

Technology Acceptance Dynamics and Adoption of E-Payment Systems: Empirical Evidence From Jordan

Ahmed Al-Dmour, Al-Ahliyya Amman University, Jordan

Hani H. Al-dmour, The Univeristy of Jordan, Jordan

Rawan Brghuthi, The Univeristy of Jordan, Jordan

Rand Al-Dmour, Tne University of Jordan, Jordan

ABSTRACT

This study aimed to identify the main factors associated with consumers' intentions to adopt electronic payment systems (EPS) in Jordan. To achieve this objective, an integrated conceptual framework based on the technology acceptance model (TAM) and content analysis of the previous studies was developed. A quantitative approach using a convenience sample of 487 Jordanian banking customers was employed with the required data obtained via a survey questionnaire. The study findings indicated that all proposed factors (perceived usefulness, ease of use, security, self-efficacy, and trust) have statistically significant positive relationships with electronic payment adoption intention, with the explanation power of all examined factors reaching 49% ($R^2=0.49$). Perceived usefulness and ease of use were found to be the most important factors associated with the adoption of e-payment. However, education level was the only individual demographic variable with a significant relationship with adoption intention; age and gender were found to have only insignificant relationships.

KEYWORDS

Adoption, E-Payments, Intention, Jordan, Secure Banking Services, Trust

INTRODUCTION

The global payment systems and tools have witnessed a remarkable development in the last ten years due to the rapid growth and evolution of information technology, digital financial services and e-commerce. As interest increased in financial and banking sector infrastructure, specifically in the field of clearing and settlement of payments and securities, the expectations indicate that the next years will see a more significant acceleration in technology and information. Consequently, major changes in the needs, features and forms of tools for payment and electronic transfer of funds in the Jordanian market. Moreover, the past two decades have seen a shift away from cash and other paper-based methods, toward electronic payment (e-payment) in numerous markets around the world. This trend mirrors the widely held belief that electronic types of payment

DOI: 10.4018/IJEBR.2021040104

This article, originally published under IGI Global's copyright on April 1, 2021 will proceed with publication as an Open Access article starting on March 11, 2024 in the gold Open Access journal, International Journal of E-Business Research (IJEBR) (converted to gold Open Access January 1, 2022) and will be distributed under the terms of the Creative Commons Attribution License (<http://creativecommons.org/licenses/by/4.0/>) which permits unrestricted use, distribution, and production in any medium, provided the author of the original work and original publication source are properly credited.

function at lower costs and provide more advantages to society than paper-based methods, including improving financial inclusion and enhancing the welfare of merchants, people and the economy as a whole.

Across the globe, electronic payments proceed on a march toward displacing paper-based methods for conducting consumer payment transactions with merchants. Several countries are well on their way toward becoming “cashless societies”, while others are making steady advances toward reducing their reliance on cash in at least some of the critical segments of consumer spending. Despite this overall trend, there are still cash-centric economies in many countries, especially in emerging markets. In this regard, there are two major payment systems used in Jordan, namely large-scale payment systems which includes Real Time Gross Settlement System (RTGS-JO), and retail payment systems that comprise of three categories. The first category is Electronic Cheques Clearing System (ECC), Automated Clearing House System (ACH), Electronic Bill Presentment and Payment System (eFAWATEERcom) and Mobile Payment System (JoMoPay). Followed by the second category; retail payment instruments (e.g. Cheques, Payment Cards and Electronic Wallets) and then; electronic payment channels (e.g. Internet Banking, Mobile Banking, Automated Teller Machines (ATMs), Point of Sales (POS) and E-Commerce Portals...etc.) (Central Bank of Jordan, 2016).

In light of this, finance and banking sector seeks to exploit the outcomes of technology in the payment systems, tools and means, and to benefit from the latest information technologies and communication networks in the field of payment and electronic transfer of funds, in order to achieve the speed and simplicity and to reduce the operational costs of payment transactions and electronic transfer of funds, and to enhance the safety and security of payments. Besides, E-payment has become a popular method today for paying; it is designed to benefit customers basically in terms of convenience, and lower the transaction cost (Central Bank of Jordan, 2016). The growth of the internet has encouraged the popularity of this payment instrument as electronic commerce (e-commerce) has created new financial needs that in many cases cannot be adequately fulfilled by traditional payment systems (Wendy et al., 2013).

A considerable number of studies have looked at e-payment from the technical and user acceptance perspectives e.g (Lwoga, & Lwoga, 2017; Lu et al. 2017; Park et al., 2019). In conjunction with these studies, several key factors influencing the perception of e-payment are proposed. For example, Hataiseree (2008) stated that cash and cheques remain as popular payment tools in the result that consumers are not convinced of the usefulness of using e-payment. The most important question in front of e-payment service providers is the reason why there is a slow adoption of e-payment. So, it is required to explore the factors influencing e-payment adoption intention in Jordan. An examination by the Central Bank of Jordan (2019) refers to the absence of awareness is one reason why consumers are not using e-payment. However, the central bank concludes that Jordan is moving toward better e-payment acceptance in the coming years. Abrazhevich (2001) attributes E-payments inability to the system design and deployment that do not meet clients’ needs and desires, while numerous studies view security and trust as among the vital concerns (Anthony & Mutalemwa, 2014; Chogo & Sedoyeka, 2014; Lashitew et al., 2019). Interestingly, these studies evoke that security; trust, usefulness, self-efficacy, and ease of use are significant factors influencing the perception of e-payment. Very few studies to date have attempted to study these factors in a single setting (e.g., Wendy et al., 2013; Qatawneh et al., 2015) and these relevant studies were conducted outside Jordan. It is interesting to inspect these factors, particularly in the Jordanian setting, due to the fascinating developments that are currently occurring. Thus, the prediction that e-payment use will expand at a significant rate within the next few years.

Understanding and meeting customers’ requirements and expectations are the key factor to the success of e-banking To increase the adoption rate of EPS, the factors that affect consumer adoption should be better managed (Montazemi and Qahri-Saremi, 2015). Most likely, the selection of e-payment services is closely related to the design characteristics of the e-payment system. For any

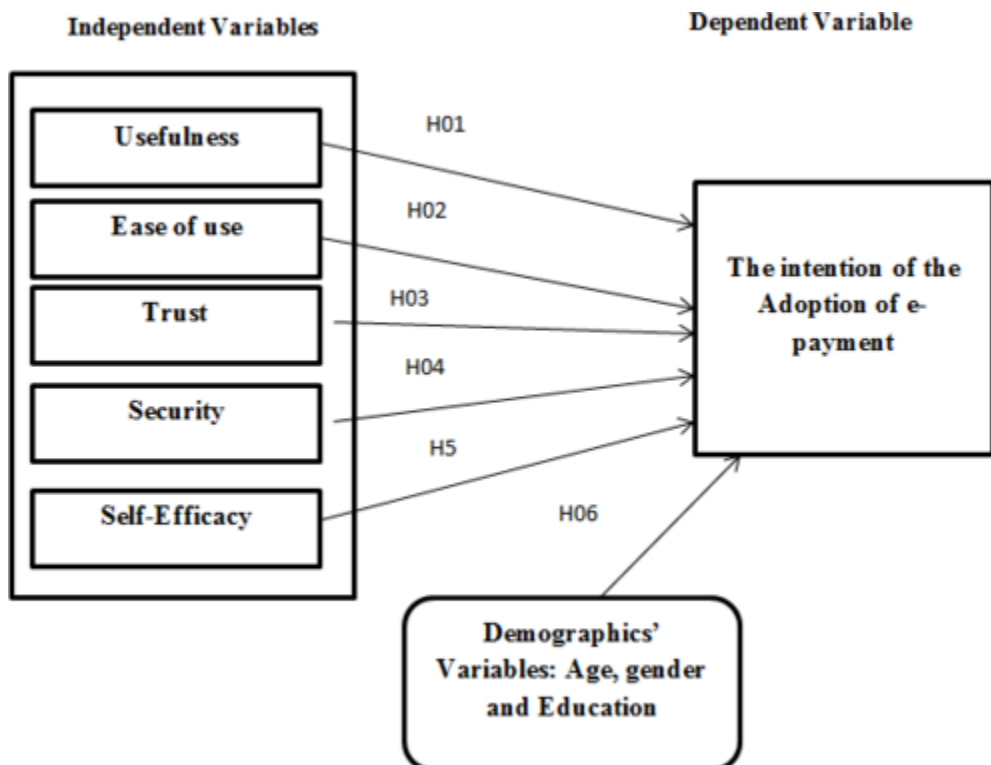
e-payment type to be adopted, its design should meet the users' need (Sahut, 2008). Furthermore, the study of the influence of customers' demographic characteristics is necessary for the banks in policy direction and formulation of strategies for marketing and allocation of e-payment resources. For example, the banks' understanding of the customers' demographic influences on the adoption of e-payment services may necessitate the deployment of target marketing strategies.

THE STUDY'S MODEL

This study uses the technology acceptance model (TAM) as a theoretical base to hypothesize and examine an integrated model to explore factors affecting e-payment adoption intention in Jordan. TAM is a theory to model how users accept and use technology (Davis, 1989). In the TAM, two main factors influence users' decision to use the technology, namely: perceived usefulness and perceived ease-of-use. Perceived usefulness (benefits) is defined as "the degree to which users believe that using a particular system would enhance their job performance", while perceived ease-of-use is defined "as the degree to which users believe that using a particular system is easy to use" (Davis, 1989).

In addition to TAM, constructs such as trust, security, and self-efficacy have been added as the antecedents of adoption according to previous studies (Wendy et al., 2013; Qatawneh et al., 2015). Consequently, this study groups together all these factors into one integrated model to examine which of these factors appear to be the most influential on Jordanian intention to adopt e-payments. The proposed research theoretical model is illustrated in Figure 1. It shows the influence of the five independent factors (security, trust, usefulness, self-efficacy, and ease of use) and demographic variables (age, gender and education) on the dependent variable (consumers' adoption /intention to

Figure 1. A study model of factors influencing consumer intentions to adopt e-payment systems



adopt e-payment. Behavioural intention refers to the desire of individuals to perform or not perform some specified future behaviour (Venkatesh and Davis, 2000). In this study, behavioural intention refers to the intention of consumers to adopt e-payment services.

E-payment represents any non-cash payment that does not include paper cheque (Hord, 2005). Wendy et al., (2013) refers e-payment to the transfer of an electronic value of payment from a payer to the payee through an e-payment tool which allows customers to remotely enter and manage their bank accounts and transactions, performed through an electronic network. This study adopts these definitions and mentions the Central Bank of Jordan definition of e-payment systems that were mentioned in the Bylaw of Electronic Payment and Transfer of Funds 2017 (Central Bank of Jordan, 2017), which is “the group of programs or instruments prepared for payment, transfer, clearance, or settlement of funds electronically and approved by the Central Bank.” Under the bylaw mentioned above, the business activities of the electronic payment and transfer of funds companies shall be subject to the supervision and control of the Central Bank of Jordan. This will make the payment and transfer of the funds’ activities such as payment or transfer or financial settlement or electronic clearing or issuing and managing electronic payment tools and systems subject to the Central Bank of Jordan supervision and control, within a new system of legislation and regulations governing this framework, requiring any entity that exercises these activities to obtain a license from the Central Bank of Jordan. All of this is obtained in order to enhance the role of Central Bank of Jordan in supervising and monitoring the activities of payment and electronic transfer of funds. As well as enhance the efficiency, soundness and effectiveness of payment, clearing and settlement systems, and to achieve transparency, efficiency, competitiveness and the protection of financial consumers in the payment sector (Central Bank of Jordan, 2016). Also, this will lead to feasibility in technology in terms of security, trust, and efficiency that also will affect users’ decision to use e-payment.

Based upon the above study’s conceptual framework, and the content analysis of the previous studies, the following most common and relevant factors were selected to be examined in the relationship with the intention of the adoption of e-payments services in Jordan culture context.

1.3 Perceived Usefulness

Gerrard and Cunningham (2003) present perceived usefulness to include fixed and transaction costs in adopting e-payment. Fixed costs refer to the costs of getting payment tools such as card readers and payment software, while transaction costs are those incurred by consumers and merchants every time, they carry out a financial transaction. Accordingly, customers can enjoy the usefulness of low cost when they involve in electronic transactions as they only need to pay a nominal fee to their respective banks, payment service providers and card issuers for the services used (San-Martin and Lo’pez-Catala ´n, 2013; Shankar and Datta, 2018). So, the usefulness of the service is a crucial factor explaining the intention to adopt the service (Davis, 1989) and it has been empirically authenticated as a vital forerunner of new technology adoption Duane et al., 2014; Arvidsson, 2014; Apanasevic et al., 2016;). The statistics of e-payment use in Jordan show that the perception of Jordanians is slowly changing from using cash to e-payment due to many reasons. For instance, the attractiveness of cards and mobile wallets as transactional e-payment tools; this attractiveness stems from two critical sources. First, they allow individuals to minimize their handled cash. Second, there has been a gradual increase in consumer demand for cards and mobile wallets use, driven by the convenience of using them as a means for conducting transactions (Central Bank of Jordan, 2016). Thus, they offer a transactional advantage over cash and cheques; through providing consumers with a convenient means of payment which includes users’ ability to spend, store, and transport a currency value through the payment systems (Chakravorti, 2003), besides, the primary advantages of e-payment which include time, speed, cost and effort savings. Therefore, the perceived usefulness for customers represents a valid dimension of the adoption process.

Before accepting any new technology, customers critically assess all the usefulness they will get after using it; therefore the perceived usefulness is the degree of consumer's beliefs that adopting technology will enhance their performance (Davis, 1989). To start with, the relative advantages of a new product or services if compared to existing ones is reviewed as one of the most important factors affecting consumer adoption. Chou et al. (2004) identify usefulness as a significant driver for e-payment systems acceptance and use. Similarly, Eastin (2002) who studied four e-commerce activities (online shopping, banking, investing, and e-payment systems) found that before adoption, perceived suitability and financial usefulness predict adoption decision. Based on the above discussion, this study consequently proposes the following hypothesis: Usefulness relates positively to consumers' attitudes to adopt e-payment in Jordan.

H1.1: There is a significant relationship between perceived usefulness and consumers' intention to adopt e-payment in Jordan.

Ease of Use

This factor has been defined as the level to which an innovation is perceived as complex to understand and use (Arvidsson, 2014). Similarly, Davis (1989) defined ease of use as the degree of beliefs that using a particular technology will be effortless. Besides, Abrazhevich (2001) stated that a fruitful design of e-payment systems from the user position is important to attract user's acceptance toward e-payment. Because of this, problems with usability have been found to justify low adoption of a variety of payment systems and tools, including cards, mobile wallets, and internet banking (Arvidsson, 2014; Qatawneh et al., 2015). As such, perceived ease of use regarded as a decisive factor of e-payment adoption.

Furthermore, this variable may explain consumers' view on new technologies which relates to the amount of complexity of the technology (Mallat, 2007). In short, content, design, and speed are essential features leading to perceived ease of use and later influence consumers' adoption of e-payment (Wendy, Et al., 2013). Chen (2008) proposed a model based on TAM and innovation diffusion theory (IDT) and found the ease of use as a crucial determinant of e-payment acceptance. Arvidsson, (2014) conclude that ease of use of a new payment service or lack of complexity; is expected to lead to a positive attitude by the individuals. If it is difficult to start using a new service, there will be usage barriers (Wang and Li, 2011) that harm the adoption (Laukkanen and Kiviniemi, 2010;). As such, the following hypotheses were developed: Ease of use relate positively to consumers' attitudes to adopt e-payment in Jordan.

H1.2: There is a significant relationship between the ease of use factor and consumers' intention to adopt e-payment in Jordan.

Security

As for security, users' concerns about safety and security of electronic payment transactions are commonly connected to authentication and confidentiality issues as well as to anxieties about secondary use and unauthorized entrance to payments and consumer data (Dewan and Chen, 2005). Commonly, security is a set of procedures and programs to confirm the data source and guarantee the integrity and privacy of the information (Tsiakis and Sthephanides, 2005). Further, it refers to the perception regarding payment instruments and mechanisms for saving and transmission of information (Lim et al., 2006). So, it gets back to the technical aspects that guarantee integrity, authentication, confidentiality, and non-recognition of relationships in e-payment.

Regarding e-payment, security can be classified into three areas (Qatawneh et al., 2015); they are systems, transaction, and legal security. This is because e-payment can only be considered as confidential when all stages of the transaction process are qualified to satisfy users' needs and their

security expectations. Wendy et al., (2013) stated that security to be an essential obstacle to online banking usage, which affects the use of e-payment systems because though consumers' confidence on their selected bank is strong, their confidence in technology remains weak. It is for these reasons that security could be a determinant of users' decision to adopt e-payment (Abrazhevich, 2004). The following hypothesis is proposed to confirm the effects of security on e-payment: Security relates positively to consumers' attitudes to adopt e-payment in Jordan.

H1.3: There is a significant relationship between security factor and consumers' intention to adopt e-payment in Jordan.

Self-Efficacy

The degree to which an individual believes in executing any particular activity with the skill they are having refers to self-efficacy (Hsu et al., 2011). Dory et al. (2009) stated that self-efficacy represents a person understands and beliefs in his or her skills and capability to perform a task given. In this regard, self-efficacy in oneself is derived from the experience of one's mastery. Such self-efficacy beliefs are developed as a response to four sources of data which are; experience (success and failure), vicarious experience (watching others' successes and failures), verbal influence (from peers, partners, and relatives), and affective state (emotional arousal such as tension) (Wendy et al., 2013). So, it has been an important determinant of users' perception toward electronic payments.

Many studies found that self-efficacy has a significant positive influence on perception and behavioral intention to use information systems (Wendy et al., 2013;). Appropriately, users with higher self-efficacy tend to experience more types of communication media and function, while users with lower self-efficacy may be limited to fewer operations (Li et al., 2011). In the context of e-payment, self-efficacy refers to the judgment of one's ability to use e-payment systems (Qatawneh et al., 2015) this factor which influencing e-payment adoption in Jordan and to be confirmed through the following proposition: Self-efficacy relates positively to consumers' attitudes to adopt e-payment in Jordan.

H1.4: There is a significant relationship between self-efficacy factor and consumers' intention to adopt e-payment in Jordan.

Trust

Many studies argue that trust is a vital factor for understanding interpersonal behavior and economic exchanges which affects consumers' perception toward e-payment systems (Wendy, 2013) and then its adoption success (Lim et al., 2006). Trust can be defined as a positive expectation of consumer towards service provider (Mayer et al., 1995). Palvia (2009) concludes that trust consists of three beliefs; ability, integrity, and benevolence. Ability means parties have enough specialized knowledge to fulfil their promises. Integrity is the capability of e-payment service entities to keep their obligations because of this consumer acceptance of electronic payment needs a belief that concerns of the consumer will be addressed (Gupta and Sareen, 2001). Benevolence is the service provider's concern to defend consumer interest. In electronic services, trust is the most important factor which affects consumer perception (Yan et al., 2009).

Trust is characterized as a component of the level of risk involved in financial transactions, and the result that trust is reduced perceived risk, leading to positive intentions toward e-payment adoption (Yousafzai et al., 2003). Prior studies found trust to be a critical determinant impacting consumers' willingness to make e-commerce deals and engage in online exchanges of money (Qatawneh et al., 2015; Shankar and Datta, 2018). Accordingly, the following hypotheses were developed: Trust relates positively to consumers' attitudes to adopt e-payment in Jordan.

H1.5: There is a significant relationship between trust factor and consumers' intention to adopt e-payment in Jordan.

Demographics' Characteristics

According to Rogers (2003), the adopter of new technology is typically younger, have a good income and appropriate level of education and more reactive to innovation than the non-adopter. This trend has been confirmed by many researchers, such as Margaret and Ngoma, (2013) Mutengezanwa and Mauchi (2013), Hidayanto et al., (2015); Yaokumah et al., (2017), Alalwan et al., (2017); Isaac et al., (2018) who concluded that adopters are younger, wealthy and usually have a right level of education, there is a consensus among researchers that demographics play an important role in determining internet banking behaviour. High income, relatively young age and good education have been singled out as explaining the acceptance of internet banking. Gender has been suggested as a factor influencing internet banking adoption, while some studies argue that the internet is male-dominated (Venkatesh and Morris, 2000). Dalia et al. (2009) conducted research aimed at understanding and explaining customers continued intention to adopt internet banking in Egypt. By using a sample of users of internet banking services show that demographic variables had no significant effect on continued usage of internet banking services. Also, Dehbini et al., (2015) in their study showed that age, gender, education, employment and marital status did not significantly related to electronic payment card acceptance. While, Lee (2000), in his research, concluded that age, income and education have a direct impact and gender has no direct impact on technology adoption. Also, the results obtained from other studies exhibited no significant influence of the demographics on the consumer adoption of internet banking (Gan et al., 2006). On the other hand, Wang et al. (2003) found that age has a significant influence on user acceptance of Internet banking.

Moreover, Alagheband (2006) asserts that young individuals are more likely to adopt Internet banking. Ernest Emeka Izogo et al., (2012), in their study, show that the influence of marital status, age and education level on the adoption of e-banking is significant. The reverse is the case with such demographic variables as gender, religion and income Connolly and Stavins (2015) found that age, education, and income are especially strongly correlated with both adoption and use of most payment instruments in the United States. Schuh and Stavins (2013) and Koulayev et al. (2016) used data from a single year's SCPC survey data, and all three studies show that demographics and income have significant effects on the adoption and use of payment instruments. Yaokumah et al., (2017), on their study, revealed that there was no significant differences between the male and female customers in the use of e-payment services. However, they indicated that younger customers and higher educated had more ICT skills and used the services much more. A critical look at the past studies reviewed revealed that the influence of the demographic characteristic of customers on the adoption of e-banking service was mixed; therefore, the following hypothesis was formulated:

H1.6: There is a significant relationship between the demographic characteristics of customers (age, education and gender) and their intention of the adoption of e-banking payment services in Jordan.

METHODOLOGY

Based on the study objectives, a questionnaire survey was considered as a valid approach. Thus, a questionnaire was developed in line with the study's conceptual framework and previous studies background. In this survey, some variables are factual (for example, customers' demographic characteristics such as sex, age, income and education), whereas others are perceptual (i.e., factors influencing the adoption of e. payments and customers' intention of adoption). A five-point Likert scale was used with range (1 = strongly disagree; 2 = disagree; 3 = neutral; 4 = agree; and 5 = strongly agree). The questionnaire's content (constructs and items) were mainly selected from previous

Table 1. Mean, Standard Deviation, and Normality of Scale Items

Factors	Mean	S.D	Skewness	Kurtosis	Cronbach Alpha
Usefulness	3.9258	0.77044	-0.880	0.746	0.878
Ease of Use	3.8652	0.74433	-1.120	1.842	0.763
Security	3.5626	0.83073	-0.649	0.001	0.652
Self-Efficacy	3.3337	0.80319	-0.522	-0.621	0.683
Trust	3.4754	0.85821	-0.467	0.107	0.864
E-payment Adoption Intention	3.2244	0.90692	-0.304	-1.067	0.853

studies and adoption theories; Davis, (1989); Wendy et al., (2013). Shankar and Datta (2018).; Kim et al., (2009); Isaac et al., (2018); Shankar and Datta, (2018). Moreover, the measurement scales of e-payment adoption were adopted by Wendy et al. (2013). For ensuring the reliability of questionnaire content, all these selected measures were modified to the Jordanian environment context based on the results of a pilot study and feedback from five professional academic staff in this filed (Appendix A, the questionnaire). Simple statistical tools like, mean, standard deviation and multiple regression analysis were applied.

The target study population comprises from bank customers of commercial banks in Jordan. To select the sample population, a convenient sampling technique was employed. Using the convenience sampling method, 600 copies of questionnaires were distributed using online, and self-administered questionnaire survey and only 487 questionnaires were usable with an 81% response rate. In this study, the respondents comprised 48.5% males and 51.5.0% females. The majority of the respondents in this study, that is, 64%, were in the age group between 35to 45years old. In terms of their education levels, 62.6% of the respondents have obtained a Bachelor degree, and in terms of their per capita income, about 56% of the respondents have income between 500 JD to 1000 per month. Also, the majority of respondents that participated (83.2%) have instruments, which can be used in e-payment and 66.2% of the respondents' used point of sale terminals for shopping as the most frequently e-payment service for their different activities, such as shopping, payment of bills, money transfer, mobile credit recharge, and cash withdraw.

Descriptive Statistics

All the items scale (independent and dependent variables) included in the study were tested for their means, standard deviations, skewness, kurtosis and reliability. The descriptive statistics presented below in Table 1 indicate a positive disposition towards the items. While the standard deviation (SD) values ranged from 0.74433 to 0.90692, these values indicate a narrow spread around the mean. Also, the mean values of all items were higher than the midpoint (3) and ranged from 3.2244 to 3.9258 However, after careful assessment by using skewness and kurtosis; the data were found to be normally distributed. Indeed, skewness and kurtosis were normally distributed since most of the values were inside the adequate ranges for normality (i.e. -1.0 to +1.0) for skewness, and less than 10 for kurtosis. The Cronbach alpha coefficient for all the study variables and they are ranged between 0.652 and 0.878, which means that all the items used were reliable (Sekrane and Bougie, 2009).

Multicollinearity Analysis Results

In statistics, Multicollinearity (Collinearity) is a phenomenon in multiple regression analysis; it arises if there is a high level of correlation (positive or negative) between two or more independent variables. Multicollinearity can be assessed by the most widely used measures Tolerance and Variance Inflation Factor (VIF), which is the proportion of variance in the independent variable that is not explained by

its relationships with the other independent variables. Hair et al., (2009) stated that the minimum cutoff value for tolerance is typically (0.10), that is, a tolerance value less than 0.10 should be investigated further. On the other hand, the Variance Inflation Factor (VIF) discovers how much Multicollinearity problems inflate the variance of the regression coefficients. Noting that (VIF) value is favorable when being less than five as well as in more relaxed criterion when being less than 10 (Hair et al., 2010).

From this perspective, the Multicollinearity test for the five main factors (benefit, ease of use, security, self-efficacy, and trust) was accomplished, and all (VIF) values were less than (5 and 10), and tolerance values were more than (0.10) as shown in Table 2. Consequently, there is no Collinearity within collected data, which in result, reinforced the model by avoiding the problem of having interchangeable beta values between independent variables and then there was no bias.

TESTING HYPOTHESES RESULTS

The multiple regression analysis techniques were used to examine the main hypothesis and sub-hypotheses.

Table 3 summarizes the results of multiple regression analysis, with the F-ratio test, for the study's main hypothesis. The results of the multiple correlation coefficient ($R=0.702$) value indicate that the main hypothesis is accepted at $\alpha \leq .000$. Accordingly, it may be concluded that there is a significant relationship between these five factors (perceived usefulness, ease of uses, security, self-efficacy and trust) and the adoption of e. payments when were taken together. The value of the coefficient of determination (R Square) also indicates that 0.49 of variance in the extent of the intention of the adoption of e-payment could be explained by these all these factors when they were taken together. Adjusted R square value of this study was 0.487 which is very similar to R square value 0.492 as shown in Table 3, since adjusted R values always less than or equal R square; it means that if the model has been fitted when the whole population participate rather than those who responded in the study, there will be 0.005 (0.492 – 0.487) less variance in the model outcome.

Table 2. Collinearity Statistics for Independent Variables

Independent Variables	Collinearity Statistics	
	Tolerance	VIF
Benefit	0.422	2.369
Ease of Use	0.425	2.352
Security	0.936	1.068
Self-efficacy	0.853	1.172
Trust	0.493	2.028

Table 3. Model summary

Model	R	R Square	Adjusted R Square	Std. The error of the Estimate	Change Statistics				
					R Square Change	F Change	df1	df2	Sig. F Change
1	0.702 ^a	0.492	0.487	0.64945	0.492	93.345	5	481	.000
a. Predictors: (Constant), Trust, Security, Self-Efficacy, Ease of Use, Benefit									

Table 4. ANOVA Results for Independent and Dependent Variables

Model		Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	196.860	5	39.372	93.345	0.000 ^b
	Residual	202.881	481	0.422		
	Total	399.741	486			
a. Dependent Variable: E-payment Adoption Intention						
b. Predictors: (Constant), Trust, Security, Self-Efficacy, Ease of Use, Benefit						

By implementing the ($\alpha 0.05$) level of significance to reject or accept the main hypothesis; the F- value for the collected primary data was 93.345 which is significant at the level of $p < 0.05$ (sig. = 0.000) which means that there is a statistically significant impact of the main five factors (benefit, ease of use, security, self-efficacy, and trust) on e-payment adoption intention, as shown in Table 4.

Table 5 started with an estimation of beta coefficients for each independent variable. It gives a measure of the contribution of each variable to the model. Clearly, a large value shows that a unit change in the independent variable has a significant effect on the dependent variable. Perceived usefulness, ease of use and self-efficacy represented the highest beta values, which were 0.281, 0.265, and 0.234 respectively, while, security and trust factors represented the lowest beta values, which were 0.084 and 0.109 respectively. Therefore, usefulness, ease of use and self-efficacy factors have the highest contributions in the research model.

The second part of Table 5 demonstrated t-value and sig—values, which give a rough indication of the impact of each independent variable. For instance, a big absolute (t) value and a small (p) value indicate that a predictor variable is having a significant effect on the criterion variable.

ANOVA analysis was used to test the 2nd hypothesis.

H1.6: There is a significant relationship between the demographic characteristics of customers (age, education and gender) and their intention of the adoption of e-banking payment services in Jordan.

It was used to assess the differences among respondents in terms of their intention to adopt e-payments services based on their personnel demographic characteristics such as gender, age and education. Table 6 summarizes the results of ANOVA for the above hypothesis, and the results indicate that the education level was significantly related to the participants' intention to adopt e-payment services, while age and gender were not. Therefore, it could be concluded that the education level

Table 5. Coefficients for Variables

Model		Unstandardized Coefficients		Standardized Coefficients	T Value	Sig.
		B	Std. Error	Beta		
1	(Constant)	-0.929	0.210		-4.416	0.000
	Usefulness	0.331	0.059	0.281	5.629	0.000
	Ease of Use	0.323	0.061	0.265	5.315	0.000
	Security	0.092	0.037	0.084	2.500	0.013
	Self-Efficacy	0.264	0.040	0.234	6.643	0.000
	Trust	0.115	0.049	0.109	2.356	0.019
a. Dependent Variable: E-payment Adoption Intention						

Table 6. ANOVA results for Hypothesis H1.6

Types of Social Media networks		Sum of Squares	Df	Mean Square	F	Sig.
Age	Between Groups	2.439	2	1.220	1.486	0.227
	Within Groups	397.302	484	.0821		
	Total	399.741	486			
Gender	Between Groups	2.936	1	2.936	3.588	0.059
	Within Groups	396.805	485	0.818		
	Total	399.741	486			
Education	Between Groups	35.311	4	8.828	11.676	0.000
	Within Groups	364.430	482	0.756		
	Total	399.741	486			

plays an important role in the intention of the adoption of payment service in Jordan and the higher educated customer, the more adopted such service.

DISCUSSION AND CONCLUSION

In this research, the quantitative approach was applied to examine the relationship between the five factors and the dependent variable proposed in the conceptual framework; A multiple regression analysis was conducted to test the study proposed hypotheses. The population of the study was the banking customers in Jordan (N=600). Data were collected by a structured questionnaire distributed to a convenience sample of 487 respondents; the questionnaire consists of 33 items that represent the six variables of the study.

The study findings indicate that there is a significant positive relationship between the perceived benefit factor and the adoption of e-payment. The perceived benefit factor scored the highest overall mean and the highest correlation. The finding found support from preceding studies (Wendy et al., 2013; Shankar and Datta, 2018; Gbongli, & Amedjonekou, (2019)) that the perceived benefit is a crucial driver of e-payment adoption. Wendy et al. (2013) indicated that individuals find it beneficial when they made their purchases at unconventional locations and at whichever time of the day. This is supported by the study results whereby the respondents stated that they found it easier and more convenient to make financial transactions electronically. The study found that Jordanian people perceive that e-payment adoption helps them to save time, costs and efforts when they conduct financial transactions, in addition to this, the speed and accuracy of the process. Shankar and Datta, (2018) indicated that this factor has a significant impact on consumers' intention to adopt technology-enabled product which is consistent with the findings of many previous e-payment adoption-related studies (e.g. Duane et al., 2014).

The findings of this study emphasized that customers would adopt a new technology only when they found it useful to fulfil their specific needs and they would switch to another payment method for a financial transaction if they perceived an extra benefit in less or similar cost. The reflections of test findings for the perceived usefulness are summarized as: (1) Benefit factor contributes to increasing consumer's intention to adopt e-payment in Jordan. (2) The more costs, time and efforts saving, provided by e-payment tools, the more the e-payment adoption in Jordan. (3) The speed and accuracy of e-payment process provided for consumers in Jordan, contribute to increasing the adoption of this method and (4) The availability and suitability (anytime and anywhere) of e-payment method increase consumers' intention to adopt it.

Ease of use scored the second-highest overall mean, this factor is correlated with consumers' intention to adopt e-payment in Jordan, and the result is highly significant. Some banks, cards issuers and payment service providers (PSPs) in Jordan have also offered tutorials and advice to their customers on how to use the various e-payment tools and channels. To some extent, Ease of use factor allows the individuals to think that they are in control of the transaction process. The conclusions mentioned above were consistent with previous literature (e.g Wendy et al., 2013; Gbongli, & Amedjonekou, (2019).) where the respondents feel that the e-payment instruments are user-friendly with easy to understand process and content. According to this, customers found it easy to learn the use of e-payment, where only minimal efforts are required. Shankar and Datta (2018) emphasized that individuals can adopt e-payment only when they find it easy to use in comparison with other traditional payment methods for a financial transaction. The repercussions of (H2) test results for this study are as follows: (1) The simplicity of learning how to use e-payment tools and channels enhance the customers' intention to adopt this method. (2) When the process of e-payment is clear and understandable for customers, it will positively contribute to improving their adoption of e-payment in Jordan and (3) When consumers become skilful in using e-payment tools and channels, their intention to adopt e-payment will be improved.

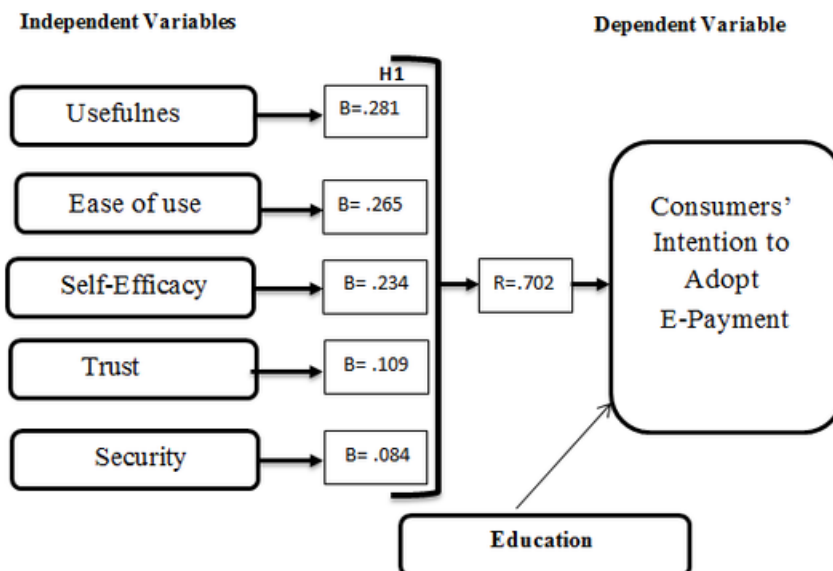
While security factor scored the lowest overall mean between the five factors and therefore, the lowest level of correlation scores with consumers' intention to adopt e-payment variable, multiple regression results show otherwise. The result is a bit inconsistent with prior studies (Bailey et al., 2017; Isaac et al. (2018; Gbongli, & Amedjonekou, (2019))), but it was supported with the result of Wendy et al., (2013) study. The implication that Jordanian people do not perceive the security factor to be a crucial issue can be clarified from the point that customers more and more recognize the steps taken by the Central Bank of Jordan, local banks, payment service providers and cards issuers, as well as all the related party to address the challenges associated with security. These moves would have instilled customers' confidence to use e-payment tools and channels. However, the significant correlation coefficient reported that security is another important factor requiring attention because of the mean score, positive correlation and multiple regression results, which indicate that security, is significantly responsible for the change in consumers' intention to adopt e-payment in Jordan, and this implies that adequate attention still has to be paid on security factor. The following points summarize the reflection of (H3) results for this study: (1) Consumer concerns about security issues for the e-payment method influence their intention to adopt e-payment and (2) Consumers believe about the degree of security in e-payment have a significant impact on consumers intention to adopt e-payment.

Self-efficacy factor scored somehow high overall mean, and this factor is significantly correlated with consumers' intention to adopt e-payment in Jordan. The conclusions as mentioned above were consistent with previous literature (e.g Wendy et al., 2013); Bailey et al., 2017 since the majority of individuals have tried e-payment tools and channels, their positive experience allows them to continue adopting e-payment. Friends, family, and other people who have used the e-payment method would have passed positive comments which further influence the consumers' intention to adopt e-payment. In addition to this, if e-payment were easy to use, the consumers would have perceived that they own the skills and capabilities to complete their financial transactions and this will increase their confidence (Wendy et al., 2013). The following points summarize the reflection of (H3) results for this study: (1) When consumers heard previously about an e-payment tool effect, this will enhance their intention to adopt e-payment. (2) Feedback of others has an impact on the consumer's intention to adopt e-payment. (3) Recommendation from family/friend about an e-payment tool and its effect would improve consumers' intention to adopt e-payment and (4) The degree of confidence when using e-payment instruments will influence consumers' intention to adopt e-payment.

The study findings indicate that there is a significant positive relationship between trust factor and the adoption of e-payment with a high overall mean and considerable correlation. Consumer trust is an important factor while adopting the technology-enabled product, as consumer trust reduces their perceived risk which leads to adoption (Mallat, 2007; Kalini et al., 2019). The results also indicated that initial trust has a significant impact on adoption intention. This result is consistent with the findings of many e-payment adoption studies (Arvidsson, 2014; Shankar and Datta, 2018;). Therefore, service providers should improve their security system to protect consumers' privacy and to prevent the occurrence of any frauds; the trust issue has a significant impact on consumer's intention to adopt e-payment as a result of the few knowledge about digital financial services and electronic payment method in Jordan. However, the Central bank of Jordan launched the digital financial literacy campaign in 2019 to raise awareness on e-payment and digital financial services and probably this will solve the trust issue. The repercussions of (H2) test results for this study are as follows: (1) Trust degree in e-payment legal frameworks will enhance consumers' intention to adopt e-payment in Jordan. (2) Trust degree in the ability of the e-payment system to protect customer privacy has a significant impact on their intention to adopt this method. (3) When the degree of risk associated with e-payment is low, the intention of consumers to adopt e-payment will be affected, and (4) Trustworthiness in payment services provider (PSP) and other related parties will positively contribute to improving consumers' intention to adopt e-payment.

The study findings indicate that the level of education factor is the only personal demographic characteristics has a significant relationship with the intention of the adoption of payment services, while gender and age were found insignificant. This result is supported by previous studies such as Hamza, A. & Shah, A. (2014).; Yaokumah et al., (2017) Dehbini et al., (2015); Baile et al., (2017); Isaac et al., (2018); Gbongli, & Amedjonekou, (2019). Therefore, bank policymakers should pay more attention to those who are highly educated customers for the adoption of e-payment services in Jordan regardless of their age or gender. The following above Figure 2 illustrates the modified research theoretical framework according to the independent variables beta values. Each independent variable within the five factors is listed in a descending order to reflect its significance in consumers' intention to adopt e-payment in Jordan. In addition to R square value, that reflects a robust positive relationship between the main five factors and the intention to adopt e-payment

Figure 2. Modified theoretical framework



Research Theoretical and Managerial Implications

The main aim of this study is to investigate the impact of (benefit, ease of use, security, self-efficacy, and trust) factors on consumers' intention to adopt e-payment in Jordan. The Literature review provided in this study was to explain the relationships between study constructs as clarified in the conceptual framework. The proposed model of this research considers users and non-users of e-payment in Jordan as a case study to test the research hypotheses. Since there is a lack of studies conducted in Jordan to discover this issue, it is interesting to inspect these factors, particularly in the Jordanian setting due to the fascinating improvements that are currently occurring. Accordingly, this study is the first of its kind to take the TAM model, which consists of five major factors (benefit, ease of use, security, self-efficacy, and trust) and demographic variable (age, gender and education) within the context of Jordan. It contributed and supported the existing literature about the relationships between the five mentioned factors and e-payment adoption. This study has provided its contribution concerning e-payment adoption, particularly from a country which has shown favorable growth in electronic payment use. Noting that; similar studies shall use the validated instruments in this research to confirm whether the findings are similar or different.

This study has a significant managerial perspective; the findings of it hold several implications for the development of e-payment method to increase the pace of adoption in Jordan. Accordingly, the following practical recommendations are suggested: Jordanian banks, payment services providers, card issuer and other related parties should continually develop their e-payment services because of the promising growth rate of this method adoption. Services provided by the mentioned parties shall meet consumers' expectations. As stated by Wendy et al., 2013 and, Bailey, et al., 2017 Baile et al., 2017 e-payment methods should be convenient and effective in order to win greater market share from cash and to create or heighten consumers' awareness. Moreover, the parties, as mentioned above, must ensure that the e-payment tools, channels, and system are always secure in order to maintain trust and confidence for their consumers.

The findings of this study show that consumers need to be educated on how to use the available e-payment tools and channels. Employees in Banks, payment service provider and the rest parties can play a role to inform and educate consumers about the e-payment method. Furthermore, in order to boost confidence and enhance trust within consumers in Jordan, which is a crucial issue that related parties should prioritize, they should provide error-free process, reliable and responsive customer services as well as speedy transaction. Hence, they should ensure that users have good experiences with the technology, as these experiences could translate to a positive impact on their intentions to adopt e-payment. Also, they should organize campaigns to increase the awareness on the usefulness and convenience, particularly, highly educated customers. The Central bank and the government of Jordan, in general, have to maintain a competitive environment in the country where innovation can continue to foster new tools, channels and services, as well as lower the transaction costs for customers, merchants and overall businesses. Furthermore, the policymakers, overseer in Central Bank of Jordan, local banks and payment service providers all have important roles to play, to guarantee the security and trustworthiness of the e-payment. The regulator should continue to ensure stability and financial integrity by controlling e-payment services in order to protect consumers.

Research Limitations and Future Studies

Although the results concluded from this study are considered significant, several limitations should be considered when evaluating and generalizing the study's conclusions. The study was conducted in one country, Jordan. Although Jordan is a valid indicator of prevalent factors in the more extensive developing countries, the lack of external validity of this research means that any generalizations of the research findings should be taken with caution. Also the small sample size raises the issue

of generalizability. Some categories were not represented as needed. Therefore, the researchers recommend using a qualitative approach when conducting future research to increase the goodness of results including the various governorates in Jordan and a larger sample in future studies will enrich the results and give a more comprehensive view of the study elements. Future research may take into consideration the barriers as mentioned above and other factors that affect the acceptance and adoption of e-payment in Jordan.

Conflicts of Interest

We wish to confirm that there are no known conflicts of interest associated with this publication and there has been no significant financial support for this work that could have influenced its outcome.

Funding Statement

No funding was received for this work.

Process Dates:

Received: July 7, 2019, Revision: August 27, 2020, Accepted: December 1, 2020

Corresponding Author:

Correspondence should be addressed to Hani Al-dmour; dmourh@ju.edu.jo

REFERENCES

- Abrazhevich, D. (2004). *Electronic payment systems: a user-centred perspective and interaction design* (PhD thesis). Technical University of Eindhoven, Eindhoven.
- Ajzen, I. (1985). From intentions to actions: A theory of planned behavior. In J. Kuhl & J. Beckmann (Eds.), *Action-control: From cognition to behavior*. Springer. doi:10.1007/978-3-642-69746-3_2
- Alwan, A. A., Dwivedi, Y. K., & Rana, N. P. (2017). Factors influencing adoption of mobile banking by Jordanian bank customers: Extending UTAUT2 with trust. *International Journal of Information Management*, 37(3), 99–110. doi:10.1016/j.ijinfomgt.2017.01.002
- Anthony, D., & Mutalemwa, D. K. (2014). Factors Influencing the Use of Mobile Payments in Tanzania: Insights from Zantel's Z-pesa Services. *Journal of Language. Technology & Entrepreneurship in Africa*, 5(2), 69–90.
- Apanasevic, T., Markendahl, J., & Arvidsson, N. (2016). Stakeholders' expectations of mobile payment in retail: Lessons from Sweden. *International Journal of Bank Marketing*, 34(1), 37–61. doi:10.1108/IJBM-06-2014-0064
- Arvidsson, N. (2014). Consumer attitudes on mobile payment services – results from a proof of concept test. *International Journal of Bank Marketing*, 32(2), 150–170. doi:10.1108/IJBM-05-2013-0048
- Bailey, A. A., Pentina, I., Mishra, A. S., & Mimoun, M. S. B. (2017). Mobile payments adoption by US consumers: An extended TAM. *International Journal of Retail & Distribution Management*, 45(6), 626–640. doi:10.1108/IJRDM-08-2016-0144
- Bandura, A. (1986). *Social Foundations of Thought and Action: A Social Cognitive Theory* (1st ed.). Prentice-Hall, Englewood Cliffs.
- Central Bank of Jordan. (2017). The Bylaw of Electronic Payment and Transfer of Funds. The Bylaw No. 111 for 2017. Author.
- Chen, K., Chen, J. V., & Yen, D. C. (2011). Dimensions of self-efficacy in the study of smartphone acceptance. *Computer Standards and Interfaces Journal*, 33(4), 422–431. doi:10.1016/j.csi.2011.01.003
- Chen, L. D. (2008). A model of consumer acceptance of mobile payment. *International Journal of Mobile Communications*, 6(1), 32–52. doi:10.1504/IJMC.2008.015997
- Chogo, P. J., & Sedoyeka, E. (2014). Exploring Factors Affecting Mobile Money Adoption in Tanzania. *International Journal of Computing and ICT Research*, 8(2), 53–64.
- Chou, Y., Lee, C., & Chung, J. (2004). Understanding M-commerce payment systems through the analytic hierarchy process. *Journal of Business Research*, 57(12), 1423–1430. doi:10.1016/S0148-2963(02)00432-0
- Davis, F. D. (1989). Perceived usefulness, perceived ease of use, and user acceptance of information technology. *MIS Quarterly Journal*, 13(3), 319–340. doi:10.2307/249008
- Duane, A., O'Reilly, P., & Andreev, P. (2014). Realizing M-payments: Modelling consumers' willingness to M-pay using smartphones. *Behaviour and Information Technology Journal*, 33(4), 318–334. doi:10.1080/0144929X.2012.745608
- Gbongli, K., Xu, Y., & Amedjonekou, K. M. (2019). Extended Technology Acceptance Model to Predict Mobile-Based Money Acceptance and Sustainability: A Multi-Analytical Structural Equation Modeling and Neural Network Approach. *Sustainability*, 11(13), 3639. doi:10.3390/su11133639
- Hamza, A., & Shah, A. (2014). Gender and Mobile Payment System Adoption among Students of Tertiary Institutions in Nigeria. *International Journal of Computer and Information Technology*, 3(1), 13–20.
- Harris, H., Guru, B. K., & Avvari, M. V. (2011). Evidence of firms' perception toward electronic payment systems (EPS) in Malaysia. *International Journal of Business and Information*, 6(2), 226–245.
- Hsu, M. H., Chang, C. M., & Yen, C. H. (2011). Exploring the antecedents of trust in virtual communities. *Behavior and Information Technology Journal*, 30(5), 587–601. doi:10.1080/0144929X.2010.549513

- Isaac, O., Mutahar, A. M., Daud, N. M., Ramayah, T., & Aldholay, A. H. (2018). The effect of awareness and perceived risk on the technology acceptance model (TAM): Mobile banking in Yemen. *Int. J. Serv. Stand.*, 12(2), 180–204. doi:10.1504/IJSS.2018.10012980
- Kalinic, Z., Marinkovic, V., Molinillo, S., & Liébana-Cabanillas, F. (2019). A multi-analytical approach to peer-to-peer mobile payment acceptance prediction. *Journal of Retailing and Consumer Services*, 49, 143–153. doi:10.1016/j.jretconser.2019.03.016
- Keramati, A., Taeb, R., Larijani, A. M., & Mojir, N. (2012). A combinative model of behavioral and technical factors affecting Mobile-payment services adoption: An empirical study. *Service Industries Journal*, 32(9), 1489–1504. doi:10.1080/02642069.2011.552716
- Kim, C., Mirusmonov, M., & Lee, I. (2010). An empirical examination of factors influencing the intention to use mobile payment. *Computers in Human Behavior Journal*, 26(3), 310–322. doi:10.1016/j.chb.2009.10.013
- Lashitew, A. A., van Tulder, R., & Liasse, Y. (2019). Mobile phones for financial inclusion: What explains the diffusion of mobile money innovations? *Research Policy*, 48(5), 1201–1215. doi:10.1016/j.respol.2018.12.010
- Laukkanen, T., & Kiviniemi, V. (2010). The role of information in mobile banking resistance. *International Journal of Bank Marketing*, 28(5), 372–388. doi:10.1108/02652321011064890
- Lee, C. C., Hsieh, M. C., & Huang, H. C. (2011). The influence of mobile self-efficacy on attitude towards mobile advertising. *Advances in Information Sciences and Service Sciences Journal*, 3(3), 100–108. doi:10.4156/aiss.vol3.issue3.13
- Li, M., Dong, Z. Y., & Chen, X. (2011). Factors influencing consumption experience of mobile commerce. *Internet Research Journal*, 22(2), 120–141. doi:10.1108/10662241211214539
- Liébana-Cabanillas, F., Muñoz-Leiva, F., & Sánchez-Fernández, J. (2018). A global approach to the analysis of user behavior in mobile payment systems in the new electronic environment. *Service Business*, 12(1), 25–64. doi:10.1007/s11628-017-0336-7
- Lu, J., Wei, J., Yu, C. S., & Liu, C. (2017). How do post-usage factors and espoused cultural values impact mobile payment continuation? *Behaviour & Information Technology*, 36(2), 140–164. doi:10.1080/0144929X.2016.1208773
- Lwoga, E. T., & Lwoga, N. B. (2017). User Acceptance of Mobile Payment: The Effects of User-Centric Security, System Characteristics and Gender. *The Electronic Journal on Information Systems in Developing Countries*, 81(1), 1–24. doi:10.1002/j.1681-4835.2017.tb00595.x
- Md Johar, M. G., & Awalluddin, J. A. (2011). The role of technology acceptance model in explaining the effect on e-commerce application system. *International Journal of Managing Information Technology Journal*, 3(3), 1–14. doi:10.5121/ijmit.2011.3301
- Montazemi, A. R., & Qahri-Saremi, H. (2015). Factors affecting adoption of online banking: A meta-analytic structural equation modeling study. *Information & Management*, 52(2), 210–226. doi:10.1016/j.im.2014.11.002
- Oliveira, T., Thomas, M., Baptista, G., & Campos, F. (2016). Mobile payment: Understanding the determinants of customer adoption and intention to recommend the technology. *Computers in Human Behavior Journal*, 61, 404–414. doi:10.1016/j.chb.2016.03.030
- Park, J. K., Ahn, J., Thavisay, T., & Ren, T. (2019). Examining the role of anxiety and social influence in multi-benefits of mobile payment service. *Journal of Retailing and Consumer Services*, 47, 140–149. doi:10.1016/j.jretconser.2018.11.015
- Peng, R., Xiong, L., & Yang, Z. (2012). Exploring tourist adoption of tourism mobile payment: An empirical analysis. *Journal of Theoretical and Applied Electronic Commerce Research*, 7(1), 21–33. doi:10.4067/S0718-18762012000100003
- Poon, W. C. (2008). Users' adoption of e-banking services: The Malaysian perspective. *Journal of Business and Industrial Marketing*, 23(1), 59–69. doi:10.1108/08858620810841498
- Qatawneh, A., Aldhmour, F., & Alfugara, S. (2015). The Adoption of Electronic Payment System (EPS) in Jordan: Case Study of Orange Telecommunication Company. *Research Journal of Finance and Accounting*, 6(22), 20–25.

Rouibah, K. (2012). Trust factors influencing intention to adopt online payment in Kuwait. *Proceedings of the Southern Association for Information Systems Conference*, 195-202.

San-Martin, S., & Lo'pez-Catala'n, B. (2013). How can a mobile vendor get satisfied customers? *Industrial Management and Data Systems Journal*, 113(2), 156–170. doi:10.1108/02635571311303514

Sekran, U., & Bougie, R. (2009). *Research Methods for Business: A Skill Building Approach* (5th ed.). Wiley.

Shankar, A., & Datta, B. (2018). Factors Affecting Mobile Payment Adoption Intention: An Indian Perspective. *Global Business Review Journal*, 19(3), 72–89. doi:10.1177/0972150918757870

Sonia San-Marti'n, S., Lo'pez-Catala'n, B., & Ramo'n-Jero'nimo, M. A. (2012). Factors determining firms' perceived performance of mobile commerce. *Industrial Management and Data Systems Journal*, 112(6), 946–963. doi:10.1108/02635571211238536

Wang, W. T., & Li, H. M. (2011). Factors influencing mobile services adoption: A brand-equity perspective. *Internet Research Journal*, 22(2), 142–179. doi:10.1108/10662241211214548

Wendy, M. T., Siong, C. C., Binshan, L., & Jiat, W. C. (2013). Factors affecting consumers' perception of electronic payment: An empirical analysis. *Internet Research Journal*, 23(4), 465–485. doi:10.1108/IntR-09-2012-0199

Yan, A. W., Md-Nor, K., Abu-Shanab, E., & Sutanonpaiboon, J. (2009). Factors that affect mobile telephone users to use mobile payment solution. *International Journal (Toronto, Ont.)*.

Zarmpou, T., Saprikis, V., Markos, A., & Vlachopoulou, M. (2012). Modeling users' acceptance of mobile services. *Electronic Commerce Research Journal*, 12(2), 225–248. doi:10.1007/s10660-012-9092-x

Zhou, T. (2011). An empirical examination of initial trust in mobile banking. *Internet Research Journal*, 21(5), 527–540. doi:10.1108/10662241111176353

APPENDIX: THE STUDY QUESTIONNAIRE

Part One: General Information

1. Gender:
 - a. Male
 - b. Female
2. Age:
 - a. Between 18 years and 35 years
 - b. Between 36 years and 45 years
 - c. Between 45 years and 55 years
 - d. More than 55 years
3. Education:
 - a. High School Degree
 - b. Diploma
 - c. Bachelor Degree
 - d. Postgraduate Degree
4. Monthly per income:
 - a. Less than 500Jd
 - b. 500-1499 JD
 - c. 1500 -2499 JD
 - d. 2500 JD and More
5. What payment methods do use frequently?
 - a. Credit card
 - b. e-Wallet account
 - c. Debit card
 - d. Automated clearing house
6. What are the most frequent uses of e. payment by you?

Part Two: Please Indicate How Much Do You Agree\ Disagree With Each Statement

Put a ✓ in the space that represents your answer:

Strongly disagree: 1

Disagree: 2

Indifference: 3

Agree: 4

Strongly agree: 5

Table 7.

No.	Statement	1	2	3	4	5
1	Usefulness Factor					
1.1	Using e-payment tools would be advantageous.					
1.2	It saves my time when using an e-payment tool.					
1.3	It reduces the incurred cost when using an e-payment tool.					
1.4	It helps in reducing the amount of effort required to make payments using electronic tools.					
1.5	All the transactions can be performed at anytime and anywhere when using an e-payment tool.					

continued on following page

Table 7. Continued

No.	Statement	1	2	3	4	5
1.6	The speed of the e-payment system flow is faster than the traditional payment system.					
1.7	The electronic billing and transaction process are accurately handled.					
2	Ease of Use Factor					
2.1	Learning to use an e-payment tool is easy.					
2.2	I believe that when I use the e-payment tool, the process will be clear and understandable.					
2.3	I believe that it is easy for me to become skillful at using e-payment instruments.					
3	Security Factor					
3.1	I am concerned about security when using an e-payment method.					
3.2	I think that an e-payment method is less secure than a traditional payment method.					
3.3	Matters of security have a significant impact on me in utilizing an e-payment tool.					
4	Self-Efficacy Factor					
4.1	I will only use an e-payment instrument if I heard about it before.					
4.2	The feedback of other individuals will affect my intention to use e-payment.					
4.3	I will use a new e-payment tool when one of my friends\ family introduce it to me.					
4.4	I feel confident using an electronic instrument for making my payment and money transfer.					
5	Trust Factor					
5.1	I trust that legal frameworks for e-payment provision are sufficiently robust to secure and protect consumers.					
5.2	I trust on the ability of an e-payment system to protect my privacy.					
5.3	I feel that the risk associated with the e-payment system is low.					
5.4	I believe that e-payment service provider implements adequate security measures to secure my data.					
6	The Adoption/ Intention to adopt E-Payment:					
6.1	I believe that the e-payment method is better than the traditional payment method.					
6.2	I believe in the usefulness of e-payment compared with traditional payment.					
6.3	I think that e-payment usefulness is the main factor to adopt e-payment.					
6.4	I believe that risks associated with e-payment are higher than traditional payment.					
6.5	I think that risks associated with e-payment are the main factor that affects consumer's intention to adopt it.					
6.6	Currently, my degree of use for e-payment tools to make financial transactions is:					
6.7	In the future, I think that I adopt/ will Intend to make my payments and money transfers through an electronic instrument.					

Ahmed Al-Dmour is assistance professor in Accounting Information Systems.

Hani H Al-Dmour's (Prof) background is in international marketing and his particular research interests surround the export marketing behavior and services marketing. He completed university education and received bachelor's degree Business Management from the University of Jordan in 1983 and MBA degree from the University of Edinburgh in 1986. In 1985, he gained his Ph.D. degree from the University of Sheffield in export marketing behaviour in 1993.

Rawan Brghuthi is a PhD student at the University of Jordan and She has got an MBA in Marketing from the University of Jordan and her area of research interest in banking services.

Rand Al-Dmour is an assistant professor in the University of Jordan, School of Business.