Determinants of Debit-Card Payment Acceptance on Point of Sale in Retail Outlets and the Gender Reaction

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Abstract
The patronage of debit-cards on POS terminals has focused specifically on predictors with sharp contrasts in findings, while poor attention on gender analysis to debit card adoption on PoS terminals is a significant issue that needs to be addressed to enable better policy drives. The paper aimed to evaluate how customers react to usage of point of sale in retail outlets with focus on gender analysis. The authors used descriptive survey and adapted questionnaire scales from related literature. SPSS v23 was used in the analysis. The results showed more female adoption of the technology in shopping which indicates a significant improvement in financial inclusion of

females in Nigeria's e-payment ecosystem. Additionally, subjective norm, perceived ease of use, perceived cost and perceived usefulness are significant at 5% in making consumers use their debit cards on PoS terminals in retail outlets, with the frequency of usage been more on female consumers than male consumers. The findings were strategic for African emerging economies devising appropriate strategies that ensure strict compliance with financial inclusion policy strategy which would indirectly contribute to the attainment of a cashless economy. The study was limited by scope and cost constraints which impacted the sample size.

Keywords: Cashless economy, Plastic money, Paperless payment, User behaviour, Gender

Introduction

Paperless payment was predicted years ago to occupy the payment environment. This is aided by technological advancements in payment instruments (Bech, Faruqui, Ougaard & Picillo, 2018). Although there is global existence of different e-payment instruments, however, there is evidence that consumers who use plastic cards are unwilling to use them on e-payment channels. Poor education and awareness (Sultana & Hasan, 2016) and more focus on the supply-side factors of debit cards (financial institutions and network providers) than the demand side (consumers) are the claimed causal factors. This is a peculiar issue in most emerging economies and African nations given that decades later, research is still dominant on acceptance of innovations in emerging African economies (Simatele & Mbedzi, 2021; Oloveze, Ogbonna, Ahaiwe & Ugwu, 2022a).

Basically, plastic money is becoming the attraction of payment the world over (Bisht, Nair, Dubey & Hajela, 2015). In the developed economies, it is a source of convenience (Sultana & Kumar, 2015) because of the utility in form of convenient purchases and payment of goods (Mourad & Sheriff, 2015). Its usage differs across nations because of differences in growth and development among economies with respect to cashless policy. In developing nations, there are evidence of poor infrastructure and user readiness to accept innovations because of utility perception and education gap. In some developing nations like Nigeria, there is evidence of domination of a single payment instrument like ATM (CBN, 2019) thus explaining poor adoption rate of Point of Sale (POS) (Oloveze et al., 2022a; Oloveze, Oteh, Nwosu & Obasi, 2021b).

Moreover, gender differences exist in all cases in life. Extant studies show that there are different reactions to circumstances and events from male and female users of e-payments (Liébana-Cabanillas, Sánchez-Fernández & Muñoz-Leiva, 2014). This differences manifest in buying behaviour (Nandanan & Fernandez, 2017). For instance, extant literature indicates that men are inclined to functional products while women are inclined to relational products (Liébana-Cabanillas et al., 2014). According to Wilska (2005), men are naturally concerned with purchases that are either expensive or has high quality. On the other hand, Saimek (2009) claim that women spend money on care-giving, costumes, cosmetics and products that are cosmetic. Notably, prior to the emergence of plastic money, these transactions were executed with cash or cheque. However, plastic money and its adoption in developed economies is causing a shift in adoption of payment choice.

However, there are sharp contrasts in some findings regarding plastic money. Some studies like Zhang, Luximon & Song (2019) and Primadineska & Jannah (2021) consider security as being significant in choosing e-payment, while other studies like Alyabes & Alsalloum (2018) have a contrary view. Others consider the motivation of customers to adopt payment innovations to be perceived usefulness (Oloveze et al., 2021), consumer attitude (Oloveze et al., 2022a), perceived ease of use (Liébana-Cabanillas, Ramos-de-Luna & Montoro-Ríos, 2017), and flexibility, awareness and cost (Kabir, Saidin & Ahmi, 2017). The customers' choice of payment option is determined by different factors though in African context, little is known about these determinants (Simatele & Mbedzi, 2021).

In using debit-cards to carry out transactions on PoS in retail outlets, there have been different outcomes especially when compared with the usage of the same debit-cards on automated teller machines (ATMs). This can account for dissimilarities on usage statistics (see CBN, 2019) and poor utilization of the innovation in other areas despite Nigeria's drive for cashless economy. Moreover, there is paucity of literature on gender analysis to adoption of technological innovations (Oloveze et al., 2022b) despite the significant differences in how genders react to different issues in life.

In Nigeria, the patronage of e-payment channel is hugely dominated by ATM which indicates consumers' confidence in ATM (CBN, 2019; Oloveze et al., 2021). The rate of adoption and use of debit-cards on PoS is relatively low when compared to other e-payment channels that have recorded higher growth rate (CBN, 2019). The slow growth rate of debit-cards usage on PoS undermines CBN's purported general consumer confidence on the use of same debit-cards on ATM thereby making it difficult to understand the reasons for the poor adoption. Therefore, this study seeks to evaluate the predictors of debit-card usage on PoS in retail outlets while also evaluating the gender response to the adoption in retail outlets.

Supporting Theory
Technology acceptance model (TAM) is mostly the foundation for explaining adoption of e-payment innovations (Ramos-de-Luna, Montoro-Rios, Liebana-Cabanillas & Gil de Luna, 2017). It is often used in different information technologies and populations (Malhotra & Galletta, 1999) and considered to be appropriate in assessing the acceptance of innovations because of its several validations in several studies and robustness in studying technological innovations (Jeong & Yoon, 2013). The theory was founded by Davis (1969). Its focus is on perceived ease of use, perceived usefulness, and attitude as prevailing factors that influence behavioural intention and its application cuts across various technological e-payment innovations (Liebana-Cabanillas et al., 2017). Thus, the study is underpinned on the theory of TAM.

Review of Related Literature
Nowadays, customers have varied e-payment choices to use in making payments (Xiao, Hedman & Runnemark, 2015). Decades ago, cash had been the only option for payment. In present times, payments can be cash, credit transfer and plastic money (Xiao et al., 2015). Cash payments have its gains and losses. Economy that is predominantly cash based can be risky and unhealthy. Majority of such economies are in developing countries (World Payment Report, 2014). However, there is an obvious shift in many nations from cash based economy to non-cash methods. While there have been significant shifts, security, convenience, and affordability are cardinal prerequisites of a payment system that encourages development of national economy. It can become a catalyst to increase plastic money transactions. Notably, the global volume of non-cash transactions once totaled 260 billion though the outright volume of these payments only remained heavily concentrated in developed markets (Yaqub, Bello, Adenuga & Ogundeji, 2013). Thus, use of plastic money is substituting cash payments in developed economies but this is not the same in developing economies.

Gender Context
Generally, consumers are motivated by certain factors toward purchases. Critically, male and female do not have the same stimulus to spending (Giroir, 2020). For instance, men have positive attitude towards spending whereas women are moved by savings (Sereetrakul, Wongveeravuti & Likitapiwat, 2013). Women's general disposition to spending is often anchored on family provisioning, care-giving and children's food (Blumberg, 1988). Thus, the tendency to use plastic cards for payment can be influenced by spending behaviour and past related experiences. Therefore, where either gender has preference for convenience in shopping or high shopping

behavior, there is a chance to developing a compulsive behaviour in using the instrument for payment. This is important when they factor the accruable usefulness (Braga et al., 2013). While this is important, education is claimed to influence adoption of e-payment (Sultana & Hasan, 2016; Oladejo & Oluwaseun, 2015) while customers' age influence behavioural intentions to adopt m-payment (Oladejo & Oluwaseun, 2015). This study seeks to examine the association of age and education across gender in using debit card to pay on PoS terminal in retail outlets. However, studies show limited information on both variables (Chawla & Joshi, 2020) particularly from African developing economy on e-payment. Therefore we hypothesize:

H1: There is significant relationship between age and customer gender in using debit-card to pay on PoS in retail outlets

H2: There is significant relationship between education and customer gender in using debit-card to pay on PoS in retail outlets

H3: There is significant relationship between customer gender and frequent usage of debit card for payment on PoS in retail outlet.

Perceived Security

Most consumers base their decision on the adoption of e-payment on non-price factors while others are driven by other factors such as security (Oyelami, Adebiyi & Adekunle, 2020), perceived usefulness (Oloveze et al., 2021), perceived ease of use (Al-Majali & Bashasbsheh, 2016) perceived cost (Achieng & Ingari, 2015) and subjective norm (Dehbini, Birjandi & Birjandi, 2015). Security is one of the most crucial aspects in e-payment (Liébana-Cabanillas, Ramos-de-Luna & Montoro-Ríos, 2017) that influences customers' tendency to switch behaviour (Zhang et al., 2019). It deals with the perception of safety and privacy. It is fundamental in building user confidence and trust (Liébana-Cabanillas et al., 2017). Therefore, to attract and retain e-payment users, it is vital to enhance users' perceptions of security because it will improve trust on e-payment transactions (Kousaridas, Parissis & Apostolopoulos, 2008). This is part of the reasons security could serve as a determinant of users' decision to utilize e-payment systems (Zhang et al., 2019).

With respect to debit cards, it has password in form of personal identification number (PIN). Studies show that scammers have varied methods of gaining knowledge of user's PIN which can be by shoulder surfing, card swapping or use of stolen card (The Nielson Report, 2019). The implication is that consumers generally consider security issues regarding their money such that adoption is low when security is low and vice versa (Hassan, Shukur, Hasan & AI-Khaleefa, 2020). Related studies indicate an influence of security on adoption of e-payment innovations (Johnson, Kiser, Washington & Torres, 2018; Patel & Patel, 2018) despite contrary findings from extant literature (Lim, Kim, Hur & Park, 2019) which can be accounted from differences in user behaviour in adopting technological payment innovation (Majundar & Pujari, 2021; Widyanto, Kusumawardani & Septyawanda, 2020). Thus, we hypothesize:

H4: Perceive security have significant effect on customers' intention to use debit card to pay on PoS in retail outlets

Perceived Ease of Use

Perceived ease of use deals with the perception of debit card holders on simplicity, lack of difficulty in adopting debit cards for payment on PoS in retail outlets (Oloveze et al., 2022a). It is one of TAM's attributes that affects technology acceptance that affects attitude and behavioural intention (Davis, 1989). The ease of use is considered from lack of difficulty for the user when adopting the innovation as well as user friendliness. Thus, once users perceive any difficulty in its adoption, there is tendency for cash payment preference but when it is simple and with minimum effort, usage on PoS terminal will increase. Thus we hypothesize:

5: Perceived ease of use significantly influences customers' intention to use debit card to pay on PoS in retail outlets.

Perceived Usefulness
Perceived usefulness deals with a user's belief about an innovation being able to improve performance when it is adopted (Davis, 1989). It can influence attitude and behavioural intention (Oloveze et al., 2021). Otherwise it is about relative advantage and considered as the extent to which an innovation is perceived to be better than its predecessor (Liébana-Cabanillas et al., 2017). It is one of the bases for adoption of technology. In this study, it considers making the user to have better payment experience than cash payment. It prompts the user to compare the convenience and time saved from using it to pay other than cash which often occur within the user's mind but acted upon after considerations. The authors hypothesize:

H6: Perceived usefulness significantly influence customers' intention to use debit card to pay on PoS in retail outlets.

Subjective Norm
Subjective norms are critical in determining the perception of customers in adopting behaviour because of referents' influence (Yajid, Sukri & Azam, 2020). It is about an individual's belief and motivation from referents in adopting certain behaviour (Venkatesh & Bala, 2008). Such referents can be opinion leaders, celebrities, family and friends who often influence them. Once they perceive that the acceptable way of making retail payments in the society is debit-cards, they will most likely conform to the societal way of doing things. In addition, it considers if users perceive that people in their life conceive them as generally having the acceptable behaviour of using debit-cards for payments (Oloveze et al., 2022a). Once individuals are perceived as belonging to a particular class in the society that should use debit-cards to make retail payments, it should ordinarily have a positive influence. By extension, they should have a direct determinant effect on users' intention to adopt a new technology. Technological innovations and cultures are not the same. Consequently, compatibility of the innovation characteristics and norms are vital in acceptance of any technology. Thus, authors hypothesize:

H7: Subjective norm significantly influence customers' intention to use debit card to pay on PoS on retail outlets.

Perceived Cost
However, cost is a major concern when it involves a new technology. It has a huge impact on individuals and management (Oloveze, Chukwuoyims, Ogbonna & Anayochukwu, 2021) and significant in e-payment adoption (Roselyn & Suharto, 2020). It is about users' belief and understanding of the cost implications associated with the use of the innovation. It can be in the form of monetary cost and non-monetary cost such as time spent, mental stress or physical stress experienced before, during, or after the consumption of goods and services (Setiawan & Achyar, 2012). These costs could be service charges and transaction fees. Transaction service fees can encourage or discourage adoption of an electronic payment (Tiwari & Tiwari, 2020). When charges are insignificant during usage, it might not deter consumers from using debit cards to pay. Usually low income earning consumers are concerned about costs associated with use of e-payment service (Achieng & Ingari, 2015). This will most likely become a concern to users especially when they seem not to see any better value from using the e-payment services. However, in large transactions, customers tend to use cards for payment against small transactions where cash is used (Stavins, 2018). Thus it is hypothesized:

H8: Perceived cost significantly influence customers' intention to use debit card to pay on PoS in retail outlets.

Research Methodology
Descriptive survey research design was adopted for the study. Members of the population consisted of debit-card holders in the two key cities of Abia state (Aba and Umuahia) that own and use debit card for payments. Given non existence of sampling frame for the population, the sample was determined using Cochran formula which is appropriate for a population that is unknown.

The total sample for this study was 138. However, in order to have a good representative of the study, the quota sampling technique and convenience sampling were adopted. Quota sampling is a non-probabilistic version of stratified random sampling (Lavrakas, 2008). We assigned equal ratio to Aba and Umuahia debit-card holders and users on e-payment in retail outlets. In using convenience sampling, we adopted mall intercept in retail outlets where PoS terminals are used by customers. 50% (69 questionnaires) each was assigned to Aba and Umuahia totaling 138 questionnaires.

The study used a structured questionnaire to collect data. The first stage was adapting questionnaire items from earlier studies on electronic payment. The second stage is validating the scale items using face validity and content validity. Face validity was done by assessing the items at face value to ensure it measures what it ought to measure. In the third stage, the adapted scale items were measured on a 5 point Likert scale and the scales ranged from strongly agree to strongly disagree on a power ranking of 5 to 1 point respectively. To subject the items to content validity, recommendation of Taherdoost (2016) and Lawshe (1975) was used because it uses a statistical approach (Content validity ratio – CVR), with nine (9) experts used to validate the instrument, where 8 essential inputs were returned from eight (8) experts. The minimum CVR for nine (9) experts is 0.78.

Thus using Lawshe's formula: $CVR = \frac{n_e - \left(\frac{N}{2}\right)}{\frac{N}{2}}$

where: CVR =content validity ratio
n_e =Number of panel members indicating "essential" (8)
N =Number of panel members (9)

The derived CVR value of 0.78 validates the instrument. With reliability, the Cronbach Alpha was used. At Cronbach Alpha score of 81.8 from 20 items used in the instrument, reliability was confirmed (Nunally, 1978).

Results
138 questionnaires were administered but 131 valid copies were used. This represents 94.93 % response rate and were deemed adequate for the research study following the recommendation of Saunders, Lewis and Thornhill (2009) that questionnaire response rate that ranges between 50 - 70% is adequate for research.

Table 1. Descriptive statistics

Variables	Frequency	Valid Percentage
Gender		
Female	60	45.80
Male	71	54.20
Total	131	100.00
Age (years)		
Below 25 years	27	20.61
25 – 34 years	59	45.04
35 – 44 years	38	29.01
45 – 54 years	7	5.34
Total	131	100.00

Education		
Secondary education	37	28.24
OND/NCE	20	15.27
BSc./HND	69	52.67
MSc	5	3.82
Total	131	100.00

From the results on table 1, male users of debit-card on PoS in retail outlets are higher compared to female users. This can be deduced from natural inclinations of men to have a higher spending habit than female (Sereetrakul et al., 2013). On the other hand, women are often overtaken by their tendencies to have control of spending their money (Blumberg, 1988). This places control on usage of debit-card especially on impulse purchases. However, the result also shows that majority of the users are majorly within their productive ages of 25 to 44 years as well as having more than basic education. While the gender difference might not be accorded much attention here, the result shows where usage rate usually occur. Similarly, the education levels of users imply that using debit-card on PoS will not be challenging given at least the graduate education level of the users.

Table 2. Cross Tabul ation by Gender and Age

		Age				Total
		Below 25 years	25-34 years	35-44 years	45-54 years	
Gender	Female	14	16	25	5	60
		10.68%	12.21%	19.08%	3.82%	45.80%
	Male	13	43	13	2	71
		9.92%	32.82%	9.92%	1.53%	54.20%
Total		27	59	38	7	131
		20.61%	45.04%	29.01%	5.34%	100.0%

In Table 2, we considered the relationship between gender and age towards debit card usage on PoS in retail outlet. While women within the productive age of 35-44 years account for higher users, men between the ages of 25-34 years have higher usage rate. This justifies the youthfulness drive, their tendency to adopt technology more than other ages. Generally, while there is observable difference between the female and male with respect to the ages where usage rate is higher, it is vital to note that at different ages there is different response to usage of debit card on PoS in retail outlets. This difference is statistically significant at 5% given the result of Pearson Chi-Square on Table 3. In essence, a relationship exists between the age of the female and that of the male in using debit card to pay for purchases on PoS in retail outlets. The reason can be due to spending associated with social and aesthetic experience in the case of women (Wilska, 2005), and men's more positive attitude towards spending (Sereetrakul et al., 2013).

Table 3. Chi-Square tests

	Value	Df	Asymp. Sig. (2-sided)
Pearson Chi-Square	10.068[a]	3	.018
Likelihood Ratio	10.217	3	.017
Linear-by-Linear Association	4.836	1	.028
N of Valid Cases	201		

The chi-Square result shows a significant association at 10.068 with p-value of .018 for 131 valid cases and degree of freedom of 3. This confirms the hypothesis of age and gender having a significant association in using this type of innovation for payment on PoS in retail outlet.

Table 4. Cross tabulation by Gender and Education

			Education				Total
			Secondary education	OND/ NCE	BSc/ HND	MSc	
Gender	Female	Count	15	15	30	0	60
		% of Total	11.45%	11.45%	22.90%	0.0%	45.80%
	Male	Count	22	5	39	5	71
		% of Total	16.79%	3.82%	29.77%	3.82%	54.20%
Total		Count	37	20	69	5	131
		% of Total	28.24%	15.27%	52.67%	3.82%	100.0%

Education has an important role to play in acceptance and use of technology (Sultana & Hasan, 2016). Both female and male are shown to have more than basic education following the greater percentage on BSc/HND. This is often important where some technologies are concerned with ease of usage and other simplicities/complexities in using the technology. In this case, the result shows that both male and female users of debit card are fairly educated. As a result, using debit card to pay on PoS will be with ease. This relationship has statistical significance at 5% following Pearson Chi-Square in Table 5.

Table 5. Chi-Square tests

	Value	Df	Asymp. Sig. (2-sided)
Pearson Chi-Square	15.225[a]	3	.002
Likelihood Ratio	16.834	3	.001
Linear-by-Linear Association	6.671	1	.010
N of Valid Cases	201		

From table 5, there is an indication of significant relationship between gender and education. This is indicated by the chi-square value of 15.225, p-value of 0.002 and degree of freedom of 3. Thus, there is evidence of a positive relationship between gender and education of the respondents in using debit-card to pay on PoS in retail outlets. The hypothesis is confirmed.

Table 6. Frequency of debit-card use on PoS

Variable	Frequency	Valid Percentage
Monthly debit-card use		
Once	15	11.45
Twice	32	24.43
Thrice and above	84	64.12
Total	131	100

From table 6, the frequency usage of debit-card by the holders is spread across once in month, twice in a month and more than three times in a month with more than three times in a month having more frequency usage compared to the others. This is further analysed in tables 7 and 8.

Table 7. Cross tabulation of frequency of debit card use by gender

		Monthly Frequency Usage			Total
		Once	Twice	Thrice and above	
Gender	Female	2	13	45	60
		1.53%	9.92%	34.35%	45.80%
	Male	13	19	39	71
		9.92%	14.50%	29.77%	54.20%
Total		15	32	84	131
		11.45%	24.43%	64.12%	100.0%

From the results on table 7, there are observable differences between male and female users of the debit-card for payment on PoS in retail outlets. The highest frequency usage by male and female is more than three times per month. The female had higher percentage of usage rate of thrice per month at 34.35% against male usage rate of thrice per month at 29.77%. This difference is statistically significant at 10% following the result of Pearson Chi-Square on table 8. Given that there are divergent motivations on either gender to use the card on PoS, the result established that female users of debit-cards tend to use it more than the male users, in a month. This can be associated with spending and their natural inclination to make household purchases (Blumberg, 1988), cosmetics and gifts to friends (Saimek, 2009). This result is contrary to the findings of Liébana-Cabanillas et al. (2014) in that there is higher likelihood among the male users to utilise the device for payment more than the female users in cases where men values perceived usefulness. However, it corroborates the work of Nandanan and Fernandez (2017) where gender difference is associated with spending particularly when their perception of trust is high.

Table 8. Chi-Square tests

	Value	Df	Asymp. Sig. (2-sided)
Pearson Chi-Square	5.507[a]	2	.064
Likelihood Ratio	5.651	2	.059
Linear-by-Linear Association	5.411	1	.020
N of Valid Cases	131		

The result of Chi-Square tests on Table 8 is 5.507 with p value of 0.064 and degree of freedom of 3. The p-value is statistically significant at 10% thus validating the proposed hypothesis on the association between gender and frequency usage of debit-card for payment on PoS in retail outlets.

Table 9. Determinant factors of debitcard usage on PoS terminal

Variables	Coefficient	Std error	t- ratio	Significance
Constant	.011	.319	.036	.972
Perceived Security	.109	.060	1.827	.070*
Perceived ease of use	.147	.040	3.632	.000**
Subjective norm	.686	.085	8.070	.000**
Perceived cost	-.445	.067	-6.657	.000**
Perceived usefulness	.376	.058	6.454	.000**
R^2			58.0	
F-ratio			47.171**	

** significant at 1%, * significant at 10%

In Table 9, factors that can determine how debit holders use their cards on PoS for payment of purchases are analysed. The R^2 is 58.0 which shows 58% variations of variables in explaining how customers react to debit card use on PoS terminals in retail outlets. The F-ratio is significant at 1% thereby showing that parameters of the model are statistically different from zero. The variables are all statistically significant. In particular, perceived security is significant at 10%. The beta coefficient of 0.109 shows that better security measures produce positive outcome on customers' usage of debit-cards to pay on PoS in retail outlets. In essence consumers' perception of security elicit different reactions to the use of debit-card on PoS. This security concerns revolve around unnecessary exposure of personal identity number (PIN), loss of active debit card, and personal fears over secure transactions. Dispelling fears and effective handling of consumers' security concerns causes consumers to use debit cards for payments on PoS terminal. The finding is consistent with Liébana-Cabanillas et al., (2017) and Al-Majali and Bashabsheh (2016).

Moreover, perceived ease of use deals with absence of complexities in use of a technology. This attribute is significant at 1% in influencing customers to react positively. In addition, beta coefficient of 0.147 indicates positive reactions of the users in that with increases in ease of using debit cards on PoS, there is obvious positive response from debit-card holders toward using it for payments in retail outlets. In essence, when the usage of debit-card on PoS terminal is without complexities, consumers use it for payment. The implication is that when it is easier to use and with no mental effort required, the reactions of consumers become positive towards using it for payment thereby making consumers think that they are in control of their transaction process. The finding supports the works of Al-Majali and Bashabsheh (2016) on e-payments.

Subjective norm is a dimension that has being deduced as directly determining intention to use technology (Oloveze et al., 2022). In this study, subjective norm is statistically significant at 1% in positively influencing consumers toward their usage of debit card on PoS. The beta coefficient of 0.686 is high compared to other values. Thus, it is the most vital determinant in adopting debit-card for payment on PoS in retail outlets. The result is an indication that consumers consider the opinion of friends, relatives, and other people around them on whether or not to adopt debit card payment on PoS in retail outlets. In addition, the indication is that there is compatibility between innovativeness of using debit-card for payment on PoS terminals and the norms of the people using it. In essence the controlling influence of other peoples' perception of using debit card causes users to respond positively in having a compulsive behaviour of using it for payment. The more the controlling cultural trait, the more people have confidence and the tendency to use it for payments on PoS. This finding is at variance with Attuquayefio (2014) which showed insignificant relationship between subjective norm and intention to use various electronic innovations and technologies. However, it supports the work of Liébana-Cabanillas et al. (2017) and Oloveze et al., (2022a) wherein subjective norm showed a significant effect in adopting financial innovation.

Cost implications are always triggers to the usage or rejection of a technology. Customers' reaction to cost implications in using debit-cards on PoS is that of an inverse relationship following the result from the study. Perceived cost is significant at 1% while the beta coefficient is -0.445. This negative relationship serves as deterrent to the use of debit-card on PoS when the cost implication is perceived to be high. It is perceived as a major concern in technology adoption in terms of user perception of high or low cost involvement in adopting the technology (Tiwari & Tiwari, 2020). The study shows that customers refrain from using debit-card for payment on PoS in retail outlets when there are high cost implications of its adoption. This finding corroborates the work of Roselyn and Suharto (2020) but not confirmed in others (Sarosa, 2022; Tiwari & Tiwari, 2020).

One of TAM's focal elements is perceived usefulness. The study shows a significant effect at 1% in influencing consumers toward using debit-card for payment on PoS. The beta coefficient of 0.376 shows a direct relationship on its usage by customers. In essence, customers view perceived usefulness of debit-card usage on PoS to be relevant in enhancing their payment transactions. This implies that customers will often use the technology when they ascertain its usefulness in their life, more particularly when compared with existing option. They view this usefulness from the angle of its benefits, greater freedom in payment and convenience. The study corroborates the findings of Oloveze et al., (2022a) and Dehbini et al. (2015).

Conclusion and Recommendations
All customers do not have the same reaction when presented with a new technology. Gender, education and age often have controlling effects on either using or not using a device. This is often the case when spending behaviours are factored in. Thus, customers who have compulsive spending behaviour have greater chances of using debit-card for payment. Equally, female customers use the payment means more than their counterparts as a result of their peculiarities and inclinations to caregiving, buying gifts, cosmetics and taking care of the home. While these are established in the study, perceived security, perceived ease of use, subjective norm, perceived usefulness, and perceived cost are significant determinants of debit-card adoption for payments on PoS in retail outlets. When there is a direct relationship between the users and the attributes except cost implications, holders of the device are predisposed to use it while, when with high cost involvement, customers refrain from using it for payment on PoS in retail outlets.

Following these findings, we recommend policy reengineering approach that encourages firms to comply strictly with regulations that promote financial inclusions. This policy should drive towards reducing or removing cost involvements in using the device while increasing cost of cash use in the economy.

Also, we recommend policies that strictly encourage women participation in e-payment ecosystem to improve financial inclusion.

Finally, we recommend marketing campaigns that include use of celebrities in deepening the awareness and benefits of adopting debit-card for payment on PoS in retail outlets.

The limitation of the study is basically on the scope used in the study and the use of cross sectional survey design. Future studies are suggested to adopt longitudinal survey and increase the sample size.

Reference

Achieng, B. M., & Ingari, B. K. (2015). Factors influencing the adoption of mobile banking in Kenya's commercial banks: A case of Kenya commercial bank (KCB) Kilindini branch. International Journal of Scientific and Research Publications, 5(10), 1-14.

AL-Majali, M. M., & Bashabsheh, A. A. (2016). Factors that affect commercial banks customers intention towards electronic payment services in Jordan. International Business Research, 9(3), 79.

Alyabes, A. F., & Alsalloum, O. (2018). Factors affecting consumers' perception of electronic payment in Saudi Arabia. European Journal of Business and Management, 10(27), 36-45

Attuquayefio, S. N. B. (2014). Extending TAM with social norm to model students'intentions to adopt ICT. European Scientific Journal, 10(14).

Bech, M., Faruqui, U., Ougaard, F., & Picillo, C. (2018). Payments are a-changing' but cash still rules, Bank for International Settlement. BIS Quarterly Review, 67-80.

Bisht, A., Nair, P., Dubey, R., & Hajela, T. (2015). Analysis of the use of plastic money: A boon or a bane. SIMS Journal of Management Research, 1(2), 34-51.

Blumberg, R. L. (1988). Income under female versus male control: Hypothesis from a theory of gender satisfaction and data from the Third World. Journal of family issues 9(1), 51-84.

Braga, F. D. A., Isabella, G., & Mazzon, J. A. (2013). Do Digital Wallets as a Payment Method Influence Consumer in Their Buying Behavior XXXVII Encontro da ANPAD, 1-16.

CBN (2019). Central Bank of Nigeria Annual Report. Available at: https://www.cbn.gov.ng/Out/2020/RSD/CBN%202019%20ANNUAL%20REPORT-FINAL.pdf

Chawla, D., & Joshi, H. (2020). The moderating role of gender and age in the adoption of mobile wallet, *Foresight 22*(4), 483–504

Davis, F. D. (1989). Perceived usefulness, perceived ease of use, and user acceptance of information technology. *MIS quarterly,* 319-340.

Dehbini, N., Birjandi, M., & Birjandi, H. (2015). Factors influencing the adoption of electronic payment cards in urban micro-payments. *Research Journal of Finance and Accounting, 6*(1), 39-47.

Giroir, G. (2020, January 6). How men and women spend their money differently. *Louisiana Federal Credit Union*. https://www.louisianafcu.org/articles/how-men-and-women-spend-their-money-differently

Hassan, M. A., Shukur, Z., Hasan, M. K., & Al-Khaleefa, A. S. (2020). A Review on Electronic Payments Security. *Symmetry, 12*(8), 1344.

Jeong, B. K., & Yoon, T. E. (2013). An empirical investigation on Consumer Acceptance of Mobile Banking Services. Business and Management Research, 2(1), 31-40

Johnson, V. L., Kiser, A., Washington, R., & Torres, R. (2018). Limitations to the rapid adoption of M-payment services: Understanding the impact of privacy risk on M-Payment

services. *Computers in Human Behavior, 79*(2) 111-122.

Kabir, M. A., Saidin, S. Z., & Ahmi, A. (2017). Analysis of factors that influence electronic payment adoption. *Journal of Engineering and Applied Sciences, 12*, 6560-6568.

Kim, C., Tao, W., Shin, N., & Kim, K. S. (2010). An empirical study of customers' perceptions of security and trust in e-payment systems. *Electronic commerce research and applications, 9*(1), 84-95.

Kousaridas, A., Parissis, G., & Apostolopoulos, T. (2008). An open Financial Services Architecture based on the use of intelligent Mobile Devices. *Electronic CommerceResearch and Applications,* 7(2), 232–246.

Lavrakas, P. J. (2008). Encyclopedia of Survey Research Methods. SAGE Publications.

Lawshe, C. H. (1975). A quantitative approach to content validity, *Personnel Psychology*, 28, 563-575

Liébana-Cabanillas, F., Ramos-de-Luna, I., & Montoro-Ríos, F. (2017). Intention to use new mobile payment systems: a comparative analysis of SMS and NFC payments. *Economic research-Ekonomska istraživanja, 30*(1), 892-910.

Liébana-Cabanillas, F. J., Sánchez-Fernández, J., & Muñoz-Leiva, F. (2014). Role of gender on acceptance of mobile payment. *Industrial Management & Data Systems, 114*(2), 220-240.

Lim, S. H., Kim, D. J., Hur, Y., & Park, K. (2019). An Empirical Study of the Impacts of Perceived Security and Knowledge on Continuous Intention to Use Mobile Fintech Payment Services. *International Journal of Human Computer Interaction, 35(*10), 886–898.

Malhotra, Y., & Galletta, D. F. (1999). Extending the technology acceptance model to account for social influence: Theoretical bases and empirical validation. *Proceedings of the Annual Hawaii International Conference on System Sciences*, 1006-1020, 32

Majumdar, S., & Pujari, V. (2021). Exploring usage of mobile banking apps in the UAE: a categorical regression analysis. *Journal of Financial Services Marketing,* 1-13. https://doi.org/10.1057/s41264-021-00112-1

Mourad, M. & Sheriff, H. F. (2015). E-payment Technology Adoption: Empirical evidence from emerging economy. Proceedings of International Academic Conference on West East Institute WEI, June, 8-10, 2015, Havard University, Barcelona, Spain, 144-158.

Nandanan, P., & Fernandez, S. P. (2017). A study on the gender differences in the spending attitude and behavior of IT professionals in Urban Bangalore. *International Journal of Business and Management Invention, 6*(7), 55-59.

Nunally, J. C. (1978). *Psychometric theory*, 2nd ed., New York: McGraw-Hill

Oladejo, M. O., & Oluwaseun, Y. (2015). Socio-economic factors influencing e-payments adoption by the Nigerian deposit money banks (DMBs): Perspective of the bankers. *International Journal of Management Sciences, Research Academy of Social Sciences,*

5(11), 747-758.

Oloveze, A. O., Chukwuoyims, K., Ogbonna, C., & Anayochukwu, P. U. (2021). Mediating effect of cost in managing rice millers' safety for service quality. *Journal of Business Administration and Management Sciences, 1*(1), 28-38

Oloveze, A. O. Ogbonna, C. Ahaiwe, E. O., & Ugwu, P. A. (2022). From offline shopping to online shopping in Nigeria: Evidence from African emerging economy, *IIM Ranchi Journal of Management Studies*, 1(1), 55-68.

Oloveze, A. O., Oteh, O. U., Nwosu, H. E., & Obasi, R. O. (2021). How user behaviour is moderated by affective commitment on point of sale terminal. *Rajagiri Management Journal, 16*(1), 2-20.

Oloveze, A. O., Ugwu, P. A., Okonkwo, R. V. O., Okeke, V.C., Chukwuoyims, K., & Ahaiwe, E. O. (2022). Factors motivating end-users' behavioural intention to recommend — health innovation: Multi-group analysis. *Health Economics and Management Review, Issue 3*, 2022

Oyelami, L. O., Adebiyi, S. O., & Adekunle, B. S. (2020). Electronic payment adoption and consumers' spending growth: empirical evidence from Nigeria. *Future Business Journal, 6*(1), 14 https://doi.org/10.1186/s43093-020-00022-z

Patel, K. J., & Patel, H. J. (2018). Adoption of internet banking services in Gujarat: An extension of TAM with perceived security and social influence. *International Journal of Bank Marketing, 36*(1), 147–169.

Primadineska, R. W., & Jannah, S. M. (2021). Perceived Security and Trust in Electronic Payment Systems: How They Affect the Decision to Use EPS During the COVID-19 Pandemic. *Jurnal Manajemen Bisnis, 12*(2), 236-247

Ramos-de-Luna, I., Montoro-Ríos, F., Liébana-Cabanillas, F., & Gil de Luna, J. (2017**).** NFC technology acceptance for mobile payments: A Brazilian Perspective, *Review of Business Management,* 19(63), 82-103.

Roselyn, S., & Suharto, Y. (2020). Factors affecting consumers' adoption of electronic payment: An empirical study of Indonesian customer. *International Journal of Economics, Business and Management Research, 4*(6), 245-254

Saimek, M. (2009). Expenditure patterns of Thai adolescent. unpublished Ph. D. thesis, National Institute of Development Administration, Thailand.

Sarosa, S. (2022). The effect of perceived risk and perceived cost on using online learning by high school students. *Procedia Computer Science, 197*, 477-483

Saunders, M., Lewis, P., & Thornhill, A. (2009). *Research Methods for Business Students* (5th ed.). Harlow, England: Prentice Hall.

Sereetrakul, W., Wongveeravuti, S., & Likitapiwat, T. (2013). Gender differences in saving and spending behaviours of Thai students. *Research in Education, 90*(1), 68-81.

Setiawan, R., & Achyar, A. (2013). Effects of Perceived Trust and Perceived Price on Customers' Intention to Buy in Online Store in Indonesia. *ASEAN Marketing Journal, 4*(1), 26-36.

Simatele, M., & Mbedzi, E. (2021). Consumer payment choices, costs, and risks: Evidence from Zimbabwe, *Cogent Economics & Finance, 9*(1), 1875564.

Stavins, J. (2018). Consumer preferences for payment methods: Role of discounts and surcharges. *Journal of Banking and Finance, 94,* 35–53.

Sultana, N., & Hasan, M. (2016). Investigating the Consumers' Perception towards usage of Plastic Money in Bangladesh: An Application of Confirmatory Factor Analysis. *South East Asia Journal of Contemporary Business, Economics and Law, 9(*2),16-24.

Sultana, S., & Kumar, K. S. (2015). An study of customer payment behavior in organized retail outlets at COmbaitore district. *Journal of Management and Science, 5*(2), 1-16.

Taherdoost, H. (2016). Validity and Reliability of the Research Instrument; How to Test the Validation of a Questionnaire/Survey in a Research, *International Journal of Academic Research in Management,* 5(3), 28-36.

The Nilson Report (2019). *Card Fraud Losses Reach $27.85* Billion. https://nilsonreport.com/mention/407/1link/

Tiwari, P. K., & Tiwari, S. (2020). Integration of technology acceptance model with perceived risk, perceived trust and perceived cost: Customers' adoption of m-banking. *International Journal on Emerging Technologies 11*(2), 447-452

Venkatesh, V., & Bala, H. (2008). Technology acceptance model 3 and a research agenda on interventions. *Decision sciences, 39*(2), 273-315.

Widyanto, H. A., Kusumawardani, K. A., & Septyawanda, A. (2020). Encouraging behavioral intention to use mobile payment: an extension of Utaut2. *Jurnal Muara Ilmu Ekonomi Dan Bisnis, 4*(1), 87-97

Wilska, T. A. (2005). Gender differences in the consumption of children and young people in Finland. Lifestyles and Social Change. *Essays in Economic Sociology*, 159-176.

World Payment Report. (2014). Payment Cards and Mobile – 2014. https://www.capgemini.com/frfr/wpcontent/uploads/sites/2/2017/07/world_payments_report_2014.pdf

Xiao, X., Hedman, J., & Runnemark, E. (2015). Use of Payment Technology: A Perspective Based on Theory of Consumption Value. In ECIS 2015 Proceedings (p. 40). Association for Information Systems. AIS Electronic Library (AISeL).

Yajid, M. S.-Ab., Sukri, S. M., & Azam, S. M. F. (2020). Role attitudes, subjective norms and perceived behavioural control in customers' purchase intention. *Systematic Reviews in Pharmacy, 11*(1), 1064-1072

Yaqub, J. O., Bello, H. T., Adenuga, I. A., & Ogundeji, M. O. (2013). The cashless policy in Nigeria: prospects and challenges. International *Journal of Humanities and Social Science, 3*(3), 200-212.

Zhang, J., Luximon, Y., & Song, Y. (2019). The role of consumers' perceived security, perceived control, interface design features, and conscientiousness in continuous use of mobile payment services. *Sustainability, 11,* 6843.