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CONSUMERS' PERCEPTIONS OF INTENTION TO USE A CREDIT CARD: PERCEIVED RISK AND SECURITY[*]

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Abstract. The goal of this study is to combine the Technology Acceptance Model (TAM) with the theory of perceived risk to create a hypothetical model for consumer behavioral intention that will be validated using data from Saudi Arabia's intended credit card usage. 217 bank customers were polled via an online survey conducted across the country. Exploratory and confirmatory factor analyses were used to evaluate the factor structure of the measuring items, while structural equation modeling was being used to validate the recommended model and test the assumptions. Social influence (SI), perceived usefulness (PU), perceived ease of use (PEU), and perceived trust (PT) were all significant predictors of perceived risk (PR) and perceived security (PS) to affect consumer intention to use a credit card (IUCC), according to the results of structural equation modeling (SEM). This research might have assisted banks in establishing new customer acquisition tactics and determining how to deploy resources to retain and grow their existing customer base. As a consequence, this study adds to the body of information on consumer behavior by verifying the effects of PR and PS on credit card intention, which most prior studies have not shown. The study also delivers genuine data about Saudi Arabia's e-banking services, particularly in the credit card sector, to an academic research platform.

Keywords: credit cards; perceived security; perceived risk; Technology Acceptance Model; structural equation modeling

JEL Classifications: E21, E40

1. Introduction

In the previous 15 years, Saudi Arabia's payment systems have evolved considerably. SAMA (www.sama-ksa.org), the Saudi Arabian Monetary Agency, has taken the lead in the development and day-to-day administration of a modern national payments infrastructure to support the Kingdom's economic development, and it continues to do so with the participation and assistance of commercial banks. This cooperative approach to building an efficient and shared payments infrastructure that relies on the best available techniques and technology from modern banking systems has yielded considerable benefits for both banks and their consumers. Customers have benefited from contemporary payment systems such as credit cards' ease of use and accessibility, while banks have avoided making costly competitive expenditures. A credit card is a sort of payment mechanism that is named after the little plastic card that is provided to customers. It allows the cardholder to obtain cash from a credit institution at a rate determined by the cardholder, up to a specified limit. The funds are usually only useful for purchases; however, they can be acquired in cash as well. The electronic card consists of a debit card linked to a local bank and a credit card linked to both a local and foreign bank (Ngonga, 2015). Consumer behaviour, when it comes to credit cards, has been impacted by individual demographic factors, credit card features, and personal perceptions. Disparities in age, gender, employment, and financial position, according to some researchers, have been demonstrated to contribute to variations in personal inclination to use credit cards (Prusti et al., 2021; Jamshidi & Kuanova, 2020). Consumers prefer credit cards to other payment methods like cash, e-money, or debit cards because of the benefits they provide, according to others (Lee & Lee, 2021; Al-Saedi et al., 2020). Rational customers are concerned not just about the advantages of having a credit card, but also about the hazards of losing money (Fishbein and Ajzen, 1975). Furthermore, several empirical research have found that social groupings including family, friends, and coworkers have a substantial impact on credit card usage intentions (Yuan et al., 2021; Hussein et al., 2021). According to numerous studies, the perception of risk is a key factor restricting use of e-services (Roy et al., 2017). Similarly, PR has been considered while selecting whether or not to use credit cards (Hussein et al., 2021; Cornea, 2021; Boden et al., 2020). However, the results were mixed: public relations had a substantial negative impact (Cornea, 2021), a significant positive impact (Hussein et al., 2021), or no impact on consumer willingness to use credit cards (Hussein et al., 2021; Boden et al., 2020). Credit cards are a type of technology that may be utilized on electronic devices to fulfill two basic functions: payment and credit (Ala'raj et al., 2021). Credit cardholders have the option of purchasing first and paying later, thanks to the bank's guarantee (Lebichot et al., 2021). As a result, the cardholder's issuing bank will pay the biller on their behalf, and the cardholder is responsible for timely and complete payback of all payments (Ala'raj et al., 2021). Credit cards are getting increasingly popular and widely utilized in modern transactions throughout the world (Jamshidi & Kuanova, 2020). As the credit card industry grows more competitive, banks will need a deeper understanding of customer behavior. Unlike previous studies, however, this one concentrates on the effects of PR and PS on credit card usage intentions, and in order to do this, the research begins with a quick evaluation of customer behavior. As a consequence, a theoretical model and testable assumptions have been developed, as well as techniques and data from Saudi customers.

2. Development of a research model and hypotheses

To understand customer intentions and actual behavior, several research frameworks have been created over time. The PR theory (TPR) is one of the most well-known (Bauer, 1960). It examines how customers' concerns of possible losses influence their purchase decisions in certain circumstances. Consumers, are not just risk averse but also rational; they intend to do something when it is advantageous, simple, or when they are influenced, as theories like the theory of reasoned actions indicate (Fishbein and Ajzen, 1975). Some of the theories that have been offered include TAM (Davis et al., 1989), the theory of planning behavior (TPB) (Ajzen, 1991), and the unified theory of acceptance and use of technology (UTAUT) (Venkatesh et al., 2003). These ideas are used

separately or combined in several studies on how customers anticipate utilizing e-services (Alalwan et al., 2017; Pelaez et al., 2019). Therefore, the current study looked into seven factors that influence credit card acceptance, as shown in Figure 1: social influence (SI), perceived usefulness (PU), perceived ease of use (PEU), perceived trust (PT), perceived risk (PR), perceived security (PS), and consumer intention to use a credit card (IUCC).
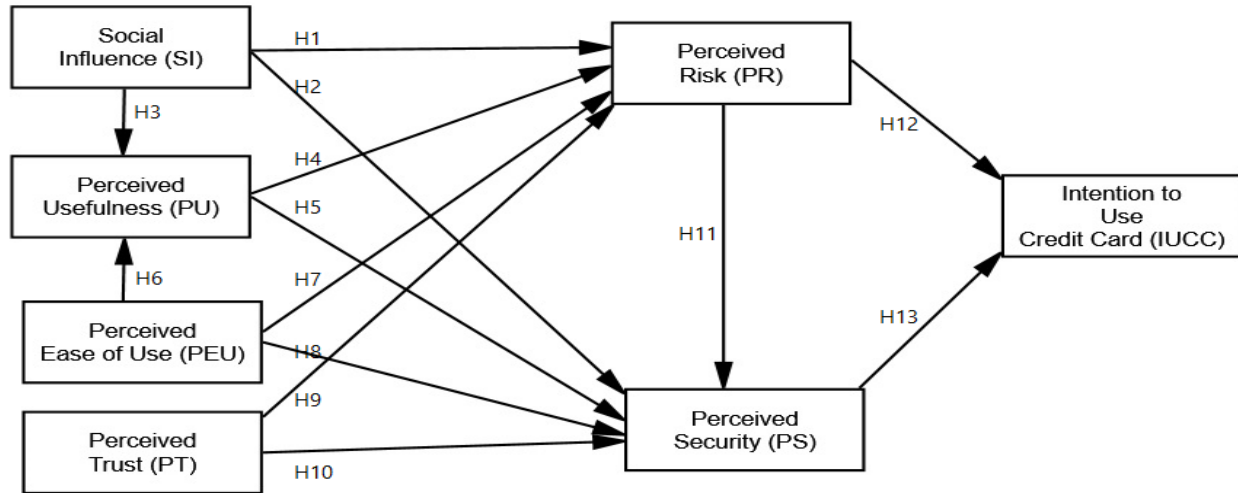

Figure 1. Research Model and Hypotheses *Source: Authors*

2.1 Social Influence (SI)

SI is a customer's opinion that important people think he or she should or should not do something (Ajzen, 1991; Venkatesh et al., 2003). Consumers are compelled to research and assess credit card features, and they become irritated when their friends and coworkers use and discuss them frequently (Al-Saedi et al., 2020). Consumers tend to acquire and reproduce their family members' financial attitudes and practices (Lebichot et al., 2021). Furthermore, mass media aiming at a broad audience has aided in increasing consumer awareness of credit cards (Yuan et al., 2021). According to an empirical study, social groups' perspectives can influence one's intention to use credit cards (Cornea, 2021; Hussein et al., 2021; Lebichot et al., 2021; Yuan et al., 2021). Because of PU and PEU, SI only impacts the planned usage of credit cards, according to (Jung & Kang, 2021).

2.2 Perceived Usefulnes (PU)

The degree to which a person feels that utilizing a system will improve his or her performance is described as the system's PU (Davis et al., 1989; Venkatesh et al., 2003). Non-cash payments and personal consumer credit are made easier with credit cards (Liu & Dewitte, 2021). Due of the insecurity of carrying cash (Trinh et al., 2021) or special discounts from well-known companies, consumers prefer credit cards to cash (Aydin, 2021). They rely on revolving credit cards with extended grace periods as a source of revolving credit (Trinh et al., 2021; Liu & Dewitte, 2021). They can even make cash withdrawals with credit cards if necessary (Liu & Dewitte, 2021). As a result, customers value the convenience of using a credit card and are more inclined to do so for everyday purchases (Lee & Lee, 2021; Cornea, 2021; Lebichot et al., 2021; Hussein et al., 2021).

2.3 Perceived Ease of Use (PEU)

PEU was defined by Ajzen (1991) and Davis et al. (1989) as the degree to which a person feels that utilizing a system is simple. According to Ajzen (1991), this perception is determined by a comprehensive set of control beliefs. Consumers may easily register a credit card using a simple and rapid method (Al-Saedi et al., 2020). Credit cards may be used in a variety of electronic devices, according to Liu & Dewitte. (2021) and Aydin. (2021). (2015). Furthermore, cardholders don't have to put much effort into the credit card payment method because it is so simple to comprehend and use on a regular basis (Trinh et al., 2021). As a result, numerous studies have shown that credit card users value them and desire to use them regularly (Yuan et al., 2021; Cornea, 2021; Lebichot et al., 2021; Jamshidi & Kuanova, 2020; Boden et al., 2020).

2.4 Perceived Trust (PT)

Customers' trust and loyalty are critical factors that impact an organization's performance; a bank's excellent reputation is required to retain its market position. It indicates that customers trust banks. The opportunity to utilize credit cards has piqued people's interest (Flavian et al, 2005). When customers recognize that banks function according to a set of principles, they have trust in the banking system because of the benefits it provides. Client loyalty, on the other hand, is influenced by trust and commitment, particularly when clients trust banks' goods and services (Hassan et al., 2012). Customer views of banks, on the other hand, are influenced by negative opinions of banks, which erode consumer trust and loyalty (Kang and James, 2004).

2.5 Perceived Risk (PR)

PR refers to a customer's subjective expectations for loss in the event of an occurrence in terms of consumer behavior (Bauer, 1960; Featherman and Pavlou, 2003). Consumers are given a credit line with which to pay their expenses, and they must invest a significant amount of time, money, and effort in order to optimize it (Liu & Dewitte, 2021). Payments not always are made due to operational issues or system failures (Hussein et al., 2021). In the meanwhile, personal privacy and system security are at risk, and customers may be held accountable until authorities define stakeholder responsibilities (Boden et al., 2020; Rahman et al., 2021). Therefore, when people are truly worried about their uncertainties, they are less likely to utilize credit cards (Cornea, 2021). Credit card uptake, however, is not driven by how consumers perceive the losses associated with its use, according to several research (Boden et al., 2020; Rahman et al., 2021). Consumers prefer credit cards because of the bank's efforts, despite their reservations about the unintended consequences of using this form of payment instrument, according to Hussein et al. (2021).

2.6 Perceived Security (PS)

Because PS is so essential in users' technology-related activities, researchers have attempted to investigate the elements that influence PS. As a consequence, the study found that PS and PR, as well as credit cards' "mobile payment," were among the barriers to online purchases (Johnson et al., 2018). In terms of security issues, there is no discernible difference between the goal of mobile payment system security and that of traditional payment methods such as credit cards (Aydin and Burnaz, 2016). Furthermore, recent cryptographic breakthroughs have enabled all current payment systems, including mobile wallets and contactless credit/debit cards, to give a better level of financial transaction security (Crowe and Tavilla, 2012).

2.7 Consumer Intention to Use Credit Card (IUCC)

The paper presents a theoretical model of planned credit card activity based on consumer behavior and prior studies on the intention to use credit cards. According to studies, PU has an influence on customers' intentions to use credit cards (Cornea, 2021). PR and security, as well as privacy problems, are among the numerous strategies for employing PR in consumer intended usage of technology research (Featherman and Pavlou, 2003; Hanafizadeh and Khedmatgozar, 2012). Consumer preparedness to accept e-services is frequently seen as a major roadblock to TPR's fundamental concept, PR. E-services have been shown to have a detrimental impact on behavioral intentions (Cao and Niu, 2019). PEU, which has been established as a key driver of customer intention to utilize modern electronic services such as e-shopping, is another essential component in TAM (Chhonker et al., 2017), e-payment (Liu et al., 2019) and e-banking (Zhang et al., 2018; Liu et al., 2019). PEU has a direct impact on credit card usage intentions, according to empirical data, or has an indirect impact via PU mediating PEU (Rahman et al., 2021; Cornea, 2021). Furthermore, research has shown that social groupings have a direct impact on customers' behavioral intentions (Cao and Niu, 2019; Malaquias and Hwang, 2019).

3. Research Methodology

An online poll was used to obtain empirical data for this study, which was based on a review of existing studies related to the suggested theoretical model. Several terms were modified to match the credit card context. A five-point Likert scale was employed in the study, with 1 indicating "strongly disagree" and 5 indicating "strongly agree". A pre-test with three banking experts with experience in credit cards was conducted to ensure that the questionnaire was free of any semantic issues. As a consequence of the input, certain changes to the content and organization were made. The study included 250 participants from a handy sample of Saudi bank customers who are potential customers who are encouraged to register and use credit cards by the bank. Only 217 replies were valid and informative, and Hair et al. (2019) presented structural equation modeling (SEM) for experimentally evaluating the conceptual model of consumers' PS for credit card intention. The devices were then put through their paces with ten people who had previously paid bills using credit cards. As a consequence of the testing, the wordings were altered insignificantly. A final questionnaire, modified from, focuses on seven dimensions that connect to the recommended model and asks the following 26 questions: SI, PU, PEU, and consumer desire to use a credit card. Furthermore, perceived danger was adopted from (Javaria et al., 2020), PT from (Flavian et al., 2005), and PS was adapted from (Featherman and Pavlou, 2003).

4. Analysis and Results

The dependability coefficient of Cronbach's alpha was determined to be 0.911, suggesting that consumers' perceptions of risk and security influenced their tendency to use credit cards. According to the researchers, discriminant validity is determined by three criteria: The average variance extracted (AVE) for each construct must be equal to or more than 0.5, and the AVE square root of each construct must be larger than the Inter-Construct Correlations (IC) for a component (Hair et al., 2019). Construct variable analysis findings with factor loadings of 0.70 or above (Cronbach's alpha 0.70 and composite reliability 0.70) are acceptable due to the aforementioned variables (Hair et al., 2019).

4.1 Observation Validity of the construct

Construct validity refers to the extent to which individual elements decide the notion for which they were produced (Al-Rahmi et al., 2020). After a comprehensive examination of previously tested products in the literature, this was revealed. Table 1 outlines the components, as well as their loadings, that must be inserted into the build they were designed to measure (Hair et al., 2019).

Table 1. Item loadings and cross-loadings

Factors	Items	PR	PS	PT	PEU	PU	SI	IUCC
Perceived Risk	PR1	**0.842550**	0.542752	0.616645	0.530190	0.631589	0.598877	0.679574
	PR2	**0.894792**	0.578784	0.603466	0.575990	0.600492	0.613870	0.714732
	PR3	**0.797420**	0.545817	0.507464	0.425716	0.365565	0.476687	0.590582
	PR4	**0.909468**	0.594669	0.703759	0.542057	0.554894	0.627951	0.834124
Perceived Security	PS1	0.584529	**0.866483**	0.495707	0.498200	0.469936	0.578850	0.530468
	PS2	0.620583	**0.847755**	0.515802	0.452843	0.432204	0.557594	0.572096
	PS3	0.472201	**0.859380**	0.438550	0.363437	0.333935	0.516982	0.460652
	PS4	0.446416	**0.891746**	0.410945	0.322515	0.219362	0.328324	0.493864
PT	PT1	0.662034	0.552466	**0.901417**	0.554102	0.627336	0.668569	0.645843
	PT2	0.609979	0.528483	**0.897453**	0.548103	0.576766	0.619933	0.646979
	PT3	0.640910	0.456562	**0.897111**	0.547275	0.572819	0.623480	0.583223
PEU	PEU1	0.405473	0.384418	0.435518	**0.791955**	0.466745	0.510411	0.415022
	PEU2	0.525681	0.432789	0.530017	**0.839782**	0.635596	0.539212	0.505124
	PEU3	0.479460	0.398640	0.503486	**0.794062**	0.432850	0.453010	0.437240
	PEU4	0.531021	0.419137	0.504323	**0.810730**	0.589597	0.540567	0.443333
PU	PU1	0.527768	0.312965	0.544290	0.582781	**0.849737**	0.510843	0.489850
	PU2	0.592113	0.453472	0.579790	0.628006	**0.911091**	0.611671	0.504861
	PU3	0.476360	0.382380	0.559162	0.473365	**0.779323**	0.495089	0.398511
SI	SI1	0.593590	0.514329	0.657435	0.595761	0.626005	**0.891737**	0.566235
	SI2	0.559514	0.503505	0.557949	0.528861	0.535798	**0.885807**	0.569254
	SI3	0.653004	0.619735	0.680078	0.570172	0.549546	**0.902499**	0.615164
Intention to Use Credit Card	IUCC1	0.745221	0.611210	0.633076	0.492093	0.496201	0.604239	**0.909225**
	IUCC2	0.790728	0.584454	0.702038	0.586220	0.520977	0.579911	**0.904783**
	IUCC3	0.717955	0.540617	0.644187	0.484611	0.501706	0.575523	**0.914796**
	IUCC4	0.681296	0.566334	0.554760	0.384618	0.424010	0.544444	**0.844627**
	IUCC5	0.732941	0.507188	0.563609	0.532012	0.502407	0.610895	**0.883810**

Source: Author

4.2 Convergent Validity in Measurement

Because their factor loadings were more than 0.70, 26 components were deemed acceptable, with composite dependability ranging from 0.951015 to 0.883613. The Cronbach's alpha values varied from 0.935463 to 0.803607, indicating that the findings were good. The average values ranged from 0.807594 to 0.655061. The results of the Confirmatory Factor Analysis (CFA) (2019) are mentioned by Hair et al., see Table 2.

Table 2. Confirmatory Factor Analysis Results and Factor Loadings

Factors	Items	Factor loading	AVE	Composite Reliability	R Square	Cronbach's Alpha
PR	PR1	0.842550	0.743389	0.920364	0.592480	0.884173
	PR2	0.894792				
	PR3	0.797420				
	PR4	0.909468				
PS	PS1	0.866483	0.671632	0.890325	0.493271	0.834211
	PS2	0.847755				
	PS3	0.859380				
	PS4	0.891746				
PT	PT1	0.901417	0.807594	0.926427	0.000000	0.880992
	PT2	0.897453				
	PT3	0.897111				
PEU	PEU1	0.791955	0.655061	0.883613	0.000000	0.825146
	PEU2	0.839782				
	PEU3	0.794062				
	PEU4	0.810730				
PU	PU1	0.849737	0.719827	0.884748	0.521912	0.803607
	PU2	0.911091				
	PU3	0.779323				
SI	SI1	0.891737	0.798118	0.922236	0.000000	0.873709
	SI2	0.885807				
	SI3	0.902499				
IUCC	IUCC1	0.909225	0.795338	0.951015	0.693389	0.935463
	IUCC2	0.904783				
	IUCC3	0.914796				
	IUCC4	0.844627				
	IUCC5	0.883810				

Source: Author

4.3 Measurement Validity using Convergence

The differences between the collection of ideas and their metrics are referred to as discriminant validity. Both constructs' discriminant validity was confirmed with values more than 0.50 and significant at p = 0.001, as predicted by the study (Hair et al., 2019). The AVE square root shared by objects in a single concept should be smaller than the correlations between items in the two constructs, according to (Hair et al., 2019), as seen in Table 3.

Table 3. Discriminant validity

Factors	Items	IUCC	PEU	PR	PS	PT	PU	SI
IUCC	IUCC	1.000000						
PEU	PEU	0.558702	1.000000					
PR	PR	0.824045	0.604426	1.000000				
PS	PS	0.630746	0.506393	0.655716	1.000000			
PT	PT	0.696727	0.611910	0.710070	0.571789	1.000000		
PU	PU	0.549468	0.665567	0.630000	0.454338	0.660113	1.000000	
SI	SI	0.653978	0.633287	0.675857	0.613422	0.710056	0.638926	1.000000

Source: Author

4.4 The Analysis of the Structural Model

Smart PLS 2.0 was used to evaluate the study hypotheses and establish associations. Figure 1 depicts the hypothesis, Figure 2 depicts the path coefficient results, and Figure 3 depicts the path coefficient (T-Values) discoveries.
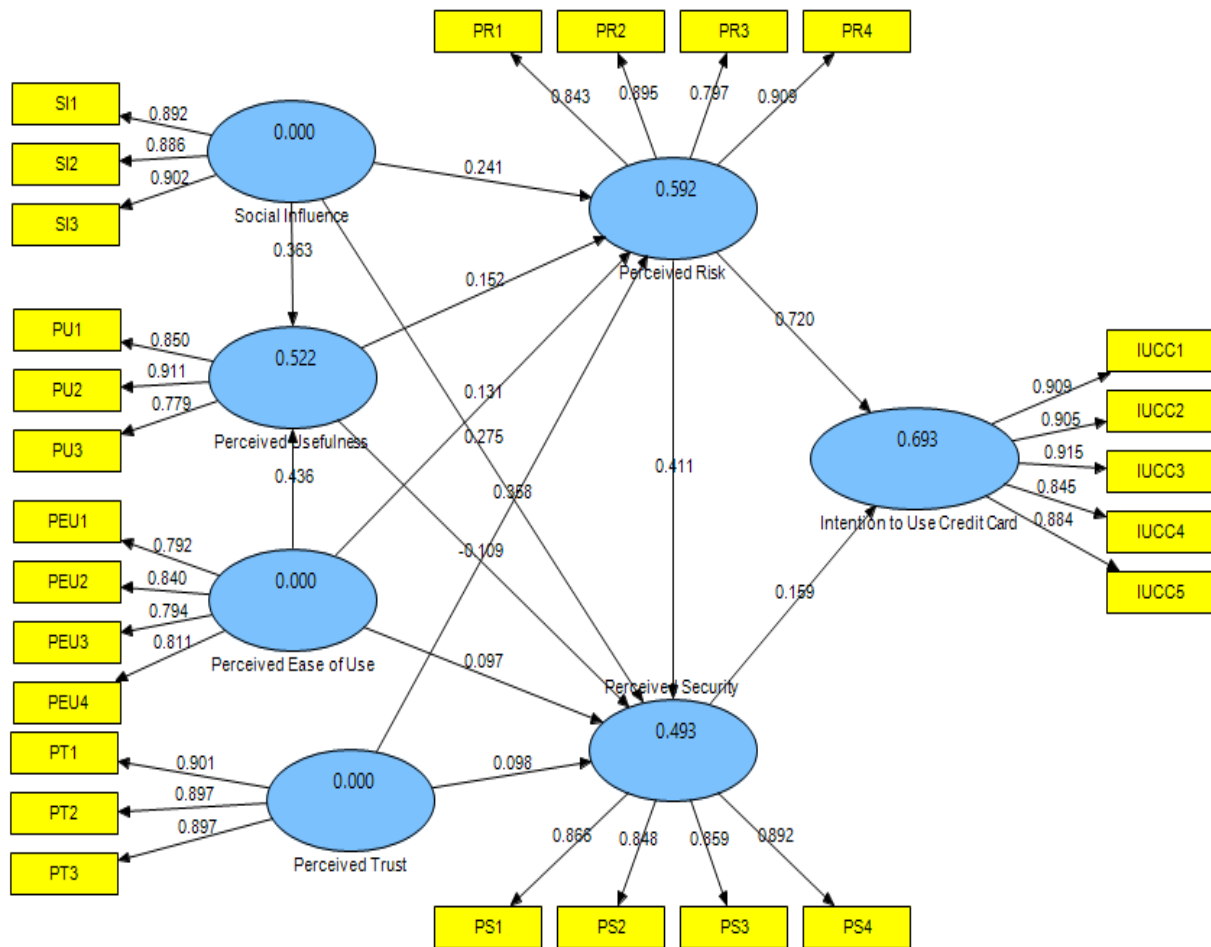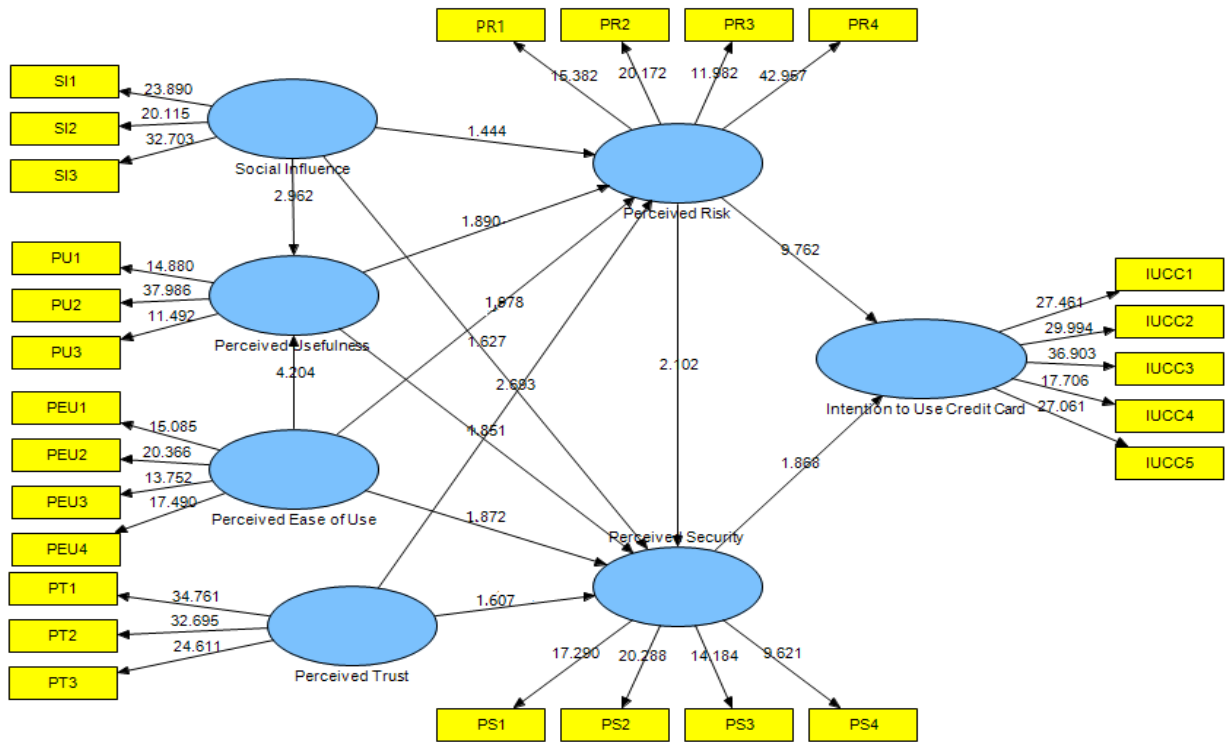

Figure 2. Path Coefficient Findings
Source: Author

Figure 3. Path T-Values Findings
Source: Author

Table 4. Hypotheses Testing

Path of Hypotheses	Path Coefficient	Standard Error (SE)	T Statistics	Results
SI -> PR (H1)	0.241358	0.167089	1.444491	Accepted
SI -> PS (H2)	0.274663	0.168857	1.626604	Accepted
SI -> PU (H3)	0.363021	0.122562	2.961949	Accepted
PU -> PR (H4)	0.152125	0.139451	1.890487	Accepted
PU -> PS (H5)	0.108903	0.127987	1.851494	Accepted
PEU -> PU (H6)	0.435670	0.103633	4.203969	Accepted
PEU -> PR (H7)	0.131312	0.103500	1.978319	Accepted
PEU -> PS (H8)	0.096874	0.111065	1.872230	Accepted
PT -> PR (H9)	0.357922	0.132919	2.692773	Accepted
PT -> PS (H10)	0.097704	0.160737	1.607846	Accepted
PR -> PS (H11)	0.410762	0.195427	2.101866	Accepted
PR -> IUCC (H12)	0.720050	0.073760	9.762067	Accepted
PS -> IUCC (H13)	0.158598	0.084888	1.868326	Accepted

Source: Author

Table 4 summarizes the outcomes of the study, showing all correlations and their significance. The relationship between SI -> PR (H1) (β= 0.241358, SE=0.167089, T=1.444491), thus, hypothesis number 1 was accepted. The relationship between SI -> PS (H2) (β= 0.274663, SE=0.168857, T=1.626604), thus, hypothesis number 2 was accepted. The relationship between SI -> PU (H3-β= 0.363021, SE=0.122562, T=2.961949), thus, hypothesis number 3 was accepted. Next the relationship between PU -> PR (H4-β= 0.152125, SE=0.139451, T=1.890487), thus, hypothesis number 4 was accepted. Also, the relationship between PU -> PS (H5-β= 0.108903,

SE=0.127987, T=1.851494), thus, hypothesis number 5 was accepted. Similarly, the relationship between PEU -> PU (H6-β= 0.435670, SE=0.103633, T=4.203969), thus, hypothesis number 6 was accepted. And the relationship between PEU -> PR (H7-β= 0.131312, SE=0.103500, T=1.978319), thus, hypothesis number 7 was accepted. Likewise, the relationship between PEU -> PS (H8- β= 0.096874, SE=0.111065, T=1.872230), thus, hypothesis number 8 was accepted. Additionally, the relationship between PT -> PR (H9-β= 0.357922, SE=0.132919, T=2.692773), thus, hypothesis number 9 was accepted. And the relationship between PT -> PS (H10-β= 0.097704, SE=0.160737, T=1.607846), thus, hypothesis number 10 was accepted. Moreover, the relationship between PR -> PS (H11- β= 0.410762, SE=0.195427, T=2.101866), thus, hypothesis number 11 was accepted. Also, the relationship between PR -> intention to use credit card (H12-β=0.720050, SE=0.073760, T=9.762067), thus, hypothesis number 12 was accepted. Finally, the relationship between PS -> intention to use credit card (H13-β= 0.158598, SE=0.084888, T=1.868326), thus, hypothesis number 13 was accepted.

5. Implementation and Discussion

The goal of this study was to see how people's risk and security perceptions impacted their willingness to use credit cards. The study looked at how four exogenous factors (SI, PEU, PU, and PT) and two endogenous variables (PR and PS) influenced customer IUCC using standard technology adoption theories. The findings of hypothesis testing for the research model, including the path coefficients and their significant values, are shown in Table 4 and Figures 2 and 3. First, the intended expectations of customers for credit card event losses were compared to prior PR and PS studies (Rahman et al., 2021; Boden et al., 2020; Cornea, 2021). PR and PS, according to the CFA findings, is a second-order reflective construct linked to seven first-order risk dimensions, including SI, PEU, PU, and PT. Previous study has considered PR as a one-dimensional construct (Rahman et al., 2021; Cornea, 2021) or two one-dimensional constructs (Rahman et al., 2021; Cornea, 2021; Boden et al., 2020). The strongest relationship between the IUCC and PEU, SI and PU, PT and PR, and PR and PS, according to the SEM research, was PR. This study is unusual in the field of credit card adoption in Saudi Arabia since it uses a theoretical model to assess the factors that influence consumers' willingness to use credit cards, such as TPR theory (Bauer, 1960), PU, PEU, and SI from TAM (Davis et al., 1989), TPB (Ajzen, 1991), and UTAUT theory (Venkatesh et al., 2003). This research might be useful to banks as they design new customer acquisition tactics and decide how to spend resources to retain and grow their existing client base. As a result of the findings, banks should concentrate their efforts on risk and security problems, which might help them attract new customers. Banks may encourage customers to own and use credit cards to pay for products and services depending on factors influencing their credit card use intentions. Money-back guarantees are another excellent risk-reduction strategy that may help clients feel more at ease and safe with the system. Banks and other stakeholders should upgrade credit cards with more useful features and services, as well as simplify credit card payment methods, in the ever-changing business environment. By defining or enhancing transactional procedures or relevant services, banks may take advantage of the positive impacts of PT, utility, simplicity of use, and SI on credit card acceptance. As a consequence, they will be willing to accept credit card issuers' offers and urge individuals in Saudi Arabia and other nations to use credit cards. As a result, this research has theoretical as well as practical implications. Modeling and deconstructing PR and security as a reflecting second-order construct into four first-order risk dimensions: SI, PT, PU, and PEU was the study's unique theoretical contribution. Second, the findings of the study contributed empirical data and a theoretical component to the academic research platform on e-banking services in Saudi Arabia, particularly in the credit card business. Finally, the study adds to the body of knowledge on consumer behavior by verifying the effects of PR and PS on the IUCC in Saudi Arabia, which most prior studies had ignored.

Conclusion and future work

This study found that PR and security are second-order attributes connected to four first-order risk dimensions: PT, PU, PEU, and SI, based on data from 217 bank clients. PR and PS had the greatest impact on credit card usage intentions, followed by PT, SI, PU, and PEU, in that order. As a consequence of all of these factors, consumers are urged to utilize credit cards. Credit card PU is also influenced by PEU and SI. All studies have faults that must be addressed, regardless of their contributions to the literature, practical, theoretical, or methodological applications. Our findings are exclusive to Saudi Arabia, although they are comparable to other IS and mobile e-services research. To gain a better understanding of how the elements interact over time and encourage people in Saudi Arabia and other countries to use credit cards, a longitudinal study on our methodology would be ideal. Other characteristics such as service quality, familiarity, mobile Skill, and anxiousness may be added in future study to increase explanatory power. Based on the respondent's educational background, our widely circulated questionnaire looks to be limited to the more educated and technically capable sectors of society, who would be more inclined to embrace e-services applications. As a result, researchers concerned in the adoption and sustainability of e-services should focus their efforts on the underbanked population, where illiteracy may be the norm.

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