

PERCEIVED BEHAVIOURAL CONTROL AND ONLINE SHOPPING BEHAVIOUR: MEDIATING EFFECT OF PURCHASE INTENTION

Yakaka GAMAMA^{1*}, Bintu MUSTAPHA² PhD., Solomon BALAMI³

1, 2, 3 Department of Marketing, Faculty of Management Sciences,
University of Maiduguri, Borno State, Nigeria.

* Corresponding Author: +234 8034027638

email – yakakag8@unimaid.edu.ng

Abstract

Online shopping behaviour of consumers remain significant to the success of online businesses thus, understanding the drivers of the behaviour is paramount to online marketers to sustain being the preferred choice of consumers. Numerous studies on influences of perceived behavioural control on online shopping behaviour have been conducted in different countries around the world with varying results that are not consistent; indeed, an obvious need exists to resolve these inconsistencies. Thus, based upon the rationale, the mediating effect of purchase intention on the influence of perceived behavioural control on online shopping behaviour of staff of University of Maiduguri is examined. A survey research was conducted on a sample of four hundred and fifty staff of the University who were selected using purposive sampling technique. Partial Least Squares-Structural Equation Modelling was used for data analysis and hypotheses testing while bootstrapping was used to determine mediation effect of purchase intention. The study reveals that purchase intention has no mediating effect on the influence of perceived behavioural control and online shopping behaviour and recommends that online marketers should consider studying other predictors in a bid to ascertaining stronger influencers of online shopping behaviour aside perceived behavioural control but should focus on maintaining universal user experience and ease of access to accommodate as many users as possible regardless of their competence.

Keywords: Perceived Behavioural Control, Purchase Intention, Online Shopping Behaviour.

1. INTRODUCTION

Marketing has been influenced by rapid changes in technology as it is gradually used in strategies to achieve objectives which add value to the processes of commerce. Notably, one of such influences is online shopping which is a process whereby

consumers directly buy goods and services from a seller without an intermediary service over the internet (Sunitha & Gnanadhas, 2014).

Furthermore, understanding online shopping behaviour is fundamental to marketers as it helps them to investigate and understand the way in which consumers behave by providing critical information to develop strategies. Consequently, they can position their products appropriately and enable them understand why and how consumers purchase. Understandably, people vary in their behaviours which can be influenced by their intrinsic and extrinsic factors which will substantiate what will change the consumers buying pattern. Notably, these influencing factors are family, friends, reference groups, opinion leaders, culture, age, lifestyle, personality, perception, motivation, beliefs, and attitude to mention a few (Blythe, 2013).

An individual will hold a favourable attitude towards online shopping if he/she believes that purchasing products online will lead to positive outcomes. Additionally, consumers' perceptions of their ability to exhibit a given behaviour can also play an important role in influencing their behaviour. Perceived behavioural control can in like manner be viewed as an individual's confidence that he or she is capable of exhibiting the behaviour, hence, it can be stated that a consumer that has the ability, capacity and confidence will most likely purchase products and services online. In view of that, willingness to engage in actual online shopping is a major issue to be put into focus. Furthermore, online shopping intention is an indication of a consumer's readiness to purchase products online and thus considered to be the immediate precursor of actual online shopping behaviour.

In addition, the influence of perceived behavioural control on online shopping behaviour has been confirmed by some studies, however findings from previous studies reveal inconsistencies. Studies conducted by Redda (2019), Kashif, Zarkada and Ramayah (2018), and Yakasai and Yusoh (2015), reveal significant influence of perceived behavioural control on online shopping behaviour. Conversely, studies conducted by Londono-Roldan, Davies and Elms (2017), Al-Jabari (2013) and Jamil, (2012) show insignificant influence of perceived behavioural control on online shopping behaviour.

To resolve these inconsistencies and bridge the theoretical gap, there is an obvious need for further research to provide a clearer understanding of how the predictor variable affects the outcome variable and what governs the relationship, hence, the need to introduce a mediator variable which may provide a premise for understanding the phenomena. Moreover, empirical investigation on the mediating effect of purchase intention is not available as mentioned by Lim, Osman, AbdulManaf and Abdullah, (2015) and Al-Jabari, (2013) there is a deficiency of studies that use purchase intention as a mediator. Though Londono-Roldan, *et al.*,

(2017), Lim, *et al.* (2015) and Al-Jabari, (2013) have investigated the mediating effect of intention but they were conducted in Columbia, Malaysia, and Jordan respectfully as such a paucity of evidence exists generally in Nigeria and specifically in Maiduguri.

Intention, as a mediator, can be a suitable mechanism to explain the influence of consumer evaluative criteria on online shopping behaviour. It can solve the inconclusive findings in previous literature by shedding more light on the extent at which purchase intention mediates the influence of perceived behavioural control on online shopping behaviour. Therefore, this study generally examines the mediating role of purchase intention on the influence of perceived behavioural control on online shopping behaviour of staff of University of Maiduguri. However, the study specifically examines the:

- i. influence of perceived behavioural control on online shopping behaviour of staff of University of Maiduguri;
- ii. mediating effect of purchase intention on the influence of perceived behavioural control on online shopping behaviour of staff of University of Maiduguri.

2. LITERATURE REVIEW AND HYPOTHESES DEVELOPMENT

Online Shopping Behaviour

Al-Maghrabi, Dennis and Halliday (2011) view online shopping behaviour as the process consumers go through to purchase products with interactive shopping over the internet. However, in recent times payment is done via the internet hence, this definition does not suffice. While a more recent definition by Kashif *et al.* (2018) describe online shopping behaviour as all activities of buying products which are done through the internet. Furthermore, online shopping behaviour has the same characteristics with traditional shopping behaviour, but the difference lies in the use of internet for purchasing goods and services (Gozukara, Ozyer & Kocoglu, 2014).

Based on the previous definitions, wherein the word internet is commonly referred; thus, this study will add to literature and thereupon define online shopping behaviour as the act of placing orders and paying for products using the internet.

Perceived Behavioural Control

Perceived behavioural control refers to a personal belief regarding his/her personal capabilities of exhibiting behavior. Moreover, perceived behavioral control is conceptualizing the individual's personal ability to control their actual behavior that

executes or not executes the transaction which depends upon their capabilities (Gao & Bai, 2014). Perceived behavioral control is a factor that plays an important role in determining intention (Kashif *et al.*, 2018). Perceived behavioural control suggests control over access to description of products, access to interpersonal communications, acquisition and purchasing processes, and access that online stores have over their personal information during online navigation process by taking into account past experience and expected obstacles with the behaviour (Al-Jabari, 2013).

With reference to the various definitions, this study defines perceived behavioural control as consumers' confidence that they can buy goods and services using the internet.

Purchase Intention

Purchase intention is one of the favourable factors that can ensure the continuity of any business by the mere fact that purchase intention is related to behaviour, perceptions and attitudes of consumers. Li, (2016) define purchase intention as a person's plan to purchase products or services in the future. Ketabi (2014) further define online purchase intention as a willingness of a person to shop online, alternately, intention in online shopping setting is defined as the situation when a customer is willing and intends to become involved in online transaction (Pavlou, 2013). Importantly, these definitions provide a clear distinction between online shopping intention and traditional shopping intention which is the use of internet. Generally, intention to purchase products online can be viewed as that which gives the customers' intention strength to purchase online.

On the premise of previous definitions, this study therefore defines purchase intention as the consumers' willingness and likelihood of purchasing goods and services using the internet.

Influence of Perceived Behavioural Control on Online Shopping Behaviour

Perceived behaviour is an important determinant of behavioural intention and for this reason several studies have been conducted to examine its effect on behaviour in general and specifically in the online shopping. Previous studies conducted found significant positive effect of perceived behavioural control on actual shopping behaviour (Redda, 2019; Rehman, Bhatti, Mohammed & Ayoup, 2019; Kashif *et al.*, 2018; Yakasai and Yusoh, 2015; Mohammed, Hossein, Mojtaba, & Amir, 2012;). However, a study conducted by Al-Muala (2010) on tourism in Jordan reveals insignificant effect of behavioural control on actual behaviour. In any event, Londono-Roldan *et al.*, 2018, Al-Jabari (2013) and **Al-Muala, (2010)** also found

insignificant relationship between perceived behavioural control and actual online shopping behaviour.

The studies indicate that findings on the influence of perceived behavioural control on online shopping behaviour are inconsistent consequently, more studies need to be undertaken to investigate its role on online shopping behaviour. These inconsistencies in behaviour could be due to internal or external difficulties that individual's face which affects their search on the web. Therefore, this study examined the role of perceived behavioural control to ascertain its influence on staff of University of Maiduguri. Thus, we hypothesize that;

Ho1: Perceived Behavioural Control has no significant influence on online shopping behaviour of Staff of University of Maiduguri.

Mediating Effect of Purchase Intention on the Influence of perceived behavioural control on Online Shopping Behaviour

Londono-Roldan *et al.*, 2017 in their study found that intention did not mediate the relationship between perceived behavioural control and online shopping behaviour. Nonetheless, Al Jabbari, (2013) reports that intention partially mediates the relationship between perceived behavioural control and online shopping behaviour. Hence, we hypothesize that;

Ho2: Purchase intention does not mediate the influence of perceived behavioural control on online shopping behaviour of staff of University of Maiduguri.

3. METHODOLOGY

This study took the form of cross-sectional design with all the 4125 staff of University of Maiduguri as population of the study, out of which 1545 are academic staff while the remaining 2580 are non-academic staff. The sample size for this study is four hundred and fifty arrived at after adding ninety-nine as a buffer to cover for non-response (Field, Miles & Field, 2012). Subsequently, to determine the sample size needed for true representation of the population for this study, Dillman's (2007) formula for determining an appropriate sample size was employed at the sample frame of +5 percent margin errors. Based on the calculation, a sample size of three hundred and fifty-one is arrived at and as earlier said; ninety-nine was added to serve as a buffer. We used a multistage sampling technique to select the sample using stratified sampling (proportionate stratification) and purposive sampling techniques.

The population was divided into two strata which are academic staff and non-academic staff and considering the fact that the number of non-academic staff is

greater than the academic staff; proportionate sampling was used to arrive at a sample size for each stratum to ensure fair representation. Purposive sampling technique was used because it allows the use of the researcher's judgement to choose the respondents based on the need of the study, which in this case is to select those that have shopped online even if it is once.

The instrument used for data collection for this study is a structured self – administered questionnaire with close ended questions and is designed in line with the objectives of the study. The study adapted the factors influencing online shopping behaviour scale developed by Al-Jabari, (2013). However, the scale was significantly modified to fit with the Nigerian context, and also take into consideration the marketing mix variables in relation to the evaluative criteria that lead to purchase intention.

A pilot study was conducted to test the validity and reliability of the instrument before the main research to assist the researchers gain some insights into the real condition of the full-scale study. Subsequently, out of the eighty questionnaires that we administered, seventy were used for analysis. We therefore subjected the data to reliability assessment. The reliability results indicate that all the research items have a Cronbach's alpha coefficient and composite reliability values above 0.70.

4. FINDINGS AND DISCUSSION

Data were analysed using PLS-SEM with the aid of software application - Smart-PLS 3.0 (Ringle, Wende & Becker, (2015). PLS-SEM is analysed and interpreted in two phases which are: assessment of measurement model where indicator item reliability, internal consistency reliability, as well as the construct, convergent and discriminant validities are examined. Assessment of structural model involves examining the significance of the path coefficients, coefficient of determination, individual variable effect size, and model of predictive relevance.

The study examined the mediating effect of purchase intention on the influence of subjective norm on online shopping behaviour of staff of University of Maiduguri. We employed the internal consistency approach to determine the reliabilities of all the items of the constructs used in the study (Hair, Hult, Ringle, & Sarstedt, 2017).

Results on Table 1 presents the Cronbach's alpha, composite reliability, and average variance extracted (AVE). The Cronbach's alpha coefficient and composite reliability values are all above 0.7 which are within acceptable ranges, furthermore, the values of AVE have surpassed the 0.4 threshold. We tested the validity of the

constructs by assessing the discriminant validity using the Fornell and Larcker, (1981) criteria. Table 1 shows the AVE values for the constructs to be from .500 to .536 which suggests acceptable values. As shown on Table 1 the square roots of AVE are greater than AVE. Additionally; the square root of the AVE of each construct is greater than the absolute values of the standardised correlation square of the given construct. This indicates that all constructs differ from one another consequently, discriminant validity is supported.

Table : Cronbach's Alpha, Composite Reliability and AVE and Square Roots of AVE

Variables	Cronbach's Alpha	Composite Reliability	AVE	Square Roots of AVE
Online Purchase Intention	0.814	0.864	0.536	0.832
Online Shopping Behaviour	0.769	0.897	0.500	0.707
Perceived Behavioural Control	0.827	0.837	0.536	0.732

Source: Survey Results, 2019

The coefficients of determination (R²) of the endogenous variables in this study are 0.571 and 0.658 respectively for online purchase intention and online shopping behaviour which indicate moderate predictive quality (As shown on Table 2).

Table 2: Assessment of Coefficient of Determination (R²)

Variable	Variable Type	R Square	R Square Adjusted
Online Purchase Intention	Endogenous	0.571	0.564
Online Shopping Behaviour	Endogenous	0.658	0.651

Source: Survey Results, 2019

As reflected on Table 3, the effect sizes for online purchase intention and perceived behavioural control are 0.716 and 0.011. The result reveals that online purchase intention has substantial effect on online shopping behaviour; however, perceived behavioural control attitude has a small effect size.

Table 3: Assessment of the Effect Size (f²)

Variables	f ²	Effect Size
Online Purchase Intention	0.716	Substantial
Perceived Behavioural Control	0.011	Small

Source: Survey Results, 2019

We used Stone - Geissser test to assess the Q² via blindfolding method and results on Table 4 show Q² values of 0.278 and 0.309 for online purchase intention and online shopping behaviour respectively. This shows the relevance of the variables to the problems investigated; therefore, the results provide clear support for the model's predictive relevance with regards to the endogenous constructs.

Table 4: Assessment of Predictive Relevance (Q²)

Endogenous Variables	SSO	SSE	Q ² (=1-SSE/SSO)
Online Purchase Intention	1,524.000	1,100.307	0.278
Online Shopping Behaviour	508.000	351.228	0.309

Source: Survey Results, 2019

Result of Test of Hypotheses

Furthermore, we used Smart PLS 3.0 in the analysis of the data to test the hypotheses and the results of the direct effects which are presented on Table 5 reveal that Perceived Behavioural Control (PBC) does not significantly affect Online Shopping Behaviour (OSB) where ($\beta = -0.056$, $t = 1.214$, $p > 0.10$). On the other hand, Purchase Intention (PI) significantly affects Online Shopping Behaviour (OSB) where ($\beta = 0.759$, $t = 11.318$, $p < 0.001$). Additionally, it reveals that Perceived Behavioural Control (PBC) does not significantly affect Purchase Intention (PI) where ($\beta = -0.102$, $t = 0.989$, $p > 0.10$).

Based on this finding, this study fails to reject the null hypotheses related to direct effect which is Ho1: Perceived Behavioural Control has no significant influence on online shopping behaviour of staff of University of Maiduguri.

Table 5: PLS Path Analysis for Direct Effects

Variables	Original Sample	Sample Mean	Std. Dev.	T Stat.	P Values	Significant
PI =>OSB	0.756	0.759	0.067	11.318	0.000***	Yes
PBC=>PI	-0.098	-0.102	0.099	0.989	0.161	No
PBC=>OSB	-0.065	-0.056	0.054	1.214	0.112	No

Source: Survey Results, 2019

The results on Table 7 reveal insignificant indirect effect; consequently, signifying potential non-mediation effect of Purchase Intention (PI) on the influence of perceived behavioural control on online shopping Behaviour (OSB) where ($\beta = -0.077$, $t = 0.968$, $p > 0.010$).

Therefore, the hypothesis related to indirect effect which is Ho2: Purchase intention does not mediate the influence of perceived behavioural control on online shopping behaviour of staff of University of Maiduguri is rejected. However, based on Zhao, Lynch and Chen (2010) classification of mediation, Ho2 is classified as no-effect nonmediation.

Table 7: PLS Path Analysis for Indirect Effect

Variables	OS	SM	Std. Dev.	T Stat.	P Values	Significant
PBC=>PI =>OSB	-0.074	-0.077	0.076	0.968	0.167	No

Source: Survey Results, 2019

Table 8: Summary of Hypotheses Testing

	Hypotheses	Decision
Ho1	Perceived behavioural control has no significant influence on online shopping behaviour of staff of University of Maiduguri	Supported
Ho2	Purchase intention does not mediate the influence of perceived behavioural control on Online Shopping Behaviour of staff of University of Maiduguri	Supported

Source : Survey Results, 2019

Discussion of Findings

The amount of variance explained by the exogenous variables on their endogenous variable which indicates their predictive power are 0.571 and 0.658 respectively for purchase intention and online shopping behaviour. This shows that the exogenous variables for this study explain 57% and 65% of the problems of purchase intention and online shopping behaviour consequently, the rest are left for future research. With regards to effect size, purchase intention has the greatest effect size of 0.716 and the highest T value of 11.318 which indicates that it has substantial effect on online shopping behaviour.

Influence of Perceived Behavioural Control on Online Shopping Behaviour

This study found insignificant influence of perceived behavioural control on online shopping behaviour which conforms to the findings of Londono-Roldan *et al.*, (2018), Al-Jabari (2013), Jamil, (2012) and Al-Muala, (2010). Perceived behavioural control is viewed as a factor that leads to behaviour change, implying that the confidence consumers have in their capability to buy goods and services using the internet positively influence their purchase decisions. However, the result of this study indicates it has no influence on online purchase. A reason may perhaps be because the sample respondents are conversant with computer technology and the use of internet, hence do not face obstacles or view the process as burdensome.

Conversely, the findings are not consistent with those of some previous studies which found significant effect of perceived behavioural control on online shopping behaviour (Redda, 2019; Rehman *et al.*, 2019; Kashif *et al.*, 2018; Yakasai and Yusoh, 2015; Mohammed, *et al.*, 2012; Jamil, 2012).

Mediating effect of Purchase Intention on the Influence of Perceived Behavioural Control on Online Shopping Behaviour

The influence of perceived behavioural control on online shopping behaviour is not mediated by purchase intention as revealed by the findings of this study which is in line with the findings of Londono-Roldan (2018). The standardised paths of perceived behavioural control to intention ($\beta = -0.102$, $t = 0.989$, $p > 0.10$) and perceived behavioural control to online shopping behaviour ($\beta = -0.056$, $t = 1.214$, $p > 0.10$) are both insignificant which shows that perceived behavioural control has no direct influence on intention neither does it directly influence online shopping behaviour. Furthermore, the standardised path of perceived behavioural control to online shopping behaviour through purchase intention ($\beta = -0.077$, $t = 0.968$, $p > 0.10$) is insignificant therefore purchase intention has no mediating effect on the influence

of perceived behavioural control on online shopping behaviour. Additionally, the negative beta coefficient which is normal in PLS-SEM analysis is suggestive of the presence of stronger predictors.

Once again, perceived behavioural control which is seen as a factor that also leads to behaviour change, implying that the confidence consumers have in their capability to buy goods and services using the internet positively influence their purchase decisions. However, the results of study reveal it has no influence on online purchase directly. However, a reason may perhaps be because the sample respondents are conversant with computer technology and the use of internet, and hence do not face obstacles or view the process as burdensome.

5. CONCLUSION

Online shopping behaviour of consumers' remains significant to the success of online businesses thus understanding the drivers of the behaviour is paramount to online marketers so as to sustain being the preferred choice of consumers. Overall, the study reveals that perceived behavioural control has no direct and significant influence on online shopping behaviour, also purchase intention has no mediating effect on the influence of perceived behavioural control on online shopping behaviour of staff of university of Maiduguri.

6. RECOMMENDATIONS

As a result of the findings of this study, the following recommendations are proffered:

- i. Online marketers should consider studying other predictors in a bid to ascertaining stronger predictors of online shopping behaviour aside perceived behavioural control but should focus on maintaining universal user experience and ease of access to accommodate as many users as possible regardless of their competence.
- ii. Additionally, online marketers should continuously put in concerted efforts in a bid to determining motivators of consumers' online purchase intention. Information is a key motivator of purchase intention, as such, online marketers should make efforts in providing up to date and detailed information to the consumers.

Research Implications

The use of a mediator to determine the degree to which the variable mediates the relationship between two variables is an empirical contribution to knowledge,

furthermore, investigating the plausibility of third variable explanations for the results of previous studies. Similarly, the use of PLS-SEM in multivariate analysis study of this nature is considered a methodological contribution.

The empirical investigation of online shopping behaviour in Maiduguri is a contribution to knowledge, since it has been studied in different counties but not much is known on the online shopping behaviours of consumers in Nigeria generally and specifically in Maiduguri.

Limitations

The study has some limitations that can serve as suggestions for future research, nevertheless they should be considered with caution. Cross-sectional research design was used which focuses data collection at single point in time (September-November, 2019) without taking into consideration changing nature of human behaviour. Additionally, this study used a single method of data collection, which is the use of questionnaire, certainly, more in-depth information will be gained from quantitative and qualitative data. In addition, the study utilised purposive sampling procedure which decreases the generalizability of findings.

Similarly, another limitation is in terms of the sample size which is rather small and the otherwise limited diversity in the population category. With regards to the population of the study, varied categories with different characteristics should be studied and a sampling method that is suitable for generalisation should be employed. Finally, dearth of previous research especially on the mediating role of purchase intention was a limitation.

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