

**Electronic payment acceptance model: A study on United Arab Emirates consumers****Maha Alkhaffaf<sup>a,e</sup>, Monira Mofleh<sup>b</sup>, Tarek Kandil<sup>c</sup>, Hesham Almomani<sup>d</sup>, Dmaithan Almajali<sup>a,e\*</sup> and Haya Almajali<sup>f</sup>**<sup>a</sup>*Applied Science Private University, Jordan*<sup>b</sup>*World Islamic Sciences and Education University, Jordan*<sup>c</sup>*Heriot Watt University, United Arab Emirates*<sup>d</sup>*The Hashemite University, Jordan*<sup>e</sup>*Reseach Unit, Middle East University, Jordan*<sup>f</sup>*Jerash Private University, Jordan***CHRONICLE***Article history:*

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*Keywords:**E-payment**Technology Acceptance Model**Computer anxiety**Self-efficacy**UAE***ABSTRACT**

This paper aims to investigate if trust, perceived usefulness, and perceived ease of use affect the intention to use e-payment. Also, the study explores if attitudes towards the use of e-payment influence consumer's intentions to use the e-payment system which is supported by testing the moderation effect of Self-Efficacy, and Computer Anxiety on the attitude to use such systems in higher education institutes. The study found that there are a variety of effects of the Electronic Payment Acceptance Model in the United Arab Emirates that pertain to sociological, legal, and economic aspects. The United Arab Emirates can benefit from a more robust and inclusive digital payment ecosystem by comprehending and implementing the lessons gained from such research. Among the lessons learned from this study is that using electronic payment leads to many benefits, it is not possible to benefit from all these benefits if the acceptance rate of technology, especially electronic payment, is low. For this reason, this research came to provide solutions to the possibility of increasing the acceptance of technology among individuals and organizations through a complete model and studying the impact of its factors and the factors that moderate the relationship in it.

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**1. Introduction**

Studies in our time after the Corona pandemic indicated that the use of the Internet to perform business has increased significantly. Hence the desire to study the factors that may affect electronic payment as part of the electronic process. And when looking at the tested models and studies, TAM model was one of the most important models studied in the field of technology acceptance, which determines clear factors affecting how users come to accept and use a technology, and for this reason, this research came to enter into force in a study community as one of the societies that use the technology and electronic work, and clearly in the Middle East and It is the society of the United Arab Emirates, and specifically the educational sector in it. And in turn, the hypotheses in this study were built based on the factors of a TAM model for accepting technology in electronic payment. There are many benefits that governments and organizations can benefit from if they increase the rate of acceptance of technology and digital payment tools, and among these benefits are economic and social benefits such as providing substantial opportunities to advance financial inclusion in addition to the potential re-duce in the financial inclusion gender gap by using the digital financial services (Zhang & Jasimuddin, 2012). There are other benefits of digital payment that can be used by governments, especially in emerging countries, such as contributing directly to poverty reduction efforts. The improvement in the levels of financial improvement from the inclusive digital payment ecosystem (Lee et al., 2007). Governments and organizations in emerging countries should initiate the establishment of such an ecosystem that accepts technology

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and e-payment methods to benefit in improving levels of financial inclusion. However, Involvement by all departments of government and organizations of electronic payment systems are important to establish new digital payments methods. This includes both the making of payments to individuals and businesses as well as receiving payments. This will be directly affected by the level and range of technology and e-payment acceptance of these organizations and individuals. The degree of acceptance of technology and electronic payment and hence the Intention to use e-payment is affected by several factors as; Trust, perceived usefulness, perceived ease of use and subjective norms and moderate the relationship among these factors and the intention to use e-payment the computer anxiety and self-efficacy listed in TAM model discussed in this research paper.

## 2. Previous Studies

### 2.1 E-payment

e-payment is defined by (Shon & Swatman 1998) as an exchange of monies initiated using an electronic communication channel, or it can be defined as the electronic transfer of a payment value from a payer to a payee via a via an exchange of value from a payment to a payment method (Kim et al., 2010). E-payment is one of the critical activities of e-banking since it relates to financial transactions (Kalakota & Whinston, 1997). Customers may access and manage their bank accounts and transactions remotely via e-payment services and web-based user interfaces (Fatonah, et al., 2018; Lim, 2008). It might be used as a primary payment method for e-shopping but is optional for e-learning or other e-services if alternative payment methods are available (Teoh et al., 2013). E-payment systems have various advantages over traditional payment systems, including reliability, security, scalability, anonymity, acceptance, privacy, effectiveness, and ease (Chou et al., 2004; Stroborn et al., 2004; Tsiakis & Sthephanides, 2005; Linck et al., 2006; Cotteleer et al., 2007; Kousaridas et al., 2008).

### 2.2 Technology Acceptance Model (TAM)

Davis (1989) established the TAM model, the most widely used paradigm for predicting information technology acceptance (Legris et al., 2003). TAM should analyze aspects impacting adoption intentions beyond perceptions of ease and usefulness (Lee et al., 2007). TAM has been extensively tested with a variety of samples in a variety of scenarios and proven to be an acceptable and reliable model that explains information system acceptance and usage (Venkatesh & Davis, 1996; Mathieson, 1991).

### 2.3 Self-efficacy

Self-efficacy refers to a person's belief in and conviction of his abilities to complete a task or produce an outcome (Dory et al., 2009; Bandura, 1997). According to Bandura (1986), one's Self-efficacy is formed in response to four types of information: Mastery experience (success and failure), vicarious experience (observation of other people doing the task), social persuasion (from colleagues and coworkers, and relatives), and emotional state such as anxiety (Maddux, 2013) recommended the fifth type of information to form self-efficacy through "imaginal experiences", which is the art of imagining yourself responding effectively or successfully in a particular situation. According to self-efficacy theorists, one's efficacy beliefs are influenced more by one's mastery experiences and absolute success standards than by social comparison and normative standards (Bandura, 1997; Zimmerman, 1995; Bong & Clark, 1999; Bong & Skaalvik, 2003). Computer self-efficacy is crucial in implementing computer-assisted learning and attaining its objectives. Perce computer self-efficacy, which influences people's attitudes about computers and their willingness to use them (Celik & Yesilyurt, 2013) also underlines the importance of being determined to overcome challenges in computer-related work (Compeau & Higgins, 1995). Individuals with high capacity and self-efficacy may consider a new technological system more straightforward to use and have a stronger intention to adopt it in the long term. People with poor self-efficacy, on the other hand, will be more resistant to adopting new technologies.

### 2.4 Trust

Trust is defined based on the level of risk associated with financial transactions, and the result of trust is a decreased perception of risk, which leads to favorable intention for e-payment acceptance (Yousafzai et al., 2003). Previous research has revealed that customers' desire to undertake e-commerce transactions and participate in online money exchanges is influenced by their level of trust (Friedman et al., 2000; Gefen, 2000, 2003; Hoffman et al., 1999; Jarvenpaa et al., 2000). Trust has historically been a driving force behind buyer-seller transactions that offer customers high expectations of pleasant exchange partnerships (Peha & Khamitov, 2004). As a result, many researchers believe that trust is critical for understanding social interactions and economic transactions, influencing customers' perceptions of e-payment systems (Abrazhevich, 2001; Chou et al., 2004; Tsiakis & Sthephanides, 2005). Most online transactions include a significant degree of uncertainty and risk, so trust is crucial in e-payment (Zhou, 2011); there is no guarantee that the online merchant would not engage in unpleasant, immoral, or opportunistic conduct such as unfair pricing, displaying incorrect information, disseminating personal data, or engaging in buy activity without authorization (Gefen, 2003). Finally, it would only be possible for e-payment to gain widespread adoption with an adequate system that consumers can trust (Lim et al., 2006).

### 2.5 Computer anxiety

Computer anxiety is defined as a dread of computers when using one or a dread of using a computer in the future (Chua et al., 1999). Computer anxiety can be described as an emotional reaction or an emotional fear of harmful consequences such as equipment damage or embarrassment. The unpleasant sensations associated with excessive anxiety remove cognitive

resources from task performance from the standpoint of information processing (Kanfer & Heggstad, 1997). In this regard, persons with computer anxiety exhibit behaviors such as avoiding computers and settings where computers are present, preferring to use computers very briefly, and taking extreme measures while using them (Ceyhan, 2006).

### 2.6 Perceived Usefulness

Davis (1989) defines perceived usefulness as the degree to which a person feels that employing a suitable system improves their job performance. In turn, a system with high perceived usefulness has a user who believes in a favorable use-performance link. Perceived usefulness is essential in both the original and updated versions of the Technology Acceptance Model (TAM). This concept has been used to predict various aspects, including word processing and spreadsheet system adoption, user intents, telecommuting technology, online and wireless site usability, and system usage over time (Alrafi, 2007; Davis et al., 1989) verified the reliability and validity of perceived usefulness as a predictor of the desire to adopt information technology.

### 2.7 Perceived Ease of Use

Davis (1989) describes the perceived ease of use as “The degree to which a person believes that using a certain method would be free of effort”. Several studies have confirmed that the ease of use of the technology influences its acceptability among users (Legris et al., 2003; Venkatesh & Davis, 1989; Yang, et al., 2015; Flavian & Guinaliu 2006) indicate that computer ease of use favors confidence levels. He linked a high level of usability and less potential for error, which is essential when providing financial services over the Internet. On the other hand, greater usability favors lower costs in research (Backos, 1997) and a good understanding of the contents and functions of a website. Abrazhevich (2001) concluded the importance of the successful design of e-payment systems in attracting users' acceptance of e-payment. According to Teoh et al. (2013), the following are the most critical elements of the success of e-payment systems: Content, design, banking image, speed, and good management, which contribute to ease of use and influence consumers' perception positively.

## 3. Research model and rationalism of framework

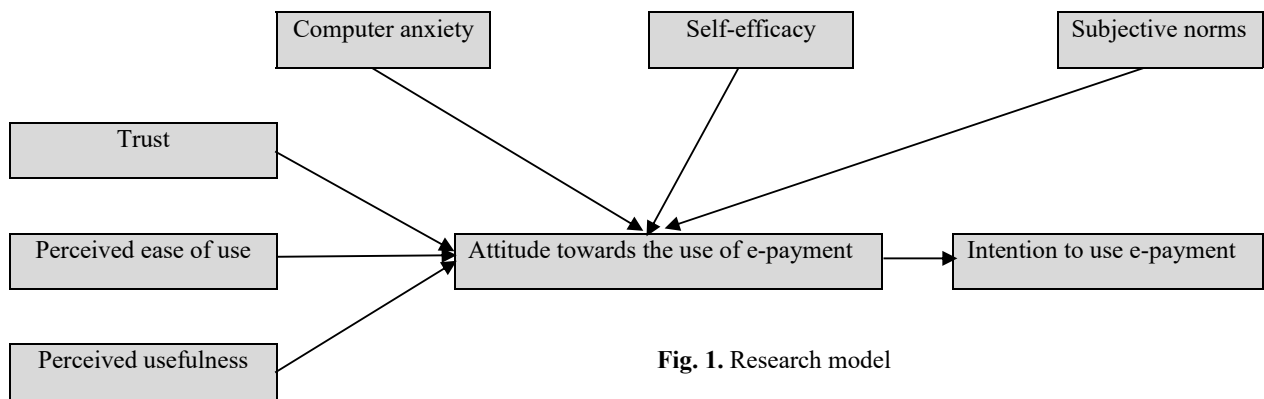


Fig. 1. Research model

## 4. Methodology

### 4.1 Research Design

This research paper focuses on quantitative research methods that aims at exploring and analyzing the modified effect of self-efficiency, computer anxiety on intention to use e-payment technology on United Arab Emirate consumers. For collecting the primary data, the study employs a structured questionnaire, supplemented by qualitative data for in-depth insights.

### 4.2 Research Sample

The research sample comprises 927 respondents, the sampling technique was accurately selected through a stratified random one; this ensures a representative group of individuals from the target population, which consists of all consumers using e-payment technology in United Arab Emirates (UAE) universities.

### 4.3 Data Collection

#### 4.3.1 Questionnaire Development

A questionnaire has been designed and developed to collect primary data for this study. It encompasses a combination of closed-ended and Likert-scale questions, designed specifically to align with the research objectives and variables under investigation.

#### 4.3.2 Data Collection Process

The data collection process involved distributing the questionnaire to the selected respondents. To encourage a high response rate and ensure data accuracy, a multiple data collection method, including online surveys and email surveys was used for the convenience of participants.

## 4.4 Data Analysis

### 4.4.1. Quantitative Data Analysis

Employing techniques such as descriptive statistics, regression analysis, and correlation analysis were used in this research study to deal with the quantitative data that has been collected from the questionnaire. However, a subjective, comprehensive statistical analysis was used to identify patterns, correlations, and trends to address the research hypotheses and objectives.

## 5. Ethical Considerations

This research adheres to ethical principles and guidelines. Respondents' privacy and confidentiality will be strictly maintained. Participation was voluntary in this research, and informed consent obtained from all participants. They all assured that their responses will be anonymized and used exclusively for research purposes.

## 6. Design

Ninety-seven respondents from universities in the United Arab Emirates (UAE) completed a web-based questionnaire that was created with these objectives in mind. The survey consists of 41 commodities and eight structures. The external constructs (individuals) are as follows: the PEOU, PU, TRUST, and SN constructs are each represented by five items; the Moderators' constructs are SE, CA, and SN constructs are indicated by five items; the facilitator's construct is ATT; and lastly, the naturally occurring construct (dependent) is represented by six items. The primary data was used to test the study model and hypotheses using the Smart PLS (3.3.9) software.

**Table 1**

Overview of the measurements and their constituting items and instructions (30 Items)

Research Variable	Items	References
Incentive	Kindly specify the scope of the subsequent remark.	Gao, Rohm, Sultan, & Huang, 2012; J. Zhang & Mao, 2008, Lu, Yang, Chau, & Cao, 2011; Lee et al., 2007; Zhou, 2011)
	1. I plan to use electronic payment technology in my academic year.	
	2. During my school year, I plan to utilize electronic payment technologies.	
	3. During my school year, I'll make an effort to use electronic payment technologies.	
	4. I am motivated to use electronic payment technology in my regular purchases.	
	5. I believe that using electronic payment technologies should be a frequent part of my transactions.	
	6. I will make routine purchases using electronic payment technologies.	
Self-efficacy	<b>I consider using digital learning regularly.</b>	Lin, Lu, Wang, & Wei, 2011; Urban et al., 2009)
	8. I'm certain that I can utilize electronic payment technologies to my advantage.	
	9. I firmly believe that my use of electronic payment technologies has been successful.	
Subjective norms	<b>Please indicate to what extent the following statement apply to</b>	(Dimitriadis & Kyre-zis, 2010; D. J. Kim et al., 2010; Kuan & Bock, 2007; Lu, Yang, Chau, & Cao, 2011; Lee et al., 2007; Zhou, 2011)
	11. Electronic technology for payment is used by my institution's partners from different departments.	
	12. My sectional colleagues make advantage of electronic payment technologies.	
	13. I work with individuals from other educational institutions who pay using technological devices.	
	14. My coworkers want me to make payments using technological devices.	
	15. I'm being asked by other students to utilize electronic payment technologies.	
Computer anxiety	<b>Please indicate to what extent the following statements apply to you:</b>	(Lin et al., 2011; Lee et al., 2007)
	17. I'm nervous about using electronic payment technologies for internet purchases this school year.	
	18. When I consider making purchases utilizing electronic payment technologies, I become anxious.	
	19. When I have to employ electronic payment technologies for my purchasing classes, I am demotivated.	
	20. I tend to steer clear of using electronic payment technologies since I find it to be daunting while making transactions.	
	21. When I employ electronic payment technologies in my classes, I become constricted.	
Perceived Ease of Use	<b>Please indicate to what extent the following statements apply to you:</b>	Bart et al., 2005; Garbarino & Johnson, 1999; Gefen, 2000; Kim et al., 2010; Lin et al., 2011).
	22. I have no trouble picking up the usage of electronic payment technologies.	
	24. My use of electronic payment technology services is transparent and easy to comprehend.	
Perceived Usefulness	<b>Please indicate to what extent the following statements apply to you:</b>	(Kim et al., 2010; Kuan & Bock, 2007; L. Zhang et al., 2012; Lin et al., 2011; Zhou, 2011).
	25. I could make an investment faster if I used electronic payment technologies.	
	27. I think using electronic payment technologies to make purchases would be beneficial.	
Trust	<b>Please indicate to what extent the following statements apply to you:</b>	(Dimitriadis & Kyre-zis, 2010; Kim et al., 2010; Kuan & Bock, 2007; Lu, Yang, Chau, & Cao, 2011; Zhou, 2011)
	28. I am aware that electronic payment technology is foreseeable for the provider according to my assessment of it.	
	30. My impression of electronic payment technology is that it supports or looks out for students when they make regular purchases.	

## 7. Information Analysis

The most important step before starting the analysis is turning the items into unambiguous codes once the data has been gathered via a questionnaire survey. Consequently, the Statistical Package for Social Sciences (SPSS) V.25 and SMART-PLS-SEM V.3.3.3 were used to insert the data into the dataset. Potential mistakes in the data entering process were found and fixed. Additionally, responses have been handled. In the data analysis section, an outline of the responders as well as the Measurement Model Assessment and Structural Model Assessment have been presented. When applying the PLS-SEM technique, the researchers have to identify two particular models: a measurement model, which authorizes the model by some important validity assessments, and a structural model, which tests the propositions of the study.

## 8. An Examination of Representative

Socioeconomic and employment variables were performed, and the findings show 28 items for 8 latent constructs that are controlled by a set of items.

**Table 2**  
Demographic and job characteristics analysis of Sample

Demographic and job characteristics		Respondents #	Percent
<b>Gender</b>			
Male		518	55.9
Female		409	44.1
Total		927	100.0
<b>Nationality</b>			
UAE		158	17.0
Arab		277	29.9
Non- Arab		492	53.1
Total		927	100.0
<b>Age</b>			
under 20		264	28.5
21-30		542	58.5
31-40		121	13.1
Total		927	100.0
<b>Academic degree</b>			
High School		316	34.1
Diploma		249	26.9
Bachelor		131	14.1
Master		193	20.8
PhD		31	3.3
Others		5	0.6
Total		927	100.0
<b>School</b>			
Business Management		502	54.2
Information System		175	18.9
Engineering		76	8.2
Social Sciences		81	8.7
Health care		93	10.0
Total		927	100.0
<b>User behavior</b>			
One-time user		301	32.5
Continued user		626	67.5
Total		927	100.0
<b>Study status</b>			
Full-time		664	71.6
Part-Time		263	28.4
Total		927	100

## 9. Analyzing Data

Data gaps and anomalies prior to doing the primary evaluation, the assumptions were verified using the SPSS initiative's clean-up and verification processes. In reference to the excessive amounts or anomalies Using the specified level of independence and the Chi-square ( $\chi^2$ ) score at an acceptable level of significance of 0.001, the Mahalanobis analysis was tested in this investigation. According to this method, the minimum acceptable Chi-square value at  $p < 0.001$  is equal to 17.07 with an amount of liberty equal to 4.

As a result, proximity scores higher than 17.07 are regarded as anomalies and must be eliminated from the study. An aggregate of 927 sanitized and legitimate replies were taken into consideration and incorporated into the ultimate evaluation in this instance, since 12 instances were found to be anomalies from the 927 replies. Moreover, Information Assessment The normality examination was conducted prior to evaluation, and the results for the parameters of skewness and Kurtosis were adopted. These parameters varied within the desirable restriction and  $\pm 2$ , indicating that the study data do not depart considerably from the distribution that is normal. The research model is assessed by a two-phase process known as measurement

and structural models. Before that, confirmatory tetrad analysis (CTA) test have to checked, which expands upon the idea of tetrads  $\tau$ , which define the connection within pairs are modified by the Bonferroni equation, in other words this method help researcher to ensure that the choice of formative or reflective model is right or not, as a second safeguard of introspective guidance based on the theoretical background was used prior to the verification and dependability assessment. According to the result in this study, figuring out that no zero value is inside the range of confidence ensured that the reflective model is the right choice theoretically and statistically.

### 9.1 Measurement Model Assessment

41 indicative measures covering 8 underlying components are included in the investigation's paradigm. If the measures are accurate and trustworthy, they should be processed before conducting the theoretical analysis. The extent to which a particular item inside a building is consistent with other pieces is indicated by its outer loading. More correlated and comparable elements are displayed with greater outermost loadings (Hair et al., 2021).

**Table 3**  
Measurement Model Assessment

construct - item	Outer loading	Convergent validity		internal consistency reliability		discriminant validity	
		Average variance extracted (AVE)	indicator reliability	Composite reliability (rho a)	Composite reliability (rho c)	Cronbach's alpha	HTMT
Threshold	> 0.7	>0.5	>0.5	> 0.6	> 0.6	> 0.6	HTMT confidence interval does
Attention		0.802		0.940	0.953	0.938	yes
qatt_1	0.837						
qatt_2	0.912						
qatt_3	0.912						
qatt_4	0.915						
qatt_5	0.901						
CA		0.743		0.913	0.935	0.913	yes
qca_1	0.871						
qca_2	0.881						
qca_3	0.873						
qca_4	0.854						
qca_5	0.829						
Intention		0.693		0.912	0.931	0.911	yes
qintn_1	0.828						
qintn_2	0.829						
qintn_3	0.886						
qintn_4	0.857						
qintn_5	0.83						
qintn_6	0.758						
Peu		0.673		0.910	0.911	0.883	yes
qpeu_1	0.763						
qpeu_2	0.834						
qpeu_3	0.796						
qpeu_4	0.858						
qpeu_5	0.846						
pu		0.720		0.907	0.928	0.902	
qpu_1	0.858						
qpu_2	0.874						
qpu_3	0.884						
qpu_4	0.788						
qpu_5	0.834						
se		0.746		0.917	0.936	0.914	
qse_1	0.859						
qse_2	0.906						
qse_3	0.832						
qse_4	0.9						
qse_5	0.817						
sn		0.790		0.934	0.949	0.933	
qsn_1	0.876						
qsn_2	0.93						
qsn_3	0.919						
qsn_4	0.904						
qsn_5	0.809						
trust		0.701		0.895	0.921	0.892	
qt_1	0.81						
qt_2	0.8						
qt_3	0.899						
qt_4	0.89						
qt_5	0.782						

To verify that the latent structure explains more than half of the mean difference of its corresponding warning signs and to test the convergence reliability of the concept, Hair et al. (2021) presented a normative value for the Average Variance Extracted (AVE) that should be greater than 0.50. Convergent reliability, which is the initial kind of validity related to constructs and is measured by the AVE significance, is defined as an examination of statistics that is done to display the concurrence rates for the variables which assess the identical component. When assessing the specific method, it also demonstrates whether there is any possibility of disagreement among these components or measures. As a result, the concepts and statistical techniques indicated that evaluating convergence validity mostly relies on the relationships between the parameters' commodities, determined applying different techniques. The primary tool for reaching and executing this level of accuracy is the factorization of the components. Two more critical procedures for verifying this kind of authenticity are Composite Reliability (CR) and AVE, which are covered in the subsections that precede.

### 9.2 Measurement Model Assessment (Model Fit)

Root Mean Square Residual, or RMSR, is a metric for the correlation replacement's actual average value. The collected covariance matrix and the estimated covariance matrix are primarily converted to a correlation matrix using this measure. Crucially, the saturated model or even the covariance matrix may be obtained by the researcher using the estimated model. The discrepancies between the observed correlations and the correlation matrix that the model contains are what define the SRMR measure.

**Table 4**  
The Result of Model Fit

	Saturated model	Estimated model
SRMR	0.069	0.072
d_ ULS	4.079	4.464
d_ G	2.410	2.450
Chi-square	11231.386	11272.807
NFI	0.739	0.738

As a result, it could make it possible to assess the model's actual indicator of the differences in size between the seen and anticipated relationship. According to Heseler et al. (2015), an acceptable fit is defined as a coefficient of less than 0.08. This metric evaluates the degree of accuracy of match in PLS-SEM, which may be utilized to prevent model misunderstanding. Table 4 presents the outcome of the SRMR and model fit.

### 9.3 Testing the Structural Model

Evaluating the structural framework used to test the study assumptions is a crucial next stage in the SEM procedure, which comes after examining the accuracy of the measurement paradigm's accuracy and dependability. To achieve this, as suggested by Hair (2010), several significant and strongly recommended procedures should be carried out in order to create this framework for evaluation. To assess the research speculation, these evaluations are known as benevolence of fit (GoF), path coefficient, effect size ( $f^2$ ), predictive relevance ( $Q^2$ ), and coefficient of determination ( $R^2$ ). In addition to Evaluation of Multicollinearity The next subsections address each analysis separately.

#### - Effect Size ( $f^2$ )

Following the computation and assessment of  $R^2$ , the next test determines the change in  $R^2$  by evaluating the effect size ( $f^2$ ) to see if there is a noteworthy and significant influence of a particular autonomous or external parameter on an underlying or indigenous variable. To that end, equation 4.3 provides a standard method for calculating effect size.

**Table 5**  
Effect Size of the Exogenous Constructs

Constructs	Effect size ( $f^2$ )			Result
	Att	CA	INTIN	
Att			0.161	Medium
CA			0.006	Small effect
INTIN				
PEU	0.053			
PU	0.286			
SE			0.305	Large effect
SN			0.029	Small effect
TRUST	0.016			

#### - Predictive Relevance ( $Q^2$ )

Predictive relevance ( $Q^2$ ), a further criterion used in this study to evaluate the model's capacity for endogenous construct prediction, is the third test utilized to evaluate the structural model's quality (Chin, 2010). The underlying presumption of the predictive relevance test is that the structural model should be sufficiently capable of forecasting the measurements of the

endogenous construct (Hair, 2010). To do this, SmartPLS uses a process known as blindfolding, which is applied to conduct the analysis and determine the value of Q<sup>2</sup> by assessing the cross-validated redundancy construct. The blindfolding process will bypass the data according to the distance D value that has been established. Any figure between 5 and 10 might be this value. This approach just assumes that the sample size divided by D will have a near value. As a result, the amount of data is managed based on the assumption of elimination, with missing values evaluating the model's D parameters. But the blindfolding procedure should only be used if reflecting measures are available for the dependent variable (Hair et al., 2021).

**Table 6**  
Predictive Relevance Result

	Q <sup>2</sup> Predictive relevance	RMSE	MAE	Result
Att	0.728	0.523	0.347	Q <sup>2</sup> > 0 Explanatory construct shows a predictive relevance
INTIN	0.772	0.478	0.365	

- *Coefficient of Determination (R<sup>2</sup>)*

To explain the variance in the dependent variable, Chin (2010) suggested a range of R<sup>2</sup> values and categorized them according to their magnitudes. For instance, values of R<sup>2</sup> greater than 0.67 are regarded as high, values between 0.33 and 0.67 as moderate, values between 0.19 and 0.33 as weak, and any value of R<sup>2</sup> less than 0.19 is poor and unacceptable. Consequently, the value of R<sup>2</sup>, which indicates how well the independent or exogenous variable can explain the dependent or endogenous variable, may be used to assess the quality of the structural model. Thus, based on the R<sup>2</sup> results produced in this investigation, the value of R<sup>2</sup> has attained a high level (0.771).

**Table 7**  
R<sup>2</sup> of the Endogenous Constructs

<i>Endogenous Constructs</i>	R-square	R-square adjusted	Result
Att	0.732	0.731	High
INTIN	0.773	0.771	High

- *Evaluation of Multicollinearity*

Before evaluating the structural model, it is crucial to look at the multicollinearity problem between the latent constructs. This metric shows how these constructs differ from one another and measure various notions. Therefore, the most widely used test, the Variance Inflation Factor VIF, was used to assess the collinearity among the variables. This issue arises, in accordance with Kock and Lynn (2012), when two latent constructs under test and hypothesis are more closely connected and assess the same variable or idea. As per Diamantopoulos and Siguaw's (2006) findings, a VIF score over 5 suggests the possibility of multicollinearity issues between the variables. The test's results are shown in Table 7. They show that, for all exogenous constructions that were supposed to be investigated and included in the model, the inner values of the VIF were less than 5, suggesting that the multicollinearity issue was not present in the current investigation.

#### 9.4 Structural model- Hypotheses Testing and Moderating

The moderating effect of the discovered associations stated in chapter two, which hypothesizes this moderation to be investigated in this stage, is the second step of evaluating the study hypotheses. The link between a certain independent variable and dependent variable may be altered by the moderator variable (M), with the potential to either increase or diminish the relationship.

**Table 8**  
Analysis Results Paths in Smart-PLS4

Hypotheses		Original sample (O)	Sample	T statistics	P values	Result
H.1	Att → INTIN	0.274	0.272	10.785	0.000	Supported
H.2	CA → INTIN	0.077	0.078	2.111	0.035	Supported
H.3	PEU → Att	0.236	0.235	5.541	0.000	Supported
H.4	PU → Att	0.533	0.536	9.900	0.000	Supported
H.5	SE → INTIN	0.460	0.456	13.744	0.000	Supported
H.6	SN → INTIN	0.163	0.168	3.179	0.001	Supported
H.7	TRUST → Att	0.133	0.132	3.568	0.000	Supported
H.8	SE x Att → INTIN	0.204	0.202	5.345	0.000	Supported
H.9	CA x Att → INTIN	-0.143	-0.145	3.410	0.001	Supported
H.10	SN x Att → INTIN	-0.045	-0.043	0.999	0.318	NOT Supported



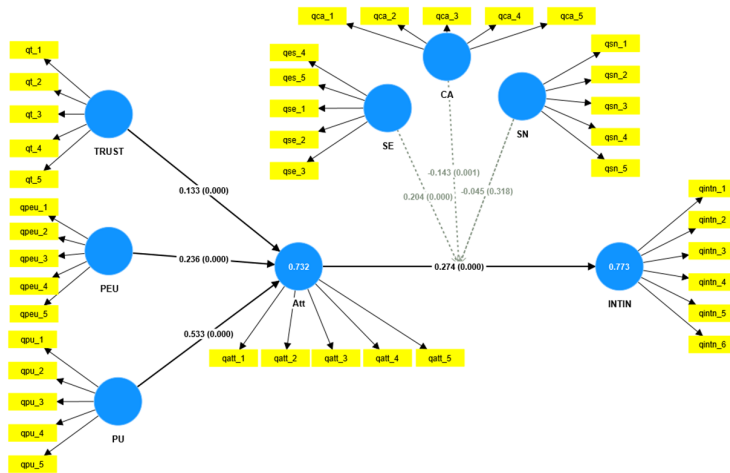


Fig. 2. Analysis Results Paths in Smart-PLS

There are three moderators named SE, CA and SN in the current study. The moderator functions as an exogenous construct in Smart-PLS to examine the moderating impact of the identified specific moderator, The moderators which were tested in connection to the one dependent variable (intention to use e-payment) as well as three identified independent factors (SE, CA and SN). The findings demonstrated that while subjective norms did not moderate links between independent factors and the dependent variable, the computer anxiety and Self-efficacy did moderate a considerable portion of them. The findings of the route coefficients suggested to test the moderating research hypotheses (moderation hypotheses) are shown in Table 8 and Fig. 2, ALSO Graphical diagrams of effects of moderations supports understanding of relationships. Shown in Figs. (3-5).

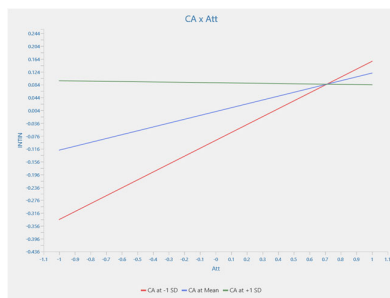


Fig. 3. Relationship Between computer anxiety and Attitude towards the use of e-payment and intention to use e-payment

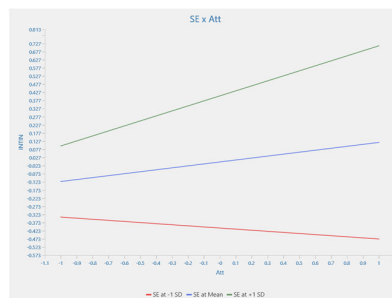


Fig. 4. Relationship Between Self-Efficacy and Attitude towards the use of e-payment and intention to use e-payment

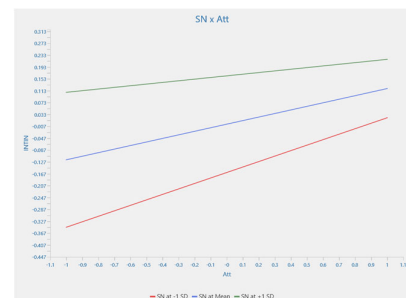


Fig. 4. Relationship Between Subjective Norms and Attitude towards the use of e-payment and intention to use e-payment

The three lines in Fig. 3 epitomize the relationship between attitude towards the use of e-payment and intention to use e-payment for low and medium and high levels of the computer anxiety ,while a high level of computer anxiety is one standard deviation unit above its average because of positive moderating effect as stated in the Fig. 3 ,relationship between the interaction span and the exogenous construct, the high computer anxiety line’s slope is steeper ,that is the relationship between attitude towards the use of e-payment and intention to use e-payment becomes stronger with high levels of computer anxiety, for low computer anxiety line’s slope is much flatter ,that is the relationship between attitude and intention becomes weaker with low levels of computer anxiety. But a negative relation appears with beta value equal -0.143, the relation Supported in hypothesis testing in Table 8. The three lines in Fig. 3 epitomize the relationship between attitude towards the use of e-payment and intention to use e-payment for low and medium and high levels of the Self-Efficacy, while a high level of Self-Efficacy is one standard deviation unit above its average because of positive moderating effect as stated in the figure 3 ,relationship between the interaction span and the endogenous construct, the high Self-Efficacy line’s slope is steeper ,that is the relationship between attitude towards the use of e-payment and intention to use e-payment becomes stronger with high levels of Self-Efficacy, for low Self-Efficacy line’s slope is much flatter ,that is the relationship between attitude and intention becomes weaker with low levels of Self-Efficacy. the relation supported in hypothesis testing in Table 8. The three lines in Fig. 5 epitomize the relationship between attitude towards the use of e-payment and intention to use e-payment for low and medium and high levels of the Self-Efficacy, while a high level of Subjective Norms is one standard deviation unit above its average because of positive moderating effect as stated in the Fig. 3 ,relationship between the interaction span and the endogenous construct, the high Subjective Norms line’s slope is steeper ,that is the relationship between attitude towards the use of e-payment and intention to use e-payment becomes stronger with high levels of Subjective Norms, for low Subjective Norms line’s slope is much flatter ,that is the relationship between attitude and intention becomes weaker with low levels of Subjective Norms. The relation did not support hypothesis testing in Table 8.

### 13. Discussion

Nowadays, it's important to research the electronic payment acceptance model, especially when it comes to customer behavior in the United Arab Emirates (UAE). Businesses and governments must comprehend the elements affecting customers' acceptance of electronic payment systems as the United Arab Emirates quickly progresses in technology and adopts a digital economy. The importance of trust is a fundamental component of the electronic payment acceptance mechanism. Like customers everywhere else, UAE consumers need to feel secure while making electronic transactions. Customer behavior is greatly influenced by several factors, including the security of financial and personal data, the perceived dependability of the payment platform, and the general credibility of electronic payment systems. Furthermore, UAE customers place a high value on the effectiveness and simplicity of electronic payment systems. The adoption of electronic payment systems is significantly influenced by aspects such as speed, accessibility, and user-friendly interfaces, due to the fast-paced lifestyle and the demand for smooth transactions. Companies who give priority to these components should observe a rise in the adoption rate of their electronic payment solutions. In the UAE setting, cultural and social variables also play a role. Comprehending the cultural subtleties and inclinations of the local customer base is imperative in customizing electronic payment solutions that align with the customs and values of the area. This covers factors like the value of interpersonal ties in commercial dealings and the cultural relevance of security and privacy. Additionally, the influence of laws and programs supporting digital transactions should be examined in the study on the acceptability of electronic payments in the United Arab Emirates. Government regulations that promote innovation, protect consumers, and provide a favorable regulatory environment can have a substantial impact on how electronic payments are shaped.

In conclusion, there are many facets to the electronic payment acceptance model in the United Arab Emirates, necessitating a thorough grasp of elements including ease, trust, cultural concerns, and governmental regulations. Through exploring these facets, scholars may provide significant perspectives that steer enterprises, regulators, and financial establishments in augmenting the acceptance of electronic payments among customers in the United Arab Emirates (Mouakket, 2020).

### 14. Implications

In the context of United Arab Emirates (UAE) customers, the Electronic Payment Acceptance Model has broad ramifications that are important for several stakeholders, including financial institutions, corporations, and politicians. Understanding and taking advantage of the variables influencing the adoption of electronic payments may have a direct influence on the bottom line of firms operating in the United Arab Emirates. Businesses who put an emphasis on establishing trust via dependable and safe electronic payment systems—as shown by the study—are probably going to have an advantage over their competitors. In addition, customizing payment options to suit cultural tastes and guaranteeing effectiveness and simplicity can improve client happiness and retention. For firms in the UAE, this may result in higher transaction volumes and better overall financial performance. The results of the study may be used by policymakers to guide the creation of programs and regulatory frameworks that encourage the expansion of electronic payments throughout the nation.

The goal of moving toward a digital economy may be furthered by establishing an atmosphere that supports financial inclusion, guarantees data security, and stimulates innovation. In addition, legislators could consider providing incentives for companies that use and recommend electronic payment systems, supporting the government's efforts to update the financial system. Understanding the Electronic Payment Acceptance Model can be advantageous for financial organizations such as banks and payment service providers. Through service alignment with the elements that have been found to influence customer behavior, these institutions can improve the appeal of their electronic payment offers. This can therefore result in a stronger and more robust financial ecosystem in the United Arab Emirates, as well as better market share and client acquisition. The ramifications of a well-executed Electronic Payment Acceptance Model spill over into society at large, advancing the digital terrain in the United Arab Emirates as a whole. Financial inclusion might rise, cash transactions could decline, and people could participate more in the global digital economy as they get more accustomed to and trusting of electronic payment systems (Alshurider, 2024). To sum up, there are a variety of effects of the Electronic Payment Acceptance Model in the United Arab Emirates that pertain to sociological, legal, and economic aspects. The United Arab Emirates can benefit from a more robust and inclusive digital payment ecosystem by comprehending and implementing the lessons gained from such research.

### 15. Limitations

Although researching the Electronic Payment Acceptance Model among consumers in the United Arab Emirates (UAE) yields insightful information, it is important to recognize several constraints that might affect how broadly and practically the findings can be used.

First, developing a unified electronic payment acceptance model might be difficult given the cultural variety in the United Arab Emirates. The population of the nation is made up of both indigenous Emirati nationals and a sizable number of foreigners from various cultural backgrounds. These groups might differ greatly in their preferences and attitudes regarding electronic payments, and a thorough model has to take this heterogeneity into consideration. Second, it's difficult to capture the most recent customer opinions due to the fast-changing nature of technology. The survey may not be able to appropriately capture

current trends and new preferences due to the rapid speed of technological development. The model must be continuously adjusted and monitored to maintain its applicability in the ever-changing world of electronic payments.

Additionally, there can be restrictions on the study's representativeness and sample size. The results may not have external validity if the sample size is too small or does not fairly reflect the socioeconomic and demographic variety of the UAE population. To make meaningful findings that apply to the larger population, it is imperative to ensure that the sample is both varied and representative. The possibility of social desirability bias in survey replies is another drawback. Answers given by respondents could not accurately reflect their genuine opinions and habits, but rather those they feel conform to society norms. The veracity of the statistics may be impacted by this bias, especially when discussing delicate subjects like confidence in electronic payment systems. Furthermore, the research could not have taken into consideration all legislative changes and how they affect the acceptability of electronic payments. The terrain of digital transactions may be considerably shaped by laws and regulations; therefore, a good model should take the changing regulatory landscape into account (Lin et al., 2023).

In conclusion, although a study on the UAE's Electronic Payment Acceptance Model provides insightful information, practitioners and researchers should be aware of its shortcomings. For the model to be effective and useful in directing enterprises, legislators, and financial institutions, these constraints must be addressed by strong sampling tactics, ongoing technology adaptation, and consideration of cultural and legal variations.

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