



# **Influence of Performance Expectancy and Government Regulations on Electronic Commerce Adoption in Nigeria**

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**Abstract:** *This study focused on the influence of performance expectancy and government regulations on electronic commerce adoption in Nigeria. The study adopted the cross-sectional survey method in the generation of data. The target population of the study consisted of the Academic staff of Abubakar Tafawa Balewa University Bauchi. The number of academic staff gave a total population of 700 Staff. The sample size was obtained using the Krejcie and Morgan (1970) table for determining minimum returned sample size for a given population. For our population, the table placed our sample size at two hundred and forty eight (248). After data cleaning, only data of 213 respondents were finally used for data analysis. Descriptive statistics and Spearman's rank correlation were used for data analysis and hypothesis testing. Empirical results confirm that performance expectancy and government regulations significantly influenced electronic commerce adoption in Nigeria. The study recommended that online retailers should organize workshop and create public awareness on the benefits of e-commerce in Nigeria and as well providing the products and services that can meet the requirements and expectations of the consumers. Government through its agencies should provide technology infrastructures that can facilitate the ease and secure use of e-commerce platforms in Nigeria. A lot should be done to regularly update the framework to keep up with the changing environment of business.*

**Keywords:** *Performance Expectancy. Government Regulations and Electronic Commerce*

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## **INTRODUCTION**

The field of electronic commerce has been the subject of many contemporary researches (Prashant, 2009; Kim et al., 2009; Wang et al., 2010; Roca et al., 2009; Martín & Camarero, 2009; Pereira et al., 2016; Safa & Ismail, 2013; Pilík et al., 2017a). Some of these studies have dealt with factors concerning trust, loyalty and riskiness in e-commerce during online shopping

processes. This research has also built up models of shopping behavior based on factors currently influencing the whole online process of electronic commerce.

With the global development, electronic commerce has increased considerably. According to the E-business Index Report 2018, E-commerce Association estimated that the growth rate of e-commerce in 2017 compared to the previous year was over 25% and forecasted this trend would continue to experience growth in the following years. The development of e-commerce in recent time confirms that the trend of online shopping has become more and more popular in Nigeria. The retailing channel attracts lots of attention from retailers and businessmen because of its significant impact on other traditional channels (Doan, 2020). Further, its benefits such as ease for shopping and price comparison, 24/7 service act as stimulants to internet shopping. Singh et al. (2017) emphasized that to boost the intention of shoppers is a strategy of online firms to improve profits.

According to Meher and Burhan (2020), almost all kinds of business organizations are trying to adopt online transactions. Some business elements, like finance, production, transportation, payment systems, electronic fund transfer, supply chain management, internet marketing, online transaction processing, electronic data interchange, automated inventory management systems, and automated data collection systems have a significant impact on electronic commerce in Nigeria. E-commerce is conducive to decreasing production costs, improving productivity, increasing business communication, ensuring quality products and services, and improving overall business performances. It also helps to come up with new ideas and provide an innovative way of doing business. As a result, e-commerce has a great and significant impact on businesses (Meher & Burhan 2020)

According to Doan (2020), Internet has brought rapid development to electronic commerce business. According to data from Internet World Stats, 52% of the world population is internet users in 2018. This shows enormous potential of online shopping. Specifically, in the recent years, online shopping has grown dramatically. According to eMarketer, global online sales reached 2,300 billion US dollars in 2017 and is anticipated to keep growing to be 4,880 billion US dollars in 2021 (Doan 2020).

According to Gabriel et al, (2016), a complete online shopping and e-commerce transaction consists of series of actions, especially: (1) the customer searching for the desired product online (2) making a choice and placing the order online (3) the payment stage (which could be done online or offline) and finally (4) the delivery of the products. These can be referred to as the major stages of a typical ecommerce transaction. Online vendors are therefore faced with the responsibility of ensuring that these four major stages operate in a seamless manner that creates a pleasurable and functional shopping experience for online customers. Online shopping has experienced a rapid growth during the recent years due to its unique advantages for both consumers and retailers, such as shopping at round the clock facilities, decreasing dependence to store visits, saving travel costs, increasing market area, decreasing overhead expenses and access to multiple options (Gabriel et al, 2016).

The government regulations deal with the regulation of E-Commerce as it relates to trading practices in many diverse communities and practices that have long existed before the advent of E-Commerce and these regulations have a lot of influence on the use of e-commerce in

Nigeria. The financial framework deals with the need to encourage the development of E-commerce by making banking procedures within developing countries to be aligned compatible with digital trade transactions, so that consumers and buyers can easily make purchases locally through the Internet. Most African countries are yet to legalize digital signatures and contracts as well as intellectual property rights and consumer protection in digital arena.

The formation of performance expectancy was based on several constructs from a number of technology related models and theories. Performance expectancy is comparable with perceived usefulness from Technology Acceptance Model, extrinsic motivation from Motivational Model, job-fit from Model of PC Utilisation, relative advantage from Innovation Diffusion Theory, and outcome expectations from Social Cognitive Theory (Venkatesh et al., 2003). The concept of performance expectancy emphasizes the extent of individual's perception of the usage of technology that could improve their performance while performing an action (Doan, 2020).

This paper would provide answers to the following research questions:

- i. What influence does performance expectancy have on E-commerce adoption in Nigeria?
- ii. What influence does government regulations have on E-commerce adoption in Nigeria?

## **Literature Review**

### **Theoretical Reviews**

#### **Unified Theory of Acceptance and Use of Technology (UTAUT)**

Based on the work of Venkatesh et al., (2012), Unified Theory of Acceptance and Use of Technology (UTAUT) Model in e-commerce adoption which was modified by Venkatesh et al., (2012) from the original UTAUT model is used for this research.

The concept of the unified theory of acceptance and use of technology (UTAUT, Venkatesh et al., 2003) serves as a basic model and has been applied to various studies that use basic technology in both organizational and non-organizational settings. There is a lot of research on the application and replication of all models or parts of models in organizational settings that have contributed to strengthening generalizations (Venkatesh et al., 2012).

Unified Theory of Acceptance and Use of Technology (UTAUT) is a theory about the acceptance of the latest technology that was first developed by Venkatesh et al., (2003). as a connection of eight previous theories, namely Theory of Reasoned Action (TRA), Theory of Planned Behavior (TPB), Technology Acceptance Model (TAM), Motivational Model (MM), Combined TAM-TPB (C-TAM-TPB), Model of Personal Computer Utilization (MPCU), Innovation Diffusion Theory (IDT), and Social Cognitive Theory (SCT). The UTAUT model was developed with four types of core constructs, namely expectations for performance (expectancy performance), expectations for effort (social expectancy), social influence (social expectancy), and conditions support (facilitating expectancy).

#### **Concept of Online Shopping**

According to Gabriel et al (2016), online shopping refers to the shopping behavior of consumer in an online store or a website used for online purchasing purposes. Online shopping is one of the widely and commonly used mediums for convenient shopping. One advantage of internet shopping is that it provides the consumers with detailed information and multiple choices so

that they can compare products and prices. The more the choice and convenience, the easier it is to find what you are looking for online (Butler & Peppard, 2018). It has been seen that online shopping provides more satisfaction to the modern day consumers who are seeking convenience as well as speed (Yu & Wu, 2007). Online shopping has experienced a rapid growth during the recent years due to its unique advantages for both consumers and retailers, such as shopping at round the clock facilities, decreasing dependence to store visits, saving travel costs, increasing market area, decreasing overhead expenses and access to multiple options. The Internet has made online shopping not only a possibility but also a huge success contributing to economies around the globe.

### **Motivation for Online Shopping**

According to Gabriel et al (2016), there are various measures used to probe consumers' online involvement, the most in-depth dimensions identified are entertainment gratification, in formativeness gratification and web irritation. The entertainment gratification construct indicates the extent to which media users are entertained by the web media. When shopping online, consumers expect a certain level of satisfaction from the entire experience which if provided by the web media serves as a motivation for them to return. Sites that provide superior entertainment value have a higher propensity to motivate consumers to use the media more (Gabriel et al 2016).

As Internet usage is increasing, so is online shopping particularly in those countries whose shopping infrastructures are well developed (Salehi, 2012). Customers can shop at any time and have access to products not available in their geographic region. Moreover, they are now able to access the Internet, not only from their personal computers, but also from advanced electronic devices such as Palm Pilots and mobile phones. The growth of Internet technology in Malaysia has enormous potential as it reduces the costs of product and service delivery and extends geographical boundaries in bringing buyers and sellers together (Salehi, 2012). Also, due to an increase in high-speed Internet access connections, lower connection costs, and increasing consumer competence, e-commerce activity will continue to grow as the availability and ease with which the Internet provides consumers the ability to handle needed tasks increasingly develops. However, not all consumers are turning to the Internet for shopping (Gabriel et al, 2016).

### **Performance Expectancy as a Measure of Online Shopping**

According to Shin (2009), performance expectancy is defined as the degree to which an individual believes that using the system or technology will help him or her to attain gains in his job.2010). Zhou (2010) found that performance expectancy, task technology fit, social influence, and facilitating conditions have significant effects on user adoption. In addition, we also found a significant effect of task technology fit on performance expectancy. The result showed that perceived usefulness, perceived enjoyment, trust, cost, network influence, and trust have significant influence on consumer's e-commerce adoption intentions. The online shopping intention is positively influenced by: (1) the levels of performance and effort expected with regard to the transaction; (2) the level of innovativeness of users. In addition, the

innovativeness construct has a moderating effect on the relationship between performance expectancy and online shopping intention (Martín & Herrero, 2012).

HO<sub>1</sub>: Performance expectancy does not significantly influence E-commerce adoption in Nigeria.

### **Government Regulations as a Measure of Online Shopping**

Government regulations or legal framework deals with the regulation of E-Commerce as it relates to trading practices in many diverse communities and practices that have long existed before the advent of E-Commerce. The financial framework deals with the need to encourage the development of E-commerce by making banking procedures within developing countries to be aligned compatible with digital trade transactions, so that consumers and buyers can easily make purchases locally through the Internet. Most African countries are yet to legalize digital signatures and contracts as well as intellectual property rights and consumer protection in digital arena. Though there is now Cybercrimes (Prohibition, Prevention, etc.) Act, 2015 which was enacted by the former president of the federal republic of Nigeria; Dr. Goodluck Ebele Jonathan. Federal government should continue to make this cybercrime Acts 2015 more effective to encourage Nigerians to participate in online shopping.

HO<sub>2</sub>: Government regulations does not significantly influence E-commerce adoption in Nigeria.

### **Concept of E-Commerce**

According to Turbman, King, MacKay, Marshall, Lee and Viehland (2008), E-commerce is the practice of buying and selling or exchanging information, products and services over the internet and other paperless media. Huy and Filiatrault (2006) describe E-commerce as any business or economic activity that makes use of ICT-based applications to facilitate the transaction among businesses, business-to-business (B2B), individuals, customers to customers (C2C), or business to customers (B2C). E-commerce, therefore, is the umbrella concept that refers to the incorporation of a range of prevailing and new technological applications in business transactions. When the internet and the web were commercialised in the late 1990s, E-commerce technology experienced tremendous growth and has not let up the momentum to-date (Heng, 2003).

E-commerce has transformed business processes in many ways in several organizations and is expected to continue in the future (Al-Qirim, 2007). Some of these benefits include access to a wider market, improved operational efficiency, increased potential to partner with suppliers, better customer service, flexibility and accessibility among others, (Vaithianathan, 2010). Another study by Chaffey (2009), on the other hand, has distinguished the benefits of E-commerce into tangible and intangible benefits as follows: the tangible advantages include increased sales, acquisition of new customers, cross-selling, and access to new markets. The other benefits are reduced marketing cost, reduced distribution cost, and reduced advertising cost. There is also the reduction in the supply-chain cost due to shortened ordering process and reduced inventory. Businesses also experience a reduction in administrative costs. Whereas the intangible benefits of E-commerce include improved marketing communication, increased

brand awareness, ease of finding new partners, better corporate image, improved product development process, faster customer feedback, and improved efficacy of marketing information.

With the proven potential of E-commerce in improving effectiveness and productivity in various sectors, it has received an increasing amount of attention in many countries. E-commerce has changed people's lifestyle and access to modern fashion and how companies carry out their activities. Studies on the adoption of E-commerce by SMEs (Olatokun & Kebonye, 2010; Wanjau, Macharia, & Ayodo, 2012) found that the strategic technological approach adopted by users influenced the adoption of E-commerce. However, inadequate infrastructures, lack of government ICT strategies, cultural and socioeconomic issues has created significant barriers to Ecommerce technology diffusion into businesses in the emergent economies. Kabanda, (2011) found that small companies do not understand the concept of E-commerce. Their opinion is that E-commerce equals having a website and using the basic features of mobile phones.

### **METHODOLOGY**

The study adopted the quantitative research design base on the cross-sectional survey method. The target population of the study was Academic staff of Abubakar Tafawa Balewa University Bauchi. The number of academic staff gave a total population of 700 Staff. (Establishment office ATBU, 2019). The sample size was obtained using the Krejcie and Morgan (1970) table for determining minimum returned sample size for a given population. For our population, the table placed our sample size at two hundred and forty eight (248). The simple random sampling technique was adopted for the purpose of this study in order to grant the respondents, equal opportunity to be selected. Descriptive statistics and Spearman's rank correlation were used for data analysis and hypothesis testing with the aid of the SPSS Package version 23.

**Table 1. Reliability statistics for the instruments**

<b>S/No</b>	<b>Dimensions/Measures of the study variable</b>	<b>Number of items</b>	<b>Number of cases</b>	<b>Cronbach's Alpha</b>
1	Performance Expectancy	4	213	0.775
2	Government Regulations	4	213	0.821
3	E-Commerce	4	213	0.798

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*Source: Research Data, 2022*

### **Data Analysis and Results**

#### **Bivariate Analysis**

The test of hypothesis cover hypotheses Ho<sub>1</sub> and Ho<sub>2</sub> which were bivariate and all stated in the null form. We have relied on the correlation analysis. The 0.05 significance level is adopted as criterion for the probability of either accepting the null hypotheses at ( $p > 0.05$ ) or rejecting the null hypotheses at ( $p < 0.05$ ).

**Testing of Hypothesis**

**Table 2: Correlation Matrix between Performance Expectancy, Government Regulations and E-Commerce**

			E-Commerce	Performance Expectancy	Government Regulation
Spearman's rho	E-Commerce	Correlation Coefficient	1.000	.881**	.841**
		Sig. (2-tailed)	.	.000	.000
		N	169	169	169
	Performance Expectancy	Correlation Coefficient	.881**	1.000	.578**
		Sig. (2-tailed)	.000	.	.000
		N	169	169	169
	Government Regulation	Correlation Coefficient	.841**	.578**	1.000
		Sig. (2-tailed)	.000	.000	.
		N	169	169	169

\*\* . Correlation is significant at the 0.01 level (2-tailed).

**Source: Research Data, 2022 (SPSS output, version 23.0)**

The table above illustrates the test for the previously postulated bivariate hypothetical statements.

HO<sub>1</sub>: Performance expectancy does not significantly influence E-commerce adoption in Nigeria.

The correlation coefficient coefficient 0.881 shows that there is a performance expectation strongly influenced E-commerce. The p value 0.000<0.05 indicates that the influence is significant. Therefore, the null hypothesis is hereby rejected and the alternate upheld. Thus, performance expectation significantly influences E-commerce in Nigeria.

HO<sub>1</sub>: Government regulation does not significantly influence E-commerce adoption in Nigeria.

The correlation coefficient coefficient 0.841 shows that there is a government regulation strongly influenced E-commerce. The p value 0.000<0.05 indicates that the influence is significant. Therefore, the null hypothesis is hereby rejected and the alternate upheld. Thus, government regulation significantly influences E-commerce in Nigeria.

### **DISCUSSION OF FINDINGS**

The findings revealed that performance expectation and government regulations had a significant influence on e-commerce using the Spearman's rank order correlation tool and at a 95% confidence interval. This finding supports the views of Salehi (2012) whose findings indicated that the first five factors influence consumers towards e-commerce included performance expectation as well as the regulation by agencies of government.

Another study that agrees with the findings of this study is that of Gabriel, et al (2016) who suggested that e-commerce providers should introduce product reviews for their products and encourages customers who have bought and used a product to honestly share their experiences on the product page as a way to create improved customer expectations. They concluded that the issue of trust has been identified as the most relevant factor that seems to be affecting consumers' expectations on e-commerce usage. They said if the consumers trust the performance, they will be more disposed to patronizing the e-commerce sites. Also, in agreement to the findings of this work is that of Muhammad, et al (2015) whose results showed that performance expectation was considered as the most relevant factor that seems to be affecting consumer buying behaviour towards online shopping when it came to the younger generation. They concluded that if the consumers has a positive expectation from the website, they are likely to buy more from it.

Similarly, Ibikunle (2013) finding on the study issues and challenges of E-commerce in developing nations, with a focus on consumer attitude in the Nigerian market corroborates with the finding of our study as it was clear that the consumer attitude towards e-commerce is on the positive side thanks to the legal frameworks that supports it.

### **SUMMARY AND RECOMMENDATIONS**

It is without doubt that e-commerce is the way to go in our contemporary world, as it remain an important platform in human life as far as transaction is concerned. Today people are harvesting tremendously from its existence not only from buyer's point of view but also from retailer's end. Different items have been sold and bought through e-transactions. Purchasing of varieties of items from one's comfort zone at any time is no longer a struggle as compared to the traditional way of shopping but a lot still need to be put in place to build and sustain the expectations of users when it comes to performance as well as the effectiveness and efficiency of agencies of government in carrying out their oversight functions. It on this bases that this paper concludes that performance expectation and government regulation influences e-commerce adoption among Academic staff in Nigerian Higher Educational Institutions.

Based on this conclusions, the following recommendations were made:

- i. Online retailers should organize workshop and create public awareness on the benefits of e-commerce in Nigeria and as well providing the products and services that can meet the requirements and expectations of the consumers.

- ii. Government through its agencies should provide technology infrastructures that can facilitate the ease and secure use of e-commerce platforms in Nigeria. A lot should be done to regularly update the framework to keep up with the changing environment of business.

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