSs, customer engagements, and loyalty to MPS (e.g., Chen et al., 2019; Li et al., 2023; Yuan et al., 2020).

The ISS model focuses on the product features, while the SOR model explains users' reactions to those features. The integrated model provides a holistic view of both product design and behavioural outcomes. Therefore, studies in e-commerce, e-learning, mobile applications, and related technical fields of digitalization have combined both ISS and SOR framework - for example, Lian (2021) integrates these models to study entrepreneurs' service experience, Elsotouhy et al. (2024) investigate health and fitness app users' usage behaviors, and Ho et al. (2024) study users' food purchase intentions.

In MPS, Yuan et al. (2020) integrate these two models to combine cognitive and cumulative emotional elements influencing MPS user commitment with information system use to evaluate the impact of overall quality on user engagement and satisfaction. Elsotouhy et al. (2023) study MPSs of Egypt for Islamic donations based on the integrated framework.

However, this combined model has not been applied to the South Korean MPS context. Instead, researchers such as Kim and Rha (2016) have applied only the SOR model to study customers' approach or negative behaviours towards MPS, while Ryu (2023) used a model inspired by ISS to examine trust development issues; although this combined approach is seen in global studies, South Korea's unique market structure, size, and user demography suggest different outcomes.

Empirical research on MPS users has explored various factors, including user satisfaction, continuance intention, acceptance and adoption, and switching behaviour (e.g., Liébana-Cabanillas et al., 2018; Oliveira et al., 2016; Wang et al., 2019). In the context of South Korea, studies have primarily focused on

consumer preferences, technology readiness, fintech adoption, switching behaviour, churn, and continued usage intentions (e.g., Choi et al., 2020; Shin & Lee, 2014). However, there is limited research examining how specific quality dimensions of MPS influence users' intentions and post-adoption psychological responses. This study aims to fill that gap by focusing on the role of MPS quality in shaping user behaviours.

IV. Research model and hypotheses

Bhattacherjee (2001) indicated continuous intention as the customer's inclination to use the service in the post-adoption stage. Kumar and Shah (2021) described it as consumers' conscious plans to persist in using a product in the future. Their study examined whether users see MPSs as superior to conventional banking in terms of their desire to continue using the service.

One of the factors that determines this continuance intention is satisfaction. Satisfaction with a product or service is an internal element determined by the capacities of external influences. In MPS studies, satisfaction is regarded as a determinant of continuance usage of MPS by Lin (2019) and Nan et al. (2020). They include it as a significant determinant of continuance intention to use MPSs.

Subsequently, trust in online payment signifies user convictions about the reliability of online transactions. In the context of the MPSs, researchers defined users' trust as the willingness of users to conduct payment transactions over a mobile network and anticipate that the payment platform will fulfil its obligations, regardless of users' capacity to monitor or control the actions of the mobile payment platform (Cao et al., 2018; Mayer et al., 1995). Prior research by Shao et al. (2019) and Zhou (2014a) on MPSs has shown that trust is vital in determining the intention to continue using a service. In their ISS-SOR integrated study, Yuan et al. (2020) also identified trust as a determinant of consumer loyalty in MPSs, with loyalty as a manifestation of the desire to continue using it.

These two variables, satisfaction and trust, are incorporated into our research as the results of quality factors and the continuous intention to use the MPSs will be incorporated as an outcome of satisfaction and trust, as validated by Chen et al. (2019) and Duong et al. (2024). Accordingly, we hypothesize that:

H1: Customer satisfaction positively impacts users' continuous intention to use MPSs.

H2: Trust positively impacts users' continuous intention to use MPSs.

Next, we hypothesize that information quality stimulates satisfaction and trust. This information can be transaction-based or personal service-based (Laudon &

Laudon, 2022). According to Zhou (2014b), providing MPS consumers with accurate, timely, and relevant information describes information quality. If consumers get faulty, outdated, and irrelevant information, MPSs may seem worthless to their businesses and lives. MPS transaction notifications replace the receipt and bill systems, so customer dissatisfaction and frustration might result if these notifications are not received correctly. In their application of the ISS-SOR model, Yuan et al. (2020) found that information quality affects MPS users' trust and satisfaction. Also, Talwar et al. (2020) found that information quality affects confidence in MPSs, which leads to continued use in their study.

Our research also delves into the role of system quality as a significant factor. The system quality of the MPS is determined by its speed, ease of use and visual appeal (Zhou, 2014b). The MPS system also includes technical functions for offline transactions in areas with low internet connectivity (Sravan et al., 2024). The technical aspects, such as product portability, adaptability, and system designs, may play a crucial role. A product that is easy to install, updates the system frequently can significantly enhance MPS user satisfaction. Lin et al. (2017) found that mobile platform satisfaction positively correlates with system quality. Moreover, Yuan et al. (2020) demonstrated that MPS system quality highly impacts trust.

Previous studies demonstrated a positive correlation between consumers' perceptions of service quality and willingness to utilize it. Parasuraman et al. (1988) included dependability, responsiveness, communication, physical facilities, competence, politeness, and individual attention as factors to assess service quality. Regarding satisfaction, providers that give comprehensive service and quick access to customer care can expect to significantly enhance MPS users' satisfaction, as this helps users believe that the service provider will assist them in fixing MPS-related issues. Given that MPSs involve financial and personal accounts, a reliable, professional service can boost customer satisfaction and confidence by ensuring safety (Yuan et al., 2020). In line with this literature, we hypothesize:

H3: The Information Quality (INQ) of MPSs positively impacts user satisfaction (SAT).
H4: The Information Quality (INQ) of MPSs positively impacts user trust (TRU).
H5: The System Quality (SYQ) of MPSs positively impacts user satisfaction (SAT).
H6: The System Quality (SYQ) of MPSs positively impacts user trust (TRU).
H7: The Service Quality (SEQ) of MPSs positively impacts user satisfaction (SAT).
H8: The Service Quality (SEQ) of MPSs positively impacts user trust (TRU).

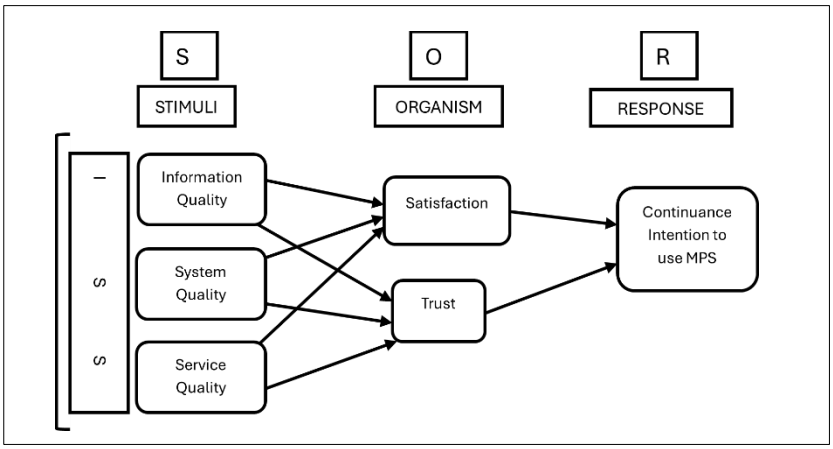

Figure 1. Research Model

V. Research Methodology

1. Measurements

Appendix Table 1 shows the items selected for this study. Satisfaction (SAT) was measured with three items, and Trust (TRU) with four, based on You et al. (2018), Kaushik et al. (2022), and Mainardes and Freitas (2023). For Information Quality (INQ), System Quality (SYQ) and Service Quality (SEQ), we used four, three and three items, respectively, based on DeLone and McLean (2003), Pitt et al. (1995), and Srivastava and Teo (2021). The three items for Continuance Intention to Use (CNTI) were measured based on Bhattacherjee (2001) and Koghut and Al-Tabbaa (2021). These previous literature items were adapted, extended, modified, and reversed. Additionally, new measures were developed, such as a notification niche of discounts and coupons as part of the Information Quality, consumers' willingness to transact and save a large amount of money on the MPS to measure trust, and the online and offline availability of the MPS to measure its system quality.

2. Data collection

We conducted an online survey in January 2025 through a South Korean private survey research firm, collecting 400 responses evenly distributed between males and females across age groups in their 20s to 50s. 56.8 % live in the Seoul metropolitan area, and 70.5 % are full-time employed. On average, individual and family monthly income is 3.7 million won, and 5.5 million won, respectively.

We also collected data regarding MPS usage trends of the respondents (Table 1). About 61.3 % of respondents are frequent MPS users, and 77.3 % usually transact small amounts of money. 84.8 % of the respondents save a small amount in the MPSs, and most transactions are done for online shopping (85.5 %). A significant percentage of respondents use the MPSs for food ordering (54.8 %) rather than just receiving or sending money (44.3 %).

Table 1. MPS usage trends

Division	Trend	(%)
Frequency of use	Frequent Users	61.3
	Infrequent Users	38.8
Usual transaction amount through MPS	Small (10,000 – 50,000 KRW)	77.3
	Medium (50,001 – 300,000 KRW)	18.3
	Large (≥300,001 KRW)	4.5
Saving amount in MPS	Small (< 500,000 KRW)	84.8
	Medium (500,000-1 Mil.) KRW	8.3
	Large (> 1 Mil. KRW)	7.0
Reason for MPS use	Receipt/Send Money	44.3
	Bill Payment	26.0
	Online Shopping	85.5
	Order Food	54.8
	Transportation and others	22.4

Note: KRW=Korean Won (South Korean currency)

VI. Results

1. Measurement model assessment

We conducted the Kaiser-Meyer-Olkin (KMO) measure of sampling adequacy and found it to be .933, which is well above the commonly accepted threshold of .6 (Kaiser & Rice, 1974), indicating that the sample size is appropriate for factor analysis. Additionally, Bartlett's test of sphericity yielded a significant result ($\chi^2 = 4809.817$, df = 300, $p < .001$), further confirming the suitability of the data for factor analysis (Bartlett, 1950).

We conducted an exploratory factor analysis (EFA) to refine the measurement model before performing confirmatory factor analysis (CFA), which revealed a clear and interpretable factor structure. We dropped items with weak loadings (<.5) or significant cross-loadings (>.4) and retained 20 items meeting Comrey and Lee's (1992) standard for practical significance and Tabachnick and Fidell's (2013) criteria for item retention.

After that, we performed CFA to assess the model's reliability and validity. The reliability of the measurement model was assessed using Cronbach's Alpha (α). The results in Table 2 indicate that all Cronbach's Alpha values exceeded 0.7, confirming the internal consistency of the measurement items (Fornell & Larcker, 1981). This result provides convincing evidence for the reliability of the model.

Convergent validity was assessed using three criteria: (1) standardized factor loadings > .6, (2) composite reliability (CR) > .7, and (3) average variance extracted (AVE) > .5 (Fornell & Larcker, 1981). All constructs met these criteria, with factor loadings exceeding .6 and CR values above .7. While the AVE for Information Quality (INQ = .454) and System Quality (SYQ = .452) were slightly below 0.5, their strong CR values (.768 and .712, respectively) justify their retention. Fornell and Larcker (1981) highlighted that when CR is high, it can compensate for a lower AVE, and Lam (2012) applied this approach in their study. These results, therefore, confirm the adequate convergent validity of all constructs as presented in Table 2.

Table 2. Results of confirmatory factor analysis, convergent validity and reliability assessment

Variables		Factor Loading	S.E.	t	p	CR	AVE	α
Information Quality (INQ)	INQ1	.638	.068	11.227	***	.768	.454	.767
	INQ2	.661	.086	11.587	***			
	INQ3	.670	.080	11.733	***			
	INQ4	.722	-	-	-			
System Quality (SYQ)	SYQ1	.666	.087	10.717	***	.712	.452	.710
	SYQ2	.695	.093	11.054	***			
	SYQ3	.655	-	-	-			
Service Quality (SEQ)	SEQ1	.821	.080	15.340	***	.842	.641	.840
	SEQ2	.842	.076	15.618	***			
	SEQ3	.734	-	-	-			
Satisfaction (SAT)	SAT1	.791	.049	17.689	***	.827	.616	.819
	SAT2	.725	.065	15.754	***			
	SAT3	.834	-	-	-			
Trust (TRU)	TRU1	.821	.089	12.964	***	.843	.575	.837
	TRU2	.807	.098	12.832	***			
	TRU3	.748	.105	12.189	***			
	TRU4	.644	-	-	-			
Continuance Intention to Use (CNTI)	CNTI1	.824	.092	12.311	***	.784	.551	.775
	CNTI2	.768	.104	11.838	***			
	CNTI3	.619	-	-	-			
$\chi 2$=298.638 (df=155, p=.000), $\chi 2$/df=1.927, GFI=.930, NFI=.922, TLI=.952, CFI=.961, IFI=0.961, RMSEA=.048								

Notes. α =Cronbach's alpha; *** p < .001, df=degrees of freedom

Next, we assessed the discriminant validity by comparing the square root of AVE and inter-construct correlation coefficients. We found the square root of AVE for each construct was greater than the inter-construct correlation coefficients as presented in Table 3, indicating the discriminant validity of the model is achieved (Fornell & Larcker, 1981).

Table 3. Construct correlations and discriminant validity

	INQ	SYQ	SEQ	SAT	TRU	CNTI
INQ	.673					
SYQ	.511	.672				
SEQ	.528	.395	.800			
SAT	.586	.623	.536	.785		
TRU	.340	.279	.515	.346	.758	
CNTI	.458	.575	.431	.681	.365	.742

Note: All correlation coefficients are significant at the $p < .01$ level.

We used the ML (maximum likelihood) method for testing the fit of the measurement model. The measurement model demonstrated excellent fit (Table 4), with a χ^2/df ratio of 1.927, below the threshold of 3 suggested by Bagozzi and Yi (1988). We got the Tucker-Lewis Index (TLI) close to .95, which is the cutoff suggested by Hu and Bentler (1999). The Normed Fit Index (NFI), Comparative Fit Index (CFI), and Incremental Fit Index (IFI) all exceeded .90, meeting Byrne's (1998) recommended standard. Next, we got the Goodness-of-Fit Index (GFI) to be greater than .90, which is suggested by McDonald and Ho (2002). Additionally, the Root Mean Square Error of Approximation (RMSEA) was below 0.08, satisfying the threshold followed by Gao et al. (2015). These results confirm the measurement model's good fit.

2. Structural model fit and path analysis

After establishing the validity and reliability of the measurement model, we assessed the structural model's fit. The results in Table 4 confirmed that the structural model fits the data well, meeting all recommended thresholds.

Table 4. Fit indices in the structural model

Fit Index	X^2/df	RMSEA	CFI	NFI	IFI	TLI	GFI
Value in the model	1.950	.049	.959	.919	.959	.951	.927
Recommended value	<3	<.08	>.90	>.90	>.90	>.95	>.90

3. Testing of hypotheses

We test our hypotheses using structural equation modelling (SEM). Out of eight hypotheses, four are confirmed. The results of the test are presented in Table 5 and Figure 2.

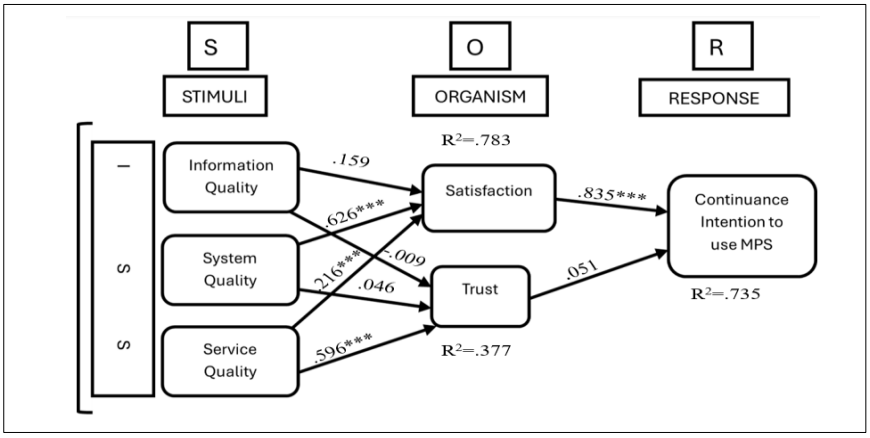

Figure 2. Summary of SEM results

Regarding proportion of variance (R^2), approximately 73.9 % of the variance in CNTI is accounted for by SAT, while 78.3 % of the variance in SAT is explained by the three quality factors (INQ, SYQ, SEQ). Additionally, 37.7 % of the variation in TRU is explained by these quality factors. Next, we found the p-values for paths SAT→CNTI, SYQ→SAT, SEQ→SAT and SEQ→TRU are ≤ .001, which indicates the relationships between these variables are positive and significant. So, we concluded that hypotheses H1, H5, H7 and H8 were confirmed (β = .835, p < .001), (β = .626, p < .001), (β = .216, p < .001), (β = .596, p < .001) respectively (Figure 2).

Table 5. SEM path analysis results and hypothesis testing

Paths	B	β	S.E.	C.R.	p	Hypothesis testing result
H1: SAT→CNTI	.842	.835	.063	13.320	***	Supported
H2: TRU→CNTI	.046	.051	.043	1.068	.286	Not Supported
H3: INQ→SAT	.142	.159	.079	1.807	.071	Not Supported
H4: INQ→TRU	-.009	-.009	.107	-.088	.930	Not Supported
H5: SYQ→SAT	.645	.626	.094	6.869	***	Supported
H6: SYQ→TRU	.053	.046	.103	.515	.607	Not Supported
H7: SEQ→SAT	.196	.216	.056	3.499	***	Supported
H8: SEQ→TRU	.610	.596	.091	6.717	***	Supported

Notes: B=Unstandardized Coefficient; β=Standardized Coefficient; S.E.=Standard Error; C.R. (Critical Ratio) = t-value; ***p<.001.

Based on the results of the hypothesis testing, we first find that among the three quality dimensions, system quality and service quality have a strong and positive effect on user satisfaction. This suggests that when the MPS is easy to install, the technology is simple to understand, which requires no other assistance, and is accessible both online and offline, users are more likely to be satisfied. In other words, users who perceive high system quality believe the MPS meets or exceeds their expectations. Moreover, when the service centres have the ability to solve users' problems, provide solutions in a timely manner, and upgrade the system regularly, users are more likely to be satisfied. Second, among the quality dimensions, we find that only service quality has a strong and positive influence on trust. This implies that when the MPS providers resolve user issues effectively and promptly, users are more likely to develop trust in the platform—particularly in its ability to help them save money. Finally, the study shows that user satisfaction has a strong and positive impact on continuance intention. That is, satisfied users are more inclined to continue using the MPS after initial adoption. Even though satisfaction positively impacts continuous usage intention, our study did not find statistical support for the relationship between trust and continuous usage intentions. This indicates that among the organism factors, only users' satisfaction solely determines their intention to use the MPSs continuously.

VII. Discussion

This study examined the influence of stimuli, represented by MPS quality attributes, on the organism, defined as users' internal psychological states, and the resulting impact on responses, reflected in their continued use intentions. Our results provide implications for MPS providers, policymakers, and future researchers.

For MPS providers, the results can guide market strategies, user targeting, and customer retention efforts. Our study identifies system quality and service quality as the significant factors influencing user satisfaction. Therefore, providers should prioritize investments in system usability, online and offline accessibility, and intuitive design that is easy to comprehend. Additionally, the MPS providers should focus on enhancing the service quality by regular system upgrades, training their staff to enhance their problem-solving skills, and ensuring timely solutions to user problems. Allocating resources primarily to enhance system and service quality rather than evenly across all quality dimensions may reduce overall costs while improving user retention, as it focuses on the key driver of continued use.

For policymakers, our study suggests extending South Korea's Electronic Financial Transaction Act (EFTA), particularly Article 21, which lacks clear guidelines on technology standards for user authentication and verification in MPS. The Financial Services Commission (FSC) has acknowledged the need for stronger user protection measures in digital transactions (Financial Service Commission, 2020). Given our finding that system quality significantly influences satisfaction, policymakers should develop a robust framework that ensures secure and reliable MPS technologies—especially in installation processes—to enhance user confidence and encourage continuous MPS usage. Moreover, the finding that service quality is crucial for user satisfaction implies that policymakers should prioritize the development of more robust frameworks for monitoring and improving service quality in MPS. This could involve enhancing consumer feedback channels and ensuring that MPS providers meet high standards for customer support and problem resolution.

To the best of our knowledge, this study is the first to integrate the ISS model with the SOR framework in the context of MPS usage in South Korea. Although these models have been applied independently in previous research, their integration provides a more holistic perspective. The ISS model highlights the determinants of user behaviour, while the inclusion of the SOR framework enables a deeper exploration of the cognitive and emotional processes underlying user responses. In this study, the "organism" component is represented by a limited set of variables reflecting users' psychological states. Future research should expand this component by incorporating a wider range of psychological and cognitive factors to better capture the complexity of user behaviour and technology adoption.

Appendix

Appendix Table 1. Measurement items

Construct	Item	Reference
Information Quality (INQ)	The MPS notifications are easy to get.	DeLone & McLean, 2003
	The MPS notifications are relevant to me.	
	The MPS discount notifications are reliable.	
	It's easy to understand the MPS notifications.	
System Quality (SYQ)	It's easy to install the MPS	Srivastava & Teo, 2021
	No assistance of other person is required while using the MPS.	
	The MPS is available online and offline.	
Service Quality (SEQ)	The service centres can solve all MPS problems.	Pitt et al., 1995
	The service centres solve the problems on time.	
	The MPS is updated regularly.	
Satisfaction (SAT)	The MPS is overall satisfactory.	You et al., 2018; Kaushik et al., 2022; Mainardes & Freitas, 2023
	The MPS is more satisfactory than going to banks.	
	The MPS meets my expectations.	
Trust (TRU)	The MPS is reliable enough to save money.	Zhou, 2014a; Chandra et al., 2010
	The MPS can be trusted for large money transaction.	
	The MPS protects personal identity.	
	The MPS is reliable enough to save large amount of money.	
Continuance Intention to Use (CNTI)	There is an intention to use the MPS continuously.	Bhattacherjee, 2001; Koghut & Al-Tabbaa, 2021
	There is an intention to prefer MPS over other banking systems in future.	
	There is an intention to continuously use the MPS even if minor problems occur.	

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