

What Drives M-Banking Clients to Continue Using M-Banking Services in Pakistan?

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Abstract

This research aims at identifying the conjoint effects of m-banking social media and communication, and perceived entertainment, gamification of the service as antecedents of perceived m-banking value and the interaction of these two key cues with the two peripheral cues, perceived entertainment and gamification of the service, as an antecedent of the perceived m-banking value. Such factors, in this sense, influence the future intention of the users of the m-banking services. The research supports the existing findings on the Elaboration Likelihood Model (ELM). It brings forth the overall effect of rational and emotional aspects of the sustained use of m-banking by delivering ideas that can be used in the financial institutions towards developing customer experience and involvement. The study used a survey that assessed 227 m-banking customers in Pakistan, and the findings were analysed by Structural Equation Modelling (SEM). The results indicate that social media and communication are very effective in enhancing perceived value through augmenting trust and engagement, but perceived entertainment and gamification advance user experience and satisfaction. Communication appeared as the most important aspect in sustaining usage. The results show the dual role of cognitive and emotional processing in influencing m-banking user behaviour. To improve customer retention, banks should focus on developing more interactive and engaging digital features. Policymakers can promote digital financial literacy in order to boost long-term m-banking adoption.

Keywords: Mobile Banking, Perceived Value, Continuous Usage Intentions, Social Media, Communication, Perceived Gamification.

Introduction

The rapid evolution of technology has significantly transformed industries, enhancing product offerings and service delivery. This shift has particularly impacted the change of smartphones and mobile services, thus enhancing the time people spend in cyberspace. Total consumption of time spent online around the world increased in 2017-2019 by 43%, and 88.8% of this time was spent through mobile devices using smartphones in applications. (Ciunova-Shuleska et al., 2022). As anticipated, this trend extends to the banking sector, one of the most advanced industries. The use of financial apps saw remarkable growth, with installations increasing by 16% and usage surging by 45% in 2020 compared to 2019 (Liftoff, 2021). Mobile banking is a substantial channel of

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service delivery through mobile (McLean et al., 2020). M-banking, being explained as "the use of a cell phone or tablet to conduct technical and non-Pvt operations" (McLean et al., 2020), has transitioned from early utilitarian offerings to presenting hedonic attributes. They make the banking transactions more customer-oriented and convenient for customers (Hassan & Wood, 2020; McLean et al., 2020). Banks must enhance the customers' relationships with various applications of digital technology, more interaction, entertainment and the application of gamification. This makes it imperative to study the reasons relating to the information processing activities that affect the customer. The Elaboration Likelihood Model (ELM) gives a concept of grouping communication into two tracks. There is the central route, which calls on circumstantial evaluation of the content and the peripheral route, which calls on minimal assessment of the content of the message.

M-banking, as a modern form of online banking, enables users to manage their accounts and perform various transactions via mobile devices, including smartphones and PDAs (Payne & Payne, 2018). Its portability and functionality make it a suitable successor to ATMs, Internet banking, and POS systems, allowing customers to access services conveniently and efficiently (Sharma et al., 2020; Wang et al., 2020). In Pakistan, m-banking is increasingly recognised for its ability to revolutionise the banking sector by offering cost-effective solutions for service delivery (Karjaluoto et al., 2019; Sharma et al., 2020). For individuals, m-banking enhances quality of life by offering convenience, usability, and a tailored experience (Karjaluoto et al., 2019). Its accessibility allows customers to conduct transactions anytime, saving time and reducing costs. For banks, m-banking improves operational efficiency, lowers costs, and supports financial inclusion by reaching underserved populations. Furthermore, it enhances productivity and transaction efficiency, making it a pivotal innovation in the banking industry (Lee et al., 2020).

Research Objective

The research objective is how social media features in M banking services influence perceived m-banking value?

Research Questions

- What role does communication in m-banking services play in shaping perceived value?
- What is the relationship between the perceptions of entertainment and gamification features and the perceptions of the value of mobile banking services?
- How the perceived value of m-banking affects the intentions of the users to persist in the service?

This study aims to investigate the conjoint effect of two central factors, namely m-banking social media and communication, and two peripheral factors, perceived entertainment and gamification of the service, as antecedents of perceived m-banking value. These factors, in this respect, influence the continued intention of the users towards m-banking services.

The contribution of this Study to the literature on consumer behaviour is that it focuses on the influence of different kinds of information sources on the responses to behaviour. It extends the Elaboration Likelihood Model (ELM) framework, providing strategic insights for retaining m-banking clients. Furthermore, the study addresses a critical gap by applying ELM to the context of M banking, emphasising the interplay of rational and emotional stimuli in influencing continued m-banking usage.

The findings highlight the central route's greater importance, emphasising the role of rational stimuli linked to m-banking services. Simultaneously, the study demonstrates the peripheral route's parallel effect, revealing the impact of emotional stimuli on continued m-banking usage rather than

initial adoption. By extending the ELM framework, this study provides strategic insights for retaining m-banking clients. The mobile wallet, an emergent application that substitutes traditional forms of payment and identification data for payment instruments, and credit card/deposit/loan information, etc., observed rapid growth in the recent past (Sharma et al., 2018). Such a fast growth rate has not only spurred increased competition within the net payment solutions industry, but also given the user stickiness, where the user is apt to stick to a single platform once they commence using it. Hence, customer acquisition and retention strategy has emerged as a competitive imperative for the providers of mobile wallets.

This research fills the gap between existing knowledge on m-banking behaviour and consumer behaviour research, as it provides insight into how both rational and experiential cues affect customers' continued engagement with m-banking services. Central cues are those cues that, when tapped, are directly associated with the specific object of the interaction and trigger cognitive responses. This study explores such m-banking service cues using the Elaboration Likelihood Model (ELM) (Cyr et al., 2018). Behavioural responses depend on the cognitive or emotional effort that clients are willing to invest in processing the information they receive. However, within m-banking services, central cues are found in the social media features. Integrally, these cues are vital to the service processing itself, as well as to the stimulation of cognitive processing. Past research indicates that technology-based self-services should be balanced between utilitarian and hedonic needs, with mental and emotional efforts.

Literature Review

The literature of the emerging mobile banking (m-banking) primarily studies the m-banking intention of the users. However, there is still a lack of research on the real-life experiences used by the users. The analysis is highly based on the concepts of the Technology Acceptance Model (TAM) and its modification, the theory of artistic diffusion and the combined theory of technology utilisation and technologies appropriation process (Karjaluoto et al., 2019). The same opinion is expressed by Karjaluoto et al. (2019), who propose to consider the antecedents and outcome of perceived m-banking value, and in that regard, they have identified 38 antecedent constructs and 19 outcome constructs. Finally, they propose that the hedonics of m-banking services are important in both increasing acceptance for utilitarian services as well as in facilitating their sustained usage. In line with this view, the present study applies the Elaboration Likelihood Model (ELM) to understand how customers process information through central and peripheral routes created by central and peripheral cues. Behavioural change can come from a thoughtful evaluation of the relevant features of an observed action.

Social Media

Social media platforms play a transformative role in influencing consumer behaviour in m-banking. Unlike traditional communication channels, social media enables real-time, interactive exchanges that significantly affect adoption decisions. The transition from conventional media to platforms like Facebook, Instagram, and YouTube has provided banks with innovative marketing tools to enhance brand awareness and loyalty (Kaiser et al., 2020). Social media campaigns have been shown to foster brand loyalty by increasing affective brand attachment and recognition (Hollebeek & Macky, 2019).

In the Pakistani banking landscape, the portfolio of digital banking has created new opportunities for innovation and service delivery. Studies reveal that m-banking, as an emerging financial channel, has gained significant attention for its capacity to provide efficient and accessible services (Nosadini et al., 2021). With digital banking customers expected to surpass 3.6 billion globally by

2024 (Ti, 2021), the significance of M banking in meeting the growing demand for online financial services continues to rise. In this digital era, innovation diffusion has accelerated dramatically. Social media, as a key player in this transformation, facilitates the rapid dissemination of information and influences consumer behaviours through interactive networks (Hamidi & Mohammadi, 2024). By enabling dynamic and community-driven exchanges, social media creates opportunities for banks to engage with consumers and adapt to changing market demands effectively. This dynamic underscores the role of digital interaction in driving continuous usage of M Banking services in Pakistan and beyond. In the context of the Elaboration Likelihood Model (ELM), individuals utilising the peripheral route evaluate cues that set the stage for persuasion or are linked to how persuasive communication is executed (San-Martin et al., 2020). E-commerce and m-banking are the two situations where studies in the past have been conducted on ELM, but not the hedonic nature of the m-banking services as peripheral cues that influence perceptions of users and their implications for the perception of service value.

Nevertheless, central cues and peripheral cues may also have a similar effect. Thus, it is not a wise thing to underestimate the influence of peripheral stimulation on the perceived value of the m-banking services (Wahyudi & Wandebori, 2025). This research categorises perceived entertainment and gamification as peripheral cues influencing the m-banking services. Based on past observations, customers are inclined towards using mobile commerce services sponsored by the entertainment, pleasure, excitement and fun notion that directs their intention towards using these mobile commerce services and has been proposed by Pearson (2012). The construct entertainment is defined by the extent to which the clients perceive the m-banking services as fun, relaxing, and enjoyable in total. Likewise, perceived gamification refers to the perceived features that create game elements in m-banking services and increase their perceived usefulness and enjoyment to customers (San-Martin et al., 2020).

H1: The impact of social media on the m-banking services has a positive impact on the perceived value of M-banking.

Communication

The use of communication has been a key factor and important aspect of social interaction in various societies and has undergone significant transformation. From mouth-to-mouth communication, using fixed phones to mobile phones and communication over the World Wide Web to virtual reality as we know it today (Akmajian et al., 2017). Communication enhances the flow of positive relations with different followers, customers, suppliers, workers, and policymakers. In 1961, communication technology has, over time, influenced the sort of meetings, tackling of matters and implementation of policies by businesses (Mulindi et al., 2024). It is this rapid penetration that shows the achievement of mobile banking as a strategy to achieve financial inclusion, mainly when supported by powerful communication strategies that address issues of access and convenience (Faisal et al., 2024). It remains a real-time and active two-way communication medium for organisations' cooperation (Thussu, 2018).

H2: M-Banking perceived value is positively affected by communication in m-banking services.

Perceived Gamification

Gamification refers to combining the colours of games (gamification feature) with other activities (m-banking) in order to make the user experience worthy and enjoyable. It encompasses game elements that provide non-monetary benefits and foster customer value creation (Wolf et al., 2018). These design-related features enable financial institutions to enhance service delivery, making m-banking not just functional but also entertaining. Social media has further amplified the potential

of m-banking services by transforming traditional communication models into interactive, many-to-many platforms. (Kemal, 2023). These services are delivered through technological solutions, including SMS service, mobile websites, and mobile applications (Mobile Marketing Association, 2009). Being innovative and having extensive features incorporated in their services, m-banking services have become one of the most significant technological breakthroughs of electronic service delivery (Estelami, 2020). Statistics highlight the promising future of m-banking, with rising adoption rates globally, including in Pakistan, as indicated by reports like the Board of Governors of the Federal Reserve System (2012). (Marcão et al., 2024) Some of the research questions that have been touched on in the literature concerning gamification in organizations are; definitions, frameworks and elements of design systems and architecture of gamification and the impact of gamification to the game users (for instance Nonetheless, studies of gamification in the context of m-wallets and financial applications remain almost exclusively technical in nature (Malik & Singh, 2022). The critical topics of privacy, perceived value, and user ownership have been discussed to implement strategies for gamification in banking organisations. However, the adoption of game elements to m-banking services that engage a good number of subscribers still poses some challenges, and the current research is relevant to investigating the user preferences in related services. This study aims to fill this gap about the factors that predispose gamification and the configurations that affect its efficiency in MW and the consequent sustained usage of m-banking services in Pakistan.

H3: M-banking services, as perceived to have a game-like approach, have a positive relationship with m-banking perceived value.

Perceived Entertainment

Previous literature on m-banking reveals that hedonic benefits play a critical role in influencing user commitment and satisfaction. Specifically, the fun embedded in the use of the service is related to the perceived value of the m-banking service with characteristics specific to an entertaining nature. Being a relatively new concept, there is much evidence about the way gamification can be used in enhancing aspects such as control, social aspects, goals, progress bar, incentives, and alerts of customer value. These features not only help the users to keep using the service, but they also make the users want to use the other aspect of the service (Eisingerich et al., 2019). The interconnection between perceived entertainment and gamification has a substantial influence on the perceived value in m-banking among users. The incorporation of these entertaining and game elements into the enhanced services is expected to yield positive effects on the perception that users place on m-banking value (Karjaluoto et al., 2019). Studies on the long-term mobile banking services have also established that perceived usefulness of m-banking services contributes to the usage of the app, positive behavioural intentions, and brand attitude towards the service provider (McLean et al., 2020). Moreover, earlier research shows that m-banking service perceived value influences not only the use of such services and customers' further engagement with them (Karjaluoto et al., 2019). Also, based on the prior literature, a conclusion was made that perceived value is crucial for customers' intentions to continue using the m-banking services in the long term. The role of perceived value, combined with entertaining and gamified features, is vital in understanding (SBP, 2024) m-banking usage in Pakistan. As social media increasingly influences user behaviour, integrating these elements within m-banking services can lead to stronger user engagement, satisfaction, and loyalty, ultimately driving the sustained usage of M-banking platforms.

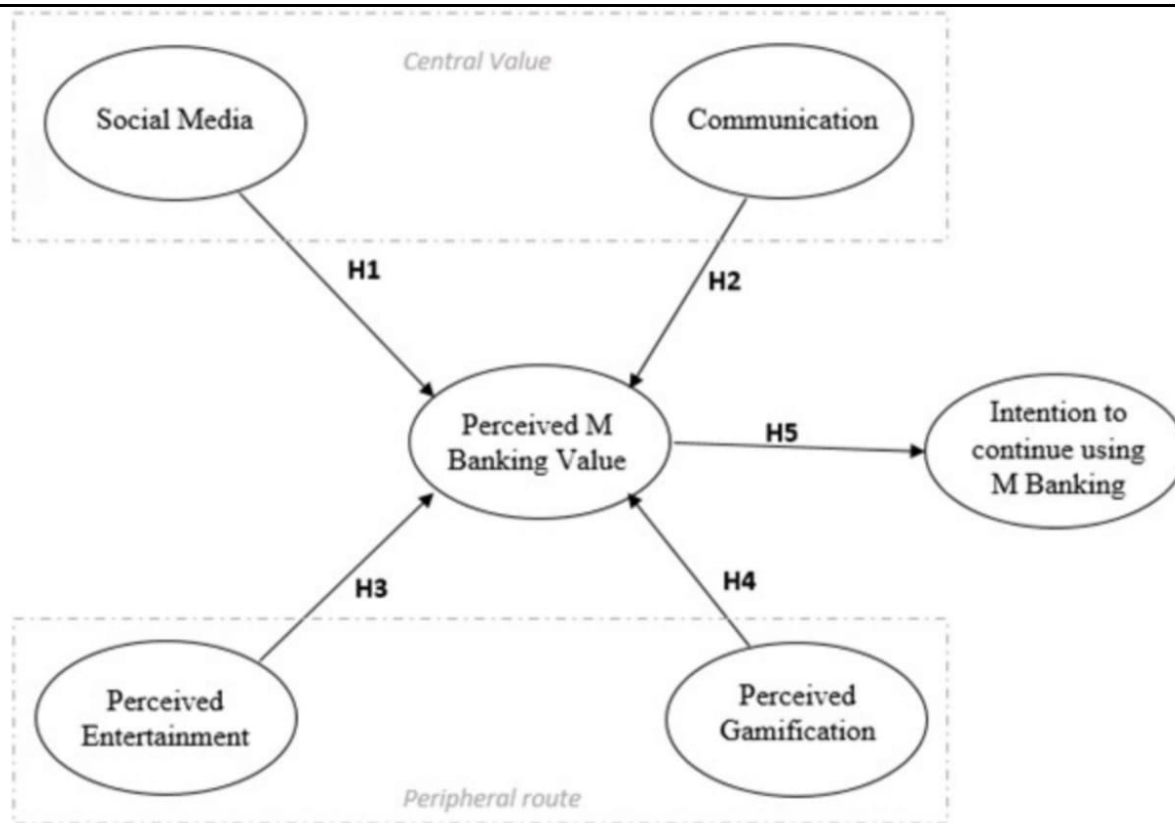
H4: The perceived value of m-banking services is embraced in the perception of entertainment of the m-banking services.

Intended behaviour and perceptions regarding the value of m-banking and behavioural intentions to use m-banking services in future.

A central variable studied in this research model is perceived m-banking service value. In this sense, M-Banking means the perception of the M-Banking service as a good, a service which enriches life through being unique, efficient in terms of time and cost (Karjaluoto et al., 2021). It is conceptually determined as the total evaluation of the customers regarding the usefulness of a product or a service, with the price that depends on the value of the product on the part of the customer (Zeithaml, Bitner, & Gremler, 2018). This research is on the antecedents of perceived value as per ELM framework and its implications on the intentions of the end user usage of the m-banking services further; the key cues of m-banking relate to the functional quality of the service, the end users are compelled to use computation (Madadi et al., 2024) In research of online and mobile commerce, it has been demonstrated that a large proportion of central cues are cognitive elements, which themselves usually encompass attributes linked to service quality traits such as accuracy, relevance, timeliness, consistency and personalization of information.

H5: This research found that clients' perceptions of the value of m-banking effectively influence their behavioural intentions to continue using the m-banking services.

Figure 1: Theoretical Framework



Methodology

The adoption of M banking in the Islamic Republic of Pakistan has witnessed significant growth in recent years. As of the end of September 2023, the number of M banking users stood at 15.1 million, increasing to 16.3 million by the end of December 2023. This growth reflects the rising popularity and base on mobile banking services. The financial impact of m-banking has also been

substantial. In FY 2018, the yearly m-banking transaction volume in Pakistan was recorded at 21.8 million PKR. By FY 2019, this figure had nearly doubled to 41.1 million PKR, showcasing a remarkable growth trajectory (SBP, 2024). The number of mobile transactions further escalated, rising by 82.8 million PKR during this period. According to the State Bank of Pakistan (SBP, 2024) the use of mobile apps for transactions continued to surge, reaching a transaction volume of 193.4 million PKR in FY 2021. This significant increase was attributed, in part, to the COVID19 pandemic which accelerated the usage of digital banking solutions due to restrictions on physical interactions. By FY 2022, the transaction volume had nearly doubled again, reaching an impressive 387.5 million PKR. Total 27 commercial banks which are currently in the Islamic Republic of Pakistan which are offering M banking services (Tribune.com.pk). This paper focused on the concept of perceived value in an electronic context review of literature led to identification of several variables for this study. To establish the validity of the measurement scale, five professionals in the field, and twenty experienced m-banking users were taken through a pre-test. The development steps aided in the validation of the scales and the determination of the final set of constructs for the main research.

Type of Research

This study is primarily explanatory, as it looks at factors such as perceived value, social media, entertainment and communication that influence continuous mobile banking usage. To better understand the primary audience, it also includes descriptive research that looks at user demographics like age, gender, and wealth. study investigates how characteristics such as gamification and entertainment influence user retention, there are elements of causal research. Using these approaches, the study provides a comprehensive picture of mobile banking adoption and engagement.

Data Collection

Data gathering was achieved through self-collecting questions to m-banking users in Pakistan. The survey questionnaires solicited the opinions of the respondent on the amenities of the m-banking services, the perceived benefits and factors in using the services in the future. To these ends, the filter question at the start of the questionnaire was used to rule out the answers of those, who did not actually practice the use of m-banking. Analysis of data in the research was conducted using Covariance-Based Structural Equation Modelling (SEM) methodology. The analysis was conducted using SPSS and the findings of this process are presented in the subsequent sections of this work. A random sampling approach was employed to collect data, focusing specifically on respondents with prior experience in m-banking (Işık & Karagöz, 2024). In May 2024, the questionnaire was distributed digitally to participants to gather their insights. The target audience consisted of m-banking users, each of whom shared their experiences with the service. To ensure clarity and minimize any potential misinterpretations, the survey began with definitions of key terms such as social media, communication, entertainment, and gaming features in the context of M banking services. The survey was shared with 400 individuals using a random sampling technique. Out of these, approximately 227 respondents, who were familiar with m-banking, completed the questionnaire, providing a substantial dataset for analysis.

In this study, scales were adopted out of the existing literature on the same field with slight adaptations to suit the m-banking services setting. The social media was borrowed on (Halkos & Nomikos, 2021) and communication was on Jun. This was done by translating and adapting the scale items in the context of the m-banking services that focused on internet banking, e-banking or mobile banking that could be applicable to the level of services of m-banking. Response level

of the participants was determined on a five-point likert scale as one: strongly disagree, two: disagree, three: neither agree, nor disagree, four: agree and five: strongly agree.

The scales used in this research were borrowed from the previous literature and modified to fit the m-banking services environment. Social media was adapted from (Halkos & Nomikos, 2021) while communication was adopted from Jun. The initial scale items were translated and adapted for the m-banking services context by changing their focus from internet banking, e-banking, or mobile services suitable for the m-banking services. The level of participants' responses was assessed using a five-point Likert scale, from 1 (strongly disagree) to 5 (strongly agree).

Figure 2: Measurement items

No	Constructs Name	Measurement items
1	Social Meda (SM)	Using social media means there is less need for me to use mass media.
2	Social Meda (SM)	Information from social media suggests using MB is a good idea.
3	Social Meda (SM)	Online messages on social media platforms consistently recommend using MB
1	Communication (COM)	M-banking offers clear answers.
2	Communication (COM)	M-banking informs clients of important information
3	Communication (COM)	M-banking makes available the status of transactions.
4	Communication (COM)	M-banking guides me on what to do if my transaction is not processed.
1	Intentions to continue using m-banking (IC)	Given the chance, I will intend to use m-banking.
2	Intentions to continue using m-banking (IC)	I expect my use of m-banking to continue in future
3	Intentions to continue using m-banking (IC)	I have the intention to use m-banking to conduct payment.
1	Perceived entertainment (PE)	Using m-banking helps me relax.
2	Perceived entertainment (PE)	Using m-banking helps me entertain
3	Perceived entertainment (PE)	Using m-banking provides me with something to do when I'm alone.
4	Perceived entertainment (PE)	Using m-banking services is a pleasant experience.
1	Perceived gamification (PG)	Learning how to use m-banking during a game on an m-banking app would be nice.
2	Perceived gamification (PG)	I feel pleasure in the use of an m- banking app with features of games.
3	Perceived gamification (PG)	I feel good while playing a game on an m-banking app.
4	Perceived gamification (PG)	I think that an m-banking app with content and animated elements is secure.
5	Perceived gamification (PG)	The m-banking should reward their clients through a system by points.
1	Perceived value (PV)	Using m-banking is an enjoyable experience.
2	Perceived value (PV)	The overall value of my experience using m-banking is outstanding.
3	Perceived value (PV)	M-banking represents a good use of my time and money.

Result and Interpretation

Estimation of the Measurement Model

Confirmatory factor analysis (CFA) was conducted to determine the reliability and validity of the measurement tools in the measurement of the concepts intended. During this process, six items (1, 5, 12, 13, 19, and 20) were removed because their high standardized residual covariances indicated they did not fit well with the overall model. It is observed that after the removal of these items, there were 16 items and these items were then grouped into six key categories: Social Media, communication, perceived entertainment, perceived gamification, perceived value and users intentions to continue using mobile banking services.

This study's findings show that the majority of mobile banking users are young, educated guys from lower-income families. The vast majority (84.1%) are between the ages of 20 and 30, with only 3.9 percent over 30. This suggests that mobile banking is mostly used by young people who are more comfortable with technology. Men make up 77.5% of users, whereas women make up only 22.5%, implying that females may face cultural, social, or economic impediments to adoption. Education levels are noticeably high, with 61.2% holding a bachelor's degree and only 1.8% possessing an M.Phil./MS degree. This shows that higher education, which is likely associated with more financial literacy and technological savvy, influences mobile banking uptake. Income breakdown reveals that more than half (53.7%) of users are in the lower-income category (Rs 20,000-30,000), with only 15% earning more than Rs 60,000. This suggests that cost factors could influence mobile banking uptake. Furthermore, the majority of respondents (87.2%) are unmarried, which is consistent with the younger age group and indicates that independent people are more likely to use these services. According to this report, most mobile banking users are young, educated men from lower-income backgrounds. The great majority (84.1%) fall between the ages of 20 and 30; only 3.9% fall over 30. This implies that young individuals more at ease with technology generally utilize mobile banking. Men account for 77.5% of users, while women account for just 22.5%. This suggests that women could have cultural, societal, or financial obstacles to adoption. With 61.2% of respondents having a bachelor's degree and just 1.8% having an M.Phil./MS degree, educational levels are rather high. Higher education influences mobile banking acceptance, presumably related with increased financial awareness and technology competence. Income analysis shows that just 15% of users earn more than Rs 60,000; more than half (53.7%) of users are in the lower-income range (Rs 20,000–30,000). This implies that adoption of mobile banking could be influenced by cost elements. Moreover, most of the respondents (87.2%) are unmarried, which fits the younger age group and shows that independent people are more inclined to make use of these services.

Figure 3: Correlation of Variables

		Correlations					
		SM_Avg	COM_Avg	IC_Avg	PE_Avg	PG_Avg	PV_Avg
SM_Avg	Pearson Correlation	1	.565**	.541**	.423**	.470**	.531**
	Sig. (2-tailed)		<.001	<.001	<.001	<.001	<.001
	N	227	227	227	227	227	227
COM_Avg	Pearson Correlation	.565**	1	.624**	.556**	.547**	.603**
	Sig. (2-tailed)	<.001		<.001	<.001	<.001	<.001
	N	227	227	227	227	227	227
IC_Avg	Pearson Correlation	.541**	.624**	1	.522**	.453**	.532**
	Sig. (2-tailed)	<.001	<.001		<.001	<.001	<.001
	N	227	227	227	227	227	227
PE_Avg	Pearson Correlation	.423**	.556**	.522**	1	.560**	.567**
	Sig. (2-tailed)	<.001	<.001	<.001		<.001	<.001
	N	227	227	227	227	227	227
PG_Avg	Pearson Correlation	.470**	.547**	.453**	.560**	1	.611**
	Sig. (2-tailed)	<.001	<.001	<.001	<.001		<.001
	N	227	227	227	227	227	227
PV_Avg	Pearson Correlation	.531**	.603**	.532**	.567**	.611**	1
	Sig. (2-tailed)	<.001	<.001	<.001	<.001	<.001	
	N	227	227	227	227	227	227

** . Correlation is significant at the 0.01 level (2-tailed).

Shin believes that the success of M banking can be determined using Subscale of Social Media (SM), Subscale of Combination (COM), and Intention to continue using M banking (IC). Shin adds Positive dimensions of entertainment (PE), Positive dimensions of gamification (PG), and Perceived dimensions of value (PV) to explain the success of M banking. The coefficients that are expressed in the table are all positive indicating that when one variable increases the other variable also increases. In addition, the correlation coefficients of the two study samples point toward these relationships and the 0.01 level of significance guarantees that chance cannot explain these trends. The strongest correlation is observed between Communication and Information Clarity ($r = 0.624$), showing that effective communication significantly enhances the Intention to continue using M banking provided to m-banking clients. Similarly, a strong relationship between perceived gamification and perceived value ($r = 0.611$), suggesting that gamification features play a crucial role in increasing the perceived value of m-banking services. Social media is moderately correlated with communication ($r = 0.565$) and perceived value ($r = 0.531$), highlighting its influence on user interactions and the overall value perception of the services. Additionally, perceived entertainment shows moderate relationships with communication ($r = 0.556$) and perceived value ($r = 0.567$), indicating that entertainment features contribute meaningfully to communication and the perceived benefits of m-banking. Even weaker relationships, such as between social media and perceived entertainment ($r = 0.423$), remain statistically significant, reinforcing the interconnectedness of these variables. Overall, the results demonstrate that aspects like communication, gamification, entertainment, and perceived value are interdependent and collectively enhance user satisfaction and the likelihood of continuing to use m-banking services.

Table 1: Reliability Analysis

Measure	Sample Size (N)	Cronbach's Alpha	No. of Items
Social media	227	0.620	3
Communication	227	0.657	4
Intention to Continue Using M-Banking (IC)	227	0.655	3
Perceived Entertainment (PE)	227	0.614	4
Perceived Gamification (PG)	227	0.764	5
Perceived Value (PV)	227	0.623	3

The study is focused on six key factors that affect mobile banking and Social Media engagement: social media, communication, intention to continue using M-Banking (IC), perceived entertainment (PE), perceived gamification (PG) and perceived value (PV). Cronbach's Alpha reliability analysis shows that Perceived Gamification (PG) had the highest reliability (0.764) across all five items, indicating strong internal consistency. Communication (0.657) and intention to continue using m-banking (0.655) have moderate reliability, indicating a reliable measuring scale. social media (0.620), perceived entertainment (0.614), and perceived value (0.623) all have slightly lower but still adequate reliability ratings. The work covered the study sample of 227 respondents, which allowed developing sufficient data for analysis. These data prompt that entertainment, gamification and social media should be considered as determinants of user attitude towards the mobile banking services as well as interest in using those.

Figure 4: Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.692 ^a	.479	.468	.48218
a. Predictors: (Constant), PV, SM, PE, PG, COM				

The model summary of the regression analysis gives useful information which help in understanding the dependency of the dependent variable in the research. The R value of 0.692 signify positive moderate correlation and it also depicts that the set of the predictors (PV, SM, PE ,PG,COM) jointly affects the dependent variable to some extent. The value of R square 0.479 depicts the proportion out of 100 that is 47.9 demonstrating how much of luckily dependent variable fluctuation can be state by the predictors in the model. This shows a relatively rich, but rather modest degree of variances explanation, since approximately 40% of the variances in the dependent variable are revealed by the chosen predictors. The adjusted R square, stand 0.468 which suggests a better way of determining the accuracy of the model to explain the variation of the dependent variable. The adjusted R square measure takes into account the number of independent variables used in the analysis. This value shows that after this adjustment, the model is still fairly stable, it retains a good generalization performance on other datasets. Last of all, the standard error of the estimate = 0.48218, which gives an indication of how far on average the dependent variable value predicted by the model is from the actual value. A low standard error

implies a good fit, which in effect transudes that the regression model makes a reasonable attempt at predicting the dependent variable.

Figure 5: ANOVA

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	47.311	5	9.462	40.698	.000 ^b
	Residual	51.382	221	.232		
	Total	98.693	226			

a. Dependent Variable: IC

b. Predictors: (Constant), PV, SM, PE, PG, COM

The outcome of ANOVA could give a summary of the entire importance of the regression model. The regression sum of squares is 47.311, which means the variance in the dependent variable (intention to continue using M banking, IC) which is as a result of the predictors (PV, SM, PE, PG, and COM). The residual sum of squares = 51.382 which indicates the variation in IC not explained by the model due to error or another factor that is not considered. Total sum of squares is 98.693 that is total change in the dependent variable. In the table the degrees of freedom (df) are also given with the regression df of 5 which is equal to the number of predictors in the model (5) and residual df is 221 which is the total number of observations (227) minus the number of predictors (6). This is referred to as the Total df and it is obtained as (the number of observations)-1 = 226. The MS of the regression and also the RMS are determinate by dividing the sum of the squares by the number of degrees of freedom. Regression mean square is 9.462, and residual Mean square is 0.232. So the F statistic is the quotient of regression mean square and residual mean square, which is equal to 40.698. The value represents that the model contributes a large percentage of variance in the dependent variable, and the larger F-value the better is the degree of fitment of the model. The value of the significance (Sig.) is 0.000 which is very much significant (less than 0.05). Such an outcome shows that the overall regression model is significant and that the predictors combine to be significant with regard to the dependent variable intension to continue using M banking (IC).

Figure 6: Coefficients

Coefficients ^a								
Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	95.0% Confidence Interval for B	
		B	Std. Error	Beta			Lower Bound	Upper Bound
1	(Constant)	.245	.135		1.815	.071	-.021	.512
	SM_Avg	.233	.067	.216	3.482	<.001	.101	.365
	COM_Avg	.361	.075	.333	4.831	<.001	.214	.508
	PE_Avg	.192	.069	.180	2.793	.006	.057	.328
	PG_Avg	-.002	.067	-.002	-.029	.977	-.134	.131
	PV_Avg	.114	.069	.116	1.644	.102	-.023	.250

a. Dependent Variable: IC_Avg

The most important aspect shown in the coefficients table is the contributions of each predictor towards the dependent variable, intention to continue using M banking (IC). That is, the estimated

value of IC when all the predictors SM, COM, PE, PG, and PV are equal to zero is 0.245. Turning to the individual predictors, we have SM with an unstandardized coefficient of 0.233, which means that when SM increases by one, relative to the scale used, there will be an increase in IC by 0.233 units, concomitantly assuming that the other predictors do not change. Likewise, COM = 0.361, which means the effect of COM is stronger; the model shows that for each unit change in COM, there will be a 0.361 change in IC and so on. The coefficient for PE is actually 0.192, making it unstandardized and thus conveys that a one unit increase in PE is expected to increase IC by 0.192 *ceteris paribus*. On the other hand, PG presented a coefficient of -0.002, suggesting a very insignificant negative relation between PG and IC, with almost no changes in the dependent variable. PV has an unstandardized coefficient of 0.114, which makes sense that the IC will be expected to increase 0.114 units with a 1 unit increase in PV, holding all other predictors constant.

Conclusion and Recommendations

It is a study that utilises the Elaboration Likelihood Model (ELM) in understanding the intention of m-banking clients towards maintaining the use of these services. The results elucidate the high levels of impact caused by social media (central route) and perceived entertainment (peripheral route) on the perceived level of m-banking services. This forms grounds for the concurrent influence of the central and peripheral routes in the case of m-banking. The findings display that social media is a utilitarian aspect of the offered service that is critical in making customers regard m-banking as something of value and meet their cognitive requirements in developing answers to whether they would utilise the service of m-banking, going into the future. In such a case, the provision of information that appears comprehensive and coherent in the eyes of users shows an increased rate of appreciation given to the interaction with the service provider (Ciunova-Shuleska et al., 2022). Perceived entertainment, as a hedonic element of m-banking, activates users' emotional and affective responses towards the service. This emotional engagement significantly affects their perceived value (H3). This finding corroborates prior studies indicating that m-banking users place substantial value on the hedonic characteristics of the service (Baptista & Oliveira, 2017; Karjaluoto et al., 2019). It underscores the significance of having entertaining content as one of the aspects in offering a user-friendly service, such as m-banking. This research hypothetically assumed that perceived value would be a moderator between social media and the intention to continue with m-banking. The effect of social media on the perceived value indicates that the central processing element improves the perceived value, which is the primary determinant factor of this intention of continuing to use the m-banking services by users. This observation confirms the assertion regarding the mediating role played by the reactions exhibited by the customers to the central cues, and this aspect shows their theoretical relevance towards the maximisation of perceived value of the services that are being provided on the m-banking platform, and hence the readiness of the customers to use the services further.

The findings of the present study support the earlier studies according to which, while adopting the m-banking services, it is crucial to incorporate both hedonic and utilitarian features (Baptista & Oliveira, 2017; Karjaluoto et al., 2019; San-Martin et al., 2020). The present study contributes to the theoretical framework along this direction as well, in that it also revealed the presence of a lack of studies which would compare the combined effects of the central and peripheral cues, and it offers an empirical solution to the two-fold nature of the cues in the perceived value of the m-banking services. The findings emphasise that the attitudes are set in place through the utilitarian handling of the object-relevant core message and affective response to the value of the signals/ the peripheral appeals (Allison et al., 2017). It is also important to note in this analysis that there is a need to take into consideration peripheral factors that include perceived entertainment to add value

to m-banking services to the clients in terms of the actual users of the services. Within this framework, the last part of the evaluation is the development of perceived value that assumes a regulating position between the central cue of social media and the user's intentions to carry out the unremitting Utilization of m-banking services. Moreover, in contrast to the majority of previous studies, the decision to take advantage of m-banking services does not form the core of the research, nor does the persistence of this usage by occasional users, but simply the perception of value and persistence among the current users. Therefore, utilising the ELM in an innovative way to make the case that perceived value came into being in m-banking and that the resultant behavioural intentions were to persist using the service, the present study adds significant theoretical value to the already existing literature in the domain by offering insights into customer behaviour in the m-banking environment. Lastly, it fulfils a gap in studies that have been conducted in connection with m-banking in Europe, particularly in the establishment of banking systems in the Western Balkans (Farah et al., 2018).

The implication of the present study to the managers working in the field of development of m-banking services, or those who want to develop continuing intentions of customers using the service, is as follows. The study also finds that banking institutions should focus on increasing the value proposition to m-banking service consumers. This could be attained through the capability for interaction and creativity within the service. An entertaining, easily navigated m-banking interface that results in positive feelings about the use of the service will be an excellent approach. Thus, the bank managers are to focus on the high quality of m-banking services and their perceived value with social media being amongst the primary instrumental variables. In so doing, systematic value can be created and delivered by the banks to improve the overall levels of utilitarian value along with the perceived levels of service quality. These initiatives will ease the understanding of my customers on the fact that m-banking is not only a mere facilitation instrument for performing banking activities, but it can also be a form of entertainment. This study has revealed that customer perceived value regarding m-banking is a viable determinant of their//continued use of these services. This means that there is a need for bank organisations to foster a firm perceived value that is communicated by providing excellent, appealing, and easily accessible attributes. Related to the targeted audience, banks' activities should be based on such motives to consider three aspects of the m-banking services: usability and fun for new technologies and innovative marketing. Finally, by delivering customised digital interfaces to consumers, banking institutions ensure consumers prefer and use their m-banking facilities, improving engagement with current and prospective consumers to ensure sustainable success.

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