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## Application of Unified Theory of Acceptance and Technology to Predict Purchase Intention of Smart Phone Users in Federal College of Education Pankshin

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**Abstract:** This study was designed to investigate the application of Unified theory of acceptance and use of technology on purchase intention of smart phones of undergraduate students of Federal College of Education Pankshin. The study employed the use of survey research method, a structured questionnaire of 354 was administered to respondents, 300 were duly filled and returned representing 85% response rate. The data was analysed using SPSS version 21 the four hypotheses were tested using multiple regression analysis. The four constructs used in this study are performance expectancy, effort expectancy, social influence and facilitating condition. Based on the statistical tests conducted, the results showed that there is a positive relationship among the variables of performance expectancy, effort expectancy, social influence and facilitating condition on purchase intention. The research concluded that this study would help smart phone marketers understand the factors that encourage users to buy a certain brand of phone and it will also help to develop effective strategies to retain customers and at last increase the profit of the companies. From the findings, the paper recommended that smart phones manufacturers and retailers should create marketing strategies that address innovation characteristics to maintain their market and using the dimensions of unified theory of acceptance and use of technology to maintain their market share.

**Keywords:** UTAUT model, purchase intention, smart phone

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### INTRODUCTION

Consumer's purchase intention represents the desire to buy products and services from a particular brand of producers (Rana, Osman and Othman, 2015). [44] Sometimes purchase intention is used to describe customer loyalty, which depends on complex set of factors as product features, compatibility, price value, and ease of use, perceived usefulness, brand image and hedonic motivation which directly influence on purchase intention (Joseph, Cronin, Brandy and Hult, 2010). [29] To build up a suitable marketing plan, it has turned out to be very significant for marketers to measure the exact market potentials. It is important for marketers to understand their customer intention as they produced a reasonable numbers of new products to meet the large numbers of users. Consumers purchase intentions is one of the primary inputs that marketing managers use to forecast future sales and to understand the behaviours of consumers. The globalization of the market place has made it necessary for manufacturers and marketers to review what influences consumer's intention of buying different brands of smart phone. Purchase intention is defined as previous circumstances that stimulate and drive consumer's purchase of products and services (Hawkins and Motharbaugh, 2010) [25]. Blackwell, Minard and Engel (2006) [7] pointed that it is one of the most common approaches undertaken by marketers in gaining an understanding about consumer's actual behaviour is through studying their intentions. In today's competitive and changing business environment that the power of retailers and the customer's demand level is continuously growing and expanding long term relationship with the customers is important and necessary for the success and survival of manufacturers of smart phones. In this 21<sup>st</sup> century it is very difficult to study, analyse and interpret customer's purchase behaviour. Consumers are often faced with the problem of



choosing from the available options to satisfy the needs of consumers and get something better, these permit researchers, marketers and manufacturers to evaluate the various factors that motivate users in buying the various brands of smart phones in the market that would satisfy their needs.

Available Nigerian Studies like Omolade and Opeyemi 2017[41]; Ayodele and Ifeanyichukwu, 2016[5]; Tumbi, Aregbosola, and Asani 2015; [ ] Elogie and Ikenwe and Idabor 2015; [ 19] identified that there are many factors that shape consumers purchase intention for smart phones such as product features, brand image, functional values, epistemic value, social influence, perceived usefulness and price value. The few Nigerian studies that used Unified Theory of Acceptance and use of technology, such as Abubakar and Ahmed (2013) [1] and Chiemekwe and Ewuekpae (2011) [9] were conceptual paper and Bankole, F and Bankole, O (2011) [6] focused on mobile banking adoption. However, none of these studies use the UTAUT model on purchase intention of buying smart phones in Nigeria. Internationally, the studies of Alshere (2012) [4] Mitigen, Popovic and Oliveira (2013) [36] mainly concentrated on acceptance and use of e- government, users' acceptance and users' adoption. Haba, Hassan and Dastane (2017) [23] looked at consumer perceived value of smart phones and purchase intention. From our searched the only study that use UTAUT and purchase intention was Guo and Barnes (2012) [22] it restricted itself the four constructs of UTAUT and virtual world. In view of the issues highlighted above the paper seeks to provide and analyzed the factors responsible for purchasing smart phones by undergraduate students of Federal College of Education Pankshin, Plateau State Nigeria.

## LITERATURE REVIEW AND HYPOTHESES DEVELOPMENT

### Concept of Purchase Intention

According to Wu, Yeh and Hsiao (2011) [59] purchase intention is seen as the possibility that consumers will plan or be willing to buy a certain product or service in the future. This depends on internal and external factors to collect information, evaluate alternative and make decision. Ibrahim, Subari, Kassim and Siti (2013) [27] posit that purchase intention is determined by relative advantage, product capability, product price, search time and perceived value. Similarly, Kim, (2012) [30] pointed out that purchase intention is also determined by word of mouth, pleasure, convenience, perceived usefulness ranking, price and trial performance. Finally, marketers are interested in purchase intention, because it can help them in segmenting the market and at the same time supporting the decision where the new innovation should be launch (Ibrahim et al 2013). [27]

**Performance Expectancy:** It is the degree to which an individual believes that using technology will help the user to achieve increase in job performance. Performance expectancy is derived from different models and from previous studies for example, perceived usefulness from technology acceptance model, external motivation from motivational models from job fit PC utilisation model from relative advantage from innovation diffusion theory and outcome from expectation social cognition theory. (Davis, Bagozzi & Warshaw, 1989; [14] Venkatesh et al, 2003; [55] Venkatesh and Davis, 2000). [54]



**Effort Expectancy:** This is the degree of convenience perceived for using new technology. It is the degree to which an individual believes that using technology will help the user to achieve increases in job performance, related variables in other models and theories which necessitated the formation of effort expectancy are perceived ease of use (technology acceptance model), complexity (PC utilization model and innovation diffusion theory).

**Social Influence:** This construct is identical to subjective norms in theory of reasoned action, technology acceptance model. Researchers have adopted different framework that are linked to various theories like the theory of planned of behaviour (Kumar, 2012) [31] and combination of technology accepted model and theory of planned behaviour (Maichum, Parichaton and Peng, 2016), [35] theory of reasoned action (Wu and Hsiao 2011; [59] Delafrooz, Paim and Khatibi (2016), [17] Technology Accepted Model (Kim, 2012; [30]. Social factor signifies benefits which may come from referrals of others like friends and family (Tabassum, Zafar, Al, Alam and Ali (2013) [48]. Therefore, social influence is the value gotten from products or service capability of improving social concept. This can be described as the perceived efficacy obtained as a result of long relations between single or multiple social groups which play a key role in consumer choice.

**Facilitating Condition:** According to Venkatesh Thong and Xu, 2012) [56] Facilitating condition is referred to smart phone users' insight of the accessibility of support and resources to perform technology adoption. This definition covers constructs of perceived behavioural control, theory of planned behaviour and adaptability (innovation diffusion theory).

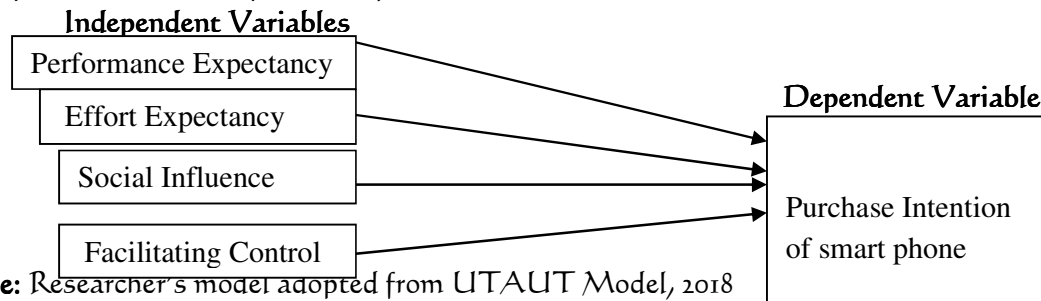
The theoretical framework for this study is formulated around the following theories, theory of planned behaviour and Unified theory of acceptance and use of technology.

### **Theory of Planned Behaviour**

The planned behaviour was developed by Azjen in 1991[3] this theory proposes to describe all behaviours over which individual have the capability to apply self-control. It forecasts the existence of a specific behaviour, provided the behaviour is planned. This theory has been widely applied in diverse studies on behavioural intention such as Singhry and Bogoro, 2016[46]; Gakobo and Jere, 2016; [20] and Haba et al 2017[23]. Theory of planned behaviour posits that intention to perform a given behaviour is determined by attitude toward the behaviour; subjective norms and perceived behavioural control. Smart phone users always have different perception of the brand of smart phone they intend to buy. In the case of subjective norms it is always based on social influenced and social needs of smart phone users to purchase which demonstrates the external factors affecting the purchase decision of the user. Perceived behavioural control reflects the possibility of regulating the behaviour which is seen in this study as facilitating control. Purchase intention is seen as the possibility that consumers will plan or be willing to buy a certain product or service in the future. (Wu, Yeh and Hsiao, 2011). [59]



## Conceptual Framework of the Study



Source: Researcher's model adopted from UTAUT Model, 2018

## Empirical Review

### Performance Expectancy and Purchase Intention

According to Abubakar and Ahmad (2013) [1]. The variables that is comparable to performance expectancy in the prior models and theories are perceived usefulness in technology acceptance model and relative advantage in innovation diffusion theory. Empirical evidence from Zuiderwijk, Jassen and Dwivedi (2015)[60 ] tested an adapted model based on the UTAUT was used to empirically determine predictors influencing the acceptance and use of open data technologies, they found that performance expectancy is directly and positively influenced the intention to use and accept open data technologies. Mutlu and Der (2017) [37] studied unified theory of acceptance and use of technology. The adoption of mobile messaging application by mobile phone users in Turkey, the results indicated that there was strong relationship between performance expectancy and purchase intention. Similarly, Javed (2017)[ 28] investigated UTAUT model in mobile banking in Jordan, his findings revealed that performance expectancy significantly influences intention to adopt mobile banking. Omolade and Opesade (2017)[41 ] investigated the use of mobile application by university students in Oyo State, Nigeria. The study revealed that performance expectancy is an important predictor of adoption of mobile application. Hew, Lee, Ooi and We (2015) [26] studied what catalyses mobile applications usage intention: an empirical analysis, the study empirically showed that performance expectancy significantly relate with purchase intention to buy mobile applications. From our review covering different environment, considering diverse sphere of influence establish that performance expectation is an important factor that shape the behavioural or purchase intention of users. Based on these arguments, we hypothesize that

### H1: Performance Expectancy is positively related to Purchase Intention

### Effort Expectancy and Purchase Intention

Previous studies have shown that effort expectancy is positively related to purchase intention. For example, Guo and Barnes (2011) [21] adopted the same theoretical foundation to examine consumers' purchase intention in the virtual world, the findings of the study revealed that effort expectancy has a positive effect on purchase intention. De, Sena Abrahao, Moriguchi, and Andrade (2016) [18] studied intentions of adoption of mobile payment. Tsuorela and Roumeliotis (2015) [51] investigated the moderating role of



technology readiness, gender and sex in consumer acceptance found strong relationship between effort expectancy and behavioural intention. Similarly, Javed (2017) [28] investigated the Unified Theory of Acceptance and Use of Technology Model in Mobile Banking in Jordan. The study found that effort expectancy significantly influence user's intention to adopt mobile banking services in Jordan. Hence we propose the following hypothesis,

## **H2: Effort Expectancy is positive related to Purchase Intention**

### **Social Influence and Purchase Intention**

Nkaabu, Bonuke and Saina (2017) [39] showed that social values and hedonic value individually mediates the relationship between emotional experience and purchase intention (Ukpabi and Orji, (2015) [53] Lau, Lam and Cheung (2016)[32] and Rahim, Safin, Kheng, Abas and Ali (2016)[43] all reported a positive effect of social influence on purchase intention among users of smart phones. This means an individual's brings about change in another person's feelings, attitude and behaviour intentionally (Rahim et, al 2015) [43]. This can be achieved as a result of interaction with other groups such as family members, peer groups, parents, and media. According to Chow et al (2012) [11] peers have more influences on users of smart phone, followed by media and parents. This is supported by the study conducted by Suki and Suki (2013) [47] the result shows that young age group especially students depend greatly over others for guidance when it comes to purchasing smart phones. Empirical evidence from Omolade and Opesade, 2017[41]; Mutlu et al 2017; [37] Wu, Tao and Yang (2008) [59] all agreed that social influence has a great influence on the purchase intention of smart phone. This leads us to the hypothesis

## **H3: There is a positive relationship between Social Influence and Purchase Intention**

### **Facilitating Control and Purchase Intention**

Seow, Ko, and Yeo, (2017)[45] studied analysis based on Theory of Reasoned Action and Unified Theory of Acceptance and Use Technology of sport smart wearable devices in Seoul, the study concluded that purchasing intention is dependent upon facilitating control. According to Tanakinjal, Deans, and Gray, (2010) [49] compatibility which is one of the dimensions of facilitating control plays a major role in smart phone adoption and purchase intention. Hew, Lee, Ooi and Wei (2015) [26] found out that facilitating control has significant effect on purchase intention to use mobile applications. Wong, Tan, Loke, and Ooi (2014) [58] also found that facilitating control had a significant impact on purchase intention to adopt mobile television. Accordingly we hypothesized

## **H4: Facilitating Control is positively related to Purchase Intention**

## **METHODOLOGY**

This paper employs quantitative research methodology based on cross sectional survey. Data was collected from population of undergraduate students in Federal College of Education Pankshin. Data available at student affairs division of the College reveal a total



of 3086 undergraduate students are currently studying with Federal College of Education Pankshin. The sample size of the study was determined by Taro Yamene formula

$$\begin{aligned}n &= N / (1 + Ne^2) = 3086 / (1 + (3086 \times 0.05)^2) \\ &= 3086 / (1 + (3036 \times 0.0025)) = 3086 / (1 + 7.715) \\ &= 3086 / 8.715 = 354\end{aligned}$$

A total of 300 questionnaires were fully filled and returned for analysing out of the 354 questionnaires administered representing a response rate of 84.7%.

### **Measurement scales**

The questionnaire items in this study were adapted from previous studies based on their relevance to this study. These include purchase intention (Ling et al 2014) [34], Performance expectancy, and Effort Expectancy (Javed, 2017) [28], Social Influence (Tazila, 2015) [50] and Facilitating Control.

**Purchase Intention** scale was adapted from Ling et al (2014) [34]. The four items adapted for the study include, I intend to buy a smart phone in near future, I will consider the brand of the smart phones before I purchase it, I will recommend my friends to buy smart phone. I will search for information about the smart phone from time to time. The four items were measured in five Likert Scale of strongly disagree 1 to strongly agree 5.

**Performance Expectancy;** the measures for this study were adapted from Javed (2017) [28], the scale was developed to investigate UTAUT model in mobile banking, and it has a Cronbach Alpha reliability value of 0.91. Sample of the questionnaire items include. Using smart phone could improve my performance; using smart phone would save my time of going to library for assignment, I would use smart phone any place, I would find smart phone useful in writing my project.

**Effort Expectancy;** we adapted Javed (2017) [28] mobile banking scale; the adopted scale has a Cronbach's Alpha of 0.918 which demonstrates high reliability. It contains 4 items and the sample include, learning to use smart phone is easy for me, becoming skilful at using smart phone is easy for me, interaction with smart phone is easy for me, I would find smart phone easy to use.

**Social Influence;** The measurement scale used for this predictor was adapted from Tazila et al 2015, [50] it has Cronbach Alpha reliability value of 0.745 with four items questionnaire and has the following as sample. Almost all my friends or family are using smart phone, people around me have stimulated me using smart phone, my friends / family influenced me to buy smart phone and my friends / family members think that we should all use smart phone.

**Facilitating Control;** Facilitating control measure used for this study was adapted from Chiong, et al (2016), [10] with Cronbach Alpha reliability value of 0.74. The scale was developed to assess the behavioural intentions of undergraduate to adopt digital library. Sample of the questionnaire items include, I have the knowledge required to use smart phone, I use smart phone to access the different brands of phone, I have internet connection in my smart phone, and I can get aid or assistance from friends and family when I am faced with problem of using my smart phone.

### **Method of Data Analysis**





Statistical Package for Social Sciences (SPSS) software version 22 was used for data analysis. A reliability test was done by using Crobach's Alpha value with cut-off point of 0.70.

$$PI = \beta_0 + \beta_1 PEE + \beta_2 EFE + \beta_3 SOI + \beta_4 FAC + e_i$$

Where PUI = Purchase intention, PEE= Performance Expectancy, EFE= Effort Expectancy, SOI= Social Influence, FAC = Facilitating Control,  $\beta_0$  is the intercept of  $\beta_1, \beta_2, \beta_3, \beta_4, \beta_5$  are the coefficients  $e_i$  is the error term

## RESULTS

TABLE 1;

	Demographics	Frequency	Percentage (%)
Gender	Male	139	46.33
	Female	161	53.66
	<b>Total</b>	<b>300</b>	<b>100</b>
Age	18-25	189	63
	26-33	87	29
	33 and Above	24	8.0
	<b>Total</b>	<b>300</b>	<b>100</b>
Smart phones	Nokia	32	10.67
	Samsung	38	12.67
	Techno	58	19.33
	Blackberry	34	11.33
	LG	58	19.33
	Infinix	43	14.33
	Gionee	37	12.33
		<b>Total</b>	<b>300</b>

Source: Researcher's Field work, 2018

Profile of Respondents: Based on the demographic profiles, the majority of the respondents (54%) were female while their male counterparts constituted of only 46%. 63. % of respondents' falls within the age range of 18-25years, these are young people who buy smart phone because it is recommended for them by their age grade and use these smart phones for different purposes. It is then followed by age bracket of 26- 33 years, lastly followed by 33 years and above.

Table 2: Shows the Summary of Reliability Analysis

Variable	Number of Items	Cronbach's Alpha
Performance Expectancy	4	0.810
Effort Expectancy	4	0.849
Social Influence	4	0.879
Facilitating Control	4	0.806
Purchase Intention	4	0.845

Source: SPSS Version 22

### Reliability Analysis

Crobach's coefficient alphas were calculated for each factor to establish the internal consistency reliability of the instruments used in the study. Table 2 illustrate the Crobach's Alpha values for the variable. According to Nunnally and Bernestein (1994) [40] the value



of 0.70 is considered as the lower limit of acceptability for Cronbach's alpha. As shown in table 2 all variables in the study had the alpha values of 0.879 to 0.806 which were all above 0.70

**Table 3 : KMO and Bartlett's test**

Kaiser Meyer – Olkin measure of sampling Adequacy		.905
Bartlett's Test sphericity	approx. chi – square	5225.334
	df	120
	Sig	.000

According to Cohen, Manion and Morrison (2007), [12] KMO value of .905 is considered as excellent as it surpasses the acceptable value of 0.6. KMO approaching 1 and Bartlett's test is significant at less than 0.05 indicates that the data is appropriate for factor analysis (Pallant, 2005) [42]

**Table 4: Four factors derived from the rotated component matrix**

Variables	factor 1	factor 2	factor 3	factor 4
	Performance	effort	social	facilitating
	Expectancy	expectancy	influence	control
PerExp 2	.642			
PerExp 3	.643			
PerExp 4	.529			
EffExp 1		.698		
EffExp 2		.851		
EffExp 3		.816		
EffExp 4		.674		
SocInf 1			.826	
SocInf 2			.893	
SocInf 3			.873	
SocInf 4			.892	
FacCon 1				.637
FacCon 4				.599

Note: Extraction method: Principal Component Analysis; Rotation Method: Varimax with Kaiser Normalization.

Exploratory factor analysis is used to find latent variables which better explain the data. Table 4 did not show performance expectancy 1, facilitating control 2 and 3 because the independent variables have a factor loading less than 0.50 these were regarded as having low factor loadings in the constructs. While the remaining having factor loading greater than 0.50 were regarded as having high factor loadings in the construct (Hair, Black, Babin and Anderson, 2010) [24]. The result of factor analysis showed that 13 out of the 16 items converged.

**Table 5: Correlation Coefficient and Descriptive Statistic**

Variables	Mean	Std Dev	1	2	3	4	5
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1. Performance Expectancy	3.59	1.13	1				
2. Effort Expectancy	3.85	1.07	.185	1			
3. Social Influence	2.99	1.29	.336	.286	1		
4. Facilitating Control	3.44	1.14	.714	.189	.450	1	
5. Purchase Intention	3.29	1.12	.531	.252	.788	.730	1

The correlation results in table 5 shows that there is a positive relationship among the predictors that affect the purchase intention of smart phones .The mean value and standard deviation ranges from to 3.85 to 2.99 and 1.07 to 1.29 respectively. It is assessed on a 5- point likert scale. This means that predictors that affect purchase of smart phones increases purchase intention in Federal College of Education Pankshin.

**Table 6; Model Summary<sup>b</sup>**

Model	R	R-square	Adjusted R	Standard Error
1	.785 <sup>a</sup>	.616	.614	.73628

Predictors (constant) performance expectancy  
 Dependent variable: purchase intention

**Table 7: ANOVA**

Model	Sum of Square	df	Mean Square	F	Sig
Regression	258.887	1	258.887	477.553	.000
Residual	6.842	144	.048		
Total	120.993	149			

a. Dependent variables Purchase intention

The result in Table 6 and 7 from the multiple linear regression shows that  $R = .785$ ,  $R^2 = .616$ , adjusted coefficient between the predictors and the criterion was .614, the predictors accounted for 61.44% of the variance in the purchase intention. The value of  $F = (477.553)$  significant at 0.05 level of significance.

**Table 8: Multiple Regression Analysis**

Model	coefficient <sup>a</sup>				
	Unstandardized coefficient		standardized coefficient		Sig
	B	Std Error	Beta	t	
(Constant)	.513	.149	-	3.453	.001
Per.expectancy	.805	.037	.785	21.853	.000

Dependent variable: Purchase Intention

. Hypothesis1: Result in Table 8 show R which is 0.785 (coefficient of relationship) explains the strength of the relationship between performance expectancy and purchase intention. This means that there is strong positive link that exist between the variables. It therefore implies that a strong drop in the provision performance expectancy will lead to a resultant decrease in purchase intention.  $R^2 = .616$ , it means that 61.6 % of the discrepancy in X (Performance Expectancy) significant level of confidence. This result therefore indicates that the independent variable performance expectancy greatly added to the variation in



purchase intention of students who buy smart phone, the value of  $F = (477.553)$  is accounted for a 100% increase in  $Y$  (purchase intention). The value of the calculated  $t$  statistic of performance expectancy in table 8  $t_{cal} = 21.583$   $P$  was greater than  $t_{tab} = (1.960)$   $P = 0.006 < 0.05$ . Indicating that performance expectancy has a positive effect on purchase intention of smart phone. The null hypothesis that performance expectancy has no effect on purchase intention was therefore rejected. This means that performance expectancy has strong effect on purchase intention.

**Table 9:**

Model	R	R-square	Adjusted R	Standard Error
1	.759 <sup>a</sup>	.576	.574	.77361

**Table 10:**

Model	sum of square	df	mean square	F	Sig
Regression	242.092	1	242.092	404.517	.000
Residual	178.345	298	.048		
Total	420.437	299			

**TABLE 11: Multiple Regression Analysis**

Model	coefficient <sup>a</sup>				
	Unstandardized coefficient		standardized coefficient		
	B	Std Error	Beta	t	Sig
(Constant)	.635	.155	-	4.093	.000
Effort expectancy	.758	.038	.759	20.113	.000

Hypothesis 2; Result in Table 9, 10 and 11 which is 0.759 (coefficient of relationship) explains the strength of the relationship between effort expectancy and purchase intention. This means that there is a strong positive relationship that exist between the variables. It therefore implies that a strong drop in usage of effort expectancy will lead to a resultant decrease in purchase intention.  $R^2 = 0.576$  it means that about 58% of the discrepancy in  $X$  (effort expectancy) is accounted for a 100% increase in  $Y$  (purchase intention), the value of  $F = (404.517)$  significant at 0.05 level of confidence. This result therefore indicates that the independent variable (effort expectancy) significantly add to the purchase intention of students using smart phone. The value of the calculated  $t$  statistic of effort expectancy in table – above  $t_{cal} = 20.11$  was greater than tabulated  $t_{tab} = (1.960)$   $P = 0.000 < 0.05$ . Indicating that effort expectancy has an effect on purchase intention of smart phone. The null hypothesis that effort expectancy has no effect on purchase intention was therefore rejected. This implies that effort expectancy has a positive effect on purchase decision of smart users in Federal College of Education Pankshin

**TABLE 12: Multiple Regression Analysis**

Model	R	R-square	Adjusted R	Standard Error
1	.753 <sup>a</sup>	.568	.566	.78093



**Table 13:**

Model	sum of square	df	mean square	F	Sig
Regression	238.702	1	238.702	404.517	.000
Residual	181.735	298	.610		
Total	420.437	299			

**Table 14:**

Model	Coefficient <sup>a</sup>				
	Unstandardized coefficient		Standardized coefficient		
	B	Std Error	Beta	t	Sig
(Constant)	1.523	.115	-	13.207	.000
Social Influence	.694	.035	.753	19.784	.000

Hypothesis 3; Result in Table 12, 13 and 14 which is 0.753 (coefficient of relationship) explains the strength of the relationship between social influence and purchase intention. This means that there is a strong positive relationship that exist between the variables. It therefore implies that a strong drop in usage of social influence will lead to a resultant decrease in purchase intention.  $R^2 = 0.568$  it means that about 57% of the discrepancy in X (social influence) is accounted for a 100% increase in Y (purchase intention), the value of  $F = (404.517)$  significant at 0.05 level of confidence. This result therefore indicates that the independent variable (social influence) significantly add to the purchase intention of students using smart phone. The value of the calculated t statistic of social influence in table – above  $t_{cal} = 20.11$ ) was greater than tabulated  $t_{tab} = (1.960)$   $P = 0.000 < 0.05$ ). Indicating that social influence has an impact on purchase intention of smart phone. The null hypothesis that social influence has no effect on purchase intention was therefore rejected. This implies that social influence has a positive effect on purchase decision of smart users in Federal College of Education Pankshin

**Table 15: Model Summary**

Model	R	R-square	Adjusted R	Standard Error
1	.782 <sup>a</sup>	.611	.610	.74038

**Table 16: Anova**

Model	sum of square	df	mean square	F	Sig
Regression	257.085	1	257.085	468.995	.000
Residual	163.352	298	.048		
Total	420.437	299			



**Table 17: Linear Regression Analysis showing the relationship between facilitating control and purchase intention**

Model	coefficient <sup>a</sup>				
	Unstandardized coefficient		standardized coefficient		
	B	Std Error	Beta	t	Sig
(Constant)	1.429	.110	-	12.998	.000
Fac. control	.654	.030	.782	21.656	.000

Hypothesis 4: Result in Table 15, 16 and 17 which is 0.782 (coefficient of relationship) explains the strength of the relationship between facilitating control and purchase intention. This means that there is a strong positive relationship that exist between the variables. It therefore implies that a strong drop in usage of facilitating control will lead to a resultant decrease in purchase intention.  $R^2 = 0.611$  it means that about 61% of the discrepancy in X (facilitating control) is accounted for a 100% increase in Y (purchase intention), the value of  $F = (468.995)$  significant at 0.05 level of confidence. This result therefore indicates that the independent variable (facilitating control) significantly add to the purchase intention of students using smart phone. The value of the calculated t statistic of social influence in table – above  $t_{cal} = 20.11$  was greater than tabulated  $t_{tab} = (1.960)$   $P = 0.000 < 0.05$ . Indicating that facilitating control has an impact on purchase intention of smart phone. The null hypothesis that facilitating control has no effect on purchase intention was therefore rejected. This implies that facilitating control has a positive effect on purchase decision of smart users in Federal College of Education Pankshin

## DISCUSSION OF FINDINGS

This study provides empirical evidences that examine the application of UTAUT model on purchase intention of smart phone users with particular reference to Federal College of Education Pankshin. It was established that performance expectancy has a significant effect on purchase intention. The findings of this study are in agreement to the results of some past studies. For instance, Empirical evidence from Zuiderwijk, Jassen and Dwivedi (2015)[60] tested an adapted model based on the UTAUT was used to empirically determine predictors influencing the acceptance and use of open data technologies, they found that performance expectancy is directly and positively influenced the intention to use and accept open data technologies. Javed (2017) [28] investigated UTAUT Model in banking sector. These studies concluded that performance expectancy significantly influenced purchase intention. Result in hypothesis two reveal the influence of effort expectancy on purchase intention of buying smart phone by the undergraduate students of F.C.E Pankshin, supported the previous findings in Guo and Barnes (2011)[21]; De Sena Abrahao, Moriguchi and Andrade (2016)[18] they found that effort expectancy is a significant factor users take into cognizance in buying smart phones. Similarly, Javed (2017)[28] suggests that effort expectancy has a positive effect on purchase intention to



adopt mobile banking services in Jordan. Result in hypothesis three on the fact that social influence and purchase intention have been found to has a positive outcome. This is in line with the results of Rahim et al (2016) [43], Lay- Yee et al (2013) [33] and Agbonifoh, Ogwo, Nnolim and Nkamnebe (2012) [2] they found that an individual's purchase decision is a function of people, he wants to be like them and they have a lot of influenced on what he or she consumes. The relationship between facilitating control and purchase intention as proposed in hypothesis 4 is positive. Finding in the current study is consistent with the work of Tanakinjal, Deans and Gray (2010). [49] Found that compatibility which is one of the dimensions of facilitating control plays a major role in smart phone adoption and purchase intention. Similarly, Wong, Tan, Loke and Ooi (2014)[58] found facilitating control had a significant impact of purchase intention to adopt mobile television in Malaysia.

### **Implication of Research Findings**

Having survey literature regarding UTAUT model and purchase intention a framework was cautiously conceived as blue print in this study to examine the application unified theory of acceptance and use technology on purchase intention as predictors in proffering more understanding on the subject. From the analysis conducted through SPSS, the results were analyzed and discussed earlier have some implications to theory and practice. Theoretically, this study identified a dearth of literature; we found limited empirical evidences linking UTAUT and purchase intention in Nigeria. Our argument was underpinned to the theory of planned behavior in explaining intention to purchase smart phone. This study contributes towards conceptualization of UTAUT Model and its importance towards purchase intention. Although previous research works have evaluated this relationship, no consistency has been indicated in their results. This study will help in obtaining consensus about relationship. Due to inconsistency in the results, many academics and researchers have called for additional research on UTAUT model for purchase intention (Abubakar and Ahmed, 2013)[1]. The present research work has confirmed that there exists a positive and significant relationship between UTAUT model and purchase intention. Practically, the findings in this study offer another perspective to practioners, it will help smart phone industries to focus on the major factors that have a significant influence on purchase intention, including performance expectancy, effort expectancy, social influence and facilitating control. Practioners must be aware that there are some key changes within the smart phone industry, including the change in the associations between market leaders and hardware producers (Lau, Lam and Cheung, 2016) [32]. From the findings, smart phones manufacturers and retailers should create marketing strategies that address innovation characteristics to maintain their market and using the dimensions of unified theory of acceptance and use of technology to maintain their market share.

### **CONCLUSION**

In conclusion, we can expressly say this study revealed that performance expectancy, effort expectancy, social influence, and facilitating control had positive effect on purchase



intention of smart phone users in Federal College of Education Pankshin, the results of the study is in line with the objectives of the study and results of this study have also added to the literature of UTAUT Theory and purchase intention.

### Limitations of the study

The limitations of the study are; only the UTAUT framework was used, the variable in the extended UTAUT Theory made of three dimensions of habit; price value and hedonic motivation were ignored. They are important factors that determine the purchase intention of customers when making purchase decisions. Another limitation of the study is that participants were only selected from undergraduate students of the College, so this cannot be used to generalize to represent the entire College, Plateau State and the country at large.

### RECOMMENDATIONS

Based on the findings of this study, there are four constructs that all smart phone companies should not take for granted which are performance expectancy, effort expectancy, and social influence and facilitating condition. The smart phones companies should manufacture smart phone that are users friendly, beneficial to the users and can also help customer in the consumer's decision making processes. From the findings, smart phones manufacturers and retailers should create marketing strategies that address innovation characteristics to maintain their market and using the dimensions of unified theory of acceptance and use of technology to maintain their market share.

### Further Research

Further studies could be carried out with the extended UTAUT model to include constructs of price value, hedonic value and habit in addition to variables used in this study, such variables combine will be performance expectancy, effort expectancy, and social influence and facilitating control to cover a large sample size and other professions. Further studies should use the qualitative method to get a much deeper insight of understanding and to explore the causal relationship among variables by using other research techniques such as in depth observation, interviews and focus group. Also, future studies should consider extended UTAUT model to study the adoption mobile payment devices in the banking sector.

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