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The effect of gender in online shopping behaviour among USIU-Africa students.

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Abstract

Kenya has a growing e-commerce market but very little is known about the consumer characteristics of online shoppers in Kenya. Demographic factors such as gender are very important in the online shopping space in Kenya. The study investigated the effect of gender among university students in USIU-Africa. With a survey sample of 71, the study used a descriptive design approach and used an online survey to get the students perception of online shopping, the study tested the effect of gender on three main constructs; Ecommerce adoption, Perceived Ease of Use (PEOU) and Perceived Usefulness (PU). The results reveal that gender has significant impact on Perceived Ease of Use among university students in Kenya and has no significant impact on E-commerce adoption or Perceived Usefulness. The study recommends that e-commerce platforms in Kenya to leverage on gender aspects and create more user-friendly interfaces towards female shoppers.

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Keywords: online shopping; university; students; gender; Kenya

Introduction

Online shopping has been on the rise and it is becoming a part of everyday life. The internet has made it even easier for e-commerce as new products and services are being produced towards specific demographics. A clear understanding of gender dynamics is important especially in emerging markets (Tamiliarasi, 2017). Businesses have realized that it is important to leverage this technology and use it to create a competitive edge through sale of innovative, catchy and relevant products and services in this fast-changing digital age. The internet first became available in Kenya in the year 1993 but its full operation formally starts in the year 1995 with the African Regional Center for Computing becoming the first internet provider in Kenya. In the year 2000, it is estimated that there were about 200,000 internet users in Kenya. This number is currently at about 44 million users as per the latest statistics (Internet World Stats, 2019). The main elements in e-commerce are communication systems, data systems and security. These components are involved in the exchange of information of sale of products and services. (Nanehkaran, 2013). E-commerce may be B2C, B2B and between private and public sectors (B2G).

The e-commerce market in Kenya has grown by leaps and bounds. Kenya's leading e-commerce platform Jumia reported that almost 10 % of internet users in Kenya visited their website per month. This is further by Communications Authority of Kenya (2018), that reported internet penetration in Kenya stood at 86%. 83% of this was generated by mobile phone traffic. This empirical evidence suggests that the cost of acquiring a smartphone has become affordable thus spurring immense growth in the sector (Jumia, 2018). For some users, a complete online experience is one that takes into account their gender. The e-commerce platform can then tailor the kind of items that the user is more likely to buy or simply skim through. A study by Gong, Stump & Maddox (2013), reveal that gender did not have an impact on online shopping behavior among users. In their hypothesis, they envisaged that men are likely to buy more online than women. This result is different in other regions such as India where it was found that gender as a demographic characteristic had an effect. In India a little over 50 % of the internet population is men yet 58% of internet revenue is generated by women. This was attributed to the fact that women had a high order value as compared to men (Brown., 2012).

In a study of online purchasing behavior among women, Elliason, Holkko & Smajovich. (2009), found out that in Sweden most women found it rather useless to shop online since they lived in the city and it was easy to go to a hypermarket easily. The conflicting results from several suggests that while gender significant to online shopping, there cannot be a generalization and there is need to study specific demographics such as university students to get a clear picture.

There is sparse research examining gender as a demographic variable and how it affects online shopping behaviour among university students in Kenya. This is because attention has been drawn to e-commerce succeeding from the business point of view and little is being done on the user's point of view. In Kenya, majority of the type of ecommerce transacted is B2C hence necessitating the need to examine this construct further (Jumia, 2018). This is because the youth account for the largest population demographic out of the overall population size. The Kenya National Population Census report in 2009, reveals that the population of youth stood at about 20% which is considered way above the worlds average of 16% .This figure increased in 2014, where population increased to about 45 million with 21 million people being active internet subscribers 47 % and the rate is predicted to increase at 300 people per month (Kenya National Bureau of Statistics, 2014).

This study seeks to investigate the influence of gender on online shopping among university students. The next section will cover the literature review and the development of the hypotheses.

Literature review

Gender in online shopping

A study of online shopping attitudes among students in Taiwan revealed that male students had a better positive attitude towards shopping and shopped more than female students (Huang & Lin, 2010). The researcher opined that gender differences really do exist when shopping online. A similar study that examined gender among shoppers found out that women had a higher possibility of shopping than men. The study identified 300 men and 300 women and examined their attitudes based on catalogue, store shopping and perceptions against 12 positive and negative adjectives. Women were found to enjoy checking the internet catalogue and found it a pleasurable experience to shop as opposed to men who did not derive any pleasure in that. The women were therefore more likely to embrace e-commerce as opposed to men who shopped only when stocks had run out or when it was deemed necessary (Alreck & Settle, 2002).

A study in the same region found out women were more likely to conduct online shopping since they bought from the online shop 3-4 times as compared to men who only bought 1-2 times (Dahiya, 2012). This was attributed to frequency of shopping where female shoppers tended to have a higher frequency than men. The female shoppers found shopping online to be enjoyable as compared to male shoppers. These studies coincide with what Pew Research Centre conducted in 2001 (58 %) of women bought more than men (42 %). This result is different in other regions such as India where it was found that gender as a demographic characteristic had an effect. In India a little over 50 % of the internet population is men yet 58% of internet revenue is generated by women. This was attributed to the fact that women had a high order value as compared to men (Brown., 2012).

While these studies clearly show that gender as a demographic variable seems to have a significance on online shopping, there cannot be a common generalization with regards to specific demographics such as youth. This necessitates the need for this study to identify the gender question regarding university students in Kenya. The following hypothesis are advanced:

H₁ There is no significant difference between male and male online shopping behavior among university students in Kenya.

H₂ There is significant difference between male and female online shopping behavior among university students in Kenya.

E-commerce adoption in Kenya

According to the World Bank Financial Inclusion Report of 2019, there are currently 43.3 million active internet users in Kenya. This translates to 84 % of the total population which is also the current internet penetration rate. 39.86 million (77%) of this population access internet from mobile phones. These statistics give insight to how e-commerce has been adopted in Kenya. The report goes on to reveal that 26% of the active internet users are frequent online shoppers. Nakhumwa (2013) investigated the adoption of e-commerce payment systems among commercial banks in Kenya. He found out that while banks had started to implement e-commerce payment systems, there was a lot of scepticism. 16 % of the bank staff allayed fears of online fraud as a big impediment to implementation. The nonexistence of a cashless society also contributed to the reluctance of banks to implement an e-commerce payment system. Cross-border e-payment support, legal and technical and legal support also proved to be a huge challenge. Gikandi & Bloor (2010), noted that there was lack of adequate resources for financial institutions to initiate e-commerce. They resorted to forming partnerships to be able to pull resources. The spread of internet was also quite poor during the time and this greatly hindered the advancement of e-commerce in Kenya. Internet enabled devices were costly and so was data at the time.

Industries such as the hospitality industry are very demanding and require the players to quickly adapt. This made a majority of them to quickly adopt e-commerce (Wanjau, Macharia, & Ayodo, 2012).

Factors such as employee IT knowhow, education level, gender, age of the organization, size of the organization among affect the adoption rate of e-commerce among organizations (Ochola, 2015). Using Akhlaq and Ahmed's (2015) study which identified several factors that influence shopping behaviour such as PEOU and PU, the study will investigate how adoption of e-commerce, PEOU and PU and with gender as a construct affect online shopping behaviour among university students. The following hypothesis is advanced:

H₃ Female university students adopt e-commerce easily more than male university students.

PEOU and PU

PEOU and PU are factors of the Technology Acceptance TAM first put forward by Davis (1989), which give a guide on how people use information systems. This theory explains how the people choose to use technologies and the enabling factors. Couza (2017), asserts that the individual intention to use a certain technology with the model essentially explain the usage and performance of the technology. TAM is seen as very popular due to its ability of being simple (parsimony), supported by data (verifiability) and its flexible nature to be able to predict acceptance of various technologies in almost any field (generalizability). These factors continue to make it very successful as a criterion for product innovation in the technology market (Hsu, Lee, & Wu, 2005).

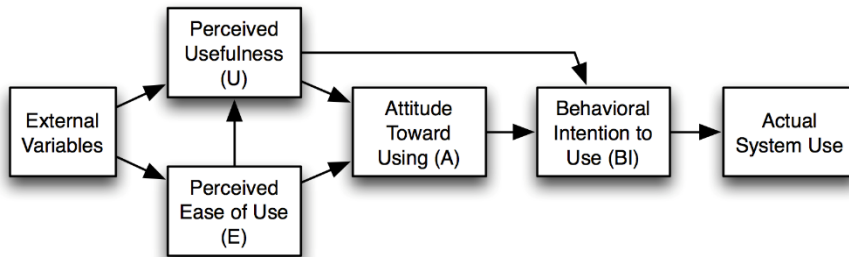


Figure 1: Technology Acceptance Model (TAM)

Source: (Davis, Bagozzi, & Warshaw, 1989).

Perceived Ease of Use refers to the extent a user anticipates the target system will be free of effort (Venkatesh & Davis, 2000). Perceived Usefulness refers to the subjective probability of a user that the use of a certain technology will be able to increase their output from an organization point of view (Lee, Kozar, & Larsen, 2003; Fayada & Paper, 2015).

This therefore proposes the following hypotheses:

H₄ Online shopping is perceived to be more useful by male university students than female university students.

H₅ Online shopping is perceived to be easier to use by male university students than female university students.

Objective of the study

The main objectives of the study are;

1. To investigate the effect on gender on e-commerce adoption among university students in Kenya.
2. To investigate the effect on gender on Perceived Ease of Use on online shopping among university students in Kenya.
3. To investigate the effect on gender on Perceived Usefulness on online shopping among university students in Kenya.

Methodology

Right from the formulation of the research questions, objectives to the analysis of the obtained data, the research design is intended to be a framework for these activities (Kothari & Garg, 2014). Imenda (2014), posits that a research design is intended to be able to answer all research questions unambiguously.

For this study, a descriptive approach was employed. Orodho (2003), asserts that descriptive research design is very useful since it can be able to collect opinions and attitudes which are very vital in an educational fact-finding study. The research design links the argument and the theory as postulated by Frankfort-Nachmias et al (2014).

Population and Sampling

The target population for this study are university students in USIU-Africa. The population of students at USIU-Africa stands at about 8000. This is because as several studies have highlighted in the literature review that the university going demographic present unique characteristics on online shopping behavior across developing countries in the world. Gathering accurate data on internet activity has also been deemed to be an uphill task (Souter & Kerretts-Makau, 2012). Mugenda and Mugenda (2003), notes that there must be observable characteristics in any population.

The study adopted a judgmental sampling technique. Judgmental sampling is when the researcher selects a certain sample that must have a certain common characteristic (Cooper & Schindler, 2014). The researcher selected 100 students who answered the survey with the condition that they had shopped online before. Out of the 100 students, 71 students answered the questionnaire and that translates to a completion rate of 71%. This is a sufficient sample size according to Mugenda and Mugenda (2003) who propose that anything over 60% suffices the study aims.

Data Instrument

Data was collected through an online survey through Google Forms that was sent to students and made available for 2 weeks. The questions were adapted from previous studies that had tested for the same construct in different regions. The questionnaire consisted of four sections: Demographic Information, Adoption of E-commerce, PEOU and PU. The respondents were asked to state their age, gender and education level in Section A. In section B, the respondents were asked to rate their online shopping adoption using a Likert scale of 1-5. Section C tested the respondent's ability to shop online easily using a Likert scale of 1-5. Section D tested the respondents ability rate the importance of online shopping using a Likert scale of 1-5.

Reliability test

The study tested using for reliability using the Cronbach's alpha reliability coefficient to check for items under each main tenet to be tested that are E-commerce adoption, Perceived Ease of Use and Perceived Usefulness. The value usually lies between 0 and 1 and if it exceeds 1 then there's even a higher reliability. The overall reliability score for all the variables was 0.83 which is regarded by George and Mallery (2003) as "Good" as shown below;

Table 1: Reliability analysis

Construct	Alpha Value	Remarks
Ecommerce adoption (2 variables)	0.70	Acceptable
PEOU (4 variables)	0.84	Good
PU (4 variables)	0.70	Acceptable

MANOVA

A multivariate analysis was conducted to investigate the differences between men and women. Gender was used as an independent variable and tested against the variables grouped in to constructs namely: E-commerce adoption, PEOU and PU.

The multivariate results present a statistically significant difference based on Huberty and Petoskey's (2000) rubric. The results show a significance of 0.037 using an alpha level of .05 which is statistically significant therefore making gender affect online shopping behavior among university students.as shown below:

Table 2: Multivariate Tests

Effect		Value	F	Hypothesis df.	Error df.	Sig.	Partial eta Squares
Gender	Pillai's Trace	.260	.2111	10	60	.037	.260

Analysis from the MANOVA show that gender influences only one construct using an alpha level of .05; PEOU. Gender, however, has no statistical significance on e-commerce adoption and PU as shown in Table 3 below.

Table 3: Tests of Between-Subjects Effects

Effect	Dependent Variable	Type III Sum of Squares	df	Mean Square	F	Sig.	Partial eta squared
Gender	Ecommerce Adoption	.009	1	.009	.010	.922	.000
	PEOU	4.451	1	4.451	4.938	.030	.067
	PU	2.149	1	2.149	2.863	.095	.040
Error	Ecommerce Adoption	63.174	69	.916			
	PEOU	62.196	69	.901			
	PU	51.794	69	0.751			

The descriptive statistics reveal that the mean score for men is higher than women in PEOU as shown below:

Table 4: Descriptive Statistics

	Gender	Mean	Std Deviation	N
PEOU	Men	4.15	.834	40
	Women	3.65	1.082	31
	Total	3.93	.976	71

Table 5 shows the hypothesis testing results. Out of 5 hypotheses only two were 'not rejected'. The rest were 'rejected'.

Table 5: Hypothesis testing results

Hypothesis	H₀ rejected/Not rejected
H₁ There is no significant difference between male and female online shopping behavior among university students in Kenya	H ₁ rejected
H₂ There is significant difference between male and female online shopping behavior among university students in Kenya	H ₂ not rejected
H₃ Female university students adopt e-commerce easily more than male university students.	H ₃ rejected
H₄ Online shopping is perceived to be more useful by male university students than female university students.	H ₄ rejected
H₅ Online shopping is perceived to be easier to use by male university students than female university students.	H ₅ not rejected

DISCUSSION

The results show that there is a statistical difference in terms of gender and online shopping among university students generally. However, on closer examination, only PEOU achieved statistical significance.

In terms of e-commerce adoption, there is no significant difference between male and female students. This suggests that both genders are at equal chances with no intervening factors. These results coincide with the study of Baba and Siddiqi (2013), who in their study found out that gender had no effect on online shopping attitudes among universities in the Kashmir region in India. Moreover, factors such as information quality,

website design, service, customers state of mind, security and delivery are some of key indicators of a satisfactory online shopping experience (Mudambi & Schuff, 2010). If these factors are considered by both genders then it is unlikely that gender will affect online shopping among students in Kenya.

Examining PEOU revealed that lies a significant difference among university students. Male students found it easier to shop online as opposed to their female counterparts. This in contrast to Dahiya (2012) who in her study found out that women were likely to shop more than men since they enjoyed it hence shopped 3-4 times while their male counterparts only shopped 1-2 times. While other studies have shown that women have an exploratory nature when shopping online and find it easier to shop online such as Richard, et al. (2010), the case is different among Kenyan university students. The results agree with the study of Huang and Lin (2010) who found out in Taiwan, male students had a better attitude towards shopping, and they found it easier to use.

Examining PU reveal that it is not statistically significant among male and female university students. This therefore suggests that male and female university students in Kenya can perceive the usefulness of online shopping equally. These results are in tandem with the study of Baba and Sidiqqi (2013), who posit that gender has no effect on online shopping behavior. With regards to internet shopping in Nigeria, there is no significance between gender and shopping (Ifeanyichukwu, 2016). Male and female students in Kenya both think that online shopping is useful to them.

Limitations of the study

The study was conducted among students of USIU-Africa, a private university in Kenya. Limitations include only carrying out the study among students from one university due to financial limitations.

Future research implications

This study provides a basis for gender studies in e-commerce in the region which are sparse and provides room for more research in the area. Other constructs that need to be examined are level of education, age, income level. These variables are room to present new and interesting insights into the region given that online shopping is on the up rise in the East African Region. E-commerce platforms may find the study findings useful as it presents insights into what needs to be done in terms of gender persuasion on PEOU. This will enable them leverage on all customers without making a gender to feel left out.

Conclusion

Gender is an important area in the field of e-commerce. The study identified that gender has a significant impact on the PEOU of online shopping among university students. The research provides an opportunity for e-commerce platform to level the playing field with the gender differences that arose from the study.

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