

Effect of E-commerce on Organizational Performance: A Review**By****Shukurat M. Bello PhD¹, Umar M. Umar², Zakariyya Musa³, Muhammed L. Tijjani⁴,**

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Bayero University Kano^{1,2,3,4}emumar9@gmail.com**Abstract**

E-commerce is an important factor that can contribute to strengthening organizational performance. This study examined the effect of e-commerce on organizational performance. As a conceptual paper, this research utilized a structured literature review to analyze the extant literature, empirical studies, and explore the theory underpinning e-commerce and organizational performance. The formulation of the framework is based on a review of the e-commerce and organizational performance literature. If this research framework is validated, it provides an avenue for organizations to develop new strategies for enhancing organizational performance. The findings also revealed that e-commerce tools in organizations are necessary for enhancing performance.

Keywords: E-commerce, social media, mobile commerce, organizational performance, Technology

1.0 Introduction

Organizational performance has gained considerable traction in recent years (Akbar et al., 2021; Qureshi et al., 2021). Organizational performance is a fundamental outcome variable in business and management research, with applications in various areas ranging from human resources and marketing to operations management, international business, strategy, and information systems (Gandolph, 2022). Corporate performance is equally important to practitioners and academics in the modern business era, and some researchers have broadly analyzed firm performance in terms

of financial and non-financial indicators (Han & Hong, 2019; Qureshi et al., 2021). However, corporate managers usually employ specific performance indicators, such as sales increment, increased market return, investment growth, and return on investment, on a year-to-year basis to measure financial performance (Combs et al., 2006; Rajan et al., 2007). Likewise, a firm's non-financial performance can be measured by customer satisfaction, advanced technological innovation, perceived value of the product, employee satisfaction, and reduction in production time (Hussain et al., 2022).

Today, we live in an era of technological revolution or digital transformation (Attia, 2022; Gregory et al., 2017; Kim et al., 2022; Lestari et al., 2020; Mou et al., 2019; Obi et al., 2022; Octavia et al., 2020). This technology and digital era cannot be separated from e-commerce, where e-commerce is a medium that connects companies, individuals, and consumers to conduct electronic transaction exchanges of goods and exchange of information through the Internet or another computer network (Lestari et al., 2020). Therefore, organizations concede the use of digital technology to help become successful and transform suppliers and customers into an integrated network capable of enhancing value-adding processes (Attia, 2022). To enhance organizational performance, many businesses, especially the new generation, adopted e-commerce to enhance customer service delivery through the advancement of information technology (Gregory et al., 2017; Gupta et al., 2020; Lestari et al., 2020; Olanrewaju, 2016; Terzi, 2011; Wu et al., 2020). There is no need for physical contact (Terzi, 2011), empowering employees, offering consumer-optimized production, serving consumer-added product benefits, or facilitating the growth of digital businesses (Ikumoro & Jawad, 2019). According to the

World Trade Organization (WTO), an increase in information contributed to the rapid development of e-commerce (WTO, 2013). E-commerce presented a new method of doing business, and firms are putting more effort into developing innovation (Chandran et al., 2001). Customers are increasingly becoming digital (Hua et al., 2018), and firms subsequently transform and expand their technological capabilities to be innovative and prepare their business for the digital age (Hua et al., 2018), all to win over as many customers as possible (Vujadinovic et al., 2020).

In addition, e-commerce has significantly changed the relationship between customers and businesses by creating and allowing two-way communication, and social media tools assist companies in communicating with individual consumers (Amir & Sirang, 2018; Gupta et al., 2020; Olusegun et al., 2020). This, in turn, helps establish long-term relationships (Gupta et al. 2020). However, consumers can produce information about an organization and educate other consumers about products, brands, and services (Olusegun et al., 2020). Online business abilities show businesses vital activities in utilizing e-commerce to exchange data and information, enhance client benefits, and reinforce provider combinations (Mutuku et

al., 2019). Therefore, e-commerce is a business transaction on the Internet (Li & Lin, 2020). E-commerce can also be defined as the application of e-business related to commercial transactions, such as electronic funds transfer, SCM (supply chain management), e-marketing (e-marketing), online marketing, online transaction processing, electronic data interchange (EDI), product promotion and others (Hendrawan et al., 2018)

Furthermore, E-commerce is increasing daily, which encourages researchers to research how e-commerce influences organizational performance (Bhatti & Rehman, 2019). Nduji and Chris (2020) suggested that more insight on organizational performance should be conducted on e-commerce in Nigeria. Li and Lin, (2020) also called for more research into when and how e-commerce can help agricultural firms and the mechanisms that translate technology-related capabilities into performance gains.

Similarly, Wasiu (2022) suggested that further study should be conducted on the impact of strategic management practices on the organizational performance of real estate businesses in Nigeria, with a different case study or geographical location outside the realm of his study and with different variables or same variables to validate the

findings. Kilay et al., (2022) recommended the necessity to investigate the use of e-payment and e-commerce services specifically based on the types of facilities used in each service to determine which facilities contribute more to organizations and which increase customer interest. However, this study focuses on the gap mentioned in Kilay et al. (2022) to examine the effect of e-payment and e-commerce on organizational performance. This study aims to determine the effect of e-commerce on organizational performance.

2.0 Related Literature Review

2.1 Organizational performance

Organizational performance has been defined in various ways by researchers (Sunayana & Parveen, 2019). It is said to be defined as the voluntary association of productive assets such as human, physical, and financial resources to achieve a common goal (Gandolph, 2022). Moreover, organizational performance refers to an enterprise's ability to achieve objectives such as high profit, quality products, large market share, good financial results, and survival at a predetermined time using the relevant strategy for action (Abomeh, 2022). A company's performance is the standard or required indication of its effectiveness, efficiency, and environmental responsibility

(Ojo et al., 2022). Organizational performance is a multi-dimensional construct that covers financial performance indicators, customer-related outcomes, innovation, and internal organizational processes (Singh et al. 2016). Organizational performance encompasses three specific areas of firm outcomes: financial performance, such as profits, return on assets, and return on investment; product market performance, such as sales and market share; and shareholder return, such as total shareholder return and economic value added (Richard et al., 2016; Sunayana & Parveen, 2019). The organization is only able to improve performance when performance is measurable (Richard et al., 2009; Loon et al., 2022). Organizational performance is generally measured by its effectiveness, efficiency, employee and customer satisfaction, innovation, product or service quality, and ability to retain a distinctive human pool (Ojo et al. 2022). A company's potential success is determined by its organizational performance or ability to effectively implement strategies to achieve institutional goals (Ojo et al., 2022). Similarly, organizational performance can also be used to view how an enterprise is doing in terms of the level of profit, market share, and product quality concerning other

enterprises in the same industry (Abomeh, 2022).

Different researchers used different methods for measuring performance. This type of measurement has been classed as objective or subjective. An objective measure deals with financial records, while subjective measures concentrate on managers' perceptions regarding the organization's performance (Tang & Zhang 2005). Nevertheless, many studies suggested using subjective measures because the data for objective criteria could be inappropriate, misleading, and difficult to obtain. If the data are available, they may not genuinely represent the actual organization's performance as the information may be manipulated (Abomeh, 2022).

Furthermore, Wade and Hulland (2004) stated that organizational capabilities can be examined from different perspectives. A comprehensive review of the literature suggests three distinct categories of capabilities: outside-in, inside-out, and spanning. Outside-in capabilities are externally oriented, focusing on a firm's ability to anticipate market requirements and understand competitors (e.g., responsiveness to competitive and external market dynamics). Inside-out capabilities are internally focused and involve deployment from inside the firm in response to market

opportunities (e.g., technology development and cost reductions). Spanning capabilities involve the integration of both outside-in and inside-out capabilities, allowing firms a more holistic view of business relationships and planning and management of operations (Gregory et al., 2017).

According to Odia (2022), three approaches were identified to achieve an organizational goal. The first approach states that an organization pursues identifiable goals. This approach describes performance in terms of the attainment of these goals. The second approach is the systems resource approach which defines performance as the relationship between an organization and its environment. This concept defines performance according to an organization's ability to secure limited and valued resources in the environment. The third approach is the process perspective, which defines performance in terms of the behavior of an organization's human resources. Abomeh (2022) described organizational performance as evidence of the output of members of an organization measured in terms of revenue, profit, growth, development, and expansion of the organization. In a highly volatile environment, organizations strive to achieve competitive advantage and superior organizational performance (Rajaguru &

Matanda, 2018). Therefore, the most well-known notion for evaluating organizations is organizational performance (Alghamdi, 2019).

2.2 E-commerce

There is no consensus on the exact definition of e-commerce as several definitions were used in different contexts. E-commerce has been described as conducting commercial activities via electronic media, most commonly the Internet (Kabuba Purity, 2014; Kinuthia & Akinnusi, 2016). Zwass (1996) defined e-commerce as sharing business information, maintaining business relationships, and conducting business transactions through telecommunications networks. Microsoft Corporation defined e-commerce as an exchange of goods or services that have value using Internet technology (Hendrawan et al., 2018). Indeed, much of the uncertainty around e-commerce can be attributed to the Internet's rapid evolution and increasing importance. Regarding the use of technology, e-commerce involves the communication, delivery, and buy selling of products, services, and information over a computer network (Sergi et al., 2019). For companies, e-commerce has many advantages over purchases from physical stores. Corporate benefits can be captured by effective e-commerce adoption through substantial cost

savings, revenue maximization, and improvements in product delivery and customer service (Mou et al., 2019).

In recent years, e-commerce has evolved into more advanced forms, such as mobile commerce (Khansa et al., 2012; Sun & Chi, 2018; Shiau et al., 2019), social commerce (Cheng et al. 2019; Schaupp & Bélanger, 2016) and cross-border e-commerce (Cui et al. 2019; Mou et al. 2019; Zhu et al. 2019), and B2B e-commerce (Ghobakhloo et al. 2015). As an extension of e-commerce, m-commerce refers to transactions with monetary value through a telecommunications network. This includes not only shopping online, but also banking, investing, and other mobile phone services (Kleijnen et al. 2007). Generally, m-commerce is considered a separate channel with unique advantages over e-commerce by offering convenience, such as instantaneity, ubiquity, localization, personalization, and identification (Zhang et al. 2012). However, social commerce is defined as a form of commerce mediated by social media that engages in online and offline transactional activities (Zhou et al. 2013). Social commerce can provide e-commerce companies with more opportunities to improve customer communication, form customer relationships, and build trust (Curty

& Zhang, 2011). Given the potential advantages, firms such as Facebook, LinkedIn, Twitter, and numerous other start-ups are trying to promote the adoption of social commerce business models to improve their financial growth (Liang & Turban, 2011). E-commerce involves the ethical mode of online commerce and the deployment of resources to achieve and maintain a competitive advantage in virtual markets (Sharma & Lijuan, 2014).

2.3 The Relationship between E-commerce and Organizational Performance

Numerous studies justified the positive relationship between e-commerce and organizational performance. According to Rosenbaum and Wong (2015), e-commerce increases a firm's output by streamlining processes and developing discounts, resulting in increased operational efficiency. For example, by decreasing response times to consumer requests and maintaining a database of consumer preferences, e-commerce capabilities can enhance customer loyalty and drive repeat visits (Hua et al. 2018). Similarly, commercial banks that leverage information, transactions, customization, and back-end integration capabilities achieve flexibility, customer satisfaction, and improved performance (Mutuku et al., 2019). Hendrawan et al.

(2018) and Vujadinovic et al. (2020) elucidated that e-commerce can improve selling performance. In addition, e-commerce helps improve marketing processes, assists in improving a firm's payment system, and helps increase workers' efficiency and firm profit (Vujadinovic et al., 2020).

High levels of e-commerce technical capability in agricultural firms mean that the IT function in firms can quickly develop, deploy, and support the system components needed by firms to face customers, improve operations, and better integrate internal operations with external stakeholders (Li & Lin, 2020). Moreover, the decision-making performance of any firm depends on three major dimensions: application design, reasonable product prices and availability of user-generated content (UGC) (Gupta et al., 2020). A study by Nwankwo (2022) revealed how e-mail, the Internet, and e-commerce can be significant factors in banks' organizational performance. Many authors stated that e-commerce is still at the embryonic stage in the business domain, although many developments have occurred in this area (Neeraj & Pandey, 2020).

Many authors reported negative findings regarding the relationship between e-commerce and business performance. Lee et al. (2019) examined the relationship between

e-commerce adoption and firm performance in the context of the Korean retail industry. The authors found that e-commerce adoption has a negative impact on firm profitability, sales growth, and market share. Similarly, Choudhury et al. (2017) reported that e-commerce adoption negatively affects firm performance. The study examined the impact of e-commerce on Indian firms' financial performance and found that e-commerce adoption was negatively associated with profitability. The authors suggested that this negative effect may be due to the high initial costs of e-commerce adoption, which may not be offset by benefits in the short run. Furthermore, Nguyen and Nguyen (2020) examined the relationship between e-commerce adoption and firm performance in the Australian retail industry. The authors found that e-commerce adoption has a negative impact on firm performance as it leads to increased competition and price pressure. Moreover, e-commerce adoption has a negative effect on firm performance, as it leads to price competition and a decrease in profit margins (Jiang et al., 2020).

In contrast, several studies found both negative and positive relationships between e-commerce and business performance. According to Turel and Serenko (2019), digital commerce adoption is positively

associated with revenue growth and negatively associated with profitability. The authors suggested that the negative effect on profitability may be due to increased competition and price transparency in the digital environment. Moreover, Chen et al. (2020) investigated the relationship between e-commerce adoption and firm performance in Chinese manufacturing firms. This study found both negative and positive results as the authors found a positive relationship between e-commerce adoption and firm profitability but no significant relationship between e-commerce adoption and sales growth or market share. This study suggested that e-commerce adoption does not significantly impact all aspects of firm performance. Furthermore, Kotb and Beltagy (2021) found that although e-commerce had some benefits, such as increased customer reach and improved efficiency, it also had negative impacts such as increased competition, reduced customer loyalty, and increased costs associated with technology adoption, maintenance, and cyber security. Finally, Prasad (2020) investigated the impact of e-commerce on small and medium enterprises (SMEs) in India. The author surveyed 100 SMEs and found that although e-commerce had some benefits, such as increased sales and customer reach, it also

had negative impacts, such as increased competition, reduced profit margins, and a lack of full control over the e-commerce platform. E-commerce initiatives can drive increases in room revenue through ease of bookings and decrease expenses through operational efficiencies and economies of scale (Hua et al., 2018).

Based on previous related studies, we have explored both the negative and positive impact of e-commerce on organizational performance, proposing that e-commerce has a positive outcome on the growth of the organization in the long run, while the negative aspects, such as the cost of implementation, also affect the profitability of the organization due to increased competition.

2.4 Theoretical Framework

The Technology–Organization–Environment Framework

The TOE framework developed by Tornatzky et al. (1990) is a classic framework that proposes a generic set of factors to explain and predict the likelihood of innovation/technology adoption (Bryan & Zuva, 2021). The framework proposes three bits of enterprise context that influence the adoption decisions and implementation of innovations (Awa et al., 2016). Furthermore, the three elements are technological, organizational,

and environmental contexts. All three are posited to influence technological innovation (Baker, 2012; Eze et al., 2022; Tripopsakul, 2018).

The three dimensions are described as follows: First, the technology context outlines the features of technologies that are within and external to the organization, which are suitable for improving efficiency and productivity; it includes those the organization is currently using (Tripopsakul, 2018), available in the market but yet to be tested, improved, or tried by the organization (Gupta et al., 2013, Eze et al., 2014; Eze et al., 2018). Second, the organizational context relates to firm resources and firm characteristics, such as firm size, scope of operations, employee capability, management support, and intra-firm communication (Baker 2002). Third, the environmental

context deals with factors that influence e-commerce adoption (Andries & Debackere, 2006). This extends to the firm's location, structure, regulatory structures, customer and competitive dynamics, trading partners' readiness, economic trends, availability of IT vendors/consultants, and globalization (Tornatzky & Fleischer, 1990; Mehrtens et al., 2001).

In summary, T-O-E has materialized as a widespread framework for the theoretical perspective on IT adoption (Bryan & Zuva, 2021). The three elements (technological, organizational, and environmental contexts) present "both constraints and opportunities for technological innovation" (Tornatzky & Fleischer, 1990), that is, e-commerce. These elements influence a firm's level of technological innovation (Baker, 2012).

2.5 Conceptual framework

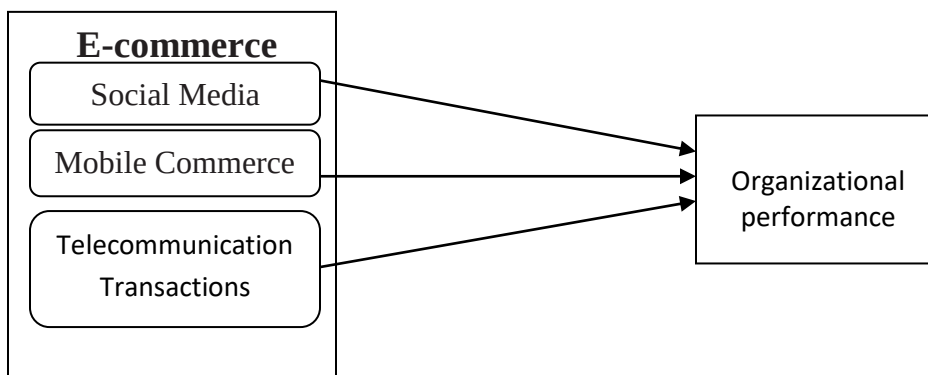


Figure 1: A research framework

3.0 Methodology

This study followed a structured literature review (SLR) as the research methodology. SLR is a three-step approach as suggested by Tranfield et al. (2003); namely, the review protocol was planned according to the requirements of the research review by identifying, selecting, and analyzing the relevant papers and disseminating the results in the form of descriptive results and thematic reporting (Neeraj Pandey, 2020). In the initial stage, the review was planned to keep in mind the void in organizational performance concerning e-commerce usage. First, the number of research papers published by each author on e-commerce and organizational performance was analyzed, and authors with more published papers on the selected themes were considered accordingly. Second, journals with the most publications were considered during the review procedure. Third, we examined the institutional affiliations of scholars who published these research articles. Finally, the topology of previous studies was considered to understand the effectiveness of the study.

4.0 Conclusion and Recommendation

The establishment of a relationship between e-commerce and organizational performance is a requirement for the effective and efficient achievement of organizational goals in

today's world. This study elucidated the relevance of electronics and the Internet to organizational performance. Concepts, theories, and empirical studies were reviewed during the research work.

In this study, a structured literature review was conducted, where the conceptual result of this study showed that e-commerce has a positive direct significance of growth on organizational performance and negative aspects, such as cost of implementation and profitability. Moreover, TOE theory was used as the theoretical framework to support our variables. This study provided insights into the definition, background, and ways that organizations can improve their performance. Several researchers have suggested future research on e-commerce and other variables. This study examined the effect of e-commerce on organizational performance, and if organizations can dwell on these factors, they enhance their performance. Future research should examine other variables, including e-payment, strategic management practice, and technology-related organizational performance. Furthermore, this study considered only conceptual studies on the effect of e-commerce on organizational performance. Hence, future research should explore the empirical findings of this study

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