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Technology Acceptance Model and Motorists' Intention to adopt Point Of Sale Terminals for Payment of Petrol price in Lagos State, Nigeria.

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Abstract

Since the introduction of a cash-less policy in Lagos State in January, 2012 by the Central Bank of Nigeria (CBN), many merchants in a number of sectors, including the downstream petroleum, have deployed point of sale (PoS) terminals to promote electronic payment system (EPS) among their customers. The paper employed the technology acceptance model (TAM) to predict the intention of motorists in Lagos state to accept and use the new payment technology to pay for petrol price. A valid sample of 267 respondents participated in the study. Multiple regression was used to test the stated hypotheses. The regression results indicated that perceived usefulness of a PoS device can be predicted from perceived ease of use; attitude toward the use of the device can be predicted from its perceived usefulness; and behavioural intention to use the devices can be predicted from both attitude toward its usage and its perceived usefulness. It was concluded that TAM is appropriate for predicting the intention of motorists to accept and use PoS terminals for the payment of petrol price in the state. These findings suggest opportunities for managers of petrol stations to widely deploy and promote use of PoS terminals to diffuse the innovative technology in Lagos and other states in Nigeria and achieve a competitive advantage over their counterparts that do not deploy the devices.

Keywords: Adoption, motorists, petrol, petrol price, point of sale (PoS) terminals, and technology acceptance model (TAM).

1. Introduction

Adoption and diffusion of a new product is an important topic in marketing, helping marketers to understand how consumers learn about a new product, try and subsequently adopt it. Adoption here refers to

buying and using a product for the first time and regularly thereafter if it satisfies the need of the consumers. Since the advent of innovative technologies in all spheres of human life, researchers have intensified efforts at investigating the acceptance of new technologies among the social system (Adeoti, 2013; Adeoti & Oshotimehin, 2011; 2012; Aminu, 2011; 2013a; Agboola, 2006; Chiemeke, Evwiekpaefe, & Chete; Sathye, 1999; Financial Derivatives Company Limited, 2012; Lederer, Maupin, Sena, & Zhuang, 2000; Okeke, 2013; Zeng, 2011). Specifically, Adeoti and Oshotimehin and Financial Derivatives Company Limited investigated adoption of point of sale (PoS) terminals in Nigeria. This paper extends the studies on acceptance of electronic payment system (EPS) with emphasis on PoS devices and applies the TAM constructs (Davis, 1989) to predict intention of motorists to adopt the devices.

With the introduction of cash-less policy by the Central Bank of Nigeria (CBN) in Lagos State, Nigeria in January 2012, a number of companies, including petrol stations, have deployed PoS terminals to provide an alternative to cash payments for retail transactions. Sadly, there is no updated statistics on the number of PoS terminals deployed in the state. The available data is dated and it was estimated to be 185, 000 terminals deployed as of November, 2012 (Financial Derivatives Company Limited, 2012). This number is grossly inadequate to serve the huge commercial activities taking place in the state, the economic and commercial hub of the country. For example, only few petrol stations in the state have deployed the device to enable motorists to pay for fuel, thereby relieving them of the risk of carrying a large sum of money while also providing them convenience and freedom to meet an emergency fuel purchase. A study found that convenience of use of PoS terminals significantly determines its adoption in Nigeria (Adeoti & Oshotimehin, 2011).

Due to the perceived usefulness (PU) and perceived ease of use (PEOU) (Davis, 1989) of PoS terminals, the expectation is that many motorists in Lagos State would accept this innovative EPS to pay for petrol. The reality is that the number of terminals deployed in the state is grossly inadequate to serve the huge population of motorists and the few available devices are concentrated in few cosmopolitan areas. Gbodume (2014) noted that to get people to use Credit and Debit cards, merchants must deploy them widely in shops, petrol stations, restaurants, and so on. The PoS terminals deployed by few downstream petroleum marketing companies like Total, Oando and MRS is still at introduction stage (Gbodume, 2014). PoS terminals deployment was concentrated in four zones of Lagos State, including Lagos Island, Ikeja, Yaba and Badagry (Financial Derivatives Company Limited, 2012). Today, the situation has not changed significantly as many petrol stations even in the concentrated zones do not have the devices, and the few that deploy them have one terminal for a multitude of customers that are willing to use them for payment of petrol price.

To worsen the situation, most of these terminals do not work most of the time. A study found that there was about 80 per cent of underutilisation of PoS terminals in Lagos area (Financial Derivatives Company Limited, 2012). Another study found that PoS terminals effectiveness in the state is plagued by network failure,

frequent power outage and limited number of PoS per merchant (Adeoti, 2013). Consequently, the terminals are not widely available and this has limited the acceptance and use of the new payment system among motorists who may prefer electronic payment to cash payment.

Given that the innovative payment system is not currently widely available for the use of willing motorists in Lagos State, this paper employs TAM to predict their acceptance as PoS terminals become widely available in the future. TAM was developed to explain and predict acceptance of an information system (IS) (Davis, 1989) and it is a useful framework to explain and analyse IS usage behaviour, which is influenced by attitude and behavioural intention to use such product (Wu & Wu, 2005) and thus the actual usage (Lederer et al., 2000).

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To the knowledge of the researcher, this is the first attempt to apply the complete constructs of the TAM to explain acceptance of PoS terminals in the payment of petrol price in Nigeria. Due to the recency of PoS terminals in the country and its unimpressive performance, there are limited studies on its acceptance (Adeoti, 2013; Adeoti & Oshotimehin, 2011; 2012; Financial Derivatives Company Limited, 2012). None of these has used the complete constructs of the TAM to predict intention to accept and use PoS terminals for payment of petrol price in Nigeria. Therefore, this paper fills this gap in the literature and provides the first empirical evidence on intention of motorists to accept and use PoS terminals for payment of petrol price as the devices become widely available in the state. The rest of the paper includes literature review, methods, results and conclusion in that order.

2. Literature review

2.1. Acceptance of a new electronic payment system (EPS) technology

PoS is a method of electronic payment system (e-PS). Electronic payment (e-Payment) is defined as "an electronic means of making payment for goods and services procured online or in supermarkets or shopping malls" (Adeoti & Oshotimehin, 2011, p. 388). PoS is defined as "an embedded platform with customer features designed for a retail and service environment" (Intel, 1998, p. 5). Due to its increasing adoption by a greater number of industries, PoS market is growing dramatically (Intel, 1998). The explosive increases in the use of Debit cards in 13 developed countries resulted from the adoption of PoS debit terminals, which suggests that both merchants and consumers generally prefer debit cards to other payment alternatives (Amromin & Chacravorty, 2007).

Credit and Debit Cards require PoS (Gbodume, 2014). Acceptance of PoS terminals by an increasing number of merchants allows consumers to use debit cards as an alternative to cash payment (Amromin & Chacravorty, 2007) while the adoption of debit cards by shoppers reduces the propensity to carry cash (Carb-Valverde & Rodriguez-Fernandez, 2014). The use of Credit cards, Debit cards and e-wallets considerably makes cash-less shopping convenient (Gbodume, 2014). Being an electronic payment technology, which according to Intel is "usually connected to a network" (p. 5) PoS terminals fall into the category of information and payment technology, and therefore, this review covers a gamut of technology acceptance.

Several studies have been carried out on acceptance of new technologies both at individual and organisational levels (Lai & Li, 2005) leading to substantial achievements being recorded, over the years, in explaining how users accept information technology (Gardner & Amoroso, 2004). In consumer behaviour and marketing at large, acceptance, use and diffusion of new products is critical to marketing effectiveness (Rogers, 1976). Acceptance and use of a new technology such as EPS varies from one country to another with more rapid and intense acceptance in developed countries (Amromin & Chacravorty, 2007). For example, it was found that debit card usage, in most of the 13 developed countries surveyed, has increased considerably while cheque usage is reducing or almost going into extinction (Amromin & Chacravorty, 2007).

Influences on acceptance of a new technology are grouped into four categories, including individual context, social context, system context and organisational context (Park, 2009). Generally, product characteristics (system context) such as relative advantage, compatibility, complexity, trialability and observability are related to its adoption and diffusion (Rogers, 1976) though the degree of the influence of these factors on the adoption of an innovation varies (Chen, Gillenson, & Sherrell, 2000). In this instance, the relative advantage of carrying less cash and freedom and convenience of payment provided by PoS terminals should motivate its acceptance in Nigeria. In addition, individual factors such as perception about usefulness and ease of use of a new technology are also significant in driving acceptance of a new technology (Davis, 1989).

Furthermore, studies have identified the combined factors of individual and social factors as facilitating acceptance of a new technology (Fishbein & Ajzen, 1975). Both theory of reasoned action (TRA) (Fishbein & Ajzen, 1975) and theory of planned behaviour (TPB) (Ajzen, 1991) combined a social factor of subjective norm with personal factors such as intention to perform a behaviour and attitude towards the behaviour to explain acceptance of a new technology (Ajzen, 1991).

2.2 Technology acceptance model (TAM)

This paper employs TAM (Davis, 1989) to predict intention to accept and use PoS terminals by motorists for making payment for petrol. TAM is seen as the most significant of all theories of adoption and is a frequently and widely used theory to explain how individuals accept and use IS (Gefen & Straub, 1997; Lee, Kozar, & Larsen,

2003; Park, 2009). TAM was adapted from TRA (Fishbein & Ajzen, 1975) and used two cognitive constructs, perceived usefulness (PU) and perceived ease of use (PEOU) to explain attitude (ATT) of potential adopters towards a new information system (IS), their behavioural intention (BI) and actual usage (Davis, 1989). The adjective 'perceived' in the PU and PEOU constructs suggests that the actual usefulness or ease of use is a subjective element resulting from personal opinions (Stalfors & Nykvist, 2011). This implies that a new technology that is perceived by some consumers as useful and easy to use may not be perceived by others in the same way.

TAM proposes that an individual's readiness to accept and adopt a new technology is determined by his/her BI, which is determined by the individual's ATT towards the technology; the attitude is a function of of PU and PEOU (Davis, 1989). This relationship "seems to explain fairly well why people accept or reject an information technology (IT)" (Gefen & Straub, 1997, p. 390). Studies have found that the TAM constructs consistently predict a large proportion of variance reported in BI and actual usage of users of different technologies (Davis, 1989; Gardner & Amoroso, 2004). There are a number of empirical studies that have validated the applicability of TAM to e-PS in Nigeria (Adeoti, 2013; Adeoti & Oshintimehin, 2011; 2012; Adesina & Ayo, 2010; Okeke, 2013). However, none of these has applied the model to explain or predict use of PoS terminals for the payment of fuel price, suggesting a gap being filled by this paper.

2.2.1 Perceived ease of use (PEOU) of a new e-PS technology

PEOU is a degree to which a potential user of a system considers that using the system will be free of effort (Davis, 1989). PEOU is the perception about how easy to learn and use a new technology (Zeng, 2011). There is no doubt that consumers requires any training to use PoS terminals; in fact, the vendor personnel often operate the technology for the users while the users only require to press their personal identification number (PIN).

A number of empirical studies have validated this with other constructs of the model. PEOU is found to be crucial in affecting the attitude and behavioural intention of internet banking usage in Hong Kong (Lai & Li, 2005). PEOU was found to positively affect customers' attitude towards using e- banking in Nigeria (Adesina & Ayo, 2010). PEOU of mobile payment significantly affected its perceived usefulness and the intention to use it in Germany (Pousttchi & Wiedemann, 2007). It was found to significantly influence adoption of PoS terminals in Lagos State (Adeoti & Oshintimehin, 2011). Moreover, it was found to support and facilitate acceptance of e-banking in Nigeria (Okeke, 2013). In contrast, there was no evidence that PEOU of mobile payment system in Sweden was significant in determining acceptance of the system in the country (Stalfors & Nykvist, 2011).

2.2.2 Perceived usefulness (PU) of a new e-PS technology

PU describes the degree to which a potential adopter believes that a particular system will strengthen his/her performance (Davis, 1989). People would use an application if they believe it would facilitate their performance (Adesina & Ayo, 2010). In this regard, motorists would consider to use PoS terminals at petrol stations because of its convenience and beneficial use. PU is considered to be more important than PEOU as users of a new technology would first consider its usefulness before determining its ease of use and accepting to use it (Gardner & Amoroso, 2004). Due to its relative importance, PU is used in the literature as both dependent and independent variables because it is predicted by PEOU (Lee et al., 2003).

There are a number of empirical findings on the significance of PU on attitude, behavioural intention and actual usage. An empirical finding revealed that PU is an important construct affecting the attitude and behavioural intention of internet banking usage in Hong Kong (Lai & Li, 2005) and had a positive effect on customers' attitude towards acceptance of e-banking in Nigeria (Adesina & Ayo, 2010). It was also found that PU significantly determined intention to accept mobile payment in Germany (Pousttchi & Wiedemann, 2007) and to adopt internet banking in a Malaysian public university (Mohd, Yeoh, Norhayati, & Ahamad, 2013). Perceived compatibility and PU of mobile payment system were the main determinants of consumers' acceptance of the system in Sweden (Stalfors & Nykvist, 2011).

2.2.3 Attitude toward and behavioural intention to accept a new technology

Attitude is defined as an enduring inclination of individual to consistently respond favourably or unfavourably to a person, a situation, an issue, an object or an environment (Aminu, 2013b). Intention to behave in certain way toward someone or something is a conative (behavioural) component of attitude (Kreitner & Kinicki, 2014) and is described as an individual's conscious plans to make effort to engage in a behaviour (Eagly & Chaiken,1993). Attitude is a personal influence on the behavioural intention (Albarracin, Kumkale, & Johnson, 2004), which in turn affects the actual behaviour of an individual (Ajzen & Fishbein, 1975; Albarracin, Kumkale, & Johnson, 2004; Davis, 1989).

An empirical finding showed that customers' attitude towards e-banking in Nigeria is positively related to its actual usage (Adesina & Ayo, 2010). Conversely, attitude is empirically established not to be a reliable predictor of usage behaviour (Sun, 2003 cited in Gardner & Amoroso, 2004) and did not significantly predict behavioural intention either (Todd,1995 cited in Gardner & Amoroso, 2004).

Based on the foregoing reviews, the following hypotheses are stated and tested in the paper:

H_1: Perceived usefulness of PoS terminals for payment of petrol price in Lagos State is positively associated with its perceived ease of use by motorists.

H_2: Attitude toward using PoS terminals for payment of petrol price in Lagos State is positively associated with its perceived usefulness by motorists.

H_3: Behavioural intention of motorists to accept PoS terminals for payment of petrol price in Lagos State is positively associated with its perceived usefulness by motorists.

H_4: Behavioural intention of motorists toward using PoS terminals for payment of petrol price in Lagos State is positively associated with motorists' attitude toward it.

3. Methods

The study was carried out in Lagos State, Nigeria, where a cash-less policy of the CBN was piloted in January, 2012 before a full scale roll-out in the entire country. A cross- sectional research design was adopted to obtain the required data. The target population included all the motorists purchasing petrol at Total, MRS and Oando service outlets that have widely deployed PoS (Gbodume, 2014) in the four zones of the state, Badagry, Ikeja, Lagos Island and Yaba where PoS terminals are widely deployed (Financial Derivatives Company Limited, 2012).

A multi-sampling technique was adopted. At the first stage, a simple random sampling technique was used to select two (Ikeja and Yaba) of the four zones where PoS terminals are widely deployed. At the second stage, a simple random sampling technique was also employed to select two of the three major petrol stations (Total and Oando) that have widely deployed PoS terminals. Finally, a systematic sampling technique was used to administer questionnaire to 471 motorists at the selected petrol stations. The field workers approached every third of the motorists that drove in to purchase fuel with a copy of questionnaire.

Two filtering questions in the questionnaire were used to screen the respondents. Using a filtering question: *Do you have Credit/Debit card?* Four hundred and seventy-one respondents from 1, 413 of the motorists that drove in to purchase petrol during the survey period admitted having and using cards for electronic payment. For the 471 respondents, the second filtering question: *Do you use Credit/Debit card to pay for petrol?* was used to determine 276 respondents who have Credit/Debit cards but do not make payments for petrol with the cards; these are the respondents of interest in this paper. Only 267 copies of the questionnaire were found usable. An instruction in the questionnaire advised the category of respondents *who uses PoS to purchase petrol* not to fill the questionnaire but return it.

The questionnaire was adapted from previous works (Agarawal & Karahanna, 2000; Davis, 1989; 1993; Venkatesh & Davis, 2000). It used a five-point Likert scale (1 - strongly disagree and 5 - strongly agree). It had four sub-scales (PU, PEOU, ATT and BI) with 16 items. The Cronbach's alpha (a measure of reliability of an instrument) of all sub-scales is high with Cronbach's alpha coefficients ranging between 0.82

and 0.97 (Agarawal & Karahanna, 2000; Davis, 1989; Venkatesh & Davis, 2000). In consistency with Lee et al.'s (2003) observation, PU is used in this paper as both dependent and independent variables. Multiple regression analysis was run on SPSS 17.0 to test the four hypotheses of the paper.

4. Results and discussion

4.1 Results

Table 1: *Respondents' demographics*

Variables	Frequency	Percentage	Variables	Frequency	Percentage
Sex:			**Petrol**		
Male	225	84.27	**Station**	151	56.54
Female	42	15.73	Total	116	43.46
Total	**267**	**100.00**	Oando	**267**	**100.00**
			Total		
Age:			**Occupation:**		
21-30	24	8.99	Civil Servant	36	13.48
years	63	23.60	Private	131	49.07
31-40	143	53.59	Company	77	28.84
years	37	13.86	Self-	23	8.61
41-50	**267**	**100.00**	employee	**267**	**100.00**
years			Others		
51 years			**Total**		
plus					
Total					
Zone:					
Lagos	142	53.18			
Island	125	46.82			
Yaba	**267**	**100.00**			
Total					

*Source: Field Research, 2014***.**

Male constituted over 84% of the respondents while female accounted for about 16%. Majority of the respondents (54%) were between 51 and 60 years. There were more respondents from the Lagos Island zone (52%). Total filling stations had more respondents, about 57%. Finally, majority of the respondents, 49% worked in private companies.

Table 2: *TAM multiple regression results*

Dependent variable	R-Squared	Independent variable	Coefficient (b)	Std error	Standardised Beta coefficient	t-statistic	Sig. Level
PU	0.475	Constant	0.492	0.185		14.452	0.000
		PEOU	0.420	0.065	0.525	10.641	
ATT	0.484	Constant	0.349	0.274		11.538	0.000
		PU	0.516	0.152	0.654	9.385	

BI	0.524	Constant **PU**	0.436 0.479	0.186 0.094	 0.485	6.546 9.157	0.000
BI	0.595	Constant **ATT**	0.371 0.524	0.273 0.748	 0.383	7.455 10.850	0.000

SPSS Output, 2015.

The values of R^2 in table 2 are sufficiently high, indicating that the model fit is satisfactory. Similarly, Beta coefficients for all the independent variables are high indicating that the contribution of each of the variable to the model, when other independent variables are controlled for, is high. PU with a Beta 0.654 and PEOU with a Beta 0.525 made the most significant contribution to the model. In addition, both t-tests and Sig. Level show the statistical significance of each independent variable in predicting the corresponding dependent variable. For example, PEOU ($t = 10.641$; $p = 0.000$) significantly predicts PU; PU ($t = 9.385$; $p = 0.000$) significantly predicts ATT; PU ($t = 9.157$; $p = 0.000$) also significantly predicts BI; and ATT ($t = 10.850$; $p = 0.000$) significantly predicts BI. Therefore, all the hypotheses are accepted.

4.2 Discussion

The paper employs Davis' (1989) TAM constructs to predict the behavioural intention of Lagos motorists to accept and use PoS terminals for payment of petrol price rather than paying with cash. The four findings of the paper are discussed here.

Perceived usefulness of *PoS terminals* is positively associated with its PEOU. Empirical studies have validated this relationship (Davis et al., 1989; Lee et al., 2003; Pousttchi & Wiedemann, 2007). For example, PEOU of mobile payment significantly affected its PU in Germany (Pousttchi & Wiedemann, 2007). PEOU of PoS terminals is a cognitive belief about ease of learning and using them. A motorist who perceives the device as being easy for paying for petrol price would also find it useful. Except for the frequent network challenge that bedevils the terminals' operations and their inadequate maintenance in Lagos State, it can be asserted that using PoS terminals for purchasing fuel is absolutely easy to use and free of efforts. This is because the users require no special skill and training to use it. In tandem with this, 92% of respondents perceived it as easy to use, suggesting that they may have been using it for other transactions.

The results also reveal that *attitude* is positively associated with perceived usefulness of PoS terminals. This finding colloborates the findings by Lai and Li (2005) and Adesina and Ayo (2010). Undoubtedly, using PoS terminals to pay for fuel is convenient, not bulky and protect users from the danger of being dispossessed of their cash by armed robbers and street urchins. Therefore, the practical benefit of using PoS terminals for transactional purpose should motivate and predispose more motorists

in the state to accept the new payment system. Advertising and promotion about the usefulness of PoS terminals should be used to create a positive attitude among motorists who do not have debit/credit cards; reinforce the attitude of those who have and currently use PoS to pay for fuel; and motivate those who have cards but are yet to adopt PoS for transactions at petrol stations. For example, a recent survey indicates that only 11.5 per cent claim to use their debit/credit cards daily (Nigeria Inter-Bank Settlement System, NIBSS, 2015).

Moreover, the results also show that *behavioural intention* to accept and use PoS terminals is positively related to motorists' perception of its usefulness. This finding is instructive as people would accept a new technology if it is perceived to be useful (Adesina & Ayo, 2010). The finding is consistent with previous studies (Lai & Li, 2006; Pousttchi & Wiedemann, 2007) but at variance with a similar TAM finding (Gefen & Straub, 1997). Eighty-four per cent of respondents believed that using PoS terminals, they would be able to buy petrol at anytime while 81% believed it would give them control over their purchase. These findings are significant to the adoption of PoS terminals in the state. This is because unlike when making purchases with cash, the use of cards over the PoS would make it possible to buy fuel at anytime and any quantity. This important benefit cannot be ignored in Nigeria with a volatile downstream petroleum sector, which is often characterised by sudden, frequent and perennial fuel crises.

Finally, the empirical analysis demonstrates that *attitude* construct is the strongest of the predictors of behavioural intention of motorists to accept and use PoS terminals as they become widely available and function effectively in most petrol stations in Lagos State. This is not unexpected as attitude is seen to be a personal influence on behavioural intention (Albarracin et al., 2004), which in turn affects the actual behaviour of an individual (Ajzen & Fishbein, 1975; Davis, 1989). The finding supports the findings of prior studies (Lai & Li, 2006; Pousttchi & Wiedemann, 2007; Stalfors & Nykvist, 2011) but is inconsistent with others (Sun, 2003 cited in Gardner & Amoroso, 2004; Todd, 1995 as cited in Gardner & Amoroso, 2004). Responses to the three items on the attitude sub-scale were very high ranging from 78% to 89%. The non-usage of the terminals for payment of fuel price currently in Lagos state, despite this high self reported level of predispositions to use it, could be attributed to underutilisation of the system (Financial Derivatives Company Limited, 2012) and network failure, frequent power outage and limited number of the system per merchant (Adeoti, 2013).

5. Conclusion and policy implications

A number of e-payment systems have been introduced by the CBN to reform and make payment

system efficient in Nigeria. One of these is the PoS terminals deployed in the retail and service sectors of the economy. This new payment system allows customers to pay for their transactions with credit or debit cards on PoS terminals. Despite its ease of use, convenience and usefulness, the innovative devices are not widely deployed in petrol stations in Nigeria and where they are deployed their downtime is very high resulting in slow adoption. This paper employed TAM (Davis, 1989) to predict the behavioural intention of motorists in Lagos State to accept and use PoS terminals for paying for fuel in petrol stations. Results of the analysis show that both PU and ATT toward use of PoS terminals can significantly predict motorists' BI to accept and use them for payment of petrol price. While ATT is strongly predicted by PU of the devices, PU is significantly predicted from PEOU. Therefore, it is concluded that TAM is appropriate for predicting the intention of motorists to accept and use PoS terminals for payment of fuel price in petrol stations in Lagos State. The paper has made an important contribution to extend TAM to PoS terminals adoption in the downstream petroleum sector of the Nigerian economy.

The findings of this paper have some implications. Managers of petrol stations should deploy PoS terminals in their outlets and ensure these devices work optimally most of the time. This would give them a competitive advantage over the outlets that do not deploy these devices and increase patronage and revenue. For example, petrol buyers paying via PoS terminals may be more disposed to buying more litres of petrol than their counterparts paying with cash. Also, encouraging motorists to pay via PoS will reduce the risk of carrying large cash generated from sales and reduce costs of managing the cash, which are usually very high. CBN estimated the cost of managing cash in Nigeria in 2010 to be N166 billion and is forecasted to increase to N300 billion in 2015 (cited in Financial Derivatives Company Limited, 2012).

In addition, CBN, NIBSS, commercial banks, cards companies, petrol stations and other merchants should engage in cooperative advertising to promote the benefits of PoS terminals adoption and persuade people to adopt them. This paper has investigated intention to use, which is different from actual usage. Therefore, massive advertising is needed to persuade those who have positive attitude toward using these innovative payment devices and have good intention to use them to actually use them.

The findings of the paper may not be generalised to the larger population of motorists in the state due to the small sample size used. Further studies should use a large sample size and be conducted in many states. Also, as more and more motorists accept and use the devices to complete petrol transactions and by which time their experience about the devices would have been established, the TAM should be employed by future researchers to validate motorists' actual usage of the terminals. A survey found that about 92% of respondents prefer cash as a mode of payment (Financial Derivatives Company Limited, 2012).

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