

**AN APPLICATION OF SUBJECTIVE NORM CONSTRUCT AND CONSUMER INNOVATIVENESS ON ADOPTION OF NEW MOBILE PHONES AMONG STUDENTS IN EKITI STATE UNIVERSITY, ADO-EKITI**

**Patrick Olajide Oladele, Ph.D**

Professor of Business Administration  
Department of Business Administration,  
Ekiti State University, Ado-Ekiti

**Chibogu Nicholas Okolugbo, M.Sc**

Lecturer  
Department of Business Administration,  
Ekiti State University, Ado-Ekiti  
Corresponding e-mail & phone number:  
+234 7034957474

**Abiodun Adekoya Oshode, M.Sc**

Postgraduate student  
Department of Business Administration,  
Ekiti State University, Ado-Ekiti

---

**ABSTRACT:** *This study examined the effect of subjective norm and consumer innovativeness on adoption of new mobile phones among students of Ekiti State University, Ado-Ekiti. The study was based on Ajzen's theory of planned behaviour and Rogers' theory of adoption. Data were obtained from a sample of 389 respondents out of a population 13,798 full-time undergraduate students of the institution using stratified random sampling technique. 380 copies of the structured questionnaire administered were duly completed and useable giving a 97.6% response rate. Multiple regression analysis was used to test the research hypothesis. The result showed that subjective norm and consumer innovativeness had a combined positive effect on adoption (0.782), subjective norm's effect was 0.315 but it was insignificant ( $p > 0.05$ ,  $p = 0.286$ ); meaning that, subjective norm had no significant influence on adoption of mobile phones. The study concluded that students have the drive or are innovative in their quests to own new phones and this accounts for the high number of new phones usage on campuses. The study further revealed that they are not influenced by their friends or peers (subjective norm) in the acquisition of new phones. The study recommended that marketers and promoters of mobile phones must recognize the degree of innovativeness and eagerness among students to purchase novel phones out of their own freewill. They should package their marketing and promotion efforts to reflect the uniqueness of each customer, as students are not influenced by peers or friends in the adoption of new phones.*

**KEYWORDS:** Adoption, consumer innovativeness, subjective norm, theory of planned behaviour.

---

## INTRODUCTION

Exceeding the innovation and diffusion of the computer and internet, the mobile phone has become the fastest penetrating technology in human history. Comerr and Wikle (2008) in Mokhlis and Yaakop (2012) submitted that, the mobile phone device has had one of the fastest household adoption rates of any technology in the world's modern history. While the rate of adoption of the computer and internet is still slow in Nigeria because of fear, resistance to change, complexity, age, social and environmental factors; that of the mobile phone has cut across every social status of people irrespective of age, education, profession, social class or location with its application and usefulness expanding by time. Coghill (2001) cited in Mokhlis and Yaakop (2012) stated that "among various contemporary mobile communication technologies, the mobile phone is regarded as "the most radiative domestic appliance ever invented". In 2001, mobile phone subscriptions were less than a billion worldwide with the majority of the subscriptions from the developed countries. However, at the end of 2010, mobile phone subscriptions had got to five billion globally with subscriptions from developing nations greater than that of the developed nations (Kelly, 2009; Rebello, 2010 in Mokhlis & Yaakop, 2012).

The high global penetration of mobile communication devices like the phones is just an indicator of the high potential of consumer innovativeness. Most users maintain a very personal relationship with their mobile phones, regarding them almost as intimate necessities. Young people especially are explicit to show their individuality by personalizing their mobile phones - choosing a particular brand, colour, size, display logo and ringing tone. They carry their mobile phones with them and regard them as status symbols and an important aspect of their daily routine. Mobile phones are versatile as people use them for making calls and texting messages, for reading and sending e-mails, for taking and storing pictures, for playing music and for performing a lot of tasks (Nwagwu & Odetumibi, 2012). In Nigeria's educational institutions, mobile phones are students' companions as information regarding admission, registration, and results can be sent as bulk SMS from the university authorities to returning and potential students.

Not having the latest mobile phones like Blackberry *Bold series*, *Curve series*; Samsung *Galaxy*; Nokia *Asha series*, *N series*, *E series*, *Lumia*; Techno *M series*, *D series*; and i-phones, etc. could create a feeling of inferiority complex as it becomes a status symbol among students on campuses. In fact, the pressure from peers and cliques and the feelings of being seen as trendy has contributed to their insatiable appetite to respond to this technology innovation called mobile phone. Mobile phone operators usually, typically have their devices with them at all times.

Based on this study, the propensity to acquire new mobile phones launched into the market is assumed to be influenced by subjective norm which is the measure of social or interpersonal influence from friends and peers to adopt a new mobile phone (Midgley & Dowling, 1978; Fishbein & Ajzen, 1975; Venkatesh & Davis, 2000; Ajzen, 1991); and consumer innovativeness which is the measure of the consumer's propensity to adopt new products (Rogers & Shoemaker, 1971; Midgley & Dowling, 1978; Chandrasekaran & Tellis, 2008; Goldsmith & Hofacker, 1991; Roehrich, 2004). This study attempted to

verify the degree of influence these variables have on adoption of new mobile phones amongst students in Ekiti State University, Ado-Ekiti.

## LITERATURE REVIEW AND THEORETICAL FRAMEWORK

### Subjective Norm

Subjective norm can be expounded to mean an individual's feeling that a large number of the people to which he holds in high esteem or believes are significant to him think he ought to or not to execute the act in consideration (Fishbein & Ajzen, 1975). The construct subjective norm or social influence is included in the Theory of Reasoned Action (Fishbein & Ajzen, 1975) and Theory of Planned Behaviour (Ajzen, 1991); both of which posited that social influence can be an important determinant in technology acceptance and usage. Consumer purchase decisions are influenced by effective external communication (advertising and promotion) and internal communication (made up of verbal and propensity to comply to reference group influences) (Agarwal & Prasad, 1998). The adoption of novel products like mobile phones, which is widely utilized, is considered to be clearly motivated or inspired by the consumers' reference groups (Bearden & Etzel, 1982).

Subjective norm is related to innovativeness because people often act based on their perception of what others think they should do. It has been discovered that subjective norm is more significant before, or in the initial phase of innovation implementation when users possess restricted direct knowledge or experience from which to acquire attitudes (Hartwick & Barki, 1994; Taylor & Todd, 1995; Tan & Teo, 2000). According to Chua (1980) cited in Tan and Teo (2000), the adopter's friends, family and colleagues or peers are groups that will strongly influence the adoption. Although there is no base to predict how each of these groups will impact adoption behaviour, it is nonetheless expected that the influence of these groups as a whole will be significantly related to the individual's intention to adopt a particular mobile phone.

### Susceptibility to Interpersonal Influence

According to Xihao and Yang (2006), Park and Lessig (1977) first developed measurement of susceptibility to interpersonal influence as a scale when they performed a study comparing students with generally more conservative housewives. Park and Lessig (1977) cited in Xihao and Yang (2006) concluded that American students were more liable to be influenced by reference group than general American housewives when making their purchase decisions, and that the advertisements and promotions utilizing reference groups added more direct and significant influence over consumers' final purchases. Bearden *et al* (1989) inducted the scale to measure susceptibility to interpersonal influence as a personality trait; that is, an innate characteristic and varies across individuals.

Bearden, Netemeyer and Teel (1989) defined consumer susceptibility to interpersonal influences as the need to boost one's image with people whom one sees as important to him or her by purchasing and using of products and brands; it is the disposition to comply to the anticipation of others in the area of purchase decisions, and the inclinations to know about products and services by studying others and requesting information from others. Susceptibility to interpersonal influence appears to be an important individual difference variable for the study of consumer behaviour (Iqbal and Ismail, 2011). Susceptibility to

interpersonal influence can be referred to as normative influence, which is defined by Brunkrank and Cousineau (1975) cited in Iqbal and Ismail (2011) as the inclination to comply with the expectations of others. Susceptibility to interpersonal influences has been recognized as occurring in three separate forms in the literature: utilitarian, value-expressive, and informational (Kumar and Uzokurt, nd). Value-expressive influence and utilitarian influence form a broad category of normative influence. Utilitarian influence happens if an individual complies with the expectations of others in an attempt to avoid punishment or receive rewards while value-expressive influence describes an individual's desire to enhance his/her self-image by the reference group association. Informational influence refers to the likelihood for individuals to accept information from others as credible evidence about a product's true nature (Bearden *et al* 1989, Kumar and Uzokurt, nd; Iqbal and Ismail, 2011).

In general, previous studies have indicated several mechanisms and pathways through which individuals that are more susceptible to interpersonal influences tend to prefer moving with the crowd and challenging fewer traditions; they tend to go with the status quo and are prone to rejecting new or different products, processes, and services. This would indicate that individuals with higher susceptibility to interpersonal influences might have lower innovativeness. This research study accordingly hypothesizes that susceptibility to interpersonal influence is a factor that influences adoption.

### **Consumer Innovativeness**

Rogers (1983, 1995) in his classical work on the diffusion and adoption of innovation categorized innovation adopters into five groups namely, innovators, early adopters, early majority, late majority, and laggards. Another issue that has been of interest to researchers is the innovativeness of individual consumers. Innovativeness as defined by Rogers (1995) is the degree to which an individual or other unit of adoption is relatively earlier in adopting new ideas than other members of a social system. Schiffman and Kanuk (1987) defined the consumer innovator as the relatively small group of consumers who are the earliest purchasers of a new product; though earliest in terms of time is relative in the case of different product types. In an argument, Williams (1982) outlined the characteristics of innovators as economic factor, social factor, communication, personality, attitudinal, demographic factor, and innovativeness. Schiffman and Kanuk (1987) also enumerated the characteristics of a consumer innovator, namely interest in the product category, personality trait, venturesomeness, perceived risk, purchase and consumption characteristics, media habits, social characteristics, and demographic characteristics. These characteristics are results of empirical studies related to new product adoption (Gatignon and Robertson, 1985; Midgley and Dowling, 1978; Rogers, 1995).

According to Hauser, Tellis and Griffin (2005) consumer innovativeness refers to the mental, behavioural, and demographic features linked with consumer inclination of readiness to adopt innovations. Wang, Dou and Zhou (2008) saw consumer innovativeness as new product adoption behaviour in line with Rogers and Shoemaker (1971) who defined consumer innovativeness as the extent of individual's acceptance of a new product relatively prior to others in his or her social system. Ho and Wu (2011) submitted that consumers with a high rate of innovativeness are willing to make changes in concepts and things; able to influence others to adopt the innovative concept and things; helpful in solving problems and making decisions in an organization or social system; and fast in the

rate and time of adopting changes in a functional relationship. Hirschman (1980) spoke of innovativeness “among the few concepts that is so important to consumer behaviour; it is the consumer’s tendency to adopt new products, ideas, goods or services. It has an important role to play in theories regarding brand loyalty, decision making, preferences and communication. From the personal point of view, each consumer generally speaking, is an innovator in that, each of us adopts some goods or ideas regarded as new by us throughout our lives.

### **Adoption of New product**

Rogers (1995) distinctly separated the diffusion process from the adoption process. While the diffusion process permeates through society and groups, the adoption process is most relevant to the individual (Courous & Kesten, 2003). The adoption process is essentially a study of individual decision-making (Klonglan *et al*, 1966). Klonglan *et al*, (1966) further asserted that when writers in the adoption-diffusion research tradition use the concept “Adoption Model”, they are usually referring to the adoption process. According to Couros and Kesten (2003), it is a popular perspective that the adoption of technology is a more complicated process than the technical superiority of a product (Rogers, 1995; Ryan & Gross, 1943; Valente, 1995).

### **Rogers’ Theory of Adoption**

The mental process that an individual undergoes right from the initial time he/she learns of an innovation up to the period of its final adoption is known as the adoption process (Rogers, 1983, 1995; Klonglan, *et al*, 1966; Couros & Kesten, 2003). In the words of Rogers (1983), adoption of technology is seen as “a choice to maximally utilize an innovation as the best plan available”. Wilkening and Santopolo as cited in Klonglan and Coward (1970) used the term acceptance in referring to both approval and adoption of technology. Rogers (1962) observed that it is clear to extension workers that a lot of people do not instantly adapt to a novel idea after being aware of its existence. Rogers (1962) commented further that, the notion that there are stages in the adoption process is based upon psychological learning theory, social psychology, and empirical research by rural sociologists. Accordingly, various paradigms and concepts have been formulated to explain the process which occurs in the human mind; that is, “the mental process”. The traditional paradigm of adoption as proposed by Rogers (1962) and acknowledged today (Lancaster & Massingham, 2001; Etzel *et al*, 2007; Couros & Kesten, 2003, Klonglan *et al*, 1966; Pride *et al*, 1997; Williams, 1982; Kotler, 1971; Wright & Bennett, 2006) are as follows: (i) Awareness Stage: The individual is exposed to the innovation but has inadequate information concerning it; (ii) Interest Stage: The person becomes curious in a new idea and desires more knowledge about it; (iii) Evaluation Stage: The person mentally samples the creative idea to his initial and potential circumstances and then concludes if to or not to try it; (iv) Trial Stage: The individual uses the innovation on a small scale in order to determine its utility in his own situation; (v) Adoption Stage: The individual decides to continue full use of the innovation.

Rogers (1983) modified his previous adoption paradigm and proposed the paradigm “Innovation-Decision Process”. It comprises of five main steps, and each step is an extension each of the traditional adoption model. The five steps viz-a-viz the traditional steps (Couros and Kesten, 2003) are (1) knowledge (awareness), (2) Persuasion (interest), (3) decision (evaluation), (4) implementation (trial) and (5) confirmation (adoption).



Rogers (1983) offered explanation of each step of the Innovation-Decision Process; (i) Knowledge: when an adoption unit realizes the existence of an innovation and accordingly seeks more information about it; (ii) Persuasion: when an adoption unit shows a favourable, or, unfavourable attitude toward that innovation; (iii) Decision: when an adoption unit engages in some exercises leading to a decision to adopt or reject the innovation; (iv) Implementation: when an adoption unit applies that innovation. In this stage reinvention is likely to occur; (v) Confirmation: when an adoption unit looks for support for the decision that has previously been made. This effort might lead to discontinuance, if the unit is exposed to conflicting situations.

### **Midgley and Dowling Theory of Consumer Innovativeness**

Midgley and Dowling (1978) in their theory showed that innovativeness stands for the extent to which an individual is responsive to novel ideas and makes decision to accept them without taking into account the experiences of others. Hui and Wan (2004) in contributing to the Midgley and Dowling (1978) theory, remarked that, innovativeness is a personality construct that is possessed to a greater or lesser degree by all individuals since everyone at some point in his or her life will adopt new objects or ideas. Midgley and Dowling (1978) did not see a specific consumer as only innovative but that all consumers have innovative traits only that they manifest in different degrees. Based on this work, studies on innovativeness have been viewed as a general psychological trait (Hirschman, 1980, Venkatraman, 1991, Venkatraman and Price, 1990). Over the years, different researchers have identified and defined different consumer innovativeness based on the trait theory, namely, consumer innate innovativeness; domain specific innovativeness; vicarious innovativeness; open-processing innovativeness; and attraction to newness, autonomy and risk-taking innovativeness. Midgley and Dowling (1978) defined consumer innate innovativeness as an innovative predisposition, which is the degree to which the individual is willing to adopt innovations such as goods and services or new ideas without communicating with others' previous purchasing experience.

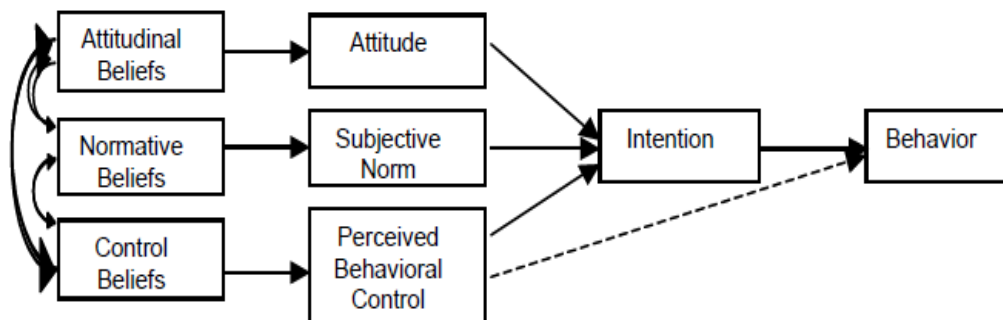
Based on studies that have been done on consumer innovativeness, Tellis *et al* (2009) identified different measures of consumer innovativeness (Roehrich, 2004). Goldsmith and Hofacker (1991) defined domain specific innovativeness as the tendency to learn about and adopt innovations (new products) within a specific domain of interest. Domain-specific innovativeness is a strong indicator of consumer adoption behaviour in specific areas of interest (Im, Bayus and Mason, 2003). Gatignon and Robertson (1985) remarked that innovativeness has to be considered in certain product category. Roehrich (2004) and Chao, Reid and Mavondo (2012) also aligned that domain-specific innovativeness explains the relationship between consumer's innate innovativeness and new product adoption.

### **Theory of Planned Behaviour (TPB)**

A specific amount of models have been developed to investigate and understand the factors affecting the adoption of technology. The theoretical models employed to study user acceptance, adoption, and behavioural use include the Theory of Reasoned Action – TRA (Ajzen & Fishbein, 1980; Fishbein & Ajzen, 1975), the Technology Acceptance Model – TAM (Davis, 1989; Davis et al., 1989), and the Theory of Planned Behaviour – TPB (Ajzen, 1991).

In the TPB, a complex mix of the attitude, subjective norm and perceived behavioural control variables control behavioural intention. According to the TPB in Lee, Cerreto and Lee (2010), volitional human behaviour spontaneously comes after wish to engage in this behavior. Behavioural intention is predicted, in turn, by three main determinants: attitude toward the behaviour, subjective norm, and perceived behavioural control. The extent to which individuals view a certain behaviour positively (attitude); think that significant others want them to engage in the behaviour (subjective norm); and believe that they are able to perform the behaviour (perceived behavioural control), serve as direct determinants of the strength of their intention to carry out the behaviour (Lee *et al.*, 2010). Actual behaviour is derived largely from behavioural intention, but it is mediated to some degree by perceived behavioural control (Ajzen, 1991). Empirical tests have often found that the Theory of Planned Behaviour has significantly improved predictive ability over the earlier Theory of Reasoned Action (Beck and Ajzen, 1991; Giles and Cairns, 1995). The construct 'perceived behavioural control' is formed by combining the perceived presence of factors that may facilitate or impede the performance of behaviour and the perceived power of each of these factors. Actual behavioural control refers to the extent to which a person has the skills, resources, and other prerequisites needed to perform a given behaviour. Actual behavioural control is difficult to accurately measure and so perceived behavioural control is measured through specially designed questionnaires and serves as a proxy measure of the influence. Subjective norm construct suggests that one's behaviour is influenced by one's desire to act as relevant referent others act or think one should act. This referent others refer to peers, friends, and colleagues within the campus environment who are within the consumer's circle of influence. Most literature suggests a positive relationship between subjective norm and intended behaviour going by the power of peer influence; and empirical studies have shown that subjective norm influences behavioural intentions toward system use (Karahanna et al. 1999). A positive relationship between subjective norm and intentions to adopt new mobile phone is thus expected.

Figure 1: The theory of Planned Behaviour



Source: Adapted from Ajzen (1991)

### Empirical Review of Related Literature

Silva, Ratnadiwakara and Zainudeen (2011) carried out a study on social influence in mobile phone adoption in emerging Asian countries like Bangladesh, Pakistan, India, Sri Lanka, the Philippines, and Thailand. From the result, it was found that social influence has influence on adoption in two ways: it exerts pressure on individuals to adopt so as to be able to communicate with others and it helps to generate perceived economic benefit, in business network as well as perceived emergency benefits.

Chiou's (1998) study on the effects of attitude, subjective norm and perceived behavioural control on consumers' purchase intentions was based on the theory of planned behaviour. 300 respondents were sampled on their intention to use laser printer, based on their level of product knowledge (subjective and objective) and attention to social comparison information. The study established that purchase intention varies when consumers possess different level of subjective product knowledge and attention to social comparison information.

Xihao and Yang (2006) conducted a study on the role of social influence on consumer purchasing behaviour in the United States (US) and China. 232 Americans and 34 Chinese participated in the survey using three reference group measures, namely, informational, utilitarian and value-expressive influences. The results revealed that even though all three reference group influences were significantly related to purchasing behaviour, they were very different between both countries. Traditional Chinese culture rests on kinship, and people rely on word-of-mouth communication to obtain credible product information with the belief that only bad products need advertising (Gong *et al*, 2004 cited in Xihao and Yang, nd). Compared to US consumers, who are exposed to heavy advertisements, it is assumed that the Chinese sample should score higher than its US counterparts on the informational influence. The high tendency to conform to social norms makes Chinese people consume similar brands or products. The United States' individualism trait shows that most people focus on their personal wants, needs, and rights while less concerned about the difference with others'.

Bauer *et al*, (2005) carried out a study to identify the key drivers of consumer acceptance of mobile marketing. Based on the theory of Reasoned Action (Ajzen and Fishbein, 1980), a model of consumer acceptance was developed. Scales developed by Shimp and Kavas (1984) were used to measure attitude toward mobile marketing and social norms. Consumer-based acceptance drivers included innovativeness, existing knowledge, information seeker-behaviour and attitude towards advertising. Findings of this study based on 1,028 respondents residing in Europe indicated that social norms have a slight direct influence on behavioural intention but a strong determinant of personal attitude towards mobile marketing. There was positive relationship between innovativeness and knowledge about mobile communication as well as for information seeking behaviour.

Vida (2007) researched on the determinants of consumer willingness to purchase non-deceptive counterfeit products in Slovenia. The study identified three underlying factors namely, a person's attitude towards piracy and counterfeiting, consumer innovativeness as a personal trait and consumer perception of social consequences of purchasing and using fake products. A sample of 223 consumers was administered questionnaires in Slovenia owing to cases of purchase of pirated goods which represented a problem, particularly in the pirated software category. Findings of this study showed that there were inconsistencies across three classes of counterfeit products sampled (Fake T-shirt, computer software and Rolex watch); meaning that consumer innovativeness was product specific (Chakraborty, Alfred and Bristol, 1996) validating the domain-specific innovativeness model (Goldsmith and Hofacker, 1991).

Hui and Wan (2004) carried out a study on the role of consumer innovativeness in the adoption of internet shopping in Singapore; in other words, the study investigated the



reason why some current users of the internet might want to shop on the web. The survey was conducted using 154 respondents who were young adults. The study established that domain-specific innovativeness had the highest influence on intention among internet usage.

Huang, Hsieh and Chang (2011) used the domain-specific innovativeness scale to test the connection between consumer innovativeness and adoption of location-based services (LBS). Convenient and random sampling method was used to select 208 respondents, out of which 192 responses were valid. The study validated Rogers' adopter model, in that consumers who were innovators have higher willingness to adopt location-based services; they tend to be leaders, price-oriented and stylish. Rao and Troshani (2007) carried out a study on developing a conceptual framework and proposition for the acceptance of mobile services in Adelaide, Australia, identified personal innovativeness among the user dispositions that can influence adoption of technology.

## METHODS

The study adopted descriptive survey design. Self-administered questionnaire were distributed to target respondents within the university campus. The questionnaire comprises of four (4) sections. Section A contained questions to obtain demographic information from the respondents; section B contained Behavioural Intention scale (Jarvenpaa, Tractinsky, and Saarinen, 1999) to measure adoption; section C contained Domain Specific Innovativeness scale (Goldsmith and Hofacker, 1991) to measure consumer innovativeness; and section D contained Susceptibility to Interpersonal Influence scale (Bearden, Netemeyer and Teel, 1989) to measure subjective norm. Each item was rated on a Likert scale of 1 to 5 (strongly disagree to strongly agree).

This study's main sample comprised 389 full-time undergraduate students drawn from a population of 13,798 using Yamane (1967) model for sample size cited in Israel (2009). Stratified random sampling technique was adopted to distribute the sets of questionnaire in all faculties of Ekiti State University, Ado-Ekiti. The distribution was done not minding of the year of study or the gender of those who indicated to participate. Data was collected within 4 weeks.

**Table 1: Reliability co-efficient of adapted instruments**

Variable	Measurement	No. of items	Cronbach's Alpha
Consumer Innovativeness	Domain Specific Innovativeness scale	6	.798
Subjective norm	Susceptibility to Interpersonal Influence scale	8	.748
Adoption	Behavioural Intention scale	3	.790

*Source: Data Output, 2014*

**Table 2: Measurement items of research instruments**

Measurement	Item
Domain Specific Innovativeness scale	In general, I am among the last in my circle of friends to buy a new mobile phone
	When I hear a new mobile phone is out, I would not be interested enough to buy it
	Compared to my friends, I do not use a new mobile phone
	In general, I am the last in my circle of friends to know of any new mobile phone
	I will consider buying a new mobile phone even if I have not tried it before
	I know about new mobile phones before most other people in my circle do
Susceptibility to Interpersonal Influence scale	To ensure the right mobile phone, I often observe what others are buying
	When buying a mobile phone, I purchase a type I think others will approve of
	I often identify with other people by buying the same mobile phone they purchase
	I like to know which mobile phone makes a good impression on others
	It is important that others like the type of mobile phone I buy
	If I want to be like someone, I often try to buy the same product they buy
	I get a sense of belonging by buying the same mobile phone that others purchase
	I often gather information from friends/family about a mobile phone before I buy
Behavioural Intention scale	I would purchase a new mobile phone
	I would use a new mobile phone in the near future
	If I need to buy a new mobile phone, it will be a new model

*Source: Goldsmith and Hofacker (1991); Bearden, Netemeyer and Teel (1989); Javenpaa, Tractinsky and Saarinen (1999)*

## Research hypothesis

The research hypothesis tested in this study is stated thus:

H<sub>0</sub>: Subjective norm and consumer innovativeness do not significantly affect the adoption of new mobile phones among students in Ekiti State University

## RESULTS AND DISCUSSIONS

### Demographic distribution of respondents

From the Table 3, 389 respondents were sampled in this study. From the 389 respondents, 380 returned the questionnaire. The distribution of the respondents by sex across the faculties showed that male respondents were two hundred and seven (207) while female respondents across the faculties were a hundred and seventy three (173). This showed that male were more than female respondents. Age distribution of the respondents showed that the highest number of respondents was in the age group (21-23 years) with a hundred and sixty nine (169); seventeen (17) respondents were under 18 years; one hundred and four (104) were between 18-20 years; seventy-nine (79) respondents were between 24-26 years; and eleven (11) respondents. This implies that the respondents are relatively young and depend on their parents or benefactors to buy mobile phones for them. Year of study across the faculties revealed that, eighty-one (81) respondents were from 100 level; one hundred (100) respondents were from 200 level; seventy-nine (79) respondents were from

300 level; a hundred and three (103) respondents were from 400 level and seventeen (17) of 500 level were from Engineering and Agricultural Sciences Faculties. Most of the respondents live in settlements near the university, namely Osekita (91), Satellite (93), Iworoko (92), School gate (35); those that live in places far away from school, i.e. Ado town (57), and other places (12). The implication is that students are liable to be influenced by what others are doing; and awareness of mobile phone among their friends could also influence them.

**Table 3: Demographic distribution of respondents**

Variable	Option	Frequency	Percent
Sex	Male	207	54.5
	Female	173	45.5
Age group	under 18	17	4.5
	18-20	104	27.4
	21-23	169	44.5
	24-26	79	20.8
	26 and above	11	2.8
Faculty	Agricultural sciences	16	4.2
	Arts	60	15.8
	Education	95	25.0
	Engineering	16	4.2
	Law	4	1.0
	Management sciences	57	15.0
	Medicine and surgery	3	0.8
	Sciences	77	20.3
	The social sciences	52	13.7
Year of study	100	81	21.3
	200	100	26.3
	300	79	20.8
	400	103	27.1
	500	17	4.5
Residence	Osekita	91	23.9
	Satellite	93	24.5
	Town	57	15.0
	Iworoko	92	24.2
	school gate	35	9.2
	Others	12	3.2

Source: Researchers' survey, 2014

**Effect of subjective norm and consumer innovativeness on adoption of new mobile phones,**

To test the hypothesis, the respondents' scores on three variables, subjective norms (susceptibility to interpersonal influence), consumer innovativeness and adoption (behavioural intention) were computed and subjected to multiple regression analysis. The results are shown in Table 4 and 5. In Table 4, the results of the analysis have shown that subjective norm and consumer innovativeness have a combined influence (0.782) on adoption of new mobile phones. Adjusted r-square showed that subjective norm and domain specific innovativeness caused 0.61% variance in adoption of new mobile phones. In other words, an estimated 0.61% of adoption of new mobile phones is accounted for by independent variables, subjective norm and domain specific innovativeness. In Table 4.5, the unstandardized and standardized beta co-efficient of domain specific innovativeness are 0.702 and 0.730 respectively with  $t = 2.469$  and ( $p = 0.014 < 0.05$ ). The unstandardized and standardized beta co-efficient of susceptibility to interpersonal influence are 0.315 and 0.328 with  $t = 1.067$  and ( $p = 0.286 > 0.05$ ). This result showed that domain specific innovativeness has a greater effect on adoption than does susceptibility to interpersonal influence on adoption and that for consumer innovativeness, the level of influence was significant; therefore for consumer innovativeness on adoption, we reject the null hypothesis and accept the alternate hypothesis.

The result also shows that even though subjective norm has a positive effect on adoption; that is, students are influenced by approvals or comments from friends/family in their quest to buy or adopt new mobile phones; it is not significant; therefore we accept the null hypothesis and reject the alternate hypothesis (Table 6). This means that respondents' reason for adopting new phone is not strongly influenced by recommendation of friends but their own personal disposition and innovativeness.

The multiple regression estimate of the model is shown below as:

$$Ad = 3.556 + 0.702DSI + 0.315SII$$

(Where Ad = Adoption; DSI = Domain Specific Innovativeness; and SII = Susceptibility to Interpersonal Influence)

**Table 4: Regression analysis for Domain Specific Innovativeness and Susceptibility to Interpersonal Influence (SII) Influence on Adoption of New Mobile Phone**

**Model Summary**

Model				
	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.782 <sup>a</sup>	.612	.610	2.239

a. Predictors: (Constant), Susceptibility to Interpersonal Influence, Domain Specific Innovativeness

Source: Output of Data Analysis (2014)

**Table 5: Regression analysis (Beta co-efficient) for Domain Specific Innovativeness and Susceptibility to Interpersonal Influence (SII) Influence on Adoption of New Mobile Phone****Coefficients**

Model		Unstandardized Coefficients		Standardized Coefficients		
		B	Std. Error	Beta	T	Sig.
1	(Constant)	3.556	.122		29.240	.000
	Domain Specific Innovativeness	.702	.294	.730	2.469	.014
	Susceptibility Interpersonal Influence	.315	.297	.328	1.067	.286

a. Dependent Variable: Behavioral Intention

Source: *Output of Data Analysis (2014)***Table 6: Summary of test of hypotheses**

Hypothesis	Independent variable	Dependent variable	p < 0.05	Decision
H <sub>0</sub>	Subjective norm	Adoption intention (Behavioural)	0.286	Accept H <sub>0</sub>
	Domain specific innovativeness	Adoption intention (Behavioural)	0.014	Reject H <sub>0</sub>

**DISCUSSION**

The hypothesis was to test if subjective norm and consumer innovativeness significantly affect adoption of new mobile phones. The result obtained showed that subjective norm did not significantly affect the students' adoption of new mobile phones but their own personal innovativeness significantly influenced them to adopt new mobile phone. One factor that may have influenced this result is that, there were more males than female respondents; males are more independent minded than females; females need approvals from friends and acquaintances; unlike males who have more carefree disposition than females. The finding of this study is consistent with Tan and Teo (2000) who found out in their work that internet user's consumer relevant groups (subjective norm) influence on his or her adoption was not significant. Subjective norms may not influence people to adopt internet banking as using or not using internet may not have any direct relevance to your peers. Cheah *et al* (2011) also established that, social norm was found to be insignificant in relationship with mobile banking adoption; that a person's adoption of internet may not influence their peers to adopt it. Walsh and White (2006) cited in Mokhlis and Yaakop (2012) submitted that with the increasing of ubiquity of mobile phone ownership, the device is no longer perceived as a luxury item or status symbol but rather a necessity in people's daily life.



However, the finding of this study is in contrast with the theory of reasoned action (Ajzen and Fishbein, 1980) and theory of planned behaviour (Ajzen, 1991) which postulated that a very strong influence on people adopting a new technology is on the premise that there is a significant-group that may influence behaviour. The theory of reasoned action places behaviour, behavioral intentions, attitude and subjective norm in one framework, where behaviour is a function of behavioural intention, which in turn is a function of attitude and subjective norm. In this study, the respondents believe that their adoption and buying of new mobile phone is their personal decision without the influence of any significant influential person in a group. This result is also in contrast with the results reported in Taylor and Todd (1995), who found subjective norms to be significant in influencing adoption in the early stages of introducing an innovation, and especially when users have only limited direct experience from which to develop interest. The result of the study was also in contrast with the findings of Oladele (2011) who carried out a qualitative study on students in Southwestern Nigeria using focus discussion group. The study revealed that social factor is a key factor in influencing choice of mobile phones among the respondents. Rosen's (2005) study on the effectiveness of innovativeness on technology acceptance and use discovered that social influence (subjective norm) was not supported or could be related to behavioural intention. The study concluded that students did not find the opinions of their peers important in the acceptance process, likely because they saw each other only once a week. A possible explanation for the lack of support for this hypothesis is that the easy access to information about mobile phones on the internet has made potential adopters less dependent on the information provided by their referent groups. Xihao and Yang (2006) study compared Chinese and American consumers' reaction to social influence and concluded that utilitarian (interpersonal influence) is highly influenced by culture. The result of this study is also in contradiction with Chiou (1998) who concluded that subjective norm has significant effect on purchase intention. Interestingly, Jayasingh and Eze (2009) also concluded that societal influence has established relationship with adoption of mobile coupon in Malaysia. Rao and Troshani (2007) also asserted from their study that both interpersonal and external influences could influence acceptance of mobile services. Ordinarily, one would assume that students need the approval of a significant few to adopt technology like mobile phones; but their response in Ekiti State University ran contrary.

## CONCLUSION

Based on the analyses of data collected and the interpretation of results, the study established that students have the drive or are innovative in their quest to own new phones. This accounts for the high number of new phones possessed by students on campus. Mobile phones are new in Nigeria and students being rational beings want to participate in this innovation. However, the outcome also reveals that respondents in this survey are not influenced by their friends or peers (subjective norm) to buy new phones. This could be as a result of the fact that information about new mobile phones can be accessed through other means especially the internet and they do not want to feel influenced by anyone to purchase a new phone. They are influenced by their personal drive to have and use new mobile phones. This finding contradicts the proponents of the theories of reasoned action and planned behaviour who have subjective norm as a very important variable that could influence behaviour (adoption) especially as regards technology.

## **RECOMMENDATIONS AND IMPLICATIONS FOR RESEARCH AND PRACTICE**

Consequent on the study result and findings, the researcher suggests the following recommendations that could best help marketers and promoters of mobile phones and other related products:

- (i) Marketers of mobile phones and related technologies should be aware of the level of consumer innovativeness of their prospective consumers so that when the product is introduced, they can be confident that the product will be adopted and bought.
- (ii) Both manufacturers and marketers should be discreet in recognising the various individual characteristics of consumers with varying levels of prior experience, perceptions and learning predispositions; as these are determining factors for adoption and use of technology.
- (iii) Since the students do not regard the influence of peers and friends as predictor of their adopting new mobile phones, marketers need to design their advertisement and promotion to indicate the uniqueness of specific consumer to make his decision to buy the product. That is, having advertisement campaigns and promotions showing a consumer's need to have a brand new mobile phone based on another consumer's adoption, or even based on a celebrity made not be effective. The advertisements need to show the personal benefits for having the mobile phone or the deprivations the consumer will 'suffer' for not having the device.
- (iv) As far as this study is concerned, social and interpersonal influences are not significant in influencing adoption of mobile phones. Young people want to assume that they are unique by themselves; and so, do not need any external interpersonal influence to make purchasing decisions.

## **SUGGESTIONS FOR FURTHER STUDY**

This study was limited to students in Ado-Ekiti, Nigeria. The study could be carried out in other cities to verify the findings in relation to consumer innovativeness, subjective norm, and adoption. Secondly, other variables that influence adoption could be studied such as culture, perceived risk, attitude, and satisfaction. Since students are not influenced by social interactions, other external sources of influence could be studied, like monetary capacity.

## **REFERENCE**

- Agarwal, R., & Prasad, J. (1998). A conceptual and operational definition of personal innovativeness in the domain of information technology. *Information System Research*, 9(2), 204-215.
- Ajzen, I. (1991). The theory of planned behaviour. *Organizational Behaviour and Human Decision Making*, 50, 179-211.
- Ajzen, I., & Fishbein, M. (1980). *Understanding Attitudes and Predicting Social Behaviour*. Englewood Cliff, New Jersey: Prentice Hall.
- Bauer, H.H., Reichardt, T., Barnes, S.J., & Neumann, M.M. (2005). Driving consumer acceptance of mobile marketing: A theoretical framework and empirical study. *Journal of Electronic Commerce Research*, 6(3), 181-192.

- Bearden, W.O., & Etzel, M.J. (1982). Reference group influence on product and brand purchase decision. *Journal of Consumer Research*, 9, 183-194.
- Bearden, W.O., Netemeyer, R.G., & Teel, J.E. (1989). Measurement of consumer susceptibility to interpersonal influence. *Journal of Consumer Research*, 15, (March), 472-480.
- Beck, L., & Ajzen, I. (1991). Predicting Dishonest Actions Using the Theory of Planned Behaviour. *Journal of Research in Personality*, 25, 285-301.
- Chakraborty, G., Allred, A.T., & Bristol, T. (1996). Exploring consumers' evaluations of counterfeits: The roles of country of origin and ethnocentrism? *Advances in Consumer Research*, 23(1), 379-384.
- Chandrasekaran, D., & Tellis, G.J. (2008). The Global Takeoff of New Products: Culture, Wealth or Vanishing Difference? *Marketing Science*, 27(5), 844-860.
- Chao, C. W., Reid, M., & Mavondo, F. (2012). "The influence of Consumer Innovativeness on Really New Product Adoption" *Australasian Marketing Journal*, 20 (3), 211- 217.
- Cheah, C.M., Teo, A.C., Sim, J.J., Oon, K.H., & Tan, B.I. (2011). Factors affecting malaysian mobile banking adoption: An empirical analysis. *International Journal of Network and Mobile Technologies*, 2(3), 149-160.
- Chiou, J.S. (1998). The effects of attitude, subjective norm, and perceived behavioural control on consumers' purchase intentions: The moderating effects of product knowledge and attention to social comparison information. *Proc. National Science Council*, 9(2), 298- 308.
- Couros, A., & Kesten, C. (2003). Innovation, change theory and the acceptance of new technologies: A literature review. *A Working Paper*.
- Davis, F., Bagozzi, P., & Warshaw, P. (1989). User acceptance of computer technology: A comparison of two theoretical models. *Management Science*, 35(8), 982-1003.
- Etzel, M.J.; Walker, B.J., & Stanton, W.J. (2007). *Marketing*, 14th Ed. Boston: McGraw-Hill/Irwin.
- Fishbein, M. (1963). *An investigation of the relationship between beliefs about an object and the attitude toward that object*. *Human Relations*, 16, 233-240.
- Fishbein, M. (1965). a consideration of beliefs, attitudes, and their relationships. In I. D. Steiner, & M. Fishbein (Eds.) *Current Studies in Social Psychology*. New York: Hold, Rinehart and Winston.
- Fishbein, M., & Ajzen, I. (1975). *Belief, attitude and behaviour: An introduction to theory and research*. Philippines: Addison Wesley.
- Gatignon, H., & Robertson, T.S. (1985). A propositional inventory for new diffusion research. *Journal of Consumer Research*, 11 (March), 849-867.
- Giles, M., & Cairns, E. (1995). Blood donation and Ajzen's theory of planned behaviour: An examination of perceived behavioural control. *British Journal of Social Psychology*, 34, 173-188.
- Goldsmith, R.E., & Hofacker, C.F. (1991). Measuring consumer innovativeness. *Journal of the Academy of Marketing Science*, 19(3), 209-221.
- Hartwick, J., & Barki, H. (1994). Explaining the role of user participation in information system use" *Management Science*, 40(4), 440-465.
- Hauser, J., Tellis, G.J., & Griffin, A. (2005). Research on innovation: A review and agenda for marketing science. *Marketing Science*, 25, 1-18.
- Hirschman, E.C. (1980). Innovativeness, novelty seeking and consumer creativity. *Journal of Consumer Research*, 7(3), 283-295.

- Hirschman, E.C. (1981). Comprehending symbolic consumption: Three theoretical issues. In E.C. Hirschman, & M.B. Holbrook, (Eds.), *Symbolic consumer behaviour*. Ann Arbor, MI: Association for Consumer Research.
- Ho, C.H., & Wu, W. (2011). Role of innovativeness of consumer in relationship between perceived attributes of new products and intention to adopt. *International Journal of Electronic Business Management*, 9(3), 258-266.
- Huang, L.Y., Hsieh, Y.J., & Chang, S.E. (2011). The effect of consumer innovativeness on adoption of location-based services. *Review of Global Management and Service Science*, 1, 17- 33.
- Hui, T.K., & Wan, D. (2004). The role of consumer innovativeness in the adoption of internet shopping in Singapore. *The Internet Business Review*, 1, 1-18.
- Im, S., Bayus, B.L., & Mason, C.H. (2003). An empirical study of innate consumer innovativeness personal characteristics, and new product adoption behaviour. *Journal of the Academy of Marketing Science*, 31(1), 61-73.
- Iqbal, S., & Ismail, Z. (2011). Buying behaviour: Gender and socioeconomic class differences on interpersonal influence susceptibility. *International Journal of Business and Social Science*, 2(4), 55- 66.
- Israel, G.D. (2009). Determining sample size. *Institute of Food and Agricultural Sciences (IFAS) University of Florida*. Document PEOD6. <http://edis.ifas.ufl.edu>
- Jarvenpaa, S.L., Tractinsky, N., & Saarinen, L. (1999). Consumer trust in an internet store: A cross-cultural validation. *Journal of Computer-Mediated Communication*, 5(2), 1-35.
- Jayasingh, S., & Eze, U.C, (2009). An empirical analysis of consumer behavioural intention toward mobile coupons in Malaysia. *International Journal of Business and Information*, 4(2), 221-242.
- Karahanna, E., Straub, D. W., & Chervany, N.L. (1999). Information technology adoption across time: A cross-sectional comparison of pre-adoption and post-adoption beliefs. *MIS Quarterly*, 23(2), 183-213.
- Klonglan, G.E., & Coward, E.W. (1970). The concept of symbolic adoption: A suggested interpretation. *Rural Sociology*, 35(March), 77-83.
- Klonglan, G.E., Beal, G.M., Bohlen, J.M., & Coward, E.W. (1966). Adoption of public fallout shelters: A 1966 National study. *IOWA Agricultural and Home Economics Experiment Station, Iowa State University*.
- Kotler, P. (1971). *Marketing decision making: A model building approach*. New York: Holt, Rinehart and Winston.
- Kumar, R., & Uzkuurt, C. (nd). Can innovativeness be impacted by interpersonal influences and do cultural dimensions play a moderating role? An investigation in the Turkish context” *Working Paper, Marshall Goldsmith School of Management, Alliant International University, USA*.
- Lancaster, G., & Massingham, L. (2001). *Marketing Management*, 3rd Ed. London: McGraw-Hill Publishing Company.
- Lee, J., Cerreto, F.A., & Lee, J. (2010).. Theory of planned behaviour and teachers’ decisions regarding use of educational technology. *Educational Technology & Society*, 13 (1), 152–164.
- Midgley, D.F., & Dowling, G. R. (1978). A longitudinal study of product form innovation: the interaction between predispositions and social messages. *Journal of Consumer Research*, 19, 611-625.

- Mokhlis, S., & Yaakop, A.Y. (2012). Consumer choice criteria in mobile phone selection: An investigation of Malaysian University students. *International Review of Social Sciences and Humanities*, 2(2), 203-212.
- Nwagwu, W., & Odetumibi, S. (2012). Factors influencing the adoption of mobile telephony by students at the University of Ibadan, Nigeria. *Working paper, University of Ibadan, Nigeria*.
- Oladele, P.O. (2011). A qualitative evaluation of the factors influencing consumer choice of telephone handset among students in selected universities in southwestern Nigeria. *International Journal of Business and Management Tomorrow*, 1(3), 1- 8.
- Pride, W.M., Ferrell, O.C., Mackenzie, H.F., & Snow, K. (1997). *Marketing: concepts and strategies*. Ontario: International Thomson Publishing.
- Rao, S., & Troshani, I. (2007). A conceptual framework and propositions for the acceptance of mobile services. *Journal of Theoretical and Applied Electronic Commerce Research*, 2(2), 61-73.
- Roehrich, G. (2004). Consumer innovativeness: Concepts and measurements. *Journal of Business Research*, 57(6), 671-677.
- Rogers, E.M. (1962). *Diffusion of Innovation*, 1st ed. London: Free Press.
- Rogers, E.M. (1983). *Diffusion of Innovation*, 3rd Ed. New York: The Free Press.
- Rogers, E.M. (1995). *Diffusion of Innovation*, New York Free Press.
- Rogers, E.M. (2003). *Diffusion of Innovation*, New York Free Press.
- Rogers, E.M. & Shoemaker, F.F. (1971). *Communication of innovation: Across-Cultural approach*. New York: The Free Press
- Rosen, P.A. (2005). The effect of personal innovativeness on technology acceptance and use. Unpublished Ph.D Thesis, *Oklahoma State University*.
- Ryan, B., & Gross, N. (1943). The diffusion of hybrid seed corn in two Iowa communities. *Rural Sociology*, 8, 15-24.
- Schiffman, L.G., & Kanuk, L.L. (1987). *Consumer behaviour*. New Jersey: Prentice Hall Inc.
- Shimp, T.A., & Kavas, A. (1984). The theory of reasoned action applied to coupon usage. *Journal of Consumer Research*, 11(3), 795-809.
- Silva, H., Ratnadiwakara, D., & Zainudeen, A. (2011). Social influence in mobile phone adoption: Evidence from the bottom of the pyramid in emerging Asia. *Information Technologies & International Development*, 7(3), 1- 18.
- Tan, M., & Teo, T.S.H. (2000). Factors influencing the adoption of internet banking. *Journal of the Association of Information Systems*, 1(5), 1-37.
- Taylor, S., & Todd, P.A. (1995). Understanding information technology usage: A test of competing models. *Information Systems Research*, 6, 144 – 176.
- Tellis, G.J. Yin, E., & Bell, S. (2009). Global Consumer Innovativeness: Cross-Country Differences and Demographic Commonalities. *Journal of International Marketing*, 17(2), 1-22.
- Valente, T.W. (1995). *Network Models of the Diffusion of Innovations*. Creskill, NJ: Hampton Press.
- Venkatesh, V., & Davis, F.D. (2000). A theoretical extension of the technology acceptance model: Four longitudinal field studies. *Management Science*, 46(2), 186–204.
- Venkatraman, M.D. (1991). The impact of innovativeness and innovative type on adoption. *Journal of Retailing*, 67, 51-67.
- Venkatraman, M.D., & Price, L.L. (1990). Differentiating between cognitive and sensory innovativeness. *Journal of Business Research*, 20(4), 293-315.



- Vida, I. (2007). Determinants of consumer willingness to purchase non-deceptive counterfeit products. *Managing Global Transition*, 5(3), 253-270.
- Wang, G., Dou, W., & Zhou, N. (2008). Consumption attitudes and adoption of new consumer products: a contingency approach. *European Journal of Marketing*, 42(12), 238-254.
- Warshaw, P.R. (1980). Predicting purchase and other behaviours from generally and contextually specific intentions. *Journal of Marketing*, 17, 26-33.
- Williams, T.G. (1982). *Consumer behaviour: Fundamentals and strategies*. New York: West Publishing Company.
- Wright, V., & Bennetts, R. (2006). *Diffusion of innovations: A theoretical framework of understanding how scientific knowledge and technology are adopted by managers*. *Greater Yellow Stone Science*, 1-5.
- Xihao, H. S., & Yang, J. (2006). Social influence on consumers' purchasing behaviour and related marketing strategy: A cross-national comparative study. *Working Paper*, Georgia College and State University.