

Factors Influencing Intentions to Use Mobile Payments: An Entrepreneurial Perspective

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ABSTRACT

Since the beginning of the 2000s, business activities have become more electronic, and cell phones have become an important way to do business. An enormous amount of research has been done on how people are using mobile payments. This study aims to examine how user's perception of risk influences their decision to continue using mobile payment services. Despite the benefits associated with payments there are still challenges that hinder its widespread acceptance. This study discusses these challenges with entrepreneurial perspective that entrepreneurial thinking here means not only noticing how popular mobile payment services are, but also figuring out what the problems are and using them as a starting point to come up with new ideas that could change the industry. The study utilizes the Unified Theory of Acceptance and Use of Technology (UTAUT) model along, with the confirmation acceptance model to analyze the factors that impact users continued intention to use payments and validate the conceptual model. To collect data for this research a quantitative approach is employed through a survey distributed among mobile payment users. The survey adopts convenience sampling techniques to gather responses from participants, across regions of Pakistan. Data collection spanned over a two-month period involving a total of 460 respondents. The study employed Structural Equation Modeling (SEM) to examine the relationship between confirmation, performance expectancy, effort expectancy, social influence, and continuous intention to use mobile payment services. There was a positive relationship between the dependent and independent factors, which meant that all of the hypotheses were valid. Additionally, SPSS analysis showed that perceived risk weakens the connection between confirmation, performance expectancy, effort expectancy, social influence, and continuous intention. The findings of this research contribute to the business literature and put forth crucial guidelines for the management of entrepreneurial mindsets.

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INTRODUCTION

Now a day's smart phones are core of our daily lives (Putri et al., 2020). In many countries across the world where mobile payment has grown substantially and this phenomenon is observed in developed countries as well as developing countries. The mobile payment provides many benefits to the modern society because people are using new technologies and digitalization is becoming essential part of everyday life (Chuah et al., 2019). The electronic money also has many benefits for customers like they need no cash in hand to make the purchases so it reduces the risk of losing money. And also reduce the tension when there is no little change available in the stores (Bojjagani

et al., 2021; Agarwal et al., 2020). In term of mobile payment services customers can easily make the payments and also keep the record and check at any time and manage transactions and their spending (Huang et al., 2020). According to the recent condition of the world the disease germs and virus are carried on money and paper money contributed to spread the virus (Sarwar et al., 2023). Almost every bank in the modern world uses online platforms and mobile apps to give their services to customers in a digital format so in this context this research contributes to literature by investigating how people intended to use M payments and how this behavior is influenced by perceptual risk. Previous research has mostly looked at what makes people start using mobile payments, but not much at how perceived risk affects people's decision to keep using them. This study aims to investigate how perceived risk influences users' behavior and how providers can mitigate these risks to enhance the mobile payment experience, ultimately contributing valuable insights to the field (Fan et al., 2021; Susanto et al., 2020).

Few research has examined how perceived risk affects technological innovation continuance intentions for Fin Tech, Mobile wallet (Halim et al., 2021), and mobile payment consumer adoption technology. Most researches have examined utility-based factors that influence technology adoption and use (Chuah et al., 2019). To analyze customers' mobile payment continuation intentions, we include perceived risk as a moderating factor. Because perceived risk describes technology uncertainty and moderate's customer intentions and post-purchase behavior. Pakistan was chosen for our study since it is a developing nation and mobile payments are widely used. Mobile payment systems, which include things like mobile wallets and payments done using mobile devices, have a greater scope and a number of distinguishing features than traditional payment methods (Huang et al., 2020). The economies of developing countries can do better if they use m-payment systems more. This is because they keep things honest and stop cheating. In Pakistan, which is a developing country, there are about 139 million unique mobile subscribers, and this number is expected to grow by 17 million more unique mobile users by the year 2020. There are many mobile payment systems in the country that are run by banks and other financial institutions. However, even in this digital age, a large number of people still don't use these services and prefer to pay with traditional methods. People in Pakistan might be hesitant to use m-payment services for more than one reason. This is the key research question of this study, which could help get more people to use m-payment services (Flavián et al., 2020).

A lot of research has been done and published regarding consumer acceptance of mobile payment service technology. These studies have consistently predicted that customers have a strong desire to utilize mobile payment technology (Shao et al., 2019). The majority of research of this type, however, has been conducted in countries like Spain, the Arab world, India, Thailand, China, and Germany. Despite the large existing and potential population of smartphone users in Pakistan, the researcher was unable to locate any studies on the use intention of M-payment in this context. Pakistan is one of four countries predicted by Google to have a billion or more smart phone users in the future (Nand et al., 2020). This study focused on perceived risk mobile payments in Pakistan, but there are likely many more factors at play. Perceived risk (PR) has also been identified as a factor

that can discourage people from making mobile payments (Susanto et al., 2020). The risk can be put into categories like security, money, people, efficiency, and privacy and some possible problems with m-payments, such as the loss and exposure of personal and credit card information, which keeps people from using the new payment method (Aboulnasr et al., 2020). As technology adoption increases, people are concerned about the risks involved.

As per earlier studies reported by Matiza et al. (2020) people got hesitant while using M payments or any other electronic transactions because of the perceived risk of loss of personal. This risk can be dimensioned by security, money, people, efficiency and privacy and some challenges associated with m-payments namely the loss and improper access to sensitive personal and credit card information, preventing the customer from exercising the new payment channel. What is more, as the spread of technologies and their introduction increases so are the people's concern with the risks associated with them. Past studies showed that PR negatively impacts m-payment adoption intention (Zubair et al., 2022; Sarwar et al., 2023). Customers will be more likely to continue using a platform if they perceive it provides a trusted system for m-payment transactions. It is unclear whether consumer perception of risk affects the regular use of mobile payments, despite recent empirical evidence.

This experimental study observed the UTAUT theory that scaled down the qualitative studies how people adopt and use new technologies to further understand a behavioral adoption and use of M payments. The focus of the research is risk factors and how to calculate them that can have the influence on their choice to continue use M payments; the research sheds light on and notes the importance of the theory and its improvement to provide better prediction and manifestation of everything. Taking a look at these research gaps raises questions with the UTAUT model that could achieve this by topics more of how people determine risks (Sarwar et al., 2023; Pietrucha et al., 2020). It is one of the first works to analyze factors influencing the continuity of mobile payments behaviour rather than initiation of its use. In addition, it has also unveiled that UTAUT variables are a fundamental aspect in the prediction of how long people take before they retire from mobile payment use. Besides, when considering introduces the concept of 'a concern of risks' into the model, this study has offered new different perspectives about how mobile payments are viewed by customers and their perception on the potential threats. From the above literature, we adopt certain constructs from the UTAUT and ECM models to determine if people will continue using mobile payments, yet the meanings are not entirely similar. In addition, this study seeks to establish the underlying most influential dynamics that may drive the long-term acceptance of mobile payments in the Pakistani market. This presents a unique approach in that, it will allow us to infuse our understanding of the relationship between and the factors concerned.

LITERATURE REVIEW

Expectation Confirmation Model

Previous studies used different theories to discuss the continuous intentions for mobile payment like innovation diffusion theory (Sahi et al., 2021), trust transfer theory (Sun et al., 2018), risk and trust theory and information success theory (Zhou et al., 2013) but these philosophies are not specific to discuss the post adoption behavior and that's why these are not supported to explain the intentions to use mobile payments. In previous studies only Humbani and Wise used Expectation confirmation model to explore the continuance intentions for electric payments (Kumar et al., 2022). Basically, EC model is the post adoption model in which we check the behavior of customers after using the technology. The confirmation is describing as difference between the actual performance and expected performance. This model explore that the customer has many expectations before use of the M payment system. According to the (Humbani et al., 2019) there are many other variables who have the direct or indirect effects on continuance intentions to use the mobile payment facilities and check their post adoption behavior.

Unified Theory of Acceptance and Use of Technology

Various studies have employed the Technology Acceptance Model (TAM), Unified Theory of Acceptance and Use of Technology (UTAUT), and the Theory of Planned Behavior (TPB) in their investigations to study different determinants of continuous intentions of mobile payment (Purohit et al., 2022). This model is proven successful against the other models mention above. Technology acceptance model have only two constructs that are not helpful for the complicated decision making. And theory of planned behavior uses perceived behavioral control that means the ability of the individuals to make efforts for the adoption. The UTAUT model comprises four key factors: performance expectation, effort expectation, social influence, and facilitating conditions (Al-Saedi et al., 2019). We are taking the first three to check the continuing intents for mobile payments of users. The TAM promotes this concept since the variables of the TAM—performance expectations, perceived usefulness, and effort expectations—are all correlated with one another. In this study, we combined the UTAUT model with the ECM to investigate how customers respond to and behave after adopting mobile payments.

Research Model and Hypothesis Development

Confirmation and Continuance Intention

Confirmation plays a vital role to continuance intention from the work of Dhia et al. (2021), it is also seen as confirmation if the technology eases to user expectations. On the other hand, if expectations are not met up to the desired levels, it may amount to disconfirmation. Mobile payments could be accepted and used affirmatively due to the confirmations and the intent to maintain the interest and faith that could facilitate mobile payments. It is argued that in the long run, the felicitations provided play a critical role in how the users are likely to use the mobile payment systems. This perception in

return affects users' own intention to retain the service which has been evidenced by previous literature studies as confirmation greatly affects the calculations about usefulness and ease of usage of the mobile payment application setting. A separate study from a study led by Chen and Chen (2019) demonstrated that confirmation significantly improved is enhanced user confidence and satisfaction of mobile payment services, therefore, as a factor attracting them towards the use of such services. The users' outcome towards the mobile payment services such as perception and attitude towards the service and also the readiness of using them in future depends mostly on the confirmation. The ECM model suggests that the perception of how well the customer experience facilitates performance confirmation has a significant impact on continuance behavior. *H1: The intention to repurchase and keep using mobile payments is positively related to confirmation.*

Effort Expectancy and Continuance Intention

The continuity of mobile payment usage and effort expectancy has a direct relationship where effort expectancy offers a real determining role. This idea refers to its ease in use of a technology. In a general manner, the less complicated technology is, the easier usability of a tool is; the higher the probability that people will keep using it. Numerous previous studies have established that where the effort expectancy is highly significant, continued use of mobile payment will be significant (Yang et al., 2021). The concept of effort expectancy is a construct that is introduced as a new concept in the UTAUT model. De Sena Abrahão et al. (2016) conduct research findings that whole greater effort expectancy has a positive relation with an intention to resume M payments in the future. In fact, the higher the level of convenience of applying the mobile payment onto the service the higher the rate of longer-term user stickiness as described by (San Martín et al., 2012). In another study, Venkatesh et al. (2001) concluded that the effort expectancy leads to a strong predictor of the users' intentions to use the mobile payment services more of the users. Customers are more likely to frequently interact with the digital payment system when they notice the increase in their effective accomplishment of digital payments (Musyaffi et al., 2021). Users who deem the utilization of mobile payments as simple and easy to use are more likely to stick to their usage. *H2: The second construct, effort expectancy, is correlated with mobile payment usage continuance.*

Performance Expectancy and Continuance Intention

If people feel the same hope that a new technology that developed is going to work properly or it will be good for them, then they take the initiative to use it soon. The term says that performance expectancy is depiction of level of belief that getting use of innovative technology would enable individuals to meet their needs (Davis, 1989). This study yielded results that prove the hypothesis which suggests that person level performance expectancies have substantial effects on their person level of activity and continuance intension to use a given activity. Results from the present study corroborate those of previous studies showing that increased expectations for performance are positively linked to an intention to continue working (Yuan et al., 2016; Susanto et al., 2016; Marinković et al., 2020; Sleiman et al., 2022). According to (Sleiman et al., 2022) important findings

indicate that digital wallet users believe that using a digital wallet will help improve efficiency and add convenience to their financial activities. Thus, the study created a hypothesis for the performance expectancy to continue use the service is:

H3: performance expectancy is positively associated with Continuance Intention for using mobile payment.

Social Influence and Continuance Intention

As we try to address consumers' willingness to use m-payment methods, we cannot ignore the challenges associated to social dimensions. These factors are important in deciding whether or not people would adopt an innovative technology, therefore we can't ignore them. The social impact of a new technological development can be seen as the degree to which consumers are influenced by the views of others in deciding whether or not to adopt the innovation (Liébana-Cabanillas et al., 2021). There are some studies like (Purohit et al., 2022; Talwar et al., 2020; Sleiman et al., 2022 and Humbani et al., 2019) show positive influence of social influence on continuance intentions. Several studies have shown that the encouragement of friends and family members can increase the chance that a person will actually start using mobile banking (Hidayat et al., 2021). Customers typically hear about mobile banking from their friends and family. The young generation adopt new things and technology by got influenced by their peers so we determine that social influence is the significant factor of continuous influence (Vatsa et al., 2022). Thus, the hypothesis is:

H4: Social Influence has positive association on Continuance Intentions for mobile payment.

Perceived Risk as a moderator

Perceived risk is taken as moderator in this study. The term perceived risk is used to describe the degree of danger involved with any given activity. As proposed in this theoretical framework Perceived risk may influence consumers' opinions and behavior in a number of contexts (Susanto et al., 2020). Risk is associated with the people choice for using mobile payment services in other words, continuance intention is the probability that a person will continue to use any given technology or service in the days coming (Humbani et al., 2019). Mobile payments involve using mobile devices for financial transactions like making payments, sending money and paying bills (Sahi et al., 2021). Perceived risk refers to the extent of uncertainties or possible negative consequences that users associate with using a particular service or technology. For instance, in mobile payments, perceived risk may include concerns about privacy of personal and financial information; whether the technology is reliable; possibility of fraud and scams; and difficulty in resolving complaints (Susanto et al., 2020; Habib et al., 2018).

However, mobile payment services' unpredictability increases users' risk perception if they fear loss. According to (Tam et al., 2020), confirmation favorably affects continuing intention, but when customers feel a risk that their expectations may not be satisfied, the perceived risk negatively moderates the relationship. In complex interactions with performance expectancy and effort

expectancy, perceived risk reduces the positive impact of PE and EE and negatively moderates the relationship between PE and EE to continuously adopt mobile payment(Azizet al., 2023). Social influence positively affects mobile payment continuance intentions (Phuong et al., 2020), but when risk factors like low internet, payment error, and money loss risk are added, the effect is reduced. Thus, the hypothesis:

H5: Perceived risk weaken the positive association of confirmation on continuance intentions for mobile payment.

H6: Perceived risk weaken the positive association of performance expectancy on continuance intentions for mobile payment.

H7: Perceived risk weaken the positive association of effort expectancy on continuance intentions for mobile payment.

H8: Perceived risk weaken the positive association of social influence on continuance intentions for mobile payment.

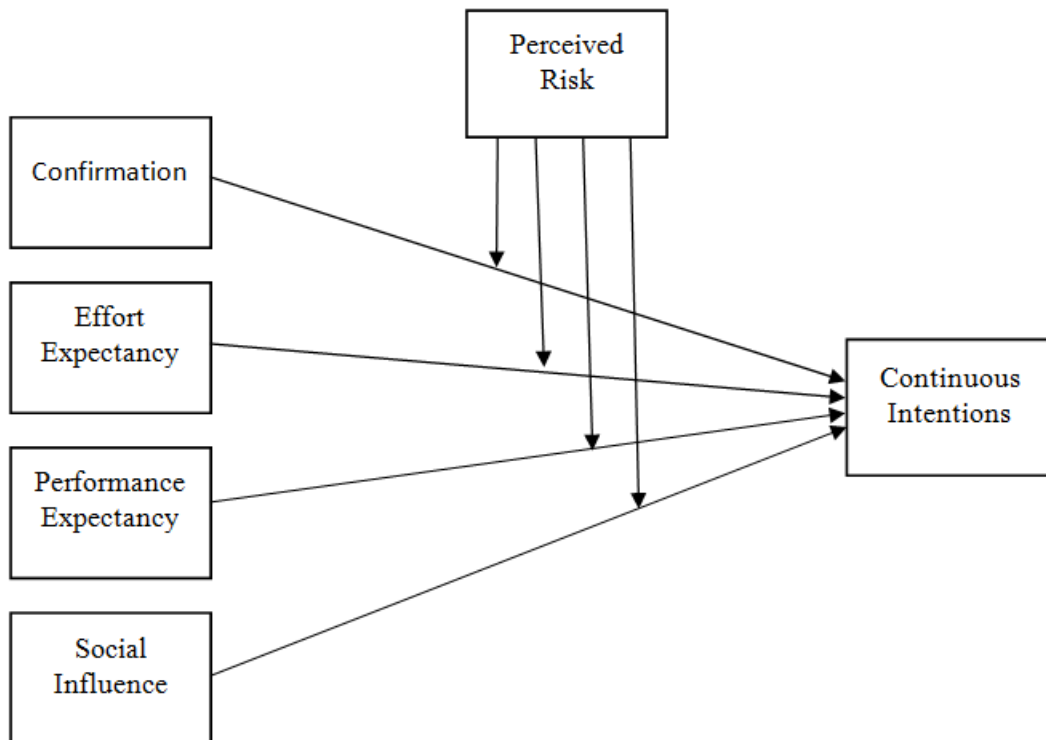


Figure 1. Framework of Study

RESEARCH METHODOLOGY

Surveys were used to collect data. Researching behavior, beliefs, attitudes, and opinions using surveys is considered the best method. After a thorough literature analysis, validated scales were used to design a questionnaire. The questionnaire was modified for mobile payments. Two specialists assessed the questioner. A preliminary survey of 55 participants assessed the questionnaire's appropriateness, accuracy, and comprehensibility. Based on responder comments, adjustments were made. The pilot survey response was used to update the satisfaction-related questions, creating the final questionnaire. In order to collect enough data with acceptable questions, this study carefully selected the amount of scale items. A total of 29 scale objects were included. For this study, 460 questionnaires were distributed using convenience sampling, targeting individuals with experience in mobile payments. The survey, conducted via an online Google questionnaire in the third quarter of 2023, reached mobile payment users across Pakistan. The study's focus on Pakistan is motivated by the substantial growth and 175 million users in the Pakistani mobile payments market in 2020, along with government support. M-payment service earners in Pakistan have prioritized customer retention enticements, making it interesting to investigate the influence of perceived risk in this context (Nasir et al., 2022; Sarwar et al., 2023).

RESULT AND DISCUSSION

Common method bias

Common method bias can happen when the data gathering method used, such as the collection tool or method, introduces variability. This bias can significantly affect the measurement results if it is substantial. According to Harman, when a single factor accounts for 50% or more of the variability in the data, it suggests the existence of common variance. Harman's single-factor approach has been employed to assess the presence of such common variance. Based on the results of Harman's single-factor analysis, the dominant factor explained 40.9% of the variance. This figure falls below the 50% threshold, suggesting that there is no presence of Common Method Bias (CMB) in our dataset (Sarwar et al., 2020).

Confirmatory factor analysis

Cronbach's alpha standards for model's structures are above 0.7, indicating excellent internal consistency. Additionally, the composite reliability (CR) values for these constructs surpass the 0.7 threshold, reinforcing their high levels of reliability. These results suggest that the values obtained are highly acceptable and demonstrate the robustness of the measurement model. This proves that the information can be accepted. By calculating the AVE, the convergent validity of the data can be checked. The AVE value for each of the study variables is larger than 0.50, the cutoff value. And the goodness model fit indicates that the value of $GFI = .90$, $CFI = .95$, $TLI = .94$, $RMSEA = .06$ that validate the model.

Table I: Factor loads

SR. No	Code	FL	Alpha	CR	AVE
1	CONF4	0.90	.87	.88	.64
2	CONF3	0.74			
3	CONF2	0.62			
4	CONF1	0.90			
5	EEXP4	0.90	.89	.90	.64
6	EEXP3	0.82			
7	EEXP2	0.83			
8	EEXP1	0.69			
9	EEXP5	0.73			
10	PEXP4	0.79	.88	.88	.64
11	PEXP3	0.78			
12	PEXP2	0.84			
13	PEXP1	0.79			
14	SINF4	0.79	.90	.90	.64
15	SINF3	0.77			
16	SINF2	0.74			
17	SINF1	0.86			
18	SINF5	0.83			
19	CINT2	0.68	.86	.86	.55
20	CINT3	0.80			
21	CINT4	0.79			
22	CINT5	0.77			
23	CINT1	0.63			
24	PRSK2	0.74	.86	.87	.63
25	PRSK3	0.85			
26	PRSK5	0.70			
27	PRSK1	0.88			

Note: GFI= .90, CFI = 95, TLI= .94 = .06, RMSEA = .06

Measurement Model

The indicator factor loadings exceeded 0.50 to verify sample adequacy (Table 4). Convergent validity was confirmed by construct average variance extracted (AVE) values exceeding 0.50. The composite reliability (CR) ranged from 0.86 to 0.90, exceeding the minimum of 0.80. Each construct has Cronbach alpha (CA) values over 0.7 (Sarwar et al. 2023). CR and CA scores are internally consistent (Hair et al. 2014). Therefore, the constructions were suitable for model testing. The square roots of AVE scores exceeded construct correlations, and all indicator loadings exceeded relevant cross-loadings, proving discriminant validity. All constructions had values of 0.90 or, according to the Fornell-Larcker criterion. The model's AVE, CR, and CA scores show strong internal consistency, indicator reliability, convergent validity, and discriminant validity. Thus, statistically, the constructs are different and suited for structural model analysis.

Table II: Fornell-Larcker criterion

	CR	AVE	MSV	ASV	CINT	CONF	EEXP	PEXP	SINF	PRSK
CINT	0.86	0.55	0.55	0.36	0.74					
CONF	0.88	0.64	0.61	0.33	0.70	0.80				
EEXP	0.90	0.64	0.12	0.07	0.35	0.19	0.80			
PEXP	0.88	0.64	0.61	0.36	0.74	0.78	0.25	0.80		
SINF	0.90	0.64	0.23	0.16	0.48	0.41	0.32	0.38	0.80	
PRSK	0.87	0.63	0.42	0.28	0.64	0.60	0.22	0.65	0.40	0.79

Hypotheses Testing

After establishing and confirming the structural model, the next stage involves using Structural Equation Modeling (SEM) with IBM SPSS AMOS to evaluate hypotheses thoroughly. SEM allows for a detailed examination of research hypotheses by assessing complex relationships among latent and observed variables, including direct and indirect effects. It serves as a robust tool not only to validate or refute hypotheses but also to assess the overall model's fitness. Additionally, the study used regression path coefficients to confirm relationships between constructs and support the initial eight hypotheses through path analysis within the structural model. In the table mentioned earlier, we outlined the hypotheses of the study, and in the subsequent table 3, we presented the results of the path analysis. Figure 1 in the study illustrates the structural model. Based on the data analysis findings, we can conclude the following: According to the data analysis results, confirmation has a positive impression on continuous intention i.e. ($\beta = .382$, $p < .01$) therefore H1 is accepted. Moreover, for the next hypothesis H2, which is EE has a positive impression on continuous intention is also accepted ($\beta = .185$, $p < .01$). Furthermore, it was proposed that PE has a positive influence on continuous intention and results are ($\beta = .499$, $p < .01$) so H3 also accepted. The next hypothesis H4 SI has a helpful influence on continuous intention ($\beta = .214$, $p < .01$) also supported.

Table III: Results of structural model

Proposed hypotheses	Estimate	P	Result
CONF→CINT	.382	***	Accepted
EEXP→CINT	.185	***	Accepted
PEXP→CINT	.499	***	Accepted
SINF→CINT	.214	***	Accepted

Note: GFI= .85, CFI = .90, TLI = .88, RMSEA = .08

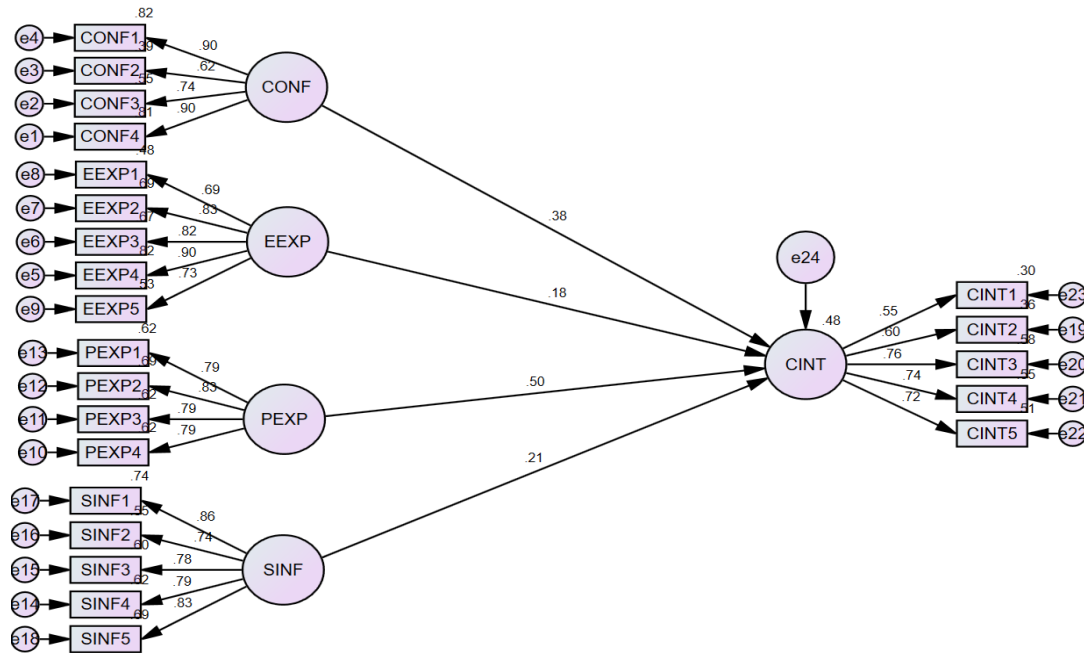


Figure 2. Structural Model

Moderation Analysis

This analysis is utilized to ascertain the correlation between two variables that is influenced by the value of a third variable. We examine the moderating impact of the third variable on the two chosen variables.

In Table 4 shows the values of coefficient for perceived risk =>confirmation are -0.024 (t= -4.16). PRSK dampens the positive relationship between CONF and CINT (Figure 2). This result approves the proposed hypothesis (H5).

Table IV: PRSK dampens the positive relationship between CONF and CINT.

	CODE	Coeff	t	LLCI	ULCI
Constant		2.26	6.93	.48	.91
Independent variable	CONF	0.500	3.92	.25	.75
Moderator	PRSK	0.470	4.58	.27	.68
Interaction	CONF*PRSK	-0.024	-4.16	.04	.09

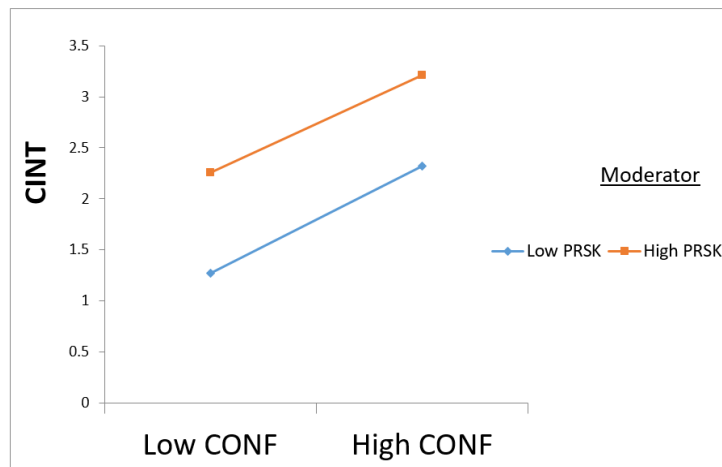


Figure 3. PRSK dampens the positive relationship between CONF and CINT.

Table 5 shows values of coefficient for perceived risk => effort expectancy are -.22 (t= -5.7). PRSK dampens the positive relationship between EEXP and CINT (Figure 3). This result approves the proposed hypothesis (H6).

Table V: PRSK dampens the positive relationship between EEXP and CINT

	CODE	Coeff	T	LLCI	ULCI
Constant		2.15	4.29	.20	.22
Independent variable	EEXP	.28	2.69	.04	.61
Moderator	PRSK	.67	5.55	.43	.91
Interaction	EEXP*PRSK	-.22	-5.7	.05	.10

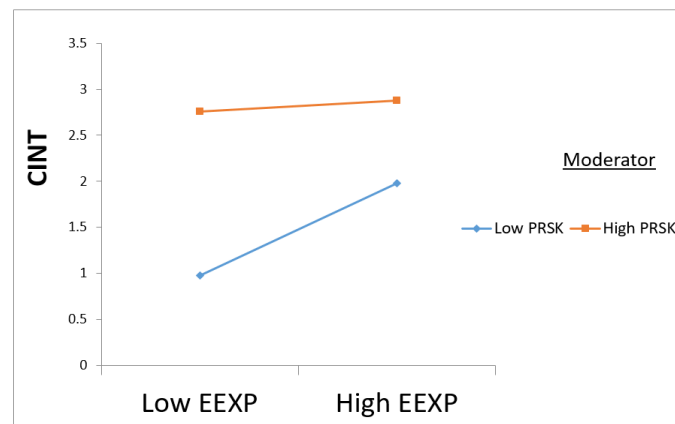


Figure 4. PRSK dampens the positive relationship between EEXP and CINT

Table 6 shows the values of coefficients of perceived risk (moderator variable), performance expectancy, while the outcome is continuance intention. The values of coefficient for perceived risk => performance expectancy are -.30 (t= -2.95). PRSK dampens the positive relationship between PEXP and CINT (Figure 5). This result approves the proposed hypothesis (H7).

Table VI: PRSK dampens the positive relationship between PEXP and CINT.

	CODE	Coeff	T	LLCI	ULCI
Constant		2.65	2.5	.18	.48
Independent variable	PEXP	.35	2.75	.09	.59
Moderator	PRSK	.26	2.13	.02	.49
Interaction	PEXP*PRSK	-.30	-2.95	.03	.09

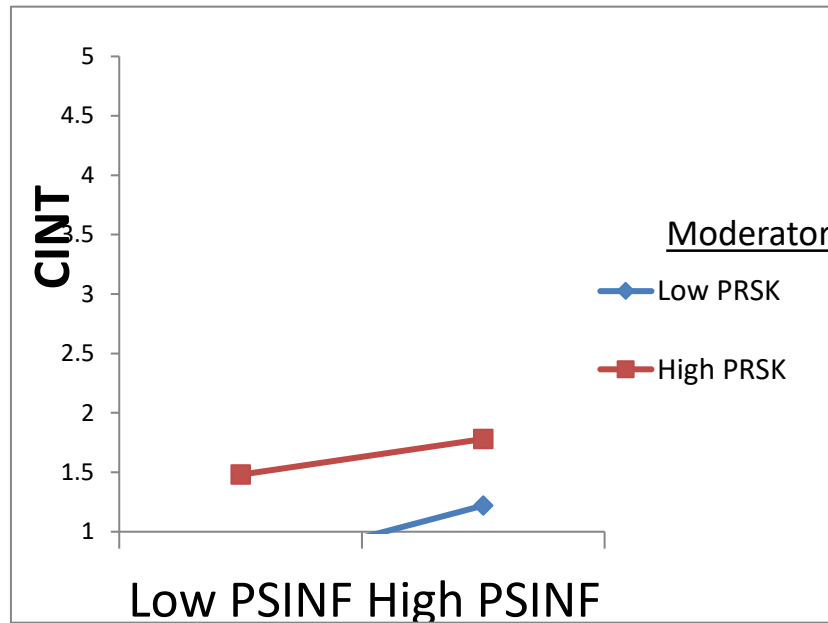


Figure 5. PRSK dampens the positive relationship between PEXP and CINT

Table 7 shows the values of coefficients of perceived risk (moderator variable), performance expectancy, while the outcome is continuance intention. The values of coefficient for perceived risk => social influence are -.06 (t= -2.65). PRSK dampens the positive relationship between SNIF and CINT (Figure 5). This result approves the proposed hypothesis (H8).

Table VII: PRSK dampens the positive relationship between SNIF and CINT.

	CODE	Coeff	T	LLCI	ULCI
Constant		1.29	2.39	.23	2.35
Independent variable	PSNIF	.21	2.13	.29	.34
Moderator	PRSK	.34	2.49	.07	.61
Interaction	SNIF*PRSK	-.06	-2.65	.01	.14

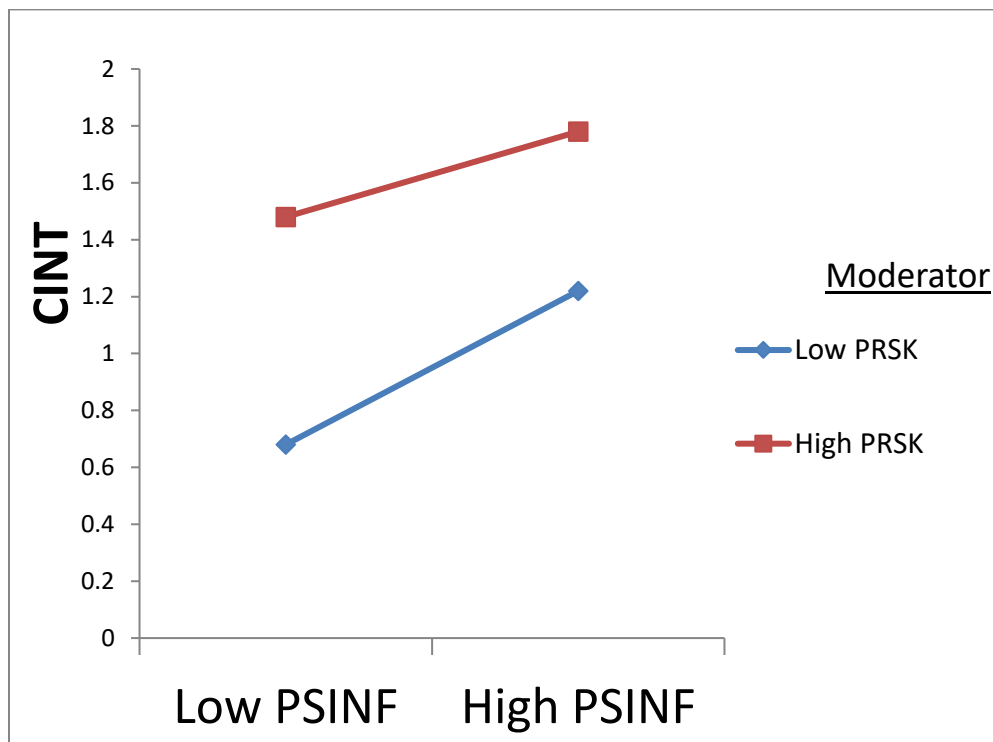


Figure 6. PRSK dampens the positive relationship between SNIF and CINT

Discussion

The research aimed to analyze factors affecting users' continuance intentions (CI) for mobile payments, with a specific focus on perceived risk. An integrated model was proposed, enhancing the UTAUT model by incorporating the ECM and adding perceived risk. The objective was to examine how functional, social, and psychological factors influence users' intentions to continue using m-payments. In line with the previous studies (Tam et al., 2021; Rezaei & Valaei, 2017; Marinkovic & Kalinic 2017), the research found a positive relationship between the expectation of the performance outcomes and the continuity of service use intentions. The specificity and the intangibility of mobile payment services contribute to the fact that the advantages of their use can be perceived only in the process of their use, which raises doubts caused by unfamiliarity and some risks initially, since this new type of service begs another type of payment (Adeel et al., 2023).

Sincerely, the correlation between confirmation and the intention to stay in use of mobile payments is shown to be positive and significant and is in accord with the ECM model proposed by Bhattacharjee. When consumers deal with any product that exceeds the expectations, users often feel gratifications and leave the product in use as is visible in the mobile app setting described by Tam et al. (2020). This clearly shows how the title of this paper, customer satisfaction and the need to achieve this has been looked at by many authors to ensure that customer expectations are fulfilled and they continue using mobile payment services in the future. As suggested by Liao et al. (2007), Effort Expectancy (EE) significantly affects Continuance Intention (CT); the suitability and convenience of the system or technology can influence one's intentions to continue to use. User-

friendly and easier mobile payment systems are emphasized in this study especially in the modern landscape in which the market is majorly dynamic due to the approaches that are used by the service providers. Ensuring the customer loyalty and engagement is possible when a mobile payment facility is developed while addressing users' needs is precious and necessary to the continual success of such facilities. The evidence shows a robust and favorable link of social constructs towards continuance intentions, supported by previous studies that found empirical evidence of a relationship between social constructs and continuance intentions (For example: Purohit et al., 2022; Talwar et al., 2020; Sleiman et al., 2022). Social influence covering social networks, product placements and peer norms has a significant impact on the continued usage intentions of mobile payment service consumers. As such, it fits within the whole literature of technology adoption, with special emphasis on the role of the social processes as a contributing factor to how the user responds to a new technology. The present study, on opposition to the UTAUT model, introduces Perceived Risk (PR) into the framework, which allows for deepening of the understanding user intentions related to mobile payment practice. The empirical analysis confirms that mobile payments' utilization negatively affects PR indicators (Narteh et al., 2017). According to Johnson et al. (2018) and Sarwar et al. (2023), the PR campaigns for e-security have an impact of reducing the intentions of the people to use the services. Therefore, this call for mobile payment suppliers to have mitigation strategies that seeks to minimize the perceived threat, awareness campaigns, and compliance to the laws. As a result, these levels provide strong empirical evidence of H5, H6, H7, and H8.

CONCLUSION AND POLICY IMPLEMENTATION

Blowing into the last few years, the leap of the tech shift is clearly visible with the help of the summary of the mobile payments. Mobile payments enjoy considerable seventh, for small entrepreneurs who may require broader internet coverage locally for payment methods. This study conducted a unification of UTAUT theory and ECM and applied a perceived risk perspective and factors that influence Continuous Intention (CI) Context of mobile payments as well. The finding indicates that the confirmation construct, effort expectancy, performance expectancy and social influence serve as positive determinants of continuance intentions and perceived risk diminish their relationship. The studies infer that service providers should beef up their mobile payment systems to offer more benefits, make the process of use simplified, and put in place effective support mechanisms so that they can create enjoyment and Continuous Intention of users. Additionally, user risk mitigation is an important area of focus in mobile payment CI because it helps minimize the activities conducted by the dishonest players.

Theoretical Implications

This study delves into the factors that influence the relationship between perceived risk (PR) and the intentions to sustain mobile payment services (CI) utilization, thereby enhancing mobile payment service models and the UTAUT framework. Unlike prior research (Im et al., 2008), our model integrates UTAUT and ECM theories to offer a comprehensive understanding of consumer behavior in this context. Our study confirms PR's role as a moderator within the UTAUT model, providing

empirical evidence for its significance in technology adoption. This research establishes a foundation for future studies, enhancing models for mobile payment service adoption, and explores PR's influence on determinants and continuance intentions in the mobile payments perspective.

The study's results confirm PR's negative moderating effects on CI in mobile payment facilities, echoing (Im et al., 2008) findings in the TAM. This research comprehensively explores various PR factors within UTUAT, extending (Im et al., 2008) work. It provides valuable insights into the critical aspect of mobile payments: user retention. Building upon suggestions by (Venkatesh et al., 2012) and Bhattacharjee (2001a, 2001b) to expand UTAUT and ECM models, this study enhances our understanding of mobile payment adoption and post-adoption behaviors, offering a more comprehensive view of customer intentions.

Practical Implications

Based on these findings and the data about the factors that affect mobile payment usage, it seems that some micro-entrepreneurs have not yet fully utilized the advantages of mobile payments. Managers in the service industry should heed the results of this study to drive mobile payments popularity. The research underscores the significance of ease of use and functionality in enhancing customer satisfaction and continued adoption. To broaden their reach, service providers should explore voice-enabled mobile payment systems, ensuring accessibility for all users. Effective promotion of mobile payment benefits and addressing customer concerns is key, emphasizing user-friendliness and efficiency in payment apps. The study highlights factors that are confirmation, effort expectancy, social influence and performance expectancy as crucial in determining mobile payment adoption and suggests implementing retention strategies and showcasing diverse benefits to encourage frequent use. It is crucial to tackle perceived risks by prioritizing safety and reliability, supported by regulatory measures. Informative advertising, while steering clear of unrealistic promises, should be coupled with personalized services and customized promotions to foster trust. Ultimately, reliability, convenience, and assurance should be linked with mobile payments to stimulate heightened usage.

Limitations and Directions for Future Research

To get a better sense of things, future research should look at comparisons between age groups, like millennial and older generations. A lot of UTAUT studies are mostly about younger people. It would also be beneficial for future studies to explore alternative research designs and approaches, such as experimental methods, to enhance our comprehension of technology acceptance. To get a broader view, it's crucial to do similar studies in different countries. This is important because markets and how people use technology can be really different from one place to another. By studying different countries, we can understand more about these differences and improve future research.

REFERENCES

- Adeel, H., Sabir, R. I., & Majid, M. B. (2023). Factors affecting women empowerment: A Micro Financing Perspective. *Journal of Entrepreneurship and Business Venturing*, 3(1). <https://doi.org/10.56536/jebv.v3i1.19>
- Agarwal, S., Qian, W., Ren, Y., Tsai, H.-T., & Yeung, B. Y. (2020). The real impact of fintech: Evidence from Mobile Payment Technology. *SSRN Electronic Journal*. <https://doi.org/10.2139/ssrn.3556340>
- Al-Saedi, K., Al-Emran, M., Abusham, E., & El Rahman, S. A. (2019). Mobile payment adoption: A systematic review of the UTAUT model. *2019 International Conference on Fourth Industrial Revolution (ICFIR)*. <https://doi.org/10.1109/icfir.2019.8894794>
- Aziz, M. A., & Ahmed, M. A. (2023). Consumer Brand Identification and Purchase Intentions: The Mediating Role of Customer Brand Engagement. *Journal of Entrepreneurship and Business Venturing*, 3(1).
- Baptista, G., & Oliveira, T. (2015). Understanding mobile banking: The unified theory of acceptance and use of technology combined with cultural moderators. *Computers in Human Behavior*, 50, 418-430. <https://doi.org/10.1016/j.chb.2015.04.024>
- Bhattacharjee, A. (2001a). An empirical analysis of the antecedents of electronic commerce service continuance. *Decision support systems*, 32(2), 201-214. [https://doi.org/10.1016/S0167-9236\(01\)00111-7](https://doi.org/10.1016/S0167-9236(01)00111-7)
- Bhattacharjee, A. (2001b). Understanding Information Systems Continuance: An Expectation-Confirmation Model. *MIS Quarterly*, 25(3), 351-370. <https://doi.org/10.2307/3250921>
- Bojjagani, S., Sastry, V., Chen, C.-M., Kumari, S., & Khan, M. K. (2021). Systematic survey of mobile payments, protocols, and security infrastructure. *Journal of Ambient Intelligence and Humanized Computing*, 1-46. <https://link.springer.com/article/10.1007/s12652-021-03316-4>
- Chuah, S. H.-W. (2019). You inspire me and make my life better: Investigating a multiple sequential mediation model of smartwatch continuance intention. *Telematics and Informatics*, 43, 101245. <https://www.sciencedirect.com/science/article/pii/S0736585319301832>
- Davis, F. D., Bagozzi, R. P., & Warshaw, P. R. (1989). User acceptance of computer technology: A comparison of two theoretical models. *Management science*, 35(8), 982-1003. <https://doi.org/10.1287/mnsc.35.8.982>
- de Sena Abrahão, R., Moriguchi, S. N., & Andrade, D. F. (2016). Intention of adoption of mobile payment: An analysis in the light of the Unified Theory of Acceptance and Use of Technology (UTAUT). *RAI Revista de Administração e Inovação*, 13(3), 221-230. <https://www.sciencedirect.com/science/article/pii/S180920391630033X>
- Dhia, A. W., & Kholid, M. N. (2021). Explaining E-Wallet Continuance Intention: A Modified Expectation Confirmation Model. *Jurnal Minds: Manajemen Ide dan Inspirasi*, 8(2), 287-302. <http://www.jatit.org/volumes/Vol99No24/9Vol99No24.pdf>
- Fan, L., Zhang, X., Rai, L., & Du, Y. (2021). Mobile payment: the next frontier of payment systems?-an empirical study based on push-pull-mooring framework. *Journal of theoretical*

- and applied electronic commerce research, 16(2), 155-169. <https://doi.org/10.4067/S0718-18762021000200111>
- Flavián, C., Guinaliu, M., & Lu, Y. (2020). Mobile payments adoption—introducing mindfulness to better understand consumer behavior. *International Journal of Bank Marketing*, 38(7), 1575-1599. <https://www.emerald.com/insight/content/doi/10.1108/IJBM-01-2020-0039/full/html>
- Guo, J., & Bouwman, H. (2016). An analytical framework for an m-payment ecosystem: A merchants' perspective. *Telecommunications Policy*, 40(2-3), 147-167. <https://doi.org/10.1016/j.telpol.2015.09.008>
- Habib, M. D., & Qayyum, A. (2018). Cognitive emotion theory and emotion-action tendency in online impulsive buying behavior. *Journal of Management Sciences*, 5(1), 86-99. <https://www.academia.edu/download/86875337/JMS1805105.pdf>
- Hair Jr, J. F., Sarstedt, M., Hopkins, L., & Kuppelwieser, V. G. (2014). Partial least squares structural equation modeling (PLS-SEM): An emerging tool in business research. *European business review*, 26(2), 106-121. <https://www.emerald.com/insight/content/doi/10.1108/EBR-10-2013-0128/full/>
- Halim, E., Margarita, V., Destiano, R., Salim, J., & Hebrard, M. (2021). The Impact of Satisfaction and Perceived Risks to Continuance Intention on Using Mobile Wallet & Pay Later. 2021 International Conference on Information Management and Technology (ICIMTech),
- Huang, Y., Wang, X., & Wang, X. (2020). Mobile payment in China: Practice and its effects. *Asian Economic Papers*, 19(3), 1-18. https://doi.org/10.1162/asep_a_00779
- Humbani, M., & Wiese, M. (2019). An integrated framework for the adoption and continuance intention to use mobile payment apps. *International Journal of Bank Marketing*, 37(2), 646-664. <https://www.emerald.com/insight/content/doi/10.1108/ijbm-03-2018-0072/full/html>
- Im, I., Kim, Y., & Han, H.-J. (2008). The effects of perceived risk and technology type on users' acceptance of technologies. *Information & management*, 45(1), 1-9. <http://ecojoin.org/index.php/EJM/article/view/707>
- Kumar, N. K., & Yadav, A. S. (2022). A Systematic Literature Review and Bibliometric Analysis on Mobile Payments. *Vision*, 09722629221104190. <https://journals.sagepub.com/doi/abs/10.1177/09722629221104190>
- Liao, C., Chen, J.-L., & Yen, D. C. (2007). Theory of planning behavior (TPB) and customer satisfaction in the continued use of e-service: An integrated model. *Computers in human behavior*, 23(6), 2804-2822. <https://doi.org/10.1016/j.chb.2006.05.006>
- Liébana-Cabanillas, F., Singh, N., Kalinic, Z., & Carvajal-Trujillo, E. (2021). Examining the determinants of continuance intention to use and the moderating effect of the gender and age of users of NFC mobile payments: A multi-analytical approach. *Information Technology and Management*, 22, 133-161. <https://link.springer.com/article/10.1007/s10799-021-00328-6>
- Liu, Y., Luo, J., & Zhang, L. (2021). The effects of mobile payment on consumer behavior. *Journal of Consumer Behaviour*, 20(3), 512-520. <https://onlinelibrary.wiley.com/doi/abs/10.1002/cb.1880>

- Marinković, V., Đorđević, A., & Kalinić, Z. (2020). The moderating effects of gender on customer satisfaction and continuance intention in mobile commerce: a UTAUT-based perspective. *Technology Analysis & Strategic Management*, 32(3), 306-318. <https://doi.org/10.1080/09537325.2019.1655537>
- Matiza, T. (2020). Post-COVID-19 crisis travel behaviour: Towards mitigating the effects of perceived risk. *Journal of Tourism Futures*, 8(1), 99-108. <https://www.emerald.com/insight/content/doi/10.1108/JTF-04-2020-0063/full/>
- Musyaffi, A. M., Sari, D. A. P., & Respati, D. K. (2021). Understanding of digital payment usage during COVID-19 pandemic: A study of UTAUT Extension Model in Indonesia. *The Journal of Asian Finance, Economics and Business*, 8(6), 475-482. <https://www.koreascience.or.kr/article/JAKO202115563442861.page>
- Nand, S., Pitafi, A. H., Kanwal, S., Pitafi, A., & Rasheed, M. I. (2020). Understanding the academic learning of university students using smartphone: Evidence from Pakistan. *Journal of Public Affairs*, 20(1), e1976. <https://doi.org/10.1002/pa.1976>
- Narteh, B., Mahmoud, M. A., & Amoh, S. (2017). Customer behavioural intentions towards mobile money services adoption in Ghana. *The Service Industries Journal*, 37(7-8), 426-447. <https://doi.org/10.1080/02642069.2017.1331435>
- Phuong, N. N. D., Luan, L. T., Dong, V. V., & Khanh, N. L. N. (2020). Examining customers' continuance intentions towards e-wallet usage: The emergence of mobile payment acceptance in Vietnam. *The Journal of Asian Finance, Economics and Business*, 7(9), 505-516. <https://www.koreascience.or.kr/article/JAKO202026061031375.page>
- Pietrucha, J., & Maciejewski, G. (2020). Precautionary demand for cash and perceived risk of electronic payments. *Sustainability*, 12(19), 7977. <https://doi.org/10.3390/su12197977>
- Purohit, S., Arora, R., & Paul, J. (2022). The bright side of online consumer behavior: Continuance intention for mobile payments. *Journal of Consumer Behaviour*, 21(3), 523-542. <https://onlinelibrary.wiley.com/doi/abs/10.1002/cb.2017>
- Rezaei, S., & Valaei, N. (2017). Crafting experiential value via smartphone apps channel. *Marketing Intelligence & Planning*, 35(5), 688-702. <https://www.emerald.com/insight/content/doi/10.1108/MIP-08-2016-0141/full/html>
- Sahi, A. M., Khalid, H., Abbas, A. F., & Khatib, S. F. (2021). The evolving research of customer adoption of digital payment: Learning from content and statistical analysis of the literature. *Journal of Open Innovation: Technology, Market, and Complexity*, 7(4), 230. <https://www.sciencedirect.com/science/article/pii/S2199853122001706>
- San Martín, H., & Herrero, Á. (2012). Influence of the user's psychological factors on the online purchase intention in rural tourism: Integrating innovativeness to the UTAUT framework. *Tourism management*, 33(2), 341-350. <https://www.sciencedirect.com/science/article/pii/S0261517711000975>
- Shao, Z., Zhang, L., Li, X., & Guo, Y. (2019). Antecedents of trust and continuance intention in mobile payment platforms: The moderating effect of gender. *Electronic Commerce Research and Applications*, 33, 100823. <https://doi.org/10.1016/j.elerap.2018.100823>

- Sarwar, M. A., Nasir, J., Sarwar, B., Hussain, M., & Abbas, A. (2023). An investigation of precursors of online impulse buying and its effects on purchase regret: Role of consumer innovation. *International Journal of Innovation Science*. <https://doi.org/10.1108/ijis-12-2022-0244>
- Sarwar, B., Sarwar, A., Mugahed Al-Rahmi, W., Almogren, A. S., Salloum, S., & Habes, M. (2023). Social Media paradox: Utilizing social media technology for creating better value for better social outcomes: Case of developing countries. *Cogent Business & Management*, 10(2). <https://doi.org/10.1080/23311975.2023.2210888>
- Sarwar, M. A., Awang, Z., Habib, M. D., Nasir, J., & Hussain, M. (2020). Why did I buy this? purchase regret and repeat purchase intentions: A model and empirical application. *Journal of Public Affairs*, 22(1). <https://doi.org/10.1002/pa.2357>
- Nasir, J., Ibrahim, R. M., Sarwar, M. A., Sarwar, B., Al-Rahmi, W. M., Alturise, F., Samed Al-Adwan, A., & Uddin, M. (2022). The effects of transformational leadership, organizational innovation, work stressors, and creativity on employee performance in smes. *Frontiers in Psychology*, 13. <https://doi.org/10.3389/fpsyg.2022.772104>
- Sleiman, K. A. A., Jin, W., Juanli, L., Lei, H. Z., Cheng, J., Ouyang, Y., & Rong, W. (2022). The factors of continuance intention to use mobile payments in Sudan. *SAGE Open*, 12(3), 21582440221114333. <https://doi.org/10.1177/21582440221114333>
- Susanto, P., Hoque, M. E., Hashim, N. M. H. N., Shah, N. U., & Alam, M. N. A. (2020). Moderating effects of perceived risk on the determinants–outcome nexus of e-money behaviour. *International Journal of Emerging Markets*, 17(2), 530-549. <https://www.emerald.com/insight/content/doi/10.1108/IJOEM-05-2019-0382/full/www.https://bizfluent.com>
- Talwar, S., Dhir, A., Khalil, A., Mohan, G., & Islam, A. N. (2020). Point of adoption and beyond. Initial trust and mobile-payment continuation intention. *Journal of Retailing and Consumer Services*, 55, 102086. <https://doi.org/10.1016/j.jretconser.2020.102086>
- Tam, C., Santos, D., & Oliveira, T. (2020). Exploring the influential factors of continuance intention to use mobile Apps: Extending the expectation confirmation model. *Information Systems Frontiers*, 22, 243-257. <https://link.springer.com/article/10.1007/s10796-018-9864-5>
- Tamilmani, K., Rana, N. P., Wamba, S. F., & Dwivedi, R. (2021). The extended Unified Theory of Acceptance and Use of Technology (UTAUT2): A systematic literature review and theory evaluation. *International Journal of Information Management*, 57, 102269. <https://www.sciencedirect.com/science/article/pii/S0268401220314687>
- Vatsa, V., & Agarwal, B. (2022). Factors impacting adoption and continuous use of contactless digital payments in the new normal. *International Journal of Electronic Finance*, 11(4), 317-344. <https://www.inderscienceonline.com/doi/abs/10.1504/IJEF.2022.126481>
- Venkatesh, V., Thong, J. Y., & Xu, X. (2012). Consumer acceptance and use of information technology: extending the unified theory of acceptance and use of technology. *MIS quarterly*, 157-178. <https://www.jstor.org/stable/41410412>

- Yuan, S., Liu, Y., Yao, R., & Liu, J. (2016). An investigation of users' continuance intention towards mobile banking in China. *Information Development*, 32(1), 20-34. <https://doi.org/10.1177/0266666914522140>
- Zhou, T. (2013). An empirical examination of continuance intention of mobile payment services. *Decision support systems*, 54(2), 1085-1091. <https://www.sciencedirect.com/science/article/pii/S0167923612002898>
- Zhou, T. (2014). Understanding the determinants of mobile payment continuance usage. *Industrial Management & Data Systems*, 114(6), 936-948. <https://www.emerald.com/insight/content/doi/10.1108/IMDS-02-2014-0068/full/html>
- Zubair, A., Baharun, R., Kiran, F., & Abro, M. A. (2022). Understanding the Airbnb user continuation intention: The moderating role of perceived risk. *Frontiers in Psychology*, 13, 929060. <https://doi.org/10.3389/fpsyg.2022.929060>