

Factor Influencing Consumers' Behavioural Intention towards the Adoption of Mobile Payment in Saudi Arabia

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Abstract

This study aims to find out various factors affecting the Attitude towards using Mobile-payment and to propose a conceptual framework showing the relationship between independent, mediating and dependent variables on the basis of an in-depth literature review and validate it through empirical analysis.

A systematic review of various research was done on mobile payments by collecting, reviewing and synthesizing studies that related to mobile payments published and accessible. SPSS v.20 was used for all analyses. With the help of Regression analysis the proposed conceptual model and hypotheses were tested.

The findings of the study indicate that ATUMP is a significant factor in relation to behavioral intention to use mobile payments. This study provides new and important information about the factors affecting the spread of mobile payment services in Saudi Arabia

Key words: M-payment, Regression Analysis, KSA, Perceived Risk, Observeability

Introduction:

Financial services are just one of several industries that have benefited from the widespread adoption of internet and smartphone technology. This service alters the way people handle their money, beginning with the ease of online buying. Payments made via mobile devices are increasingly made using specialized apps downloaded onto cellphones. Users are able to buy and sell products and services from virtually anywhere with just their mobile phones and this service. Technology adoption can happen at any moment and in any place. The survival of businesses depends on their ability to participate in the introduction of cutting-edge technologies.

Payments made via a mobile device using QR codes, near-field communications (NFC), one-time passwords (OTPs), and other forms of digital media eliminate the need for physical cash. For every mobile payment transaction, the user must maintain digital funds in an electronic wallet (Qi et al., 2020). The internet has revolutionized nearly

every industry in today's economy, making digital disruption the norm. All emerging digital platforms are vehicles for the distribution of data, goods, and money. Mobile devices are used to conduct the transaction without the need of currency or the assistance of a financial institution (Shankar & Rishi, 2020; Agusta, Joshua Widjaja, 2018).

Research into user attitudes toward adopting new technology has been conducted in a number of different ways. Several elements are regarded to impact people's inclination to adopt specific technologies, based on the evolution of prior models. Expectations of performance and effort, as well as the availability of favorable environmental and social influences, are among these elements.

In a number of different nations, people's attitudes toward using mobile payment services have been the subject of research studies (Ting et al., 2016; Patil et al., 2020). In a few studies, researchers examine what aspects influence Behavioral Intention to use a specific technology.

Through an in-depth literature review and subsequent empirical validation, this study seeks to identify a number of factors that influence Attitude toward adopting M-payment and to provide a conceptual framework illustrating the link between independent, mediating, and dependent variables.

Literature Review

Literature reviews based on scholarly journals and articles by other researchers are included here, along with discussions of pertinent theoretical models, frameworks, and hypotheses, to learn about the previous research and contributions made to the field of mobile payment studies among the intended audience.

Mobile Payment

Mobile payments encompass any form of monetary transaction conducted over a mobile device, be it via voice, text, or Near Field Communication (NFC). As a result of mobile payments, mobile devices are now being used as digital wallets in place of traditional payment methods. Several research agree that the mobile devices used for payment and the payment function and the transfer of

currency are the two most important factors in defining mobile payment (Dahlberget al., 2008). The most notable variations are the stages of the payment process—the initiation, the authorisation, and the confirmation—and the manner in which mobile payments are implemented using wireless or other communication technologies. Payment for goods, services, bills, and invoices can now be made through mobile device. An electronic payment model is one that is implemented through a mobile device (Humphrey et al., 1996). He et al. (2006) found that the use of mobile payments has significantly increased the volume of both local and international business transactions. Mobile payment's rising popularity is due in large part to the fact that it may be used in a variety of situations and requires nothing in the way of setup (Lee, 2009). When consumers link their mobile devices to the Internet and take advantage of communication technologies, they are able to make payments utilizing this specialized kind of electronic payment known as mobile payment (Dahlberget al., 2008). Smartphone adoption in Saudi Arabia has skyrocketed in recent years. The number of Saudis who own smartphones has climbed from 19 million in 2015 to 21 million in 2018, as reported by Jarvenpaa and Lang (2005). Due to the widespread adoption of smartphones and the development of innovative solutions, mobile payment is predicted to grow in popularity over time.

Development of a Behavioural Intention

As defined by Davis (1989), Behavioral Intention (BI) quantifies the likelihood that a consumer will make a future purchase or make use of a service. Numerous research have been conducted to determine what aspects of modern technology usage are most influential. If an individual believes that utilizing IT inside their information systems will boost their productivity at work, they are more likely to do so.

Performance Expectancy

The term "performance expectation" (PE) is used to describe a person's level of confidence that using a piece of technology will improve their efficiency and productivity (Venkatesh et al., 2012). For the purposes of this investigation, making financial transactions via mobile

payment is an attractive option. The widespread availability of smartphones also means that people can easily have access to mobile payment services (Slade et al., 2015). Adoption is hence likely to be influenced by increased economic rewards, convenience, and satisfaction.

An individual's "performance expectation" is their confidence that adopting the system would lead to better results in their work (Venkatesh et al., 2003). When people see that mobile payment systems improve their ability to transact or manage their finances, they will adopt them. The intent to employ mobile payment technology requires a description of the expected performance. Jung et al., (2020) has demonstrated that Performance Expectancy strongly influences the Behavioral Intention to employ particular technologies.

H1 Performance Expectancy (PE) expressively stimulates the ATUMP solutions.

Effort Expectancy

Consumers' "Effort Expectancy" (EE) measures how simple they anticipate technology to be to use (Venkatesh et al., 2012). Users' expectations that a system will be straightforward and trouble-free are known as "Effort Expectancy" (Venkatesh et al., 2003). People imagine that using an IT system would need no work on their part. The more intuitive and user-friendly mobile payment systems are, the more likely they are to be widely adopted by consumers (Al-Saedi et al., 2020). However, due to the nature of mobile payment systems, they call for a particular level of expertise and familiarity. Therefore, user effort anticipation may play a significant role in determining whether or not they are willing to adopt such technology (Alalwan et al., 2017). In addition, many studies have found that the level of effort expected to use M-payments is a major influence in whether or not people really use them (Al-Saedi et al., 2020). In light of the foregoing,

H2 Effort Expectancy (EE) expressively stimulates the ATUMP solutions.

Social Influence

Venkatesh et al. (2012) stated that One's level of social influence (SI) refers to how much consideration one gives

to the thoughts and feelings of those closest to them when making technological decisions. According to a study by Dawi et al. (2013), users who belong to the same social group are more inclined to connect with one another and share their stories about the services they've used. When people in a certain social group talk to one another about their experiences using a service, it can increase both the knowledge of the service and the desire to use it among the group's members.

The adoption and use of mobile payment systems can be influenced by social influences if enough individuals have the same opinion that the technology is valuable (Nassar et al., 2019). A person's assessment of whether or not they should implement a behavior based on the views and expectations of influential references is a key component of social influence. Alshehri, Rutter, & Smith, (2019) has demonstrated that social influences have a major effect on people's attitudes toward adopting new technology.

H3: Social Influence (SI) expressively stimulates the ATUMP solutions.

Facilitating Conditions

Individuals' awareness of the tools and help they have at their disposal to complete a task is referred to as "Facilitating Conditions" (FC) (Venkatesh et al., 2012). As was previously indicated, the ability to make mobile payments depends on having a compatible device and access to support services. Therefore, if users are convinced, they are more likely to implement mobile payment into their routines, provided they have access to a certain amount of support and resources, and if the mobile payment systems they use are compatible with the other technology they already employ (Oliveira, 2016).

Perceived availability and accessibility of resources and social backing for a given conduct (Venkatesh et al., 2003) are examples of Facilitating Conditions. The person has faith that the necessary technology infrastructure exists to facilitate widespread implementation of the system. People are more likely to embrace new technologies if they are confident in their availability and accessibility (Oliveira et al., 2016). Patil et al. (2020) revealed that Facilitating Conditions greatly affect the attitude toward utilizing a

given technology. As a result, we can form the following hypothesis:

H4: Facilitating Conditions (FC) expressively stimulates the ATUMP solutions.

Trust/Trustworthiness

After researching the company thoroughly, consumers develop trust in them as a trustworthy vendor. Honesty, dependability, kindness, and dependability are all components of trust (Pavlou, 2003). The level of trust that individuals have in the security of mobile payment systems is defined. Since mobile payment systems are still relatively new, users understandably have concerns about privacy and security (Septiani, Handayani, & Azzahro, 2017). Most mobile commerce takes place online, where there is no opportunity for a personal connection between the customer and vendor. Buyers are worried that the vendor may take advantage of them financially or with their personal data (Septiani et al., 2017). Therefore, consumers may be hesitant to make purchases from internet vendors due to their inherent suspicions and misgivings. Trust has been shown to have a beneficial effect on one's outlook on adopting a new technological system (Al-Saedi et al., 2020).

Demircan and Ceylan (2003) defined trust as the willingness to put faith in another person, an event, or an object in the face of uncertainty in order to accomplish a goal. Researchers Kim et al. (2010) and Mallat (2007) investigated consumers' trust in mobile payment systems as a means of determining whether or not they would adopt the technology. The research found that customers lacked trust in mobile payment due to the unknowns and operational difficulties. It was discovered that distrust is a significant barrier to mobile payment system acceptance and intent to use. Using a sample from a developing market, Hiram et al. (2016) looked into how different ethnic groups' attitudes about mobile payment varied. This research drew on the theory of planned behavior and used trust as an antecedent to predict people's propensity to use mobile payment. Researchers found that trust significantly affects whether or not people plan to use mobile payments. This study suggests that, notwithstanding the divergent findings of prior research on trust;

H5 Trust/ Trustworthiness expressively stimulates the ATUMP solutions.

Observe ability:

The "observability" of an innovation is defined as the simplicity with which its results can be seen by others (E.M. Rogers 1995). According to Chakravarty and Dubinsky (2005), skepticism and slow acceptance are risks associated with innovations that are difficult to monitor. Therefore, a service innovation needs to grab the attention of its intended audience so that its intended audience can learn about the service. Based on this research, we recommend that Hypotheses be:

H6 Observeability (Observ) expressively stimulates the ATUMP solutions.

Perceived Risk

Perceived risk was consistently shown as a barrier to adoption of new technologies (Slade et al., 2015). Furthermore, as described by Lee and Chung (2009), the word perceived risk is comprised of five factors: privacy/security performance, time, financial and social. Previous studies have found that consumers' unwillingness to take risks is a major impediment to the widespread adoption of mobile payments (Al-Saedi et al., 2020).

Kabir (2013) states that losses due to bugs or failures of mobile payment services constitute performance risk. The term "security risk" refers to the possibility of financial loss due to fraudulent activity or a hacker breaching a mobile banking user's security. Loss of money due to clerical mistakes or fraudulent usage of a bank account is an example of financial risk.

H7 Perceived Risk (PR) expressively stimulates the ATUMP solutions.

Attitude towards using M-Payment (ATUMP)

Mobile payment was studied from a worldwide perspective by Liébana Cabanillas et al., (2014). Attitude was revealed to be a crucial factor in predicting mobile payment uptake. Attitude, as defined by Küçük (2012), is a person's inclination or propensity to feel a certain way about a thing, an idea, or a way of behaving. Intention to adopt the new technology was found to be strongly correlated with one's

attitude toward it. The study found a substantial, favorable, and statistically significant link between attitude and intention to use (Kalkan, 2011). The outlook was seen as a robust predictor of additional variables. Empirical results (Da tan&Gürler, 2016) showed that people's trust, mobility, and attitudes all play a role in whether or not they use mobile payment systems.

H8 Attitude towards using M-payment (ATUMP) has vital impact on Behavioural intention to use M-Payment (BIUMP).

Research Objectives

This study aims to suggest how using of mobile payments changing the consumer's payment habits and spending patterns in Saudi Arabia.

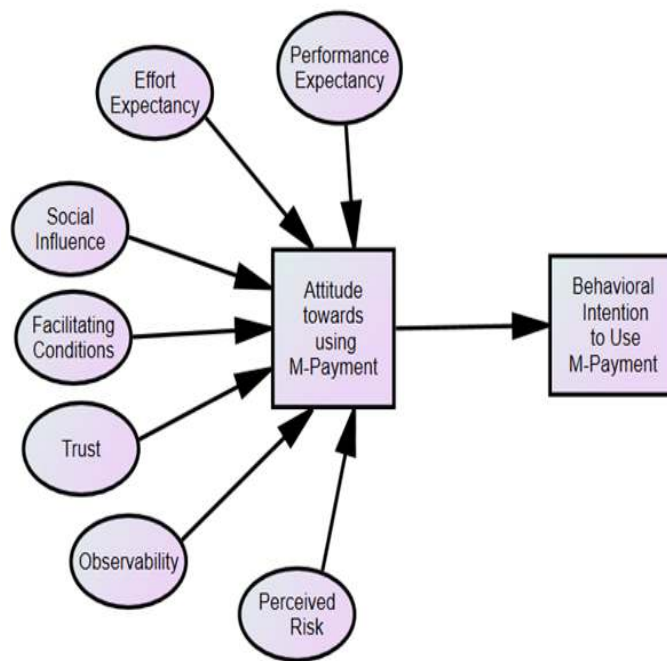
The key objectives of the study undertaken:

- (i) To find out various factors affecting the Attitude towards using M-payment like M-wallets by consumers
- (ii) To assess the Attitude towards using M-payment as a mediating variable influencing the consumers' Behavioural intention to use M-payment
- (iii) To propose a conceptual framework showing the relationship between independent, mediating and dependent variables on the basis of in-depth literature review and validate it through empirical analysis

Proposed Framework

The proposed model includes and represents the relationship between seven influencing or independent factors as Performance Expectancy (PE); Effort Expectancy (EE); Social Influence (SI); Facilitating Conditions (FC); Trust/ Trustworthiness; Observability (Observ) and Perceived Risk (PR), one mediating variable Attitude towards using M-Payment (ATUMP) and Behavioural intention to use M-Payment (BIUMP) as dependent variable (Figure 1).

Figure 1: Proposed Framework showing the relationship of factors influencing the attitude towards using M-Payment and Behavioural Intention to use M-Payment.



Research Methodology

This research utilized both descriptive and causal comparative research designs. Descriptive research design was employed to recognize and clarify the factors that influence the Attitude towards using M-Payment (Figure 1). In contrast, causal comparative research design is applied to investigate how variables affect the adoption of mobile payments and, consequently, how this adoption influences Consumers' Behavioural Intention towards the Adoption of Mobile Payment.

Data collection

The study was carried out in Saudi Arabia. The study regions are located in the north-west of Riyadh. This research is founded on a questionnaire survey encompassing details such as age, gender, education level, and more in the first section. The second section is comprised of statements rated on a five-point Likert scale. These statements pertain to various factors selected for the

study. It's worth noting that all of these statements have been borrowed from prior literature and adapted as necessary for this study. A total of 579 duly-filled questionnaires were obtained.

Statistical Analysis

Descriptive analysis, Exploratory factor analysis, Correlational analysis, Regression analysis, were used in the present study. The descriptive analysis will provide insights into how common a phenomenon is within a particular population, as indicated by specific metrics (Loeb et al., 2017; Kusuma et al., 2022; Min, 2024; Na, 2024). EFA aims to uncover the fundamental relationships between variables by condensing a large number of variables into a more concise set of factors or dimensions. It's possible that each observed variable relates to multiple factors, and the main goal is to identify how observed variables are associated with these factors. Variables that display strong correlations are likely affected by the same factor, whereas those with weaker correlations are probably influenced by different factors (Coni et al., 2019). Correlation analysis is used to find the extent of association

between the variables used and tells the closeness of one related variable to another (Senthilnathan, 2019). However, it is not useful in identifying causal relationship. For this regression analysis is used where one can ascertain the causal effect of one variable upon another (Sykes, 1993). A p-value of 0.05 was regarded as significant for all statistical tests.

Results

Descriptive Statistics

Responses were analyzed for their demographic information using descriptive demographic data in terms of frequency of occurrence and percentage proportion. Table 1 summarizes the socio-demographic characteristics of the participants. Among the 579 respondents, noticeably more males (340, 58.7%) participated than the females (239, 41.3%); mostly were in the age group of 31-40 years (170, 29.4%), and 246 (42.5%) were studied upto Professional level and 71(12.3%) were having bachelors degree.

Table 1 : Responder Profile

		Frequency	Valid%
Gender profile	Female	239	41.3%
	Male	340	58.7%
Age profile	20-30 years	77	13.3%
	31-40 years	170	29.4%
	41-50 years	106	18.3%
	51-60 years	140	24.2%
	Above 60 years	86	14.9%
Highest education level	Bachelor Degree	71	12.3%
	Master Degree	156	26.8 %
	Professional Education	246	42.5%
	Other	106	18.4%

Exploratory Factor Analysis

For conforming constructs, the Exploratory Factor Analysis (EFA) was conducted using the PCA approach. A carefully considered parameter was used to authenticate the factor loadings, measuring factor loadings larger than >0.30 as deserving to meet the minimum level and >0.40 as

more noteworthy. In contrast, factor loadings of 0.50 or greater are considered to be highly significant. A factor loading of 0.50 or above has been set as the cut-off for the current investigation.

The factor analysis results show that Table No. 2 is appropriate for the data collected.

Table2: Results of Exploratory Factor Analysis

Variable	Statement	Factor loadings	KMO Measure of Sample Adequacy (>0.5)	Bartlett's Test of Sphericity		Items confirmed	Items dropped	Cum % of loading
				Chi Square	Sig. (<.10)			
Performance Expectancy (PE)	PE1	.905	.737	920.984	0.000	4	1	55.057
	PE2	.764						
	PE3	.678						
	PE 4	.419						
	PE5	.846						
Effort Expectancy (EE)	EE1	.775	.750	441.812	0.000	4	1	45.690
	EE2	.807						
	EE3	.122						
	EE4	.738						
	EE5	.687						
Social Influence (SI)	SI1	.198	.859	2129.956	0.000	4	1	70.780
	SI2	.924						
	SI3	.941						
	SI4	.948						
	SI5	.928						
Facilitating Conditions (FC)	FC1	.852	.749	548.834	0.000	4	0	59.113
	FC2	.809						
	FC3	.576						
	FC4	.808						
Trust	Trust1	.948	.714	5816.280	0.000	5	0	89.823
	Trust2	.943						
	Trust3	.949						
	Trust4	.955						
	Trust5	.945						
Observability (Observ)	Observ1	.885	.826	1670.767	0.000	5	0	71.540
	Observ2	.904						
	Observ3	.879						
	Observ4	.823						
	Observ5	.726						
Perceived Risk (PR)	PR1	.626	.674	1197.966	0.000	4	0	67.973
	PR2	.856						
	PR3	.937						
	PR4	.846						
Behav. intention to use M-Payment (BIUMP)	BIUMP1	.855	.813	843.890	0.000	4	0	69.160
	BIUMP2	.853						
	BIUMP3	.773						
	BIUMP4	.842						
Attitude towards using M- Payment (ATUMP)	ATUMP1	.852	.889	1365.649	0.000	5	0	70.339
	ATUMP2	.870						
	ATUMP3	.790						
	ATUMP4	.857						
	ATUMP5	.822						

Reliability Analysis

The reliability test in this study is conducted using the Cronbach Alpha method, which serves as a measurement tool to assess the reliability of results for each variable. This method can be used to get rid of inappropriate variables from the study model. Hoang and Chu's (2008) suggestion is that the scale for Cronbach's Alpha coefficients or the permissible alpha value is as follows: the accepted cut-off

for evaluation is 0.60 or higher. Usability and internal consistency are both determined by the range of 0.7 to 0.8. The results of reliability test are given in Table 3.

It was found to be greater than the cut-off value of 0.70 and to be within the acceptable range, the study adopted a Cronbach's alpha cut-off value of 0.7. This shows that any definitional scale satisfies the dependability requirements (Hoang & Chu, 2008).

Table 3 : Results of Reliability test

Variable	Cronbach alpha
Performance Expectancy	0.781
Effort Expectancy	0.747
Social Influence	0.862
Facilitating Conditions	0.753
Trust	0.971
Observability	0.900
Perceived Risk	0.842
Behav. intention to use M-Payment (BIUMP)	0.851
Attitude towards using M-Payment (ATUMP)	0.894

Correlation Analysis

After the EFA and reliability analysis, the mean value is appropriately scaled, and controlled variables are coded for correlation analysis. When analyzing the connection between quantitative data, Pearson's correlation coefficient (r) is utilized to look at the linear relationship between components. Different statistics may be employed to investigate the relationship between the variables because all correlations between dependent and independent variables exhibit statistical significance. The correlation coefficient values further confirm that the multicollinearity problem is not present.

If there is a strong correlation between the dependent and independent variables, it is possible to use them in a linear regression analysis. The absolute value of r's magnitude tells us how rigid a linear relationship is. The stronger the relationship between the two variables, and vice versa, the closer r is to 1.

According to table 4, the independent variable and dependent variables were discovered to be significantly correlated with one another among all the factors taken into account. The OB and ATMP variables showed the highest level of association (0.938), while BIUMP and EE showed the least significant correlation (.560).

Table 4: Correlations analysis

	PE	EE	SI	FC	TR	OB	PR	ATMP	BIUMP
PE	1								
EE	.752**	1							
SI	.909**	.832**	1						
FC	.872**	.807**	.903**	1					

	PE	EE	SI	FC	TR	OB	PR	ATMP	BIUMP
TR	.869**	.808**	.910**	.832**	1				
OB	.867**	.819**	.928**	.849**	.946**	1			
PR	.884**	.763**	.917**	.866**	.883**	.890**	1		
ATMP	.866**	.825**	.904**	.869**	.912**	.938**	.873**	1	
BIUMP	.798**	.560**	.671**	.657**	.643**	.644**	.675**	.650**	1
**. Correlation is significant at the 0.01 level (2-tailed).									

Regression Analysis

After doing a coefficient analysis, the researcher uses linear regression analysis and a significant level of 5% to test hypotheses, establish the statistical validity of the model assumption, and determine the impact of independent variables on dependent variables. Cronbach's Alpha was utilized to evaluate the study instrument's reliability, and factors analysis was employed to conduct validity testing. Linear Regression analysis was utilized to identify the predictor-criterion link between the dependent and independent variables.

Regression summary for dependent variables: Attitude toward using M-Payment (ATUMP) is shown in Table 5a to be a significantly influenced by predictor independent variables EF, PE, FC, SI, TR, and PR to the extent of roughly 90.5%. Similarly, Behavioural intention to adopt Mobile Payment (BIUMP) in Saudi Arabia is shown in Table 5a to be a significantly influenced by mediating variable Attitude toward using M-Payment (ATUMP) using step-wise regression analysis to the extent of roughly 94.4%.

Table 5a: Model Summary

Model	Predictors	Dependent variable	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	PE, EE, SI, FC, TR, OB, PR	ATUMP	.951 ^a	.905	.904	.255
2	ATUMP	BIUMP	.972 ^a	.944	.944	.189

The results of the ANOVA in Table 5b for the regression model, show validation at a 95% confidence level.

Table 5b: ANOVA

Model	Predictors	Dependent variable	Sum of Squares	df	Mean Square	F	Sig.
1	PE, EE, SI, FC, TR, OB, PR	ATUMP	302.766	7	43.252	665.883	.000 ^b
2	ATUMP	BIUMP	298.750	1	298.750	8401.212	.000 ^b

Table 5c: Regression coefficients table for dependent variables

Predictors	Dependent variable	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error			
PE	ATUMP	.089	.036	.091	2.460	.014
EE	ATUMP	.113	.030	.102	3.770	.000
SI	ATUMP	.074	.046	.086	1.616	.007
FC	ATUMP	.195	.037	.188	5.281	.000

Predictors	Dependent variable	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
Trust	ATUMP	.101	.039	.120	2.591	.010
OB	ATUMP	.524	.048	.553	10.951	.000
PR	ATUMP	-.074	.046	-.086	-1.616	.107
ATUMP	BIUMP	.945	.010	.972	91.658	.000

The table 5c shows that the regression model is statistically significant (F-statistic = 8401.212, $p < 0.001$). This means that the model as a whole is a good fit for the data. The table also shows that all of the predictor variables are statistically significant ($p < 0.05$). This means that all of the predictor variables are making a significant contribution to the model. The standardized coefficients (Beta) can be used to compare the relative importance of the predictor variables. The standardized coefficient for ATUMP is the highest (0.972), which means that ATUMP is the most important predictor of BIUMP. Overall, the regression results suggest that ATUMP is a valuable predictor of BIUMP. According to the coefficient summary in Table 5c, the factor's beta values are 0.972 and 0.553 which are essentially typical of the impact on BIUMP by ATUMP and on ATUMP by OB.

Customers' Attitude towards using M-Payment (ATUMP) as dependent variable

The result can be seen in Table 5C of the coefficients that PE, EE, SI, FC, Trust and OB have beta coefficients of 0.091, 0.102, 0.086, 0.188, 0.120 and 0.553. This shows that PE, EE, SI, FC, Trust and OB contribute to the prediction of the customers attitude towards using M-Payment (ATUMP) in Saudi Arabia. This is also an indication that the ATUMP is dependent on PE, EE, SI, FC,

Trust and OB as proposed by the study. A 9.1%, 10.2%, 8.6%, 18.8%, 12% and 55.3% change in the PE, EE, SI, FC, Trust and OB will result in 9.1%, 10.2%, 8.6%, 18.8%, 12% and 55.3% change respectively in the intention to customers attitude towards using M-Payment (ATUMP).

Observability (OB) has a coefficient value of 0.553 and a significance level of 0.000. It follows that OB significantly influences and predicts customers' attitudes toward making M-Payments. Therefore, Observability (OB) contributes 55.3% to the variance explanation of the dependent variable, i.e., ATUMP, after controlling for the variance explained by all other variables in the model.

This suggests that customers' expectations of how mobile payments should function have a significant role in shaping their propensity to use M-Payment systems (ATUMP). However, the beta value for perceived risk (PR) is -0.086 and the p-value for PR is 0.107. Customers' ATUMP (attitude toward using M-Payment) is negatively impacted by their perception of risk. As a result, the ATUMP drops by 8.6 percentage points for every one point rise in perceived risk.

Results of Hypotheses Testing

Eight initial hypotheses were put out for the conceptual research framework, and as can be seen in table 8, in which two are rejected and remaining six were ultimately approved.

Table 8: Summary of Hypotheses Testing

Hy. No.	Independent Variables	Dependent Variables	R-Square	Beta Coefficient	t-value	Sig Value	Status of Hypotheses
H1	Performance Expectancy(PE)	ATUMP	.905	.091	2.460	.014	Accepted
H2	Effort Expectancy(EE)	ATUMP		.102	3.770	.000	Accepted
H3	Social Influence(SI)	ATUMP		.086	1.616	.007	Accepted
H4	Facilitating Conditions(FC)	ATUMP		.188	5.281	.000	Accepted
H5	Trust	ATUMP		.120	2.591	.010	Accepted
H6	Observability(OB)	ATUMP		.553	10.951	.000	Accepted
H7	Perceived Risk(PR)	ATUMP		-.086	-1.616	.107	Rejected
H8	Attitude towards using M-Payment (ATUMP)	BIUMP	.944	.972	91.658	.000	Accepted

Discussion

In the pursuit of consumers' behavioural intention to adopt mobile payment, especially in developed nation like Saudi Arabia, it is crucial to carefully incorporate factors such as EF, PE, FC, SI, TR, and PR into mobile payment products and marketing campaigns. The findings demonstrate that factors including EF, PE, FC, SI, TR, and PR significantly influence consumers' behavioural intention to adopt mobile payment. Based on the factor analysis results, it is recommended that m-payment systems be designed to be easy to use, secure, and trustworthy. Additionally, it is important to promote the benefits such as quick speed and convenience of m-payment to potential users and to make it easy for them to learn how to use it (Chen & Lai, 2023).

As all but one (perceived risk) the dependent variables were positively correlated with behavioral intention to use M-payment indicating that M-payment users are likely to be people who have a positive attitude towards M-payment. Another interesting finding is the strong correlation between effort expectancy and behavioral intention to use M-payment. This suggests that users are more likely to use M-payment if they believe that it will be easy to use. This is consistent with the theory of diffusion of innovations, which posits that one of the key factors that determines whether or not an innovation is adopted is its perceived ease of use (Yunus, 2014; Aizstrauta et al., 2015). Feeling comfortable to use a new technology is also essential and has been consistently found to be a strong predictor for positive behavioral intention to use M-payment (Duane et al., 2014; Chandra et al., 2010). In the present study, trust was found to have strong correlation with the Attitude toward using M-Payment (ATUMP) this is because users need to believe that M-payment systems are secure and that their personal information will be protected.

The negative correlation between perceived risk and behavioral intention to use M-payment is also consistent with previous research. This is because users are less likely to use a technology if they perceive it to be risky. M-payment providers can reduce perceived risk by providing users with information about the security measures that are in place and by making it easy for users to resolve any problems that they may encounter.

On the other hand, users who perceive M-payment to be risky are less likely to use it. This is because perceived risk is negatively correlated with behavioral intention to use M-payment. Risk associated with M-payments was found to be a determining factor by Duane et al. (2014) where safety and reliability was the most important factor in deciding whether people will make M-payments or not even if they find it useful and easy. Hence, it is important that M-payment systems should be designed in a way that minimizes perceived risk. This could be done by providing users with information about the security measures that are in place and by making it easy for users to resolve any problems that they may encounter.

Behavioural intention to use M-Payment (BIUMP) as dependent variable

Customers' ATUMP has a coefficient value of 0.972, with a significance level of 0.000. Behavioural intention to use M-Payment (BIUMP) can be accurately predicted by ATUMP, indicating a favorable and significant impact. This means that 97.2% of the variation in BIUMP can be attributed to ATUMP. This suggests that attitudes toward mobile payment usability (ATUMP) play a significant role in influencing people's intentions to make use of mobile payments (BIUMP). The findings corroborate those of Abebe and Lessa (2020), who found that a beta value of 0.522 for attitude was statistically significant ($p > 0.05$). Research into what factors influence Indian consumers' willingness to adopt new payment methods found support for the conclusion.

Conclusion

The goal of this research was to determine the factors affecting the behavioral intention to use mobile payments in Saudi Arabia. In this study, the conceptual model based on seven independent variables and one mediating variable influencing the dependent variable i.e. behavioural intention to use mobile payments (BIUMP) was proposed.

According to the findings of this investigation, the factors that influence the Attitude towards using M-payment (ATUMP) are Performance Expectancy (PE); Effort Expectancy (EE); Social Influence (SI); Facilitating Conditions (FC); Trust/ Trustworthiness; Observeability

(Observ) and Perceived Risk (PR). There is one variable i.e. Observeability (Observ) that has a high enough influence on Attitude towards using M-payment (ATUMP), which contributes 55.3% to the variance explanation of ATUMP followed by Facilitating Conditions(FC) contributing 18.8% to the variance explanation of ATUMP. While Perceived Risk(PR) has negative impact on ATUMP.

The findings of the study indicate that ATUMP is a significant factor in relation to BIUMP (behavioral intention to use mobile payments). The positive correlation shown between the two variables lends credence to the study's central hypothesis. As a result, it is intended that Saudi Arabia's mobile payment services will introduce novel elements to the country's existing payment infrastructure, giving consumers more flexibility in how they choose to make purchases. In conclusion, this study provides new and important information about the factors affecting the spread of mobile payment services in Saudi Arabia.

Study Limitations: The timing of data collection was staggered on purpose to reduce participant stress. One drawback of this method is that it limits the scope of any potential cross-analysis between various inventories because not all respondents can be polled.

Despite accomplishing a number of its goals, this study has some serious drawbacks. The primary problem is that the sample size is small to draw any firm conclusions from the study. However, the study's sample size was also affected by respondents' reluctance to take part in the survey and their refusal to answer some questions. In addition, only Saudi Arabians were included in the analysis; data from other countries or areas was disregarded. Therefore, it may be contentious to extrapolate the study's findings to claim that all clients use mobile payment due to the variables described here.

Future Recommendation

- In the area, you should survey both people who plan to start using mobile payments and those who have no interest in doing so. The elements that affect both types of users could be better understood using this method.

- Alternative theoretical frameworks that explain why people in Saudi Arabia are adopting mobile payment could be investigated in future studies. Perspectives and insights from various theories may be gained.
- It may be helpful to increase the size of the sample or change the demographics of the research group. The factors influencing the uptake of mobile payment in Saudi Arabia could be better understood with data from a bigger and more representative sample.

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