

# E-commerce and Business Performance: An Empirical Investigation of Business Organizations in Nigeria

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## ABSTRACT

*With precise reference to the selected supermarkets in the metropolis of Ibadan, this research paper analyzed the effect of e-commerce on business efficiency. The research sample consisted of 8 supermarkets. The researchers' standardized questionnaire was used to collect data from each operator and 5 staff, for a total of 48 respondents. Easy regression analysis was performed for the data analysis. The result showed that adoption of e-commerce has major effects on service operations, decreases in cost operations and profit levels. It was concluded that Nigerian supermarkets' adoption of e-commerce would reduce the cost of transactions, boost service operations, extend the business base, better understand international customer needs, and increase profit levels. The paper recommended that supermarket operators and workers embark on more successful training in Information Technology (IT) to further boost their results. And supermarket management should also obtain quality IT gadgets that will increase productivity and the retention of customers.*

**Keywords:** E-Commerce, Business Performance, Customer Satisfaction Organization

## 1. INTRODUCTION

In various economies and developing countries like Nigeria, e-commerce has encouraged the emergence of new technologies and business models. With the advent of online shopping, significant changes are occurring in supermarket retailing, in particular about channel growth and collaboration, a redefinition of the company reach, modeling of distribution centers and core processes, new consumer value-generating approaches, and Online collaborations. Nevertheless, over the last few years, the position of the online store itself has changed greatly (John Chituanya, 2003). Over the last year, the retail e-commerce business segment experienced massive growth through economic participation. According to Ndonga, more than one hundred companies both locally and internationally have shown renewed interest in the \$50 billion markets annually. He said the industry opened doors to the young entrepreneurs' future generation. There is no question that the electronic business industry has increased the local content percentage in its goods and services and improved local capability utilization. Gagliardone (2009) also found that the domestic economy was greatly influenced by the online retail sector in Nigeria. In the same vein, Singh (2016) claimed that e-commerce provides equal opportunities for both large corporations as well as SMEs in global markets and efficiently across international borders for regional communities and businesses to participate in

financial, economic, and cultural networks. Electronic commerce particularly for the usage of communications technologies in customers' purchasing, selling, and marketing of products and services. The Internet has brought about structural change in national economies that have been separated by barriers to cross-border trade and investment. It is separated by space, time zones, and speech and by isolating regional gaps between governments, culture, and business structures (Mohammad 2004). The value of e-commerce reduced drastically. Retailers will now promote their goods worldwide. This will significantly boost its sales and customer base. The need for e-commerce in the global competitive world is important for the survival of business organizations (Dhir, 2018). The awareness of key success factors in the implementation of e-commerce is therefore vital to business organizations' ability to tackle and step forward accordingly because failure to incorporate such factors can have significant effects on corporate results. A large number of studies were conducted to study factors affecting the use of e-commerce in small and large enterprises. However, no empirical research or little research was carried out that examined the effect of e-commerce on the performance of businesses, in particular in the Nigerian market following implementation, (Choshin & Ghaffari, 2017). This research paper is based on this fact and aims to examine the influence of e-commerce on the performance of businesses, especially about selected supermarkets in Ibadan.

## 2. LITERATURE

E-commerce began to grow rapidly and restructure various industries since the mid-1990s. Fishenden and Thompson (2013) claimed that electronic business is described simply as a commercial service transaction in an electronic format. The market and the way the business is performed are never equivalent (Chong 2008). For Holland (2018) e-commerce has also been described as electronically doing business. The text, sound, and video are electronic. This covers various operations including e-commerce, digital content supplies, e-funds transfers, e-share purchases, online bills of lading, commercial auctions, collaborative design and engineering online sourcing, public procurement, direct consumer marketing and after sales services. It includes products (consumer goods, medical devices) and services (information, financial and legal services). Pantelic (2010) described e-commerce, a process to incorporate, through computer networks and electronic technologies, all business processes, activities, and services to buy and sell products and information and funding interchange with the company partners. Also, the concept of "e-commerce processes to buy, sell, send or exchange goods, services and/or information through computer networks, including the internet" was provided by Fishenden and Thompson (2012). The growth of e-commerce as defined by Altinay (2008) in Pantelic (2010) was divided into two phases. In the US large companies with quick access to finance, primarily from external sources, have embraced "The first wave" of e-commerce. At this early point, Mahipal and Shankaraiah (2018) call e-commerce a "land grab." Around the same time, the whole new market was created, and firms that had enough capital and ability "caught the ground." Firstly, these major corporations realized and began researching and creating the possibilities that e-commerce would offer. Since most businesses rely on external investors, income is fairly low. The pressure on smaller firms was significantly stronger, with many suffering losses. Initially, it was said that the technique was simple, low-cost, and slow internet connection, mostly English pages, unstructured e-mails were used and e-commerce integration with other processes was not effective. The second phase of mobile broadband growth is marked by a technological boom after 2001 and by increased Internet speed at a low cost. The land has already been secured and the key players have moved from capturing to defending the ground. Companies have become more focused on competitive advantages and develop strategies for them. This was a requirement for smaller businesses to establish and introduce e-commerce using their internal capital. At the same time, it is important to resolve such problems resulting from the use of new technologies. Stockdale and Standing (2004) said that e-commerce should be important and noticeable to enable businesses to ascend the ladder from a simple to a more complex e-commerce level.

### 2.1 E-commerce models

Eight forms of e-commerce have been defined as follows, by Choe (2016):

- Electronic business-to-business (B2B) companies, in this case, create or electronically coordinate two or more businesses.
- Collaborative commerce (c-trade). Business partners operate electronically in this form of e-commerce. This coordination also happens through the supply chain with and between business partners.
- Business-to-consumers (B2C). In this case, the sellers are businesses that are buyers.

- Consumer to consumer (C2C). Consumer to Market. In this case, a person sells products (or services) to other individuals.
- Intra-business (intra-business) commerce. A company uses EC to improve its activities internally in this situation. A specific case is called e-commerce (B2E for its employees).
- Government-to-citizens (G2C) and others. The government in this case provides services through e-commerce technology to its residents. Governments can engage with both other governments (G2G) and businesses (G2B).
- Mobile commerce (m-trade). We label e-commerce m-commerce when it takes place in a wireless environment, such as mobile phones, for Internet access

## 2.2 Adoption of e-commerce and its impact on business efficiency

Several constructive drivers were described as supporting e-commerce adoption by business organizations (Gilmore et al, 2007). Proactive factors include widening the reach of a product to domestic and foreign markets. With a minimum capital estate, a company can easily find more buyers, best suppliers, and most appropriate business partners worldwide, rapidly at a reduced cost and shorten and eliminate distribution routes making goods more affordable and competitive (Molla and Licker, 2005) (Sajuyigbe, 2012). In terms of their export marketing strategy, Gilmore et al. (2007) defined four major factors for e-commerce, both internally and externally. "External drivers for e-commerce include product transfers and e-commerce properties, and external drivers include e-commerce infrastructure and e-commerce market." Yet Papazoglou and Ribbers (2006) suggest that a lot of companies still have a problem with implementing some kind of innovation, and e-commerce is still emerging, so they find it to be a burdening activity to establish a website. These variables involve corporate size, organizational structure and the quality of the resources; innovations that are relevant internally and externally for the company; and the world in which the company performs operations including the market, rivals, the government, etc. Throughout the broader spectrum, the acceptance of e-commerce was motivated by concerns such as technological competence, corporate size, business size, customer readiness, and competitive pressure. Gbolagade et al ( 2013) reiterated in the same vein that the acceptance of innovation culture, infrastructure, economy, knowledge and skills, accessibility, and safety level are the key factors. In a global competitive climate, the value of e-commerce to achieve the specified goals of business organizations cannot be massively overstated. Electronic commerce over the Internet has brought huge benefits, including an easy way for buyers and sellers alike to perform business transactions (Buderi 2005). Alrawi (2007) said that e-commerce customers can immediately access information and even literally check the product which is time-consuming under the conventional marketing definition. The e-commerce has changed the way the product is distributed, customers can have more choices than they could ever find and the transaction can be done 24 hours a day. E-commerce offers improved access and contact with clients that allows a deeper understanding of consumer needs and offers a product that meets them completely and allows individuals to work at home and drive less, resulting in fewer roads and lower air pollution (Allen and Fjermestad, 2001). E-commerce offers more detail. At the same time, businesses will extend their product line to include the core product with additional digital, physical, and other services (Chaffey et al . 2000). In E-commerce, there are new distribution opportunities and relatively lower international expansion (Hamad and Elbeltagi 2018), and lower inventories can be allowed by promoting the supply chain management pull process. This makes it possible to personalize the commodity and reduce the expense of inventories. According to the above literature, e-commerce adoptions by Ethiopian business organizations may reduce transaction costs, boost service operations, extend their market base, better understand international consumer needs, increase their income, reduce communication barriers and rapidly move goods. E-commerce may also allow Ethiopian companies to acquire information from international retailers on e-commerce around the globe on 24/7 about their unique consumer needs and foreign competitors.

## 2.3 Research Questions

The following questions will be answered:

- Does e-commerce usage improves service operations?
- Does e-commerce usage reduce operations cost?
- Does e-commerce usage increase profit levels?

The following hypotheses are formulated in null form.

HoI: e-commerce implementation has no significant influence on service operations

HoII: e-commerce implementation has no significant influence on operation cost reduction

HoIII: e-commerce implementation has no significant influence on profit level

### 3. RESEARCH METHODOLOGY

Eight different supermarkets (Shoprite, Honeywell, Zooma, Foodco, Feed Well, Danax, Diadem, and Gbolade Supermarket) were included in the survey. To collect data from each operator and 5 employees, a formal questionnaire developed by researchers was used, totaling 48 respondents. The answer format in the Likert format ranged from the strong agreement (5) to strong disagreement (1). A test-retest method has been used to determine the reliability of the measuring device. In verifying the authenticity of the facts and contents of the instrument, experts were provided for verification. The correlation values (Cronbach's) for calculating the precision of the scale was 0.792. The success of firms has been calculated by the economic objectives of companies such as return on investment and profitability (Thabit and Younis 2016). The scale was tested to ensure it was accurate and consistent and to provide alpha reliability of .85. Easy regression analysis was done for the data analysis.

#### Model specification

Mathematically the mode is expressed as follows;

Specific MODEL I: E-C-USAGE =  $\beta_0 + \beta_1SEOP + \epsilon$  ..... Eq1

Specific MODEL II: E-C-USAGE =  $\beta_0 + \beta_1COSR + \epsilon$  ..... Eq2

Specific MODEL III: E-C-USAGE =  $\beta_0 + \beta_1PROL + \epsilon$  ..... Eq3

E-C-USAGE = E –commerce usage

SEOP = Service operation

COSR = Cost operations

PROL = Profit level

$\beta_0$  = intercept

$\beta_1$  = regression coefficient

$\epsilon$  = error term

### 4. Data Analysis and Interpretation

Variable	SEOP	t- value	P	COSP	t-value	P	PROL	t-value	P
E-C-USAGE	0.775	8.119	P<.05	0.350	2.572	P<.05	0.537	4.382	P<.05
Coefficient	0.783			0.348			0.535		
R2	0.583			0.121			0.286		

Table 1 indicates that supermarket e-commerce adoption substantially affects business operations at a pace of 5 % ( $\beta = 0.783$ ;  $t = 8.119$ ). This means that the effects of e-commerce on business operations are strong. This result agrees with Alrawi (2007) that e-commerce has changed the way the product is distributed and customers can have more options than they could find otherwise, and purchases can be made 24 hours a day, from almost all locations. Results have shown that embracing e-commerce through supermarkets has a major effect on cost savings with a level of 5% ( $\beta = 0.348$ ;  $t = 0.121$ ). This suggests that e-commerce adoption and usage would reduce operational costs. This finding also complies with the conclusions of Nair and Kiran (2017) that e-commerce provides new opportunities for product delivery and international expansion at relatively low cost, allowing for smaller inventories by enabling



the management of the supply chain pull-type. The findings suggested that supermarket e-commerce adoption has a major effect at a point of 5 % on income with ( $\beta=0.535$ ;  $t=0.286$ ). This indicates that e-commerce adoption will significantly increase the degree of profitability.

## 5. CONCLUSIONS AND RECOMMENDATIONS

This study examined the effects of e-commerce on business performance with particular reference to selected supermarkets in the city of Ibadan. The analysis indicates that the adoption of e-commerce has an important impact on service operations, efficiency gains, and profit levels. The inference is that Nigerian markets adopting e-commerce would cut costs for purchases, increase service operations, extend their consumer base, boost awareness of international client's requirements, and increase profit rates. E-commerce has been described as an effective platform for Nigerian supermarkets to obtain knowledge from international distributors all over the world 24/7 about their unique consumer needs and foreign competitors.

It was advocated that supermarket managers and workers undergo more successful IT training to further boost their performance. And supermarket management should also include quality IT tools that improves productivity and retention of customers.

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