FACTORS AFFECTING UNIVERSITY STUDENTS INTENTIONS TO USE DEBIT CARD SERVICES: AN EMPIRICAL STUDY BASED ON UTAUT

Philip Siaw KISSI[1], Mustapha Kudirat OLUWATOBILOBA[2], Amankwah Yaw BERKO[3]

[1,2]*Management Information Systems, School of Applied Sciences, Cyprus International University, Nicosia, Northern Cyprus, Mersin 10, Turkey*
[3]*School of Business, University of Cape Coast, Ghana*
E-mails: [1]philip.asakomah@yahoo.com (corresponding author);
[2]kudiratmustapha236@yahoo.com; [3]yamankwah@ymail.com

Abstract. Despite the promising use of debit cards for e-payment and online transactions, to the best of our knowledge, there has not been any study regarding students' intentions to use debit card services in Nigeria. This research aims to examine factors that influence university students' decision to use debit card services in Nigeria. A Unified Theory of Acceptance and Use of Technology (UTAUT) integrated with the trust of bank and online transaction factors are used in the study. Data were purposively selected from 400 students in the Faculty of Business Administration in Nigeria University using a survey questionnaire. The multiple linear regression results reveal that social influence, the trust of online transaction and performance expectancy exert significant influences on students' behavioural intention to use a debit card. However, the insignificant results obtained for effort expectation and facilitating condition warrant for further investigation. We have confidence that the findings of this study will guide debit card services providers and professionals in the field in improving and promoting debit card services by revealing the students' priorities regarding debit card services in Africa, particularly in Nigeria.

Keywords: behavioural intention, debit card services, university students, UTAUT.

JEL Classification: C83, L86, I23.

1. Introduction

The university students' payment transaction is one of the areas which has been improved significantly by the use of technology. The use of technology to enhance the efficiency of university students' payment services constitutes the concept of e-payment. Debit card services provide easy access to e-payment through the use of online payment services such as PayPal, square cash and the like. The advantage provided by the use of the debit card for e-payment is more than the traditional method of payment service. For

instance, the debit card offers benefits such as avoidance of keeping cash-on-hand, enabling tracking of expenses, increase quality and speed of online purchasing (Atkinson, Castro 2008). In addition, the development of card payment system prevents the costs of money circulation which leads to significant economic gains (Goczek, Witkowski 2016). The promotion of debit card transactions grew quickly in most advanced countries while usage has declined or disappeared in some countries (Amromin, Chakravorti 2007).

In 2015, 74 percent of college students use a debit card to make daily online purchases such as entertainment tickets, gas purchase rebates, cash back among other transaction (Holmes 2016). Despite the great advantages provided by debit card services, there is lack of studies that examine the extent of its usage among the students, particularly in Africa. Moreover, in literature, there are several adaptations models which predict the acceptance of e-payment services through the use of credit or debit card (Koenig-Lewis *et al.* 2015; Estrella-Ramon *et al.* 2016; Goczek, Witkowski 2016; Razak 2016). However, to the best of our knowledge, there has not been a comprehensive examination of debit card adoption among African students, especially in Nigeria. Therefore, this study aims to investigate factors affecting students' intentions to use debit card services.

In the present study, Unified Theory of Acceptance and Use of Technology (UTAUT) model was integrated with Trust of online transaction and Trust of bank factors to examine university students behavioural intention to debit card in Nigeria.

2. The Unified Theory of Acceptance and Use of Technology

The Unified Theory of Acceptance and Use of Technology (UTAUT) was introduced by Venkatesh *et al.* (2003). This theory explained people intentions to use technology and actual user behaviour. The UTAUT theory suggested four major constructs, performance expectancy, effort expectancy, social influence, and facilitating conditions that predict user behavioural intention to use a certain technology as presented in Figure 1. These four major factors are defined as follows: Performance expectancy as "degree to which an individual believes that using the system will help him or her to attain gains in job performance" (Venkatesh *et al.* 2003: 447), effort expectancy as "degree of ease associated with use of the system" (Venkatesh *et al.* 2003: 450), social influence as "degree to which an individual perceives that important others believe he or she should use the new system" (Venkatesh *et al.* 2003: 451) and facilitating conditions as "degree to which an individual believes that an organizational and technical infrastructure exists to support use of the system" (Venkatesh *et al.* 2003: 450). They included four moderating variables consist of gender, age, experience, and voluntariness of use. Despite its constraints, it has combined eight major theories and widely used as a theoretical model to explain the acceptance, adoption, deployment, and effective use of technology. Therefore, UTAUT model was used as the theoretical background of this study.
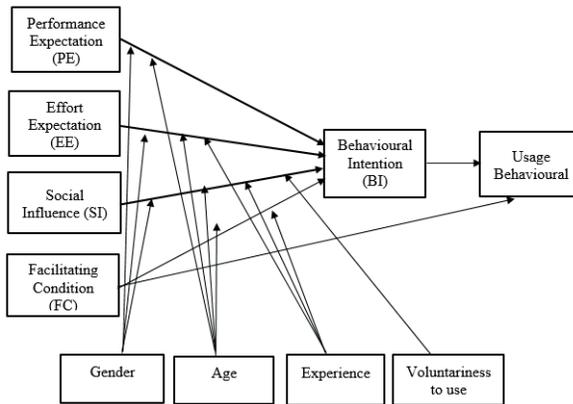
Fig. 1. UTAUT model (Venkatesh *et al.* 2003)

The UTAUT theory did not integrate trust factors. Debit card services are being used in many countries and it is important to acquire a better understanding of the impact of trust on debit card services adoption. For the betterment of the context of the study, we did include some variables such as gender, age, experience, voluntariness, and usage behaviour in the model.

2.1. Research hypothesis

Trust of online transaction and banks

As stated earlier, the study introduces trust of online transaction and bank as factors that could affect the students' behavioral intention to use a debit card. Trust is considered as an important variable influencing online businesses particularly, those relating to electronic transactions (Moody *et al.* 2017). Trust promotes the success of transaction by reducing social uncertainties that would be otherwise impossible to deal with on a normal basis (Luhmann 1979). For this reason, the trust of online transaction and banks could be found to be key predictors of students' behavioral intention to use debit cards. Therefore, we proposed that:

H1: Trust of online transaction has a positive influence on student's behavioral intention to use debit card services.

H2: Trust of bank has a positive influence on behavioral intention to use debit card services.

Performance expectancy

In this study, we defined performance expectancy as the extent to which students believes that debit card services will improve their work performance. Baptista and Ol-

iveira (2015) examined the factors affecting the acceptation and influences individual behaviour in mobile banking. They concluded that performance expectancy is the most significant antecedents of behavioral intention. Mohammadyari and Singh (2015) investigated users' intentions to continue using Web 2.0 tools. The findings suggested that performance expectations significantly influenceusers' intentions. From this premise, we hypothesized that:

H3: Performance expectancy has a positive influence on student's behavioral intention to use debit card services.

Effort expectancy

In the context of this study, effort expectancy is defined as the degree to which students perceived debit card services as easy to use. Martins *et al.* (2014) investigated people intention to use Internet banking. The findings revealed that effort expectancy is a stronger predictor of intention. In another study conducted by Thakur (2013) discovered effort expectancy has a significant effect on consumer's mobile payment services. Hence, we proposed that

H4: Effort expectancy has a positive influence on student's behavioral intention to use a debit card services.

Social influence

In the context of this study, we defined social influence as the extent to which students perceive that others believe they should use a debit card. Wills *et al.* (2008) examined registered nurses' acceptance to use electronic medical records. They concluded that social influence is a significant determinant of behavioral intention. Furthermore, Escobar-Rodríguez and Carvajal-Trujillo (2014) investigated factors that positively affect purchasing of online flight ticket from low-cost carrier websites. The findings indicated that social influence has a positive impact on customer's intention. Therefore, we suggested

H5: Social influence has a positive impact on student's behavioral intention to use debit card services.

Facilitating condition

For the purpose of the study, facilitating condition is defined as the extent in which students believe that administrative and technical structures exist to support the use of debit card services. Using debit card services requires some skills such as Internet connectivity, mobile phone or computer usage, and knowledge of debit card online service and security. Students with these skills have a greater intention to use the debit card. From this logic, we posited that:

H6: Facilitating condition has a positive impact on student's behavioral intention to use a debit card.

3. Methodology

This study employed a survey design with quantitative data to assess factors affecting the use of the debit card in Nigeria. According to Fraenkel and Wallen (2000), survey design research was used by administering questionnaires to find out detailed characteristics of the participants and classified as an efficient way to gather data to enable address a research question.

Population and sampling. The population selected for this study was students from the University of Lagos in Nigeria. Students from the Faculty of Business Administration were used as the target population. The faculty has a total population of four thousand, three hundred and ninety-five (4395). Sample size calculation formula was adapted from Yamane (1967). Sample size (n) = $\dfrac{N}{1+N(e)^2}$ where n = sample size, N = populations and e = margin error. In substituting N = 4395 and e = 0.05 in above formula, the least sample size should be three hundred sixty-seven (367). Therefore, 400 students in the university were employed for the study. Purposive sampling technique was used to select the students for the study. The purposive sampling procedure which referred as judgment sampling is the deliberate selection participates who can provide the rich information base on experience or knowledge (Patton 2002; Etikan *et al.* 2016). *Questionnaire development.* The study employed questionnaire instrument to obtained information from the participants of the study. the questionnaire items consisted of two parts. The first part drew participants' demographic data which involved gender, and their usage of credit card. The second part consists of twenty-two (22) observed items which were used to measure 7 latent variables, namely trust of online transactions, the trust of banks, performance expectancy, effort expectancy, social influence, facilitating conditions and behavioral intention. The questionnaire items were adopted from previous studies (Venkatesh *et al.* 2003; Khasawneh *et al.* 2013; Kurfalı *et al.* 2017; Nurrohmah *et al.* 2017).

Data collection and analysis. The target participants of the study were given the survey questionnaire in their various lecture hall and place of residence to answer. This strategy was employed to ensure independent responses and clarify any misunderstanding associated with the questionnaire items. The research utilized SPSS version 24 to perform multiple linear regression to determine factors that affect behavioral intention to use a credit card.

Evaluation of reliability and convergent validity. The reliability of the construct was examined using Cronbach's alpha. The construct reliability should exceed 0.7 to meet the acceptance level (Fraenkel, Wallen 2000). The reliability of the construct of this study ranged from 0.961 to 0.961 which indicated excellent reliable construct as shown in Table 1.

Table 1. Construct reliability and convergent validity

Construct	Items	Factor loading (ρ)	AVE	CR	Cronbach's α
Trust of online transactions			0.698	0872	0.964
TOT1	I trust debit card and its services through the online transactions.	0.825			
TOT2	I think that debit card services' technical and legal infrastructure. protects enough personal information and data.	0.834			
TOT3	In general, online transactions are trusted tool that can be used by debit card services.	0.844			
Trust of bank			0.739	0.894	0.961
TB1	I trust banks' institutions and departments.	0.849			
TB2	I trust bank institutions and departments' ability to provide debit card services effectively and securely.	0.866			
TB3	I trust that citizens and their benefits have the highest priorities at banks institutions and departments.	0.863			
Performance expectancy			0.710	0.880	0.964
PE1	I find the debit card services useful in my daily transactions	0.840			
PE2	Using the debit card enables me to accomplish tasks more quickly	0.839			
PE3	Using the debit card services increase my productivity	0.848			
Effort expectancy			0.752	0.858	0.961
EE1	My interaction with the debit card services would be clear and understandable.	0.862			

End of Table 1

Construct	Items	Factor loading (ρ)	AVE	CR	Cronbach's α
EE2	I would find the debit card services easy to use.	0.872			
Social influence			0.762	0.891	0.959
SI1	Other users beliefs about debit card service encourage me to use it.	0.870			
SI2	Other users' beliefs about debit card service influence my degree of usage of it.	0.871			
SI3	Other user' beliefs about debit card services condition me to use it.	0.878			
Facilitating condition			0.761	0.864	0.961
FC1	I have the resources necessary to use the debit card.	0.867			
FC2	I have the knowledge necessary to use the debit card.	0.878			
Behavioral Intention					
BI1	I intend to continue to use debit card service in the future.	0.860	0.761	0.864	0.961
BI2	My intentions are to continue using debit card service in the future, at least as active as today.	0.835			
BI3	I would continue using debit card service increasingly in the future.	0.850			

AVE: Average Variance Extracted = $\sum \rho^2 / n$

CR: Composite Reliability = $\left(\sum(\rho) \right)^2 / \left(\sum(\rho) \right)^2 + (\sum a), \ a = 1 - \rho^2$

Factor Loadings < .500 were omitted

Varimax with Kaiser Normalization

Convergent validity was tested based on the acceptance guideline. The test was done using three measurement scale: factor loadings greater than 0.7; the average variance extracted (AVE) exceeding 0.50; composite reliabilities (CR) more than 0.7 (Fornell, Larcker 1981; Kissi *et al.* 2017). The factor loading, the AVE, CR and Cronbach's alpha values of all the constructs exceeded the recommended threshold values as demonstrated in Table 1. In general, all the constructs were considered reliable and significant for the study.

Discriminant validity. Discriminant validity was evaluated based on the relationship between the square root of AVE and correlations of the construct. For discriminant validity testing, the square root of the AVR average should exceed its correction value of the construct (Fornell, Larcker 1981). As shown in Table 2, the square root of AVE value in bold of the construct is consistently greater than it respective correlations values, suggesting acceptance discriminant validity among constructs.

Table 2. Discriminant analysis of the factors

	TOT	TB	PE	EE	SI	FC	BI
TOT	**0.834**						
TB	0.780	**0.860**					
PE	0.791	0.796	**0.843**				
EE	0.784	0.825	0.810	**0.867**			
SI	0.813	0.867	0.803	0.869	**0.873**		
FC	0.789	0.844	0.780	0.824	0.870	**0.872**	
BI	0.844	0.780	0.791	0.784	0.813	0.789	**0.849**

4. Results

Demographics. Out of 400 university students who took part in the study, 53.3% (n = 218) were male and 46.8% (n = 187) were female. The number of males and females were properly distributed for the study. All the participants were selected from undergraduate levels in the faculty of business administration. The majority (38.3%, n = 153) of the students were first-year students. The student in second-year were 32.0% (n = 128) and the third year were 19.3% (n = 77). Only 10.5% (n = 42) of the participants were found in the fourth year. However, 95.0% (n = 380) indicated they are frequent users of a credit card, only 5.0% (n = 20) do not use it often. Table 3 presents the summary of the results.

Table 3. Sample profile of the survey

Item	Demography	Frequency	Percentage
Gender	Male	213	53.3
	Female	187	46.8
Level	Yes	380	95.0
	No	20	5.00
Undergraduate level	First year	153	38.3
	Second year	128	32.0
	Third year	77	19.3
	Four year	42	10.5

Descriptive statistics of factors: The responded survey questionnaire were measured from the seven-point Likert scale items on the variables ranged from 1 = strongly disagree to 7 = strongly agree: (1) Trust of online transaction, (2) trust of bank, (3) performance expectation, (4) effort expectation, (5) social influence, (6) facilitating condition, and (7) behavioral intention were measured to find the overall average score (mean) and standard deviation. Trust of online transaction and trust of the bank had a mean 5.16 (SD = 1.55) and 5.10 (SD = 1.56) respectively. This indicates that participant trust of using a debit card for online transaction and banks are high. Also, the participants believe that debit card is useful in their daily transactions (performance expectation (m = 5.16, SD = 1.55)), find the debit card services easy to use (effort expectation (m = 5.16, SD = 1.55), have the resources necessary to use the debit card (facilitating condition (m = 5.16, SD = 1.55)) and encourage others to use the debit card (social influence (m = 5.16, SD = 1.55)). Furthermore, the participants showed high behavioral intention (m = 5.16, SD = 1.55) to the use debit card. The summary of the results is shown in Table 4.

Table 4. Descriptive statistics of variables (factors)

Item	N	Mean	St. Deviation
TOT	400	5.16	1.55
TB	400	5.10	1.56
PE	400	5.19	1.50
EE	400	5.25	1.56
SI	400	5.16	1.52
FC	400	5.30	1.65
BI	400	5.13	1.46

Table 5 displayed the standard regression model summary of Analysis of Variance (ANOVA). As shown in Table 5, F = 238.988, p = .000 and p < 0.05, which shows that the test is statistically significant. This suggests that the independent factors significantly related to students' behavioral intention to use a debit card. The summary of the standard regression model in Table 6 represents multiple correlation values (R = 0.886). This show how well all the independent combine factors (TOT, TB, PE, EE, SI and FC) related to participants' behavioral intention (dependent factor) to use a debit card. Moreover, the Adjusted $R^2 = 0.782$ suggests that all the independent factors combine contributed 78.2% of the variances in participants' behavioral intention to use a debit card services.

Table 5. ANOVA of regression significance

	Sum Squares	D	Mean square	F	Sig
Regression	663.809	6	110.635	238.988	0.000[b]
Residual	181.931	393	0.463		
Total	845.740	399			

a. Predictors: (constant), TB, TOT, PE, EE, FC, SI
b. Dependent variable: BI

204

Table 6. Standard regression model summary

R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics				
				R Square Change	F Change	df1	df2	Sig. F Change
.886ᵃ	0.785	0.782	0.68039	0.785	238.988	6	393	.000

a. Predictors: (constant), TB, TOT, PE, EE, FC, SI
b. Dependent variable: BI

Significance of Individual Factors. From Table 7, Trust of bank (t = 0.644, p = 0.520, p > .05), effort expectation (t = 1.098, p = 0.273, p > 0.05), and facilitating condition (t = 1.495, p = 0.136, p > 0.05) were not statistically significant. This suggests that participants' behavioral intention to use debit card is not influence by trust of bank, effort expectancy and facilitating condition. However, trust of online transaction (t = 9.962, p = 0.000, p > 0.05), performance expectancy (t = 4.320, p = 0.000, p > 0.05), and social influence (t = 2.642, p = 0.009, p > 0.05) was statistically significant. This indicates that trust of online transaction, performance expectancy, and social influence have positive influence on participants use of debit cards.

Table 7. Regression coefficient of the standard regression model

Model 1	Unstandardized Coefficients		Standardized Coefficients		
	B	Std. Error	Beta	T	Sig.
Constant	0.438	0.130		3.373	0.001*
TOT	0.404	0.041	0.430	9.962	0.000
TB	0.032	0.049	0.034	0.644	0.520
PE	0.189	0.044	0.195	4.320	0.000
EE	0.054	0.049	0.058	1.098	0.273
SI	0.157	0.059	0.163	2.642	0.009
FC	0.070	0.047	0.079	1.495	0.136

4.1. Comparative importance of the factors

As shown in Table 7 and figure 2, Trust of online transaction (TOT) was found to be the most significant (β = 0.430, p = .000 (< 0.05)) and influential factor that contribute to the behavioral intention to use a debit card in the study. The second most significant factor (β = 0.195, p = .000 (< 0.05)) was performance expectancy followed by social influence (Beta = 0.163, p = .000(< 0.05)). However, trust of bank, effort expectancy, and facilitating condition did not make any statistically significant contribution to the behavioral intention (BI) of participants (β = 0.034, p > 0.05; β = 0.273, p > 0.05; β = 0.136, p = .967 > 0.05).
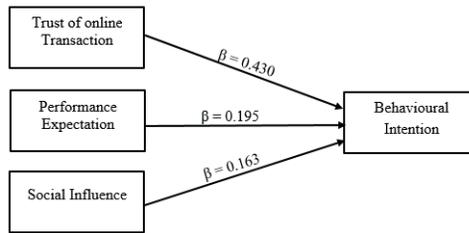
Fig. 2. Comparative importance of the factors

The above findings supported the Unified Theory of Acceptance and Use of Technology (UTAUT) by Venkatesh *et al.* (2003). That is, user intentions to use a particular technology is based on performance expectancy and social influence among others.

5. Discussion

The analysis of the participants' responses using regression model revealed that trust of online transaction is the most significant ($\beta = 0.430$) factor that predicts the use of debit card particularly in Nigeria. This suggests that people trust and accept the use of the debit card for online payment. This is in agreement with a study conducted by Yang *et al.* (2015) when they stress that online payment has been accepted and adopted by customers particularly those who have more trust in online payment. In support, Ponte, Carvajal-Trujillo and Escobar-Rodríguez (2015) point out that online purchase intention is influenced by the perceived trust. Trust and risk are important factors of online transactions, particular when it comes to consumers' electronic purchasing (Bachas *et al.* 2016; Chin *et al.* 2009; Kim *et al.* 2008). Trust of debit card usage could increase customer retention and improve revenue. Trust-based companies have lower marketing cost and increase sales than companies without trust (Hess, Story 2005; Berry 2002). It is important that debit card companies should improve the security features of the card and provide consumers with impartial information and recommendation concerning the online transaction. When customers are provided with truthful and honest information, their loyalty towards the company products grows. As a result, high profit is earned.

Also, performance expectation has a positive influence ($\beta = 0.195$) on students' usage of the debit card. This means that (1) students (customers) find the debit card useful in their daily transactions, (2) Using the debit card enable the students to accomplish tasks more quickly and (3) Using the debit card increase students' productivity in terms of the transaction that involves payment of money. These results are consistent with studies conducted by Foscht *et al.* (2010) and Anderson, Fornell, Lehmann (1994), when they indicated that quality and expectation influence customers' satisfaction which leads to a higher degree of retention. On other hands, lack of ability to meet customer expectations could damage company reputation, which may lead to failure to retain and attract new customers (Rackspace Hosting, Inc. 2009). Therefore, debit card companies must

meet or fulfil their customers' expectations. This would increase customers' retention, excitement and improve competitor advantage.

Furthermore, social influence positively contributes (β = 0.162) to students' usage of the debit card. That is, the encouragement from other users has an impact on students behavioural intention to use the debit card services. In support Raska (2011) and Khan (2012) clarify in his study that environmental factor can change the intention or action of human being. For instance, actions such as buying can be changed by individual environment. Addition, Kulviwat, Bruner and Al-Shuridah (2009) stressed that social influence has a positive impact on consumer intention to use a particular product. Since social influence has a positive effect on students (customers) use of debit card, companies responsible for debit card usage and awareness should advertise more on the card in a wide range of different platform or media. The advertisement could help to send more information to local, regional, national and international users which may change people's attitudes and perceptions of its usage. This could have a strong impact on users in the society and in turns increase more usage.

6. Conclusions and recommendations

The key objective of the study was to examine the factors that influence university students' behavioural intention to use debit cards in Nigeria. It was revealed that university students from University of Nigeria have high behaviour intention to use a debit card because of its usefulness in their daily transaction, the trust of online transactions, and encouragement from other users, Therefore, debit card providers should educate African university students particularly in Nigeria about the essence of using a debit card services and improve the security of the online transaction. This would encourage more student to adapt and accept the usage of debit card in their daily activities. Furthermore, understanding the main factors that affect consumer (students) behaviour intention to use a debit card is necessary for effective planning, better and successful future development.

Since the study investigated university students' usage of debit card in Nigeria. Therefore, the results of the study would be strictly applicable to university students from the University of Nigeria and similar university students in Africa. A survey with a large sample size that covers more than one university is recommended for future studies to shed more light on the students' adaptation and acceptance of the use of debit card services.

References

Amromin, G.; Chakravorti, S. 2007. *Debit card and cash usage: a cross-country analysis* [online], [cited 12 October 2017]. Available from Internet: https://papers.ssrn.com/sol3/papers.cfm?abstract_id=981236

Anderson, E. W.; Fornell, C.; Lehmann, D. R. 1994. Customer satisfaction, market share, and profitability: findings from Sweden, *The Journal of marketing* 58(3): 53–66. https://doi.org/10.2307/1252310

Atkinson, R. D.; Castro, D. D. 2008. *Digital quality of life: understanding the personal and social benefits of the information technology revolution* [online], [cited 10 October 2017]. Available from Internet: http://www.itif.org/files/DQOL.pdfS

Bachas, P.; Gertler, P.; Higgins, S.; Seira, E. 2016. *Banking on trust: how debit cards help the poor to save more*. Working Paper, University of California at Berkeley, Berkeley, CA.

Baptista, G.; Oliveira, T. 2015. Understanding mobile banking: the unified theory of acceptance and use of technology combined with cultural moderators, *Computers in Human Behavior* 50: 418–430. https://doi.org/10.1016/j.chb.2015.04.024

Berry, L. L. 2002. Relationship marketing of services perspectives from 1983 and 2000, *Journal of Relationship Marketing* 1(1): 59–77. https://doi.org/10.1300/J366v01n01_05

Chin, A. J.; Wafa, S. A. W. S. K.; Ooi, A. Y. 2009. The effect of internet trust and social influence towards willingness to purchase online in Labuan, Malaysia, *International Business Research* 2(2): 72. https://doi.org/10.5539/ibr.v2n2p72

Escobar-Rodríguez, T.; Carvajal-Trujillo, E. 2014. Online purchasing tickets for low cost carriers: an application of the unified theory of acceptance and use of technology (UTAUT) model, *Tourism Management* 43: 70–88. https://doi.org/10.1016/j.tourman.2014.01.017

Estrella-Ramon, A.; Estrella-Ramon, A.; Sánchez-Pérez, M.; Sánchez-Pérez, M.; Swinnen, G.; Swinnen, G. 2016. How customers' offline experience affects the adoption of online banking, *Internet Research* 26(5): 1072–1092. https://doi.org/10.1108/IntR-03–2015–0092

Etikan, I.; Musa, S. A.; Alkassim, R. S. 2016. Comparison of convenience sampling and purposive sampling, *American Journal of Theoretical and Applied Statistics* 5(1): 1–4. https://doi.org/10.11648/j.ajtas.20160501.11

Fornell, C.; Larcker, D. F. 1981. Evaluating structural equation models with unobservable variables and measurement error, *Journal of Marketing Research* 18(1): 39–50. https://doi.org/10.2307/3151312

Foscht, T.; Maloles, III, C.; Swoboda, B.; Chia, S. L. 2010. Debit and credit card usage and satisfaction: who uses which and why – evidence from Austria, *International Journal of Bank Marketing* 28(2): 150–165. https://doi.org/10.1108/02652321011018332

Fraenkel, J. R.; Wallen, N. E. 2000. *How to design and evaluate research in education.* 5th ed. New York: McGraw-Hill Publishing Co.

Goczek, Ł.; Witkowski, B. 2016. Determinants of card payments, *Applied Economics* 48(16): 1530–1543. https://doi.org/10.1080/00036846.2015.1102846

Hess, J.; Story, J. 2005. Trust-based commitment: multidimensional consumer-brand relationships, *Journal of Consumer Marketing* 22(6): 313–322. https://doi.org/10.1108/07363760510623902

Holmes, T. E. 2016. *Student credit, debit and prepaid card statistics* [online], [cited 14 October 2017]. Available from Internet: https://www.creditcards.com/credit-card-news/credit-card-debt-statistics-1276.php

Khan, S. 2012. The influence of formal and informal sources on consumer buying behavior, *Global Journal of Management and Business Research* 12(12): 1–5.

Khasawneh, R.; Rabayah, W.; Abu-Shanab, E. 2013. E-Government acceptance factors: trust and risk, in *The 6th international conference on information technology (ICIT 2013*), 8–10 May, 2013, Amman, Jordan, 8–10.

Kim, D. J.; Ferrin, D. L.; Rao, H. R. 2008. A trust-based consumer decision-making model in electronic commerce: the role of trust, perceived risk, and their antecedents, *Decision Support Systems* 44(2): 544–564. https://doi.org/10.1016/j.dss.2007.07.001

Kissi, P. S.; Nat, M.; Idowu, A. 2017. Taking business intelligence to business education curriculum: graduate students' concerns, *Business, Management and Education* 15(1): 77–90.

Koenig-Lewis, N.; Marquet, M.; Palmer, A.; Zhao, A. L. 2015. Enjoyment and social influence: predicting mobile payment adoption, *The Service Industries Journal* 35(10): 537–554.

Kulviwat, S.; Bruner, G. C.; Al-Shuridah, O. 2009. The role of social influence on adoption of high tech innovations: the moderating effect of public/private consumption, *Journal of Business Research* 62(7): 706–712.

Kurfalı, M.; Arifoğlu, A.; Tokdemir, G.; Paçin, Y. 2017. Adoption of e-government services in Turkey, *Computers in Human Behavior* 66: 168–178. https://doi.org/10.1016/j.chb.2016.09.041

Luhmann, N. 1979. Trust: a mechanism for the reduction of social complexity, in T. Burns, G. Poggi (Eds.). *Trust and power: two works by Niklas Luhmann.* Trans. H. Davis, J. Raffan and K. Rooney. Chichester: John Wiley, 2–103.

Martins, C.; Oliveira, T.; Popovič, A. 2014. Understanding the internet banking adoption: a unified theory of acceptance and use of technology and perceived risk application, *International Journal of Information Management* 34(1): 1–13. https://doi.org/10.1016/j.ijinfomgt.2013.06.002

Moody, G. D.; Lowry, P. B.; Galletta, D. F. 2017. It's complicated: explaining the relationship between trust, distrust, and ambivalence in online transaction relationships using polynomial regression analysis and response surface analysis, *European Journal of Information Systems* 26(4): 379–413. https://doi.org/10.1057/s41303–016–0027–9

Mohammadyari, S.; Singh, H. 2015. Understanding the effect of e-learning on individual performance: the role of digital literacy, *Computers & Education* 82: 11–25. https://doi.org/10.1016/j.compedu.2014.10.025

Nurrohmah, I.; Dewi, M. A. A.; Sahadi, N. 2017. Measuring the e-Government maturity in Indonesia using the ranking of e-Government of Indonesia (PeGI), *American Scientific Research Journal for Engineering, Technology, and Sciences* 32(1): 49–63.

Patton, M. Q. 2002. *Qualitative research and evaluation methods*. 3rd ed. Thousand Oaks, CA: Sage.

Ponte, E. B.; Carvajal-Trujillo, E.; Escobar-Rodríguez, T. 2015. Influence of trust and perceived value on the intention to purchase travel online: integrating the effects of assurance on trust antecedents, *Tourism Management* 47: 286–302. https://doi.org/10.1016/j.tourman.2014.10.009

Rackspace Hosting, Inc. 2009. *If we are unable to maintain a high level of customer service, customer satisfaction and demand for our services could suffer* [online], [cited 28 October 2017]. Available from Internet: http://www.wikinvest.com/stock/Rackspace_Hosting_(RAX)/Unable_Maintain_High_Level_Customer_Service_Satisfaction_Demand

Raska, D. 2011. Exploring the effect of a brand's pro-Environmental behavior on consumers' attitudes toward similar behaviors, *ASBBS Annual Conference* 18(1): 703–714.

Razak, L. T. 2016. The effect of security and privacy perceptions on customers' trust to accept internet banking services: an extension of TAM, *Journal of Engineering and Applied Sciences* 11(3): 545–552.

Thakur, R. 2013. Consumer adoption of mobile payment services by professionals across two cities in India: an empirical study using modified technology acceptance model, *Business Perspectives & Research* 1(2): 17–29. https://doi.org/10.1177/2278533720130203

Venkatesh, V.; Morris, M.; Davis, G.; Davis, F. 2003. User acceptance of information technology: toward a unified view, *MIS Quarterly* 27: 425–478. https://doi.org/10.2307/30036540

Wills, M. J.; El-Gayar, O. F.; Bennett, D. 2008. Examining healthcare professionals' acceptance of electronic medical records using UTAUT, *Issues in Information Systems* 9(2): 396–401.

Yamane, T. 1967. *Statistics: an introductory analysis.* 2nd ed. New York, NY: Harper and Row.

Yang, Q.; Pang, C.; Liu, L.; Yen, D. C.; Tarn, J. M. 2015. Exploring consumer perceived risk and trust for online payments: an empirical study in China's younger generation, *Computers in Human Behavior* 50: 9–24. https://doi.org/10.1016/j.chb.2015.03.058

Philip Siaw KISSI. M.Phil., Research assistant in the Departments of Management Information Systems and Information Technology (School of Applied Sciences) at the Cyprus International University (CIU). He is currently offering PhD in management information systems in CIU. He is course advisor, article reviewer and president of management information systems club in CIU. He holds M.Phil. and M.Ed. in Mathematics Education from the University of Education (UEW). His research interests include business and mathematics education, educational technology, curriculum development and implementation, Integration of technology in a business organization and information security.

Mustapha Kudirat OLUWATOBILOBA. MSc., She holds MSc. in Management of Information System and BSc. in Computer science and information technology from CIU and Bowen University in Nigeria respectively. Her research interests include information security and application of technology in business.

Amankwah Yaw BERKO, holds a degree in Bachelor of Commerce from the university of Cape Coast – Ghana. He currently works with the Sunyani West District Assembly and also holds a certificate in Ghana Accounting Technician (GAT) from the Institute of Chartered Accountants – Ghana. His research interests include business and economics education, auditing, taxation and management accounting.