

**DETERMINANTS OF CHOICE OF MOBILE PHONE BRANDS AMONG UNIVERSITY STUDENTS  
IN NAKURU, KENYA**

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**Abstract**

*The widespread use of mobile phones, the various information access it provides to its users, and the vast presence and significant impact of mobile phone on users' daily life make mobile phones important devices to study. The survey study focused on the determinants of choice of mobile phone brand among university students in Kenya. The target population was 3000 students from universities in Nakuru town. A stratified random sample of 106 students was used in the study. Descriptive and inferential statistics were used in analyzing data with the help of statistical package for social sciences (SPSS) version 20.0. The findings showed that product features ( $\beta_2 = 0.284$   $p = 0.002$ ), and media influences ( $\beta = 0.357$ ,  $p = 0.000$ ), had a positive significance on the choice of mobile phone handset, while price had no significant influence. The implication for the study is that marketers of mobile phones need to understand customers' needs based on the media avenues and give much information to enhance students' choice of mobile phone handsets. Future research that extends sampling beyond a university environment would allow for a more representative assessment of factors influencing consumers' choice of mobile phones in the wider society.*

**Key words:** Choice, mobile phone, university students, Kenya.

**1. Introduction**

The development of mobile communication technology (wireless Internet, the mobile phone, MP3 player, GPS navigation system) has been a long journey of innovation which is constantly evolving and updating as a result of consumers' changing needs and preferences. Among various contemporary mobile communication technologies, the mobile phone is regarded as "the most radioactive domestic appliance ever invented" (Coghill, 2001). The device has had one of the fastest household adoption rates of any technology in the world's modern history (Comer and Wikle, 2008).

The growth has been phenomenal by any standards and there are now more mobile phone subscribers than fixed line subscribers globally (Rice and Katz, 2003). 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 reached five billion worldwide with subscriptions from developing countries out-numbering that of the

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developed countries (Kelly, 2010). With the increasing of ubiquity of mobile phone ownership, the device is no longer perceived as a luxury item or a status symbol but rather a necessity in people's daily life (Walsh and White, 2006).

The widespread utilization of mobile phones in the communication platform and information transfer leads to exponential improvement in mobile phone technology. To meet users' information needs, innovative features and applications are continuously being added to mobile phones to make them perform many more new functions. Consequently, mobile phone which is essentially a communication device has undergone numerous transformations, making its functionalities transcend the traditional voice communication between two individuals (Kushchu, 2007; Hakoama and Hakoyama, 2011). Beyond voice, mobile phones fulfill users' needs by providing: firstly communication services allowing transfer of information in the forms of text, graphics and voice, secondly wireless internet services such as browsing and e-mail, and lastly multimedia and entertainment services such as color screen, motion picture, camera, games, and music. Because these are key features in enabling universal information access, and in facilitating the formation of social networks among its users (Ling, Hwang and Salvendy, 2006). Despite the growing importance of mobile phone technology there has, to date, been relatively little research on consumers' evaluation of the importance of mobile phone attributes.

Higher market penetration has been achieved in developing countries like Kenya, because of affordability of handsets, increased uses of handsets, increased internet connectivity and compatibility of handset features to users' needs. Roostika (2011) attributes increased demand for mobile phones to rapid adoption of internet by users and the ease of internet access on mobile devices. In Kenya, there are over 28 million users who are connected to mobile phone services, representing 71.3 percent penetration of the total population (Communications Commission of Kenya, CCK, 2011/2012). Emergence of mobile phones has drastically changed the telecommunication sector in Kenya from one previously dominated by fixed line service providers and heavy government regulation to today's liberalized market, with mobile phone service providers taking lead in market share (Mokhtar, Maiyaki & Noor, 2011)

## **2. Statement of the problem**

The development of mobile phones and technologies has been an extended history of innovation and advancements resulting from dynamic changes in consumers' needs and preferences. Among these developments, mobile phone devices have had one of the fastest household adoption rates of any technology in the world's modern history (Comer & Wickle, 2008). The mobile handsets have become an integral part of human daily life and personal communication across the globe. In the current highly competitive mobile phone market, manufacturers constantly fight to find additional competitive edge and differentiating elements to persuade consumers to select their brand instead of a competitor's. To break the major mobile phone services monopoly, the competing mobile phone providers have resorted to niche marketing strategy targeting the youth. The university students provide a niche market that the mobile phone service providers target. Studies have indicated a range of items as a determinant factor influencing purchase decision. These factors include price, features, quality, brand name, durability and social factors (Li, 2010). Despite the heavy investment of mobile phone companies on innovative products that attract consumers, it remains unclear whether mobile phone consumers in Kenya and in particular university students consider factors such as pricing, physical features, social factor, media influence, brand image, and

post sales services in their purchase decisions. Therefore, the study sought to determine the influence of these factors on choice of mobile phone brand among university students in Kenya.

### **3. Specific objective**

- i. To establish the effect of price variation on choice of mobile phone brand among university students.
- ii. To determine the effect of product features on choice of mobile phone brand among university students.
- iii. To establish the effect of media promotion influence on the choice of mobile phone brand among university students.

### **4. Research hypothesis**

Ho<sub>1</sub>: Price variation has no significant influence on mobile phone brand choice among university students.

Ho<sub>2</sub>: Product features have no significant influence on mobile phone brand choice among university students.

Ho<sub>3</sub>: Media has no significant influence on mobile phone brand choice among university students.

### **5. Literature review**

Research on customer choice of mobile phone classifies consumer's purchase process into a five step problem solving process: need recognition, information search, evaluation of alternatives, purchase activity and post purchase evaluation ( Dorsch, Grove and Darden 2002). This five step process of decision making is most appropriate for the problem solving behavior of purchase making decision or complex decision purchase process. Similarly purchase decision for mobile handset pursues the same buying process but in some cases the decision may also be influenced by symbolic preference associated with some brands.

Malasi (2012) examined the influence of product attributes on mobile phone preference among undergraduate university students in Kenya. The study observed that varying the product attributes' has an influence on the undergraduate students' preferences on mobile phones. Various aspects of product and brand attributes such as color themes, visible name labels, and mobile phone with variety of models, packaging for safety, degree of awareness on safety issues, look and design of the phone were considered.

There are multidimensional factors impacting the consumer choices of mobile phones which have been investigated and analyzed through several researches over time and across the nations. Based on Mokhlis and Yaakop (2012) investigation on the consumer choice criteria in mobile phone selection among Malaysian university student's, seven main factors were considered: innovative features, image, price, personal recommendation, durability & portable aspect, media influence and post-sales service. It was found that the new innovative features impact strongly on the choice of mobile phones among university students.

Ling, Hwang and Salvendy (2007) investigated college students to identify their preference of their current mobile phone. The results of their survey indicated that the physical appearance, size and menu organization of the mobile phones are the most determinant factors affecting the choice of

mobile phones. An investigation done by Pakola et al. (2010) on consumer purchasing motives in cellular phone markets observed that the most influential factors affecting the purchase of a new mobile phone is reputed brand, smart appearance, and advanced value added features, and usability.

Research on price as a determinant of mobile hand-set purchase has mixed findings. Some report price to be a significant factor whereas others report that price is not significant. For instance, Mokhlis & Yaakop, (2012) found price to be a critical factor affecting the choice of mobile phone, especially among younger people. Price also found support by Dziwornu (2013) who contends that consumers' choice of purchasing mobile phone was mostly affected by price, as they associated the price charged with the product quality. Similarly, mobile phone customers have perceived price as a key identification of brands' perceived value and brands' quality, whereby high price indicates advanced technology, design, and improved features (Kabadayi, et al. 2008; Malasi, 2012).

According to Sabri & Masud (2006), university students in Malaysia felt that the amount of money they received was not even sufficient to cover their financial needs, let alone going for expensive mobile phones. A study conducted by Yusuf et al. (2015) noted that price was not significant to the choice of mobile phone because Price, which comes hand in hand with brand, is also considered having a strong relationship with the brand. Consumers with high brand loyalty are willing to pay a premium price for their favored brand, thus, their purchase intention is not easily affected by price (Yee and Sidek, 2008). Also, Mesay (2013), study on consumer buying behavior of mobile phone device had similar findings that price was not significant to the purchase choice. Smita (2006) in her research study examined the significance of celebrities in advertisement and came up with the conclusion that in order to add glamour and excitement to their brands, advertisers use celebrity endorsers. Another study by Byrne et al.(2003) indicated that using celebrity endorsers generates a more positive response and higher purchase intentions than non-celebrity endorsers. Muhammad (2013) report that advertising has a positive influence on consumers purchase decision for mobile hand-set.

The study conceptualized independent variables as factors that affect mobile phone choice decision which are price, product features and media influence, while the dependent variable was mobile phone purchase choice. The choice of the factors was informed by several researches (Mesay 2013; Tanzila 2015).

## **6. Research methodology**

The study employed a descriptive research design. Descriptive research design describes behavior, attitudes, values and characteristics (Kothari, 2004). The use of descriptive survey research design allowed the factors affecting mobile phone users to be examined. The target population was 3000 students from selected universities in Nakuru town, Kenya. The sample size of 106 was obtained using a simple random sampling method of Nassiuma (2000) formula, who asserts that in most surveys, a coefficient of variation in the range of  $21\% \leq C \leq 30\%$  and a standard error in the range  $2\% \leq e \leq 5\%$  is usually acceptable. From the sample of 106, proportionate sample size for each strata (university) was determined.

This study used structured questionnaire to obtain information from university students. The first section contained personal information, their age, gender type of brand used and subscribers. The second section contained the factors influencing student's choice of mobile phone brand. There

were three determinant factors with each factor having its own items. The items were developed based on past literature (Karjaluoto et al. 2005; ling et al. 2007). The first factor was price, which had four items i.e. higher price, reasonable price, special offer and mode of payment. The second factor product features had nine items i.e. color display, memory, web browser, dual-sim, Bluetooth, camera and video, appearances, light and small size. The third factor media influence had six items i.e. advertisement in radio, advertisement in newspapers, advertisement on TV, positive review in Face-book and the positive review in blogs.

The responses were measured on a 5 – point Likert scale with values ranging from strongly Agree =5, Agree = 4, Neutral =3, Disagree= 2, strongly Disagree=1. To counter balance possible order-effect bias, no significance was placed on the order of the attributes in the questionnaire. Descriptive and inferential statistics were used in data analysis. Descriptive statistics comprised frequencies, means, and percentages and inferential statistics were composed of correlation and multiple regressions that enabled testing of hypotheses.

## 7. Results and Discussions

### Descriptive Statistics

Majority of the respondents were female represented by 53.8 percent compared to the male students who were 46.2 percent. In terms of age, 69.8 percent of the respondent were aged between 18-24 years followed by those between 25-31 years represented by 24.5 percent, while 5.7 percent were 32-38 years. On brand usage and gender, 35 percent of female use Samsung, 31.58 percent were using Techno followed by a 14.04, percent using Nokia while Infinix and Alcatel were least used with each recording 7.02 percent. Majority of the female (52.6 percent) use one handset while those who owned two handsets were 38.6 percent and 8.77 percent had three phones.

Majority of the male students (59.18 percent) had one handset followed by 32.65 percent having two handsets and only 8.16 percent had three handsets. In terms of brand usage among the male, 42.86 percent use Nokia brand followed by 20.41 percent using Samsung, while Tecno usage registered 18.37 percent and Alcatel and Infinix recorded the same usage of 8.16 percent.

### Reliability Test

The findings in table 3.1 show that all the variables in the study had alpha values above the acceptable value of 0.65, implying that the instrument would give consistent and reliable results.

**Table 3.1 Reliability test**

Variables	Cronbach's Alpha	No of items
Price	0.662	4
Product feature	0.834	7
Media influence	0.702	4
Choice of mobile	0.823	6

**Source:** Computed by researchers from field data (2017)

**Correlation Analysis.**

Correlation is a technique of assessing the relationship between variables. Price variation, Product features, and Media influence were correlated with the choice of mobile phone. Thus the study analyzed the relationships that are inherent among the independent and dependent variables. The result are summarized and presented in table 3.2

**Table 3.2 Correlation Analysis**

		<b>choice of mobile</b>	<b>Price</b>	<b>product feature</b>	<b>media</b>
<b>choice of mobile</b>	Pearson Correlation Sig. (1-tailed)	1			
<b>Price</b>	Pearson Correlation Sig. (1-tailed)	.173*	1		
<b>product feature</b>	Pearson Correlation Sig. (1-tailed)	.185*	.165*	1	
<b>Media</b>	Pearson Correlation Sig. (1-tailed)	.493**	.064	.241**	1

\*. Correlation is significant at the 0.05 level (1-tailed).

\*\*.. Correlation is significant at the 0.01 level (1-tailed).

**Source:** Computed by researchers from field data (2017)

From the findings in table 3.2, media influence was positively and significantly associated with choice of mobile phone( $r=0.493$ ,  $p<.000$ ). Additionally, product features were positively correlated with choice of mobile phone ( $r=0.185$ ,  $p<0.05$ ). Price variation was found to be positively correlated with choice of mobile phone ( $r=0.173$ ,  $p<0.05$ ).

The correlation results show the largest beta coefficient of 0.493 on media influence and makes this variable the strongest contributor in explaining the dependent variable (choice of mobile phone). This suggests that one standard deviation increase in media influence is followed by a 0.493 standard deviation increase in choice of mobile phone handset.

**8. Hypotheses Testing**

Multiple regression analysis was conducted to determine the relationship between choice of mobile phone and the three variables: price variation, product features and media influence. The findings are presented in table 3.3

The rule thumb was applied in the interpretation of the variance inflation factor. From table 3.3, the VIF for all estimate parameters was found to be less than 4 which indicated the absence of multicollinearity among the independent factors. Therefore, all the factors were included in the prediction model.

**Table 3.3 Coefficient of Estimate**

Model	Unstandardized Coefficients		Standardized Coefficients	T	Sig.	Collinearity Statistics	
	B	Std. Error	Beta			Tolerance	VIF
Constant	4.875	2.882		1.692	0.094		
Price	0.131	0.117	0.094	1.126	0.263	0.94	1.064
Product features	0.284	0.087	0.284	3.25	0.002	0.899	1.113
media influence	0.445	0.112	0.357	3.966	0.000	0.812	1.232

**Source:** Computed by researchers from field data (2017)

The result of multiple regressions, as presented in table 3.3 revealed that price variation had no significant influence on the choice of mobile phone ( $t= 1.126$ ,  $\beta_1=0.094$ ,  $p> 0.05$ ). Therefore, the findings failed to reject the null hypothesis that price variation has no significant influence on mobile phone brand choice among university students. Also, the  $t$  value= $1.126$  which implies that the standard error associated with the parameter is less than the effect of the parameter.

The findings from table 3.3 showed that there was a statistically significant influence of product features on choice of mobile phone brand among university students;  $t = 3.25$ ,  $p< .05$ , and  $\beta= 0.284$ . Therefore, the null hypothesis that product features have no significant influence on mobile phone brand choice among university students was rejected. The data therefore has evidence to support the claim that product features influence university students purchase choice of mobile phone.

The result from table 3.3 shows that media had a positive and significant influence on purchase choice of mobile phone brand ( $t=3.966$ ,  $\beta=0.357$ ,  $p<0.000$ ) among university students. Therefore, the null hypothesis is rejected because media influence has a significant relationship with purchase choice of mobile phone brand. The effect of media influence in the  $t$ -test value of  $3.966$  surpasses that of the error.

## 9. Discussions

The findings from the study showed that price variation has no significant influence on mobile phone brand choice among university students. These findings are in agreement with the study conducted by Yusuf and et al. (2015) who reported that price was not significant to the choice of mobile phone because price, which comes hand in hand with brand, is also considered having a

strong relationship with brand. Consumers with high brand loyalty are willing to pay a premium price for their favored brand, thus, their purchase intention is not easily affected by price (Yee and Sidek, 2008). In addition, Mesay (2013) study on consumer buying behavior of mobile phone device had the same findings that price was not significant to the purchase choice. Similarly, Mokhlis and Yaakop (2012), on their research on consumer choice criteria in Mobile Phone Selection concluded that price does not have significant effect consumers' choice for a mobile phone. Dziwornu (2013) findings on factors affecting mobile phone purchase in the Greater Accra Region of Ghana was that price and access to phone accessories are the factors that do not significantly affect mobile phone purchase decision. The findings of this study equally found support from Karjaluo et al. (2005), who concluded that price, brand, interface, and properties tend to be influential factors affecting the actual choice amongst mobile phone brands

Product features had a significant influence on choice of mobile phone brand among university students. The results concur with those of Liu, (2002); Karjaluo (2005); Mack and Sharples, (2009), who concluded that product's innovative features are very important in the student selection of mobile phones. This is possibly related to mobile phones which have now been widely accepted as part of fashion accessories, especially among the youngsters. Thus, innovation in mobile phone features and design does appear on top of the list in consumers' choice of mobile phones. Further support of the results from this study is by Yang, and Lee (2007) found out that phone design and appearance are significant factors in purchasing a mobile phone. Therefore, paying attention to product features by marketers is a strategic and competitive move.

The result shows that media influence has a positive and significant influence on mobile phone brand choice among university students. In support of the study, Erdem and Keane (1996) highlighted the influence of user experience and advertising content on the brand choice, especially when the consumers are forward-looking and concluded media had a significant effect on choice of mobile phone brand. Additionally, Muhammad (2013) contends that advertising has a positive impact in the present times and that advertisement creates a stronger impression in the mind. This shows that the result from the finding of the study agree with other research findings.

## **10. Conclusions**

The findings of the study are indicative of insignificant relation between price variations and choice of mobile phone. Despite the fact that price is seen as an important factor to choice of mobile phones, the findings present a negative relationship between price and choice of mobile phone. Price may not have been a strong consideration by students as most of them may have been financed by their parents. This study therefore add new insight into the existing literature on choice of mobile phone. This shows a gap and would therefore be prudent for scholars to conduct replication studies to ascertain whether the above findings hold.

The findings of the study are indicative of significant relationship between product features and choice of mobile phone. Product features such as different phone characteristics with connectivity of wireless, installation of application programs, a system of file management, presentation of multi-media programs, camera, picture, video quality and mobile memory, influence students purchase choice for mobile phone. It is therefore recommended that marketers and manufacturers of mobile phones should focus on the features that appeal to students so as to enhance the sales.



Media has a positive and significantly influence on the choice of mobile phone among university students. It is therefore important for marketers to focus on understanding their customers in particular, university students and identifying their unique needs. Utility of media tools like internet, TV, radio and Face-book can be strategically used to popularize the different brands that appeal to students. This way media becomes an important tool for students when purchasing their handset as a major information source.

### **11. Suggestion for Further Research**

Future research that extends sampling beyond a university environment would allow for a more representative assessment of factors influencing consumers' choice of phone in the larger society. Future studies should take into account wider geographical distributions of respondents, as well as covering larger population size and sampling (higher number of respondents). Lastly, samples should be varied to include urban and rural population as well.

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