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**THE STUDY OF ADOPTING ECOMMERCE
PLATFORMS IN GHANA BASED ON
IMPULSIVE BUYING BEHAVIOUR THEORY.**

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Abstract

Purpose: This study concentrated on the adoption of e-commerce platforms base on impulsive buying behavior, using technology for sustainable development of governments' institutions, small medium enterprises and individual consumers or customers in Ghana.

Methodology: The research adopted quantitative approach design and primary data were collected based on survey questionnaire and respondent were selected using non- probability sampling technique where respondent is selected based on convenience sampling technique. The focus of this research was on the buyer (the individual who is involved in any buying and selling of goods over the internet). The theoretical deduced model fit is tested using survey data obtained from five hundred (500) respondents of E-commerce adoption platform in Ghana.

Findings: Findings revealed that the model for this study is not a very good fit to describe the factors affecting the behavioral intention to adopt e-commerce in Ghana.

Keywords: *Impulsive Buying, E-commerce Adoption, Behavior, Ghana, Platform.*

Introduction

E-commerce was defined by Kalakota and Whinston (1997) as a means of transacting business over the internet. It is not only a creation but a combination of creativities (Prescott and Conger, 1998; Van Slyke, 1997; White et al., 1998). Institutions however have the mandate to choose the kind of e-commerce to be adopted as they are often guided by the perceptions of authors Chowdhuri (2005). Research that have already been conducted show that online appraisal functions significantly in shopping behavior of consumers (Yin et al., 2014; Mudambi and Schuff, 2010; Zhang et al., 2014).

Several organizations around the world have embraced electronic ways of doing business. Electronic commerce (EC) growth is rapid and taking place in a lot of directions that learned people in e-commerce are at a loss to find already established business approaches for comparison (Bingi et. al. 2000). The mode of transacting business and meeting the expanding demands of Purchasers for many institutions have been changed by ICT (Boateng and Molla, 2006). E-commerce provides institutions and people the ability to conduct business anywhere and anytime at an affordable cost (Bingi et. al., 2000).

Most businesses engage in commercial activities over the internet; hence the internet is used as a means of conducting business in this computer age (Corbitta et al., 2003). A major characteristic attributed to online shopping could be impulsive buying. Impulsive buying could be said to be one of the characteristics associated with online shopping which reflect tendencies to behave on felt urges with unconsciousness and unexpected urges to do instant buying.

Online shopping is known to present an untouched platform for behaving impulsively when it is compared to traditional strategies (Liu et al 2013). Buying impulsively is a purchase behavior that is not planned (Mohan et al., 2013).

Customers often purchase products online without planning after exposure to price promotion and attractive appearance of products. Buying impulsively is viewed to be grouped into 3 main features which includes unplanned. Decided on the spot and result of an exposition to a stimulus (Piron, 1991). This attitude of buying is common in online settings, especially among internet shoppers, and also common in-built stores (Donthu and Garcia, 1999). An estimation made by Hausman (2000) was that, about 30–50% of all retail sales originate from impulsive attitude of buyers while about 90% of customers render impulsive purchasing an occasional event. He went further to say that 40% of all money that is spent on sites that engage in e-commerce is associated with purchasing impulsively (Verhagen, 2013).

The relevance of electronic business in third world countries like Ghana cannot be underestimated. Online business is a useful development device which has been in large part recounted as a revolution for carrying our enterprise across the globe (Saffu et. al., 2007). Development of e-commerce is growing at a rapid rate in Ghana, with a lot of businesses migrating gradually to online platforms. This is however because companies aim to be firm-specific. Businesses generally move from offline to online businesses in order to facilitate business process. Customers make unplanned purchases on the internet sometimes. This study therefore conceptualized that the model used in this study are not a very good fit to describe the factors affecting the behavioral intention to adopt e-commerce. This study recommends this model for more research in the future because the proposed model requires further testing and thorough empirical validation.

Literature review

CONCEPTUAL REVIEW

E –Commerce Adoption

There is no generally recognized definition of e-commerce. Kalakota and Whinston, (1997) however presented e-commerce as a transaction of information or goods and services via the internet. Reynolds (2000) use the term to cover not simply commercial transaction as stipulated earlier by other studies. E-commerce implementation in some small organizations or companies is overseen due to its advantages (Kaynak et al., 2005). Small companies necessitate to know the merits of e-commerce before they fully intend to apply it in the day-to-day activities of their organization. Electronic commerce is to some extent, an apparatus for undertaking e-transactions (Liu, 2004). To under-developed and developing countries, especially in Africa, e-commerce is a vital tool for development and many researchers have emphasized the benefit developing countries derive from application of e-commerce adoption (Moodley and Morris, 2004; Molla and Licker, 2005; Kshetri, 2007; Datta, 2011).

The similarities of the above definitions and explanations of the meanings of e-commerce adoption stated that, e-commerce is a transaction via electronic media such as the internet. Furthermore, the second definition differs from the first, due to the fact that electronic commerce is a tool used by both developing and developed countries to advance themselves. A lot of researchers have confirmed such concepts about the benefits of e-commerce to developing countries like Ghana.

Despite the similarities and differences that exist in the definitions set above, this study focused on looking at how e-commerce adoption influences people in Ghana and how its citizens can take advantage of the internet to carry out various forms of transaction to ensure capitalization of the economic potentials of the nation and also to develop e-commerce platforms.

Impulsive Buying Behavior

Impulse buying happens at the time the consumer feels an urge to make a purchase on an e-platform like alibaba and tonaton without really thinking about it (Sharma et al, 2015). Consumers temporarily fall out of control or become unconscious when making a payment which they usually pay less attention to the aftermath. As active rather than cognitive processes, real impulse buying decision making is often very short and at once (Sharma et al, 2015). The impulsive attitude indicates that it really occurs at the time a consumer is conversing and interacting with the online shopping platforms. Subsequently, the only prevailing information apart from the memory is the prevailing information at the shopping community. Hence a consumer could think that in-store information plays a potential role (J.K et al, 2018).

E-COMMERCE ADOPTION STRATEGIES

With increased penetration of the Internet, companies are compelled to adopt e-business strategies to reduce cost and remain competitive (Yee-Loong et al., 2014).

Scarcity

Justice seriously affects the adoption of e-commerce. The concept of scarcity is highly valued in classical economics. Microeconomic theory shows that if everything else remains the same, the

deficit becomes a force for establishing trade-offs between supply and demand for a product in a free market. Limiting the deficit and keeping prices up so that the supply of the product is equal to the expected demand.

Serendipity Information

Detection and search are two different ways to get online information. Consumers enter specific sentences or words into a search engine to search for information. When people accidentally find interesting information, they "open" information. Due to the popularity of smartphones, the online shopping environment is very convenient, information that is relevant to consumers and randomly discovered is called random information (Tom et al., 2017). Therefore, random detection is part of the web browsing experience (Rice & Keller, 2009).

Shopping Value

Shopping continues to buy. The value of the purchase is the consumer's rating (Barbin & Darden 1994). People see the value of shopping as a medium for positive emotions, such as happiness, pleasure, (healing) or getting how they are needed (utilitarianism). Through an in-depth study of the value of utilitarianism and hedonistic shopping, retailers can use an effective approach to realistically existing purchasing tasks to meet consumer demand.

THEORETICAL REVIEW

Technological Acceptance Model (TAM)

In the earliest of 1985, Fred Davis suggested the technology acceptance model (TAM). The model sought to critically look at the middle or urgent role of the notion of easy use of information system and its benefits online with the characteristics of information system that is the external variables hence the likelihood of the system which could be used.

Cognitive Emotion Theory (COE)

COE is normally tested to show a relationship that exist between online shop and consumer online who are taking part in e-commerce activities that relays cognitive emotion theory. It is a model that was developed to show how online shops, their attractiveness and easy access and use, their enjoyment and website communication style have direct relationship with online e-commerce. Consumers most often act very impulsively when transacting on e-platforms induced by easy access to information systems and products and ease of purchasing a product.

Social Cognitive Theory

The theory explains human behavior as a triadic, dynamic and reciprocal communication of personal factors, behavior and social network (Bandura, 1989). All other elements such as self-efficacy and outcome expectations that affect human interaction is a subset of this theory. Self – efficacy is defined by some researchers as human ability to arrange and discharge duties judiciously. Hence an outcome expectation is adjudication of assumable consequence that results in production (Bandura, 1997).

Theory of Planned Behavior

This theory is a highly researched one which is proposed to indicate and show behaviors over different settings. Generally, it is crafted to elucidate a lot of human behavior (Ajzen, 1991). It has

been indicated as one of the very convincing theories that predicts human behavior, thus it has been shown to indicate a vast variety of attitudes. Planned theory suggest that, particular pertinent convictions convince attitude and perceptions (Ajzen, 1991). The founders of this theory said, that there are types of beliefs and convictions that are in the theory of planned behavior, namely, attitude, subjective norm and perceived behavioral control.

Theoretical framework

The conceptual framework serves to create an overview of interlinked activities that aim to achieve a specific goal; for example, Adoption of E-commerce. The framework can facilitate and structure an approach that can be both measured and repeated. Figure 2.1 illustrates the process of mapping specific action points to respective stages of developing a framework proposed by the researcher.

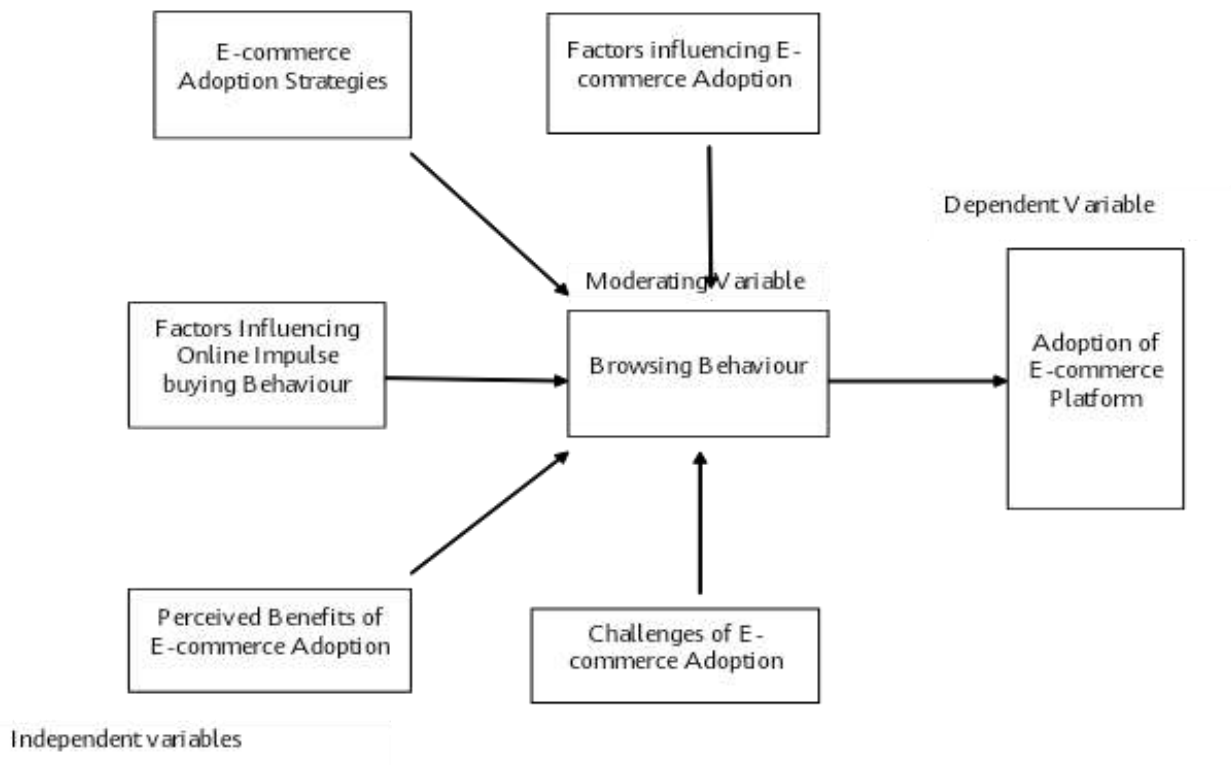


Figure 1: conceptual framework

Hypothesis development and correlation analysis summary

The table provides a summary of the Spearman correlation analysis used to test the relationships among the constructs, while the proposed model suggests a positive relationship between all constructs and Behavioral Intention. It appears that the data do not support a significant relationship between these concepts. However, significant relationship can be found between performance expectancy, voluntariness of use, perceived challenges, and perceived benefits on intention to adopt e-commerce. Unfortunately, no significant relationships can be found between

social influence, Perceived awareness/education and Experience with respect to Behavioral Intention to adopt e-commerce.

Table 1: Summary of Hypotheses Testing

Hypothesis	Relationship Tested	Results
H1	Social Influence is positively related to intention toward using e-commerce	Null hypothesis is Supported ($p > .05$)
H2	Voluntariness of Use is positively related to intention toward using e-commerce	Alternate hypothesis is Supported ($p < .05$)
H3	Perceived Benefit is positively related to intention toward using e-commerce	Alternate hypothesis is Supported ($p < .05$)
H4	Perceived Challenges is positively related to intention toward using e-commerce	Alternate hypothesis is Supported ($p < .05$)
H5	Perceived awareness/education is positively related to intention toward using e-commerce	Null hypothesis is Supported ($p > .05$)
H6	Performance Expectancy is positively related to intention toward using e-commerce	Alternate hypothesis is Supported ($p < .05$)
H7	Experience is positively related to intention toward using e-commerce	Null hypothesis is Supported ($p > .05$)
H8	Experience is positively related to Voluntariness of Use	Alternate hypothesis is Supported ($p < .05$)

Methodology

The researcher adopted quantitative research design technique for the study. (Crewell, 2003; Taylor, 2005). This makes statistical analysis imperative in this study. Hence statistical package for social science (SPSS version 21) was adopted to analyze the field data and was done with aid of Microsoft Excel. The field data was adequately validated to remove possible omissions, errors, inconsistencies, and non-response. Descriptive statistics were conducted. Namely; Means, standard deviations, relative importance index and frequencies.

Our focus in this study was on the customer (the person who is involved in any buying and vending of goods and services over the internet). Therefore, the set of questionnaires was administered to

users of e-commerce in Kumasi-Ghana. The survey questions were developed based on an adaptation process of e-commerce envisaged in our proposed framework. Data was collected from May, 2018 through September, 2018. A number of (500) questionnaires were administered randomly among users of e-commerce in Kumasi-Ghana. The results for this study were presented using tables and charts. The findings were further discussed with previously done studies (Sakars,2000). Hence the study used (Amos software) to conduct exploratory and confirmatory factor data analysis (EFA, CFA) to ensure composite validity of constructs and the results of the analysis were adequately presented in this study.

RESULTS

Confirmatory Analysis Results.

The confirmatory test for **Convergent validity and Discriminant validity** results obtained from the data constructs are summarized in the tables below:

Table 2: Convergent validity

Convergent Validity	(EAS)	(VU)	(PB)	(SI)	(PE)	(PC)
AVE = $\sum x_i^2 \div N$ Value >.5	.602	.596	.588	.495	.564	.683
CR = $\sum (x_i)^2 \div (\sum (x_i)^2 + \sum \delta)$ Value >.7	.882	.898	.811	.740	.864	.915
Convergent Validity	Established	Established	Established	Partial	Established	Established

From table above, it can be seen that our constructs do in fact have convergence validity except for social influence (SI) which is slightly below the minimum in the average variance extracted (AVE).

Table 3: Discriminant validity

Construct Correlation	Factor Correlation	Correlation Squared	AVE 1 (AVEs be > r²)	AVE 2 should	Discriminant Validity
EAS <--> VU	.738	.544	.602	.596	Established
EAS <--> PC	.364	.132	.602	.683	Established
EAS <--> SI	.360	.130	.602	.495	Established
EAS <--> PE	.537	.288	.602	.564	Established
PB <--> EAS	.493	.243	.588	.602	Established
VU <--> PC	.328	.146	.596	.683	Established
VU <--> SI	.395	.156	.596	.495	Established
VU <--> PE	.505	.255	.596	.564	Established
PB <--> VU	.590	.348	.683	.596	Established
PC <--> SI	.334	.112	.683	.495	Established
PC <--> PE	.444	.197	.683	.564	Established
PB <--> PC	.341	.116	.588	.683	Established
SI <--> PE	.521	.271	.495	.564	Established
PB <--> SI	.774	.599	.588	.495	Failed
PB <--> PE	.704	.496	.588	.564	Established

It can be seen from table above that, the discriminant validity is good in other words apart from the context of PB <--> SI, there was no violation of discriminant validity. That is, both AVE estimates have to be greater than the shared variance estimate, not the average of the AVE estimates, as argued by (Bove et al. 2009). Hence, the (PB) latent variable (ξ_1) explains more of the variance in observed variable items Q46, Q56 and Q52 than the (SI) latent variable (ξ_2), despite the fact that Q46, Q56 and Q52 are supposed to be measures of (SI) (not (PB)).

Table 4: Model Identification – composite scale indicator

Convergent Validity	(EAS)	(VU)	(PB)	(SI)	(PE)	(PC)
CR	.882	.898	.811	.740	.864	.915
Factor Loadings	.939	.947	.900	.860	.930	.957
$\sqrt{(CR)}$						
Error Variance (1-CR)	.016	.053	.100	.140	.070	.043

The Composite model and their loadings with covariance suggestions

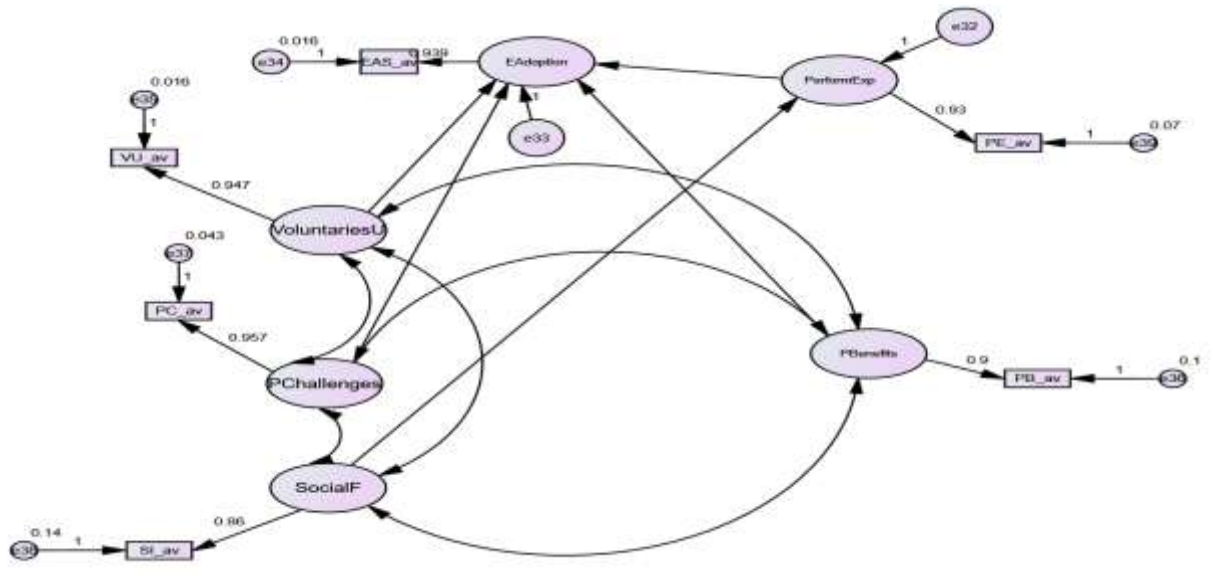


Figure 2: composite model modification

The composite model modifications however caused only slight changes in the model fit indices so there seem to be no significance in the two measures.

Table 5: model fit indices

CMIN	GFI	NFI	RMR	CFI	TLI	RMSEA
185.727	.901	.809	.101	.811	.290	.173

Some of the model fit indices obtained as shown in the table 5 above includes Normed Fit Index (NFI), Goodness of Fit Index (GFI), root mean square residual (RMR) , Non-Normed Fit Index (NNFI, also known as TLI (Tucker–Lewis index)), Incremental Fit Index (IFI), and root mean square error of approximation (RMSEA). Hu and Bentler (1999) suggested that for continuous data—RMSEA < .06, TLI > .95, CFI > .95, NFI > .90 and standard root mean square residual (SRMR) < .08. It appears only GFI, NFI is a good fit (Hair et al. (2010)) even NFI > .90 is satisfactory and SRMR are good fits and however our RMSEA, CMIN, TLI and CFI are less than the minimum limits.

Discussions

In this research, the study proposed a framework for defining and describing the adoption of e-commerce using the survey method. This framework will prove important and useful to organizations and individuals that are using or considering using e-commerce. This paper investigated the model and proposed an adaptation particularly with regards to the e-commerce in Kumasi-Ghana. Results of reliability test in exploratory analysis of the model in this study shows that all constructs are reliable and adequate. This is indicated by their Cronbach’s-alpha values ranging from 0.729 of Social Influence to 0.912 of Perceived Challenges. The values for the factor loadings on each of the constructs was higher than our set recommended benchmark of 0.6 and also in the reliability test on the constructs. Following results from the regression analysis, the study concluded that Voluntariness of Use (VU), Perceived Challenges (PC), Social Influence (SI), Performance Expectancy (PE), Perceived Awareness (PA), Experience (E), and Perceived Benefits (PB) affect e-commerce adoption in different ways.

The study found out that Social influence, Perceived Awareness and Experience (as our objective one (Facilitating factors) does not have direct relationship with the behavioral intention of adopting e-commerce) as suggested by the previous model (fig. 2). However, an indirect relationship between Experience and intention to adopt e-commerce was established. Also, significant positive relationship can be seen between Voluntariness of Use (VU) [as a main measure of impulse buying influence], Perceived Benefit (PB), Performance Expectancy (PE) and Perceived Challenges (PC) in influencing e-commerce adoption in Cote d’Ivoire. Results of the regression analysis have only 44% supported for the model. This is a reasonable support for the model.

Discriminant validity establishment is crucial for conducting latent variable analysis (Bollen, 1989; Fornell and Larcker, 1981). Without it, researchers cannot be certain whether results confirming hypothesized structural paths are real or whether they are a result of statistical discrepancies.

Perceived Awareness (PA) and Experience (E) have been excluded from the structural equation modeling with Amos due to their very poor contribution to the default model.

Validity test in confirmatory analysis (CFA) and structural equation modelling (SEM) shows that the Social Influence failed to achieve the minimum threshold for AVE in the measure of convergent validity and also the variance between Perceived Benefit and Social Influence also fell below the minimum required in their measure for discriminant validity. However, Voluntariness of Use (VU), Perceived Benefit (PB), Performance Expectancy (PE) and Perceived Challenges (PC) showed very good validity results both convergent and discriminant validity test. These also confirms their similar influence on e-commerce adoption as obtained from exploratory factor analysis (EFA). Hence the study concludes that Voluntariness of Use (VU), Perceived Benefit (PB), Performance Expectancy (PE) and Perceived Challenges (PC) have positive influence on intentions to adopt e-commerce in Ghana.

Recommendation

It is suggested that managers should create useful Ecommerce Websites to make consumers habitually use Ecommerce platforms for buying. Also, Businesses should give consumers free delivery option and help people in finding the best product at giving price. They need mostly to know the facilitating conditions links to online platforms buying. That means companies must provide support to individual users to help them complete the online transaction if they encounter any problems. They also need to provide some tutorials on how to use such Ecommerce platforms tools for online buying to attract more customers and convince individuals that new technology will be useful and user-friendly, and will fulfill their requirements in a best possible way.

As African country, Ghana is a collectivistic society, consumers make decisions in group and discuss options with other people before making a buying decision. Therefore, managers need to have a special advertising policy which cover all, country, group or family members and inspire them to a buying decision. Also, Managers need to provide detailed information and help customers about the products and services provided by the online platforms so that they can build trust in these young developing country which is Ghana. Finally, managers should be particular to address gender issues by providing special products at the right prices to males and female, and doing so managers can segment very well the customer market according to the gender and moreover master the overall market.

Suggestion for Future Research

Most of the model fit indices obtained after an extensive modeling and improvements with covariance was however below the optimal requirement. This study concluded that this model is not a good fit to describe the factors affecting the behavioral intention to adopt e-commerce. We recommend this model for more research in the future because the proposed model requires further testing and thorough empirical validation.

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