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E-Commerce Adoption by Small and Medium Enterprises in Nigeria

Anthony Obioma Nwosu
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Walden University

College of Management and Technology

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Anthony Nwosu

has been found to be complete and satisfactory in all respects,
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Walden University
2017

Abstract

E-Commerce Adoption by Small and Medium Enterprises in Nigeria

by

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MSC, University of Lagos, 1992

BEng, University of Nigeria, 1988

Doctoral Study Submitted in Partial Fulfillment

of the Requirements for the Degree of

Doctor of Business Administration

Walden University

August 2017

Abstract

The future survival of small and medium enterprises (SMEs) is inextricably linked to their implementation of e-commerce systems. The lack of e-commerce strategies among SME business owners has contributed to a low level of e-commerce adoption by SMEs. The purpose of this multiple case study was to explore the strategies that Nigerian SME business owners used to implement e-commerce systems. The population consisted of retail SMEs in Lagos, Nigeria, that have functional e-commerce systems. The conceptual framework supporting the study was dynamic capabilities framework. Data for the study were derived from semistructured interviews of 4 SME business owners/managers and documentation from the case companies. Data analysis entailed coding of the interview transcripts and analysis of documentary data to identify themes. Member checking and triangulation ensured the credibility of the study. The main themes that emerged from data analysis include service delivery strategies, dynamic marketing strategies, and learning and adaptation. The implications for social change include the potential to contribute to increased wealth creation opportunities for the business owners, their employees, and the local communities in Nigeria.

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Dedication

Dedicated to my late dad, Nnaoma Clement E. Nwosu, and my mom, Ezinne Janet C. Nwosu, both of whom retired as teachers, for their passion and commitment to the education of their children and society.

Acknowledgments

First, I thank the Almighty God, who not only kept me alive to actualize this dream but also provided me with the energy and resources to complete this highly tasking academic exercise. Special thanks to my chair, Dr. Michael Lavelle, for his exceptional guidance, support, and timely feedback. I am grateful to my doctoral committee member, Dr. Charlotte Carlstrom, for her insightful reviews and feedback. I thank Dr. Yvonne Doll, the university research reviewer, for the deep insights she brought to this study.

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Section 1: Foundation of the Study

Advancements in Internet technology have led to innovations in business models, goods, and markets, including the use of electronic commerce (e-commerce) to carry out sales transactions among individuals, businesses, and organizations (Elseoud, 2014). Small and medium enterprises (SMEs) constitute a majority of businesses in the world, with the number of SMEs globally estimated between 420 million and 510 million in 2015 (International Trade Centre, 2015). Despite the potential benefits of e-commerce, the rate of adoption of e-commerce among Nigerian SMEs is low (Faloye, 2014). The purpose of this qualitative multiple case study was to explore the strategies that Nigerian SME business owners used to implement e-commerce systems. The results of the study may create more interest among Nigerian SME business owners in using e-commerce to improve the competitiveness of their organizations.

Background of the Problem

The fast growth of the Internet has led to increasing adoption of e-commerce business models among firms globally. The potential benefits of adopting e-commerce by SMEs include improvement in operational efficiency, increased revenue, and the possibility of leveraging e-commerce as a tool to achieve competitive advantage (Dan, 2014). SMEs are a key sector in today's global economy. Globally, SMEs constitute more than 95% of all firms, contribute approximately 50% of gross domestic product (GDP), and account for 60% to 70% of total employment (International Trade Centre, 2015). Micro, small, and medium enterprises (MSMEs) in Nigeria contributed 48.5% to

the country's GDP and employed 84% of the total labor force in 2013 (Small and Medium Enterprises Development Agency of Nigeria [SMEDAN], 2013).

Despite the important role that SMEs play in the global economy and the potential benefits of e-commerce, e-commerce adoption among SMEs is limited (Yeng, Osman, Haji-Othman, & Safizal, 2015). Furthermore, the level of e-commerce adoption among Nigerian SMEs is low (Agwu & Murray, 2014; Faloye, 2014). The purpose of this qualitative multiple case study was to explore the strategies that Nigerian SME business owners used to implement e-commerce systems.

Problem Statement

SMEs that use e-commerce for business transactions achieve higher sales growth than their competitors who do not use e-commerce (Abebe, 2014). Nigerian SMEs have been slow in adopting e-commerce for their marketing and trade. Although retail e-commerce sales within the European Union were 241 billion euros in 2011 (Gomez-Herrera, Martens, & Turlea, 2014), online sales among Nigeria's retail SMEs was near zero (Faloye, 2014). The general business problem that I addressed in this study was that the lack of e-commerce systems for consumer online shopping was negatively affecting some retail SME business owners in Nigeria. The specific business problem that I addressed in this study was that some Nigerian SME business owners lacked strategies to implement e-commerce systems.

Purpose Statement

The purpose of this qualitative multiple case study was to explore the strategies that Nigerian SME business owners used to implement e-commerce systems. The

targeted population consisted of four SMEs in Lagos, Nigeria, that have successfully implemented e-commerce systems. The implications for social change may include employment and wealth creation opportunities for the business owners, their employees, and the communities in which they live in Nigeria.

Nature of the Study

The qualitative method is an inductive, interpretive approach, based on the ontological assumption that reality is not static or fixed, but multiple, socially constructed, and context dependent (Hesse-Biber, 2010; Yilmaz, 2013). Many researchers using the qualitative method view social phenomenon as complex and adopt a holistic, iterative reasoning in interpreting reality (Marshall & Rossman, 2016). In contrast, the quantitative methodology involves using mathematical models to investigate the relationships and differences among variables (Yilmaz, 2013). Mixed-methods research involves the analyses of both quantitative and qualitative data (Venkatesh, Brown, & Bala, 2013). Because the objective of this study was not to investigate or confirm any mathematical relationships between variables but to explore strategies that Nigerian SME business owners used to implement e-commerce systems, both quantitative and mixed-methods were inappropriate for the study. Based on its inductive, interpretive approach, the qualitative method was the most appropriate to explore the strategies that Nigerian SME business owners used to implement e-commerce systems. For these reasons, I used the qualitative method for this study.

Case study design enables a researcher to carry out an in-depth investigation of specific situations, events, or processes (Cronin, 2014; Sangster-Gromley, 2013). A

researcher using case study design can draw evidence from multiple sources of data such as interviews, documents, direct observation, participant observation, archival records, and physical artifacts (Yin, 2014). Multiple case studies lead to more robust analytical conclusions than single case studies (Yin, 2014). The multiple case study design was the most appropriate to enable me collect and analyze multiple sources of data from different organizations and arrive at conclusions for addressing the specific business problem. For these reasons, I used a multiple case study design for this study.

In choosing the research design, four options were available: case study, ethnography, phenomenology, and narrative. A researcher using ethnographic design often focuses on the description and interpretation of shared patterns of behaviors, experiences, and beliefs within a cultural or social setting (Drake & Harvey, 2014). The ethnographic design was inappropriate for this study because the objective of the study was not to explore the behaviors, experiences, and beliefs within a cultural or social setting. Researchers using phenomenological designs focus on description or interpretation of the lived human experiences of participants (Mayoh & Onwuegbuzie, 2015). Narrative design involves using participants' stories to describe and reconstruct their personal experiences (Suarez-Ortega, 2013). The objective of this study was to collect and analyze data from multiple sources including interviews and documents; hence, both the phenomenological and narrative designs were inappropriate for the study. The multiple case study design was the most appropriate to realize the objectives of this study.

Research Question

What strategies do Nigerian SME business owners use to implement e-commerce systems?

Interview Questions

1. What strategies helped to ensure a successful deployment of an e-commerce system in your organization?
2. What strategies have you used to deal with the challenges associated with your organization's implementation of e-commerce?
3. What strategies have you used to attract and retain customers on your e-commerce site?
4. What strategies have you used to manage your in-house and outside resources to ensure a successful e-commerce system implementation?
5. What else would you want to share regarding strategies SME business owners can use to implement e-commerce?

Conceptual Framework

The dynamic capabilities framework (DCF) developed by Teece, Pisano, and Shuen (1997) served as the conceptual framework for this study. The key tenet of the DCF is that acquiring and implementing firm-specific capabilities could be a source of competitive advantage for firms operating under rapidly changing market conditions. The key concepts of the DCF proposed by Teece et al. (1997) include managerial and organizational capabilities and processes relating to (a) coordination/integration, (b) learning, and (c) reconfiguration/transformation. Teece (2007) extended the key concepts

of dynamic capabilities to include the capacities for (a) sensing and shaping opportunities and threats; (b) seizing opportunities; and (c) adapting, configuring, and reconfiguring the firm's tangible and intangible assets to achieve competitive advantage.

Successful e-commerce adoption requires firms to build focal capabilities in response to the dynamic nature of the market and competition (Cui & Pan, 2015). Daniel and Wilson (2003) underscored the critical role of dynamic capabilities in achieving a sustained competitive advantage by firms undergoing e-business transformation. The propositions advanced in the DCF were relevant in exploring the strategies that Nigerian SME business owners use to implement e-commerce systems. Because an e-commerce strategy indicates how an organization deploys its assets to achieve and sustain competitive advantage in the online market space (Torres, Lisboa, & Yasin, 2014), using the DCF was insightful in exploring how SME business owners implemented e-commerce systems by acquiring, adapting, and reconfiguring organizational assets to achieve competitive advantage.

Operational Definitions

E-business: The use of information and communications technology to enhance business processes, including production processes, managing customer relationships, and management of internal operations (Mazzarol, 2015).

E-commerce: The process of carrying out commercial transactions through computer networks, such as the Internet (Huseynov & Yildirim, 2016).

E-commerce strategy: An e-commerce strategy indicates how an organization deploys its assets to achieve and sustain competitive advantage in the online market space (Torres et al., 2014).

E-marketing: The use of information and communications technology by businesses to carry out marketing and promotion activities in support of e-commerce and e-business initiatives (Mazzarol, 2015).

Online store: A website that offers products or services for customers (Chen & Teng, 2013).

Small and medium enterprise (SME): In Nigeria, an SME is a firm employing 10 to 199 persons, and with total assets, excluding land and buildings, of more than 5 million naira but not exceeding 500 million naira (SMEDAN, 2013).

Small and Medium Enterprises Development Agency of Nigeria (SMEDAN): The SMEDAN is an agency set up by an act of parliament of the Federal Republic of Nigeria and is charged with the responsibility of initiating and facilitating programs and policies for the growth of micro, small, and medium enterprises in Nigeria (SMEDAN, 2013).

Assumptions, Limitations, and Delimitations

Perception and reality shaped the assumptions, limitations, and delimitations of this study. The participants' perspectives, documentary data, and my role as the researcher informed the study. Additional factors that shaped the assumptions, limitations and delimitations of this study include the participants' leadership roles, beliefs, and the location of the case organizations.

Assumptions

Assumptions are things a researcher accepts as being true without any concrete proof (Ellis & Levy, 2009). One of the assumptions of this study was that the chosen participants would be truthful and honest in answering the interview questions. A second assumption was that all documentary evidence about the case organizations would contain accurate information. Finally, I assumed that using the qualitative case study approach would provide a deep understanding of the strategies used by owners and managers of Nigerian SMEs to implement successful e-commerce systems.

Limitations

Limitations include potential threats to the credibility of the study that are beyond a researcher's control (Ellis & Levy, 2009). This study was limited to participants from Lagos, which might not be representative of all of Nigeria. The perspectives of the business owners/managers, as well as documentary evidence from the case organizations, informed the study. The accuracy of the results of this study depended on how accurately the participants recalled their experiences, as well as on the truthfulness of information contained in the documentary evidence.

Delimitations

Delimitations refer to the boundaries of the study set by a researcher to make the research manageable (Ellis & Levy, 2009). I delimited participation in this study to only four SMEs with functional e-commerce systems. As stated by Marshall and Rossman (2016), the use of a small sample size in qualitative research enables a researcher to carry out an indepth investigation and build relationships with the participants.

Significance of the Study

Globally, SMEs constitute more than 95% of all firms, contribute approximately 50% of GDP, and account for 60% to 70% of total employment (International Trade Centre, 2015). MSMEs in Nigeria contributed 48.5% to the country's GDP and employed 84% of the total labor force in Nigeria in 2013 (SMEDAN, 2013). Discussed in the following subsections are the values businesses and local communities may derive from greater adoption of e-commerce by SMEs.

Contribution to Business Practice

The findings from this study may contribute to the effective practice of business through efficiency improvements in business processes and transaction in firms that implement e-commerce systems. The use of e-commerce can lead to improvements in business processes, cost savings, and productivity gains (Savrul, Incekara, & Sener, 2014). The findings may also have the positive effect of improving e-commerce knowledge within the business community, further contributing to the improvement of business practice. Owners and managers of firms that are yet to implement e-commerce systems may learn from the experiences and strategies of the SME business owners who have successfully implemented e-commerce systems, thereby acquiring the strategies necessary to implement e-commerce for their organizations.

The value to business resulting from this study may be the increased leverage of e-commerce by Nigerian SME business owners and managers as a cost-effective tool to reach wider markets and improve sales. SMEs lack financial and human resources to effectively compete with big businesses (Zach, Munkvold, & Olsen, 2014). E-commerce

presents an opportunity for SMEs to reach new markets and become part of global value chains (Savrul et al., 2014). Considering their size and resource constraints, SMEs may use e-commerce as a strategic means of increasing sales and achieving competitive advantage (Abebe, 2014).

Implications for Social Change

The potential contribution of this study to positive social change may include employment and wealth creation opportunities for the businesses, their employees, and the host communities. Small local producers of goods using e-commerce can sell directly to consumers and have the possibility of accessing a wider market (Carlucci, De Gennaro, Roselli, & Seccia, 2014). With e-commerce, selling products directly to end users without intermediaries leads to a reduction in transaction costs (Dan, 2014). Access to wider markets and possible reduction in transaction costs may contribute to increased wealth creation for the local small businesses that use e-commerce. As more SMEs adopt e-commerce, the likely increase in employment and incomes in the local communities may contribute to a more economically empowered local population, which may help reduce poverty in the communities. Local and state governments may benefit from higher tax revenues as more companies adopt e-commerce, and more people become economically empowered.

A Review of the Professional and Academic Literature

The objective of this study was to explore the strategies that SME business owners may use to achieve successful e-commerce systems implementation. A fundamental motivation for this study was to raise the level of e-commerce adoption

among Nigerian SMEs. The purpose of this literature review was to explore relevant in-depth information that could aid in answering the overarching research question: What strategies do Nigerian SME business owners use to implement e-commerce systems? The literature review included a review of literature relating to the DCF, which was the conceptual framework for this study; an overview of SMEs; an overview of e-commerce; a discussion of SMEs and e-commerce adoption; and a discussion of e-commerce systems success strategies.

The sources of information in this literature review include peer-reviewed journals, non-peer-reviewed journals, scholarly books, and publications of government agencies. I searched for relevant scholarly articles and books primarily through Google Scholar and the various databases linked to the Walden University Library. The databases searched include ABI/INFORM Complete, Business Source Complete, Academic Search Complete, Dissertation & Theses at Walden University, Emerald Management, ProQuest Central, and SAGE Premier. The Ulrich's Periodicals Directory database provided confirmation of the peer-review status of journals, and, in some cases, the journal website information revealed the peer-review status of the journals. I conducted a search for relevant information using keywords such as *electronic commerce*, *e-commerce*, *small and medium enterprises*, *e-commerce adoption*, *SMEs and e-commerce adoption*, *SMEs and ICT adoption*, *SMEs and e-commerce in Nigeria*, *online shopping*, *e-commerce strategies*, *sales and marketing strategies*, *dynamic capability framework*, *resource-based view*, *Porter's five forces framework*, *technology-organization-environment framework*, and *systems theory*.

Table 1

Literature Review Sources Summary Table

Sources	Outside of 5-year range (2012 and earlier)	Within 5-year range (2013-2017)	Total of all sources
Peer-reviewed publications	9	103	112
Non-peer-reviewed publications	0	2	2
Books	2	0	2
Government sources	0	5	5
Total sources by year grouping	11	110	121

Table 1 shows a summary of the literature review sources. The literature review contains 112 peer-reviewed sources out of 121, which is equivalent to 92.6%. There were 103 peer-reviewed sources published since 2013, which means that 92% of the sources were publications within 5 years of the anticipated completion date of my study. My study contains 168 peer-reviewed sources out of 181, which is equivalent to 92.82%. There were 149 peer-reviewed sources published since 2013, which means that 88.69% of the sources were publications within 5 years of the anticipated completion date of my study.

Dynamic Capability Framework

Dynamic capabilities include competencies and capabilities that firms can leverage to create new products and processes, and adaptively respond to changes in the marketplace (Teece et al., 1997). Teece et al. (1997) argued that acquisition and

deployment of firm-specific capabilities could be a source of competitive advantage for firms operating under rapidly changing market conditions. Daniel and Wilson (2003) indicated that possession of static resources under situations of rapid and unpredictable market change would not lead to sustained competitive advantage; rather managers should engage in constant asset reconfiguration, acquisition, and disposal to meet changing market expectations. Pavlou and El Sawy (2011) stated that dynamic capabilities are useful in managing turbulent environments, because they assist managers in adapting and reconfiguring the firms' operational capabilities into new ones that more dynamically respond to the changing environment. Koryak et al. (2015) posited that dynamic capabilities reflect the capacity of an organization to proactively renew itself and successfully adapt to the changes in the environment. Shuen, Feiler, and Teece (2014) described the DCF as a transformative approach to strategy and strategic management that helps in dealing with the opportunities and challenges in high-velocity markets.

The definition and scope of the DCF have evolved with time. The DCF described by Teece et al. (1997) incorporates two dimensions: (a) the ability to renew competencies in line with changing business environment, and (b) management's strategic role of adapting, integrating, and reconfiguring the firm's internal and external competencies and resources in response to environmental changes to achieve competitive advantage. Teece et al. (1997) described distinctive competencies/capabilities as those competencies and capabilities that are difficult to buy in the marketplace or imitate. Teece (2007) expanded the concept of dynamic capabilities to include (a) the capacities of sensing and shaping

opportunities and threats; (b) seizing opportunities; and (c) adapting, configuring, and reconfiguring the firm's tangible and intangible assets to achieve competitive advantage. The evolution in the definition and scope of the DCF has led to a greater expository and understanding of the core concepts of the DCF. The DCF is a wide construct that relates managerial responses to changes in the environment.

Dynamic capabilities relate to a firm's assets. The nature of a firm's assets contributes to its competitive position at any point in time (Teece et al., 1997). Teece et al. (1997) identified some assets that determine a firm's competitive position as technological assets, complimentary assets, financial assets, relational assets, and reputational assets. Cui and Pan (2015) posited that firms would find it difficult to build sustainable competitive advantage using static resources when the business environment is continuously changing. Wright, Roper, Hart, and Carter (2015) argued that dynamic capabilities are essential for firms to develop a sustainable growth trajectory. Yi, He, Ndofor, and Wei (2015) posited that dynamic capabilities enhance the capacity of firms to implement strategic change rapidly. Teece et al. argued that a firm's asset position, the firm's distinctive organizational and managerial processes, and the firm's evolutionary path determine the competitive position of the firm under environments of rapid technological change. These arguments indicated that firms do not achieve competitive advantage by acquisition of assets alone when the business environment is constantly changing. Having managerial capabilities and organizational processes to dynamically leverage organizational assets to achieve competitive advantage may help firms succeed in turbulent business environments.

There are arguments among scholars regarding the relationship between the DCF and the resource-based view (RBV). Piening and Salge (2015) described the DCF as an extension of the RBV. Teece et al. (1997) argued that whereas the focus of the RBV paradigm is on strategies to exploit firm-specific assets, the strategic intent of the dynamic capabilities paradigm is the exploitation and reconfiguration of a firm's internal and external resources to achieve competitive advantage. Pavlou and El Sawy (2011) argued that the RBV paradigm emphasizes resource selection, whereas the dynamic capabilities paradigm emphasizes resource renewal. Cui and Pan (2015) noted that dynamic capabilities address the shortcomings of the RBV, as the RBV overlooks the dynamic nature of the environment and the effect of resource management actions. The strong point of the DCF compared with the RBV is that the DCF paradigm recognizes the dynamic nature of the environment and emphasizes resource renewal to achieve competitive advantage. Using the postulations of the DCF, firms need to engage in continuous renewal of their resources, competencies, and capabilities to achieve competitive advantage under environments of rapid change.

The DCF is a multidimensional construct, which some authors have explained from varying perspectives. Teece et al. (1997) identified three managerial and organizational processes that constitute core elements of dynamic capabilities as (a) coordination/integration, (b) learning, and (c) reconfiguration/transformation. Teece (2007) described the three managerial and organizational processes as foundations that support the capabilities for sensing, seizing, and managing opportunities and threats. Li and Liu (2014) modeled dynamic capabilities as a three-dimensional construct consisting

of (a) strategic sense-making capacity, (b) timely decision capacity, and (c) change implementation capacity. Dixon, Meyer, and Day (2014) identified two forms of dynamic capabilities that are critical for organizational transformation: adaptation dynamic capabilities and innovation dynamic capabilities. Day (2014) argued that adaptive capabilities influence the ability of firms to learn and adjust to rapid changes in the market. Wang, Hu, and Hu (2013) identified dynamic marketing capability as a critical capability that enables firms to track market trends, evaluate, and design appropriate processes to respond to the changes in the marketplace. The varied perspectives on the DCF suggested that the DCF construct is wide and still evolving in definition and scope. All the authors, however, focused on the identification of dynamic capabilities necessary for firms to achieve competitive advantage when the business environment is rapidly changing.

Understanding how to leverage the various dimensions of the DCF for business success is essential for managers. Developing the three capabilities of sensing opportunities, seizing opportunities, and reconfiguration is essential for enterprise success under regimes of rapid technological change (Teece, 2007). Wilden and Gudergan (2015) argued that sensing capability could be beneficial to managers in scanning for technologies and markets, whereas reconfiguring capability could assist managers in reconfiguring organizational resources, structures, and processes. Pavlou and El Sawy (2011) argued that reconfiguration requires market intelligence and the ability to monitor market and technology trends to sense and seize opportunities. Li and Liu (2014) argued that having a strategic sense-making capacity could help in better understanding of

customer needs, timely response to competitor moves, and greater creativity in developing products. Pavlou and El Sawy posited that sensing capability includes having the ability for detecting, interpreting, and pursuing opportunities in the business environment. Li and Liu posited that having a timely decision-making capacity could help a firm achieve competitive advantage by seizing emerging opportunities faster than the firm's rivals. Helfat and Peteraf (2015) argued that sensing and seizing of opportunities could contribute to a firm's growth and profitability. Proper understanding and deployment of dynamic capabilities by managers may enhance the competitiveness of their firms. Knowing how to leverage the various dimensions of the DCF for business success, however, may be a challenge for some managers.

Some scholars have underscored the importance of learning, collaboration, and integration capabilities. Lin and Wu (2014) associated learning capability with the capability for integration with external partners. Learning capability includes the ability to apply new knowledge to improve existing operational capabilities (Pavlou & El Sawy, 2011). Lin and Wu argued that through learning from alliance partners, a company could develop an innovative technology and improve its performance. Schilke (2014) posited that alliance management capability could be helpful in reconfiguring organizational resources. Eriksson (2014) described flexibility and collaboration as two core organizational capabilities that support dynamic capabilities. Teece et al. (1997) underscored the strategic importance of managers having the capabilities for integrating activities within the firm, as well as external activities and technologies. Learning, collaboration, and integration are important dynamic capabilities. Proper integration of

activities within a firm and collaboration with external partners could contribute to organizational learning and innovativeness.

Dynamic capabilities and operational capabilities are two constructs that might be confusing and need a proper explanation. Pavlou and El Sawy (2011) made a distinction between dynamic capabilities and operational capabilities. According to Pavlou and El Sawy, operational capabilities relate to the ability to implement day-to-day routines, whereas dynamic capabilities relate to the ability to modify and reconfigure existing operational capabilities to match the changes in the environment. Teece (2007) argued that dynamic capability is superior to operational competence, and that having the skill to orchestrate assets to meet changing customer and environmental conditions is essential for management. Dynamic capabilities are, therefore, higher-order capabilities that go beyond implementation of day-to-day routines. Dynamic capabilities entail continuous assets renewal and reconfiguration in line with changing environmental conditions.

Some scholars have underscored the importance of dynamic capabilities for firms operating in the e-business environment. Dynamic capabilities are critical for the attainment of a sustained competitive advantage by firms undergoing e-business transformation, including firms transforming from offline retail to e-commerce business model (Daniel & Wilson, 2003). Daniel and Wilson (2003) argued that e-business environments undergo rapid changes requiring managers not to rely on prior accumulated resources for competitive advantage; rather, managers should have the capabilities to engage in constant asset reconfiguration, acquisition, and disposal to meet changing market expectations. Cui and Pan (2015) posited that successful e-commerce adoption

requires firms to build focal capabilities in response to the dynamic nature of the market and competition. Kindstrom, Kowalkowski, and Sandberg (2013) argued that dynamic capabilities enhance the capacity of product-centric firms to offer innovative service delivery to their customers. The e-business environment is dynamic, and firms operating under such an environment need to build dynamic capabilities in order to respond effectively to the changes in the environment. Building dynamic capabilities by e-commerce firms may enhance their capacity to meet changing market expectations and may lead to a sustained competitive advantage.

Researchers have used the DCF to explore competitive strategies used by managers and organizations in different situations. Lomas (2016) used the DCF to study how marketing managers used strategies of customer knowledge management to improve business-to-business (B2B) customer engagement and identified the need to improve marketing strategies. Using the DCF to explore the strategies microbrewers used to navigate through microbrewery licensing requirements, Gely (2015) found that learning from other brewers and using a flexible strategic approach were some of the strategies adopted by the microbrewers. Rashidirad, Soltani, and Syed (2013) found that alignment between dynamic capabilities and competitive strategies of cost and differentiation results in increased e-business value creation in the areas of innovativeness, customer lock-in, efficiency, and complementarities. Schilke (2014) found that dynamic capabilities positively influence a firm's competitive advantage, but the level of influence depends on the extent of environmental dynamism. These studies illustrated the wide applicability of the DCF in investigating different phenomena. The DCF proved to be a useful tool for

investigating managerial actions and competitive advantage under dynamic business environments.

Some studies indicated relationships between dynamic capabilities, information and communications technology (ICT) capabilities, and firm performance. Parida, Oghazi, and Cedergren (2016) found that developing and using ICT capabilities by small firms for internal efficiency, collaboration, and communications activities positively influence the development of dynamic capability components such as absorptive capability, networking capability, adaptive capability, and innovative capability. Wang et al. (2013) found a positive association between dynamic marketing capability and a firm's market orientation, the functionality of a firm's information technology (IT) infrastructure, and the use of IT to support customer relationship management (CRM). Wilden and Gudergan (2015) found a positive association between marketing capabilities and firm performance in highly competitive environments. Rice, Liao, Galvin, and Martin (2015) found that dynamic capabilities mediated by market transformation strategies improve SMEs firm performance. These studies indicated a positive association between ICT capabilities and dynamic capabilities. Dynamic capabilities, on the other hand, have a positive influence on firm performance.

Researchers have linked successful e-commerce adoption to the acquisition of dynamic capabilities. Cui and Pan (2015) found that successful e-commerce adoption among manufacturing enterprises requires (a) capability for sensing and responding to consumer needs; (b) cooperation capability enabling harmonious integration of internal and external resources; and (c) innovation capability enabling the pioneering of new

initiatives, conversion, adaptation, and coordination of internal and external resources to achieve competitive advantage. Daniel and Wilson (2003) identified organizational intelligence to reconfigure resources to match changing market dynamics, the ability to reconfigure the sales/service process to take advantage of new channel capabilities, the ability to integrate old and new information systems, and the ability to integrate the existing and new channels as some of the essential capabilities for e-business transformation. Gajendran, Brewer, and Marimuthu (2013) argued that contracting firms with developed dynamic capabilities have the potentials to leverage e-commerce as a channel to offer their products and services to the international markets. Successful e-commerce adoption by firms requires the acquisition of dynamic capabilities because the e-commerce business environment undergoes rapid changes in technology and the market. Acquisition and deployment of dynamic capabilities by managers of e-commerce firms may enhance the capacity of their firms to compete effectively in such dynamic environments.

The DCF aligned with this study's objective of exploring the strategies that Nigerian SME business owners used to implement e-commerce. The specific business problem addressed in this study was that some Nigerian SME business owners lacked strategies to implement e-commerce systems. Considering that the e-commerce business environment undergoes rapid changes (Daniel & Wilson, 2003), using the DCF was insightful in exploring how SME business owners implemented e-commerce by acquiring, adapting, and reconfiguring internal and external resources to achieve competitive advantage.

Rival Theories

There were alternative theories I could use as the conceptual framework for this study. Three of the theories described here are the RBV, Porter's five forces framework, and the technology-organization-environment (TOE) framework. Provided below is a description of the theories and how they compare with the DCF.

The resource-based view. The RBV theory links a firm's competitiveness to the firm's possession of resources. The RBV strategic paradigm considers a firm as a bundle of tangible and intangible assets or resources (Daniel & Wilson, 2003). Penrose originated the idea of viewing the firm as a bundle of resources in 1959 (Kim, Song, & Triche, 2014). Wernerfelt (1984) elaborated on the concept of the RBV and described firm resources to include brand names, in-house technology knowledge, capital, skilled personnel, machinery, processes, and trade contacts. For firms to achieve sustained competitive advantage, they should possess resources that are valuable, rare, inimitable, and non-substitutable, such that competitors cannot easily replicate the resources (Shuen et al., 2014). The RBV helps in understanding how a firm can sustain competitive advantage by using resources available to it (Kim et al., 2014). Paredes, Barrutia, and Echebarria (2014) argued that the RBV provides a link between an organization's internal characteristics and its performance. Based on the RBV paradigm, firms' resources are their sources of competitive advantage. The competitiveness of firms, however, depends on the ability of the firms to accumulate resources that competitors may not easily replicate.

Some studies, based on the RBV indicated relationships between firm resources, e-commerce strategy, and firm performance. Yang, Xun, and He (2015) used the RBV to investigate the relationship between SME e-commerce investments and firm performance, and found that e-commerce sophistication, complimentary human resources, and complimentary business resources have positive relationships with firm performance, while IT investment has no positive association with firm performance. Perrigot and Penard (2013) used the RBV as a theoretical lens to examine e-commerce strategy in franchise networks and argued that internal resources and competencies of franchisors are important considerations when adopting e-commerce. Sobihah, Embat, Amin, and Muda (2013) examined the relationship between e-commerce adoption and organizational performance using the RBV as a theoretical framework and found that e-commerce business network and e-commerce competency have a positive effect on organizational performance. Yu, Ramanathan, and Nath (2014) used the RBV framework to investigate the relationship between marketing capability, operations capability, and firm performance, and found that marketing capability positively affects operational capability, which in turn affects firm performance. These studies illustrate the efficacy of the RBV as a framework for understanding the effect of resources on firm performance. The studies showed how various organizational resources influenced organizational performance.

The RBV is supportive of the DCF, in that both frameworks address how managers can exploit tangible and intangible resources to achieve competitive advantage. However, a shortcoming of the RBV is its failure to address the dynamic environment as

well as the effect of resource management actions (Cui & Pan, 2015). Shuen et al. (2014) described the DCF as a re-engineering of the RBV to address the complex, dynamic markets that businesses encounter today. Given the dynamic nature of e-commerce business environment (Daniel & Wilson, 2003) and the failure of the RBV to address the dynamic environment (Cui & Pan, 2015), using the RBV as a framework for this study would be inappropriate. The DCF relates managerial actions and strategies to the changes in the business environment. Using the DCF was insightful in exploring how SME business owners implemented e-commerce by acquiring, adapting, and reconfiguring internal and external resources to achieve competitive advantage.

Porter's five forces framework. Porter's five forces framework is a tool for assessing industry attractiveness. Porter developed the five forces framework in 1980 (Teece et al., 1997). Based on Porter's framework, five forces shape industry competition and profitability: the threat of entry, the power of suppliers, the power of buyers, the threat of substitutes, and rivalry among existing competitors (Shuen et al., 2014). The emphasis in using the five forces approach is to assess the industry and avoid competing in product markets where firms can only earn minimal returns (Shuen et al., 2014). Based on the five forces approach, the sources of competitive advantage are at the level of the industry within which a firm operates (Teece et al., 1997). Rajasekar and Al Raee (2013) used the five forces framework to study competition in the telecommunications industry of Oman and found that the main forces that shaped industry competition were the threat of substitutes and rivalry among competitors. Siaw and Yu (2004) used the five forces framework to analyze the effect of the internet on the banking industry and advised that

managers need new strategies to deal with the changes and volatility the internet has brought to the industry. With the five forces approach, the unit of analysis for competitive advantage is not the firm but the industry. The five forces framework is relevant when studying the attractiveness of an industry.

The five forces framework is a contrasting theory to the DCF. Teece (2007) argued that the DCF represents a shift from the five forces framework, as the unit of analysis in the case of the DCF is not the industry but the business ecosystem. One of the criticisms against the use of the five forces framework is that the framework provides no strategic direction to managers regarding how they can compete by managing their firms' resources (Shuen et al., 2014). The five forces approach ignores issues of skills, knowledge, and the firm's development path (Teece et al., 1997). The five forces framework is a tool to assess the level of industry attractiveness and does not provide strategic insight or specify strategic actions a firm can take to compete effectively in its industry (Dobbs, 2014). Because the five forces framework is a tool to assess the level of industry attractiveness, and the five forces framework provides no strategic direction to managers regarding how they can compete by managing their firms' resources, using the five forces framework for this study would be inappropriate. Using the DCF was insightful in exploring how SME business owners implemented e-commerce by acquiring, adapting, and reconfiguring internal and external resources to achieve competitive advantage.

Technology-organization-environment framework. The key constructs of the TOE framework are that technological factors, organizational factors, and environmental

factors, facilitate or inhibit innovation and technological adoption. Tornatzky and Fleischer developed the TOE framework in 1990 (Ramdani, Chevers, & Williams, 2013). One of the advantages of using the TOE framework to investigate e-commerce adoption is that the TOE framework addresses issues beyond the technological context by incorporating organizational and environmental contexts (Rahayu & Day, 2015). Researchers using the TOE framework have a wide conceptual lens to evaluate the effects of technological, organizational, and environmental factors on information and communications technology adoption and diffusion (Ramdani et al., 2013). The TOE framework is relevant when investigating how technological factors, organizational factors, and environmental factors, influence innovation and technological adoption. The authors of the TOE framework recognized that effective innovation and technological adoption requires an understanding of issues beyond the technological context.

Some researchers have used the TOE framework to study e-commerce adoption among SMEs. Yeng et al. (2015) used the TOE framework to investigate the aggregate effect of technological context, organizational context, and environmental context on SMEs adoption of e-commerce in Malaysia, and found that organizational context and technological context influence e-commerce adoption among the SMEs, while environmental context has no influence. Ramdani et al. (2013) used the TOE framework to investigate the factors that influence SMEs adoption of enterprise applications using data collected from SMEs located in the northwest of England, and found that technology, organization, and environment contexts, all influence SMEs adoption of enterprise applications. Rahayu and Day (2015) used the TOE framework to investigate

SMEs adoption of e-commerce in Indonesia, and found that environmental context has no influence on e-commerce adoption while organizational context and technological context have influence. Rashidirad, Soltani, and Salimian (2014) found that TOE factors, other than firm size, positively influence the fit between competitive strategies and dynamic capabilities. These studies illustrate the efficacy of the TOE framework as a theoretical lens for understanding the factors that influence e-commerce adoption. The studies showed how technological factors, organizational factors, and environmental factors influence e-commerce adoption.

The TOE framework has some limitations, which made the framework inappropriate for this study. Although the TOE framework offers a wide theoretical lens to study the determinants of e-commerce adoption, one of the limitations of the framework is that it does not address individual factors, such as issues relating to employee and manager attributes (Ghobakhloo & Hong Tang, 2013). Considering that the objective of this study was not to identify the factors that inhibit or facilitate e-commerce adoption, but rather to explore firm-specific strategies SME business owners used to implement e-commerce, using the TOE framework for this study would be inappropriate. The DCF addresses firm-level managerial actions and capabilities, and using the DCF was insightful in exploring how SME business owners implemented e-commerce by acquiring, adapting, and reconfiguring internal and external resources to achieve competitive advantage.

Systems theory. Systems theory associates the performance of a system with the interaction of its constituent parts. von Bertalanffy (1972) formulated the idea of general

systems theory. According to von Bertalanffy, a system consists of a set of elements that interact among themselves and with the environment. The general systems theory encompasses the principles of *open systems* and *wholeness* of systems. The key theoretical propositions are that systems, made up of subsystems, engage in an exchange of matter with the environment, and what affects a subsystem has some effect on other subsystems and the system as a whole (Stacey, 2011). Based on the principles of systems theory, organizations consist of multiple interdependent parts that together form more than the sum of their parts (Suter et al., 2013). Adams, Hester, Bradley, Meyers, and Keating (2014) posited that systems theory is a multidisciplinary construct that derives its propositions from a wide variety of disciplines such as the natural sciences, engineering and technology, medical and health sciences, agricultural sciences, social sciences, and the humanities. Using systems theory to investigate the performance of a system would entail a holistic investigation of the contributions of the subsystems. Consequently, using systems theory to investigate organizational performance would entail a holistic investigation of the various organizational subsystems, such as the contributions of various departments.

Systems theory is applicable to studying diverse situations. Systems theory has a wide and unrestricted domain of applicability, making it a general approach that can aid researchers and practitioners in understanding the behavior of systems (Adams et al., 2014). Berglund and Sandstrom (2013) used the open systems perspective to explore the challenges of business models innovation (BMI) and argued that organizations engaging in BMI have to cope with the challenge of restricted authority due to their interdependent

relationship with actors outside their domains. Gandy (2015) used the systems theory as a conceptual framework to explore small business strategies for profitability and sustainability and identified the business owner's passion and commitment, recruitment of the right employees, and understanding the seasonality of the business as key strategies. Johnson (2015) used the systems theory as a conceptual framework to explore the strategies small business owners in the salon industry use to sustain their businesses and identified education and training, customer service, business owner's passion and dedication, and professionalism as core strategies to ensure business sustainability. These studies illustrate the efficacy of using systems theory to study diverse situations. The studies showed how various systemic actions contributed to strategic outcomes.

Besides the general systems theory, there are other variants of systems theory. The general systems theory belongs to a group of systems thinking theories that include cybernetic systems and systems dynamics (Stacey, 2011). The theory of complex adaptive systems is another theory of systems that models a system as a population of agents interacting with one another based on self-organizing rules that may result in unpredictable outcomes: they may produce anarchy or creative outcomes (Stacey, 2011). Nguyen and Bosch (2013) used the systems thinking approach to address complex sustainability issues associated with the Cat Ba Biosphere Reserve in Vietnam and developed a systems model that shows the interconnections and interdependencies among the key parts of the system. Analysis of the systems model presented by Nguyen and Bosch (2013) not only helps in understanding potential system behavior; it also helps in identifying leverage points and systemic intervention strategies necessary to ensure the

sustainable development of the biosphere. On a higher level, systems theory encompasses systems thinking theories and the theory of complex adaptive systems. The common theme in all the variants of systems theory is that the interactions of system parts or agents influence system outcomes.

The systems theory has some limitations, which made the theory inappropriate for this study. The systems theory provides a wide theoretical lens to study the general behavior of systems (Adams et al., 2014) but does not address the issues of firm-level strategies or managerial capabilities necessary to achieve successful e-commerce implementation. Considering that, the objective of this study was to explore firm-specific strategies SME business owners used to implement e-commerce, using the systems theory as a conceptual framework for this study would be inappropriate. The DCF addresses firm-level managerial actions and capabilities; consequently, using the DCF was insightful in exploring how SME business owners implemented e-commerce by acquiring, adapting, and reconfiguring internal and external resources to achieve competitive advantage.

Small and Medium Enterprises

Some scholars have argued that understanding the context of SMEs is important when investigating the manner SMEs respond to change initiatives such as adopting new technologies. Ates, Garengo, Cocca, and Bititci (2013) identified eight main SME characteristics influencing managerial practices: short-term priorities, internal operational focus and lack of external orientation, tacit knowledge, flexibility, poor managerial skills, entrepreneurial orientation, command and control structure, and limited resources. The

owners, who also make decisions at different levels in the organizations, run most SMEs (Savrul et al., 2014). Zach et al. (2014) investigated the influence of SMEs context on the enterprise resource planning (ERP) system implementation process among SMEs and found that the owner-managers significantly influenced issues across the ERP life cycle such as ERP system selection, the implementation team's work, and system customization. Bhaskaran (2013) described the cultural orientation of most SMEs as similar to that of their owners. Savrul et al. (2014) argued that although the management of SMEs by their owners frees the firms from complex organizational structures, the success of the SMEs depends largely on the actions of the owners. These arguments underscored the importance of considering SMEs' context when introducing change initiatives in SMEs. The lack of formal organizational structures, limited resources, and the influence of the SME business owners are important contextual factors for consideration when introducing change programs in SMEs.

The importance of SMEs as a key sector in the global economy attracted attention in the literature. SMEs consist of a heterogeneous group of firms found in a wide range of business activities globally (Dan, 2014). The overwhelming majority of businesses in the world are SMEs, with the number of SMEs globally estimated at between 420 million and 510 million (International Trade Centre, 2015). Globally, SMEs constitute more than 95% of all firms; contribute approximately 50% of GDP, and account for 60% to 70% of total employment (International Trade Centre, 2015). In both developed and developing countries, SMEs employ the majority of workers in manufacturing and service sectors (Savrul et al., 2014; World Trade Organization, 2013). These statistics and arguments

showed that SMEs constitute a majority of businesses worldwide. Also, SMEs contribute substantially to the employment of labor globally, making SMEs a notable force in the fight against poverty and social inequality.

SMEs have made significant contributions to the economic growth and development of different countries and regions. SMEs drive employment generation, economic growth, and contribute to ensuring social stability (European Union, 2015). In Europe, SMEs constitute more than 99% of all businesses and provide two-thirds of private sector employment (Dan, 2014). In both the United States and China, SMEs constitute the majority of the industrial entities (Wang, Lou, Wang, & Guo, 2015). SMEs constitute more than 50% of the workforce employed in manufacturing in developing countries such as Ghana, Turkey, and Ecuador (World Trade Organization, 2013). In Ghana, SMEs constitute 92% of businesses, account for 85% of the manufacturing employment, and contributes 70% to the country's GDP (Ali, 2013). In 2013, MSMEs in Nigeria contributed 48.5% to the country's GDP, employed 84% of the total labor force, and contributed 7.3% to total exports (SMEDAN, 2013). These statistics indicated that SMEs are a significant player in the production of goods and services. The socioeconomic contributions of SMEs are evident in different countries and regions.

Despite its growing importance, a controversy exists in the literature as to what an SME is. Faloye (2014) argued that there is no universally accepted definition of what constitutes an SME. The definition of SME varies with nations and regions (Jahanshahi, Zhang, & Brem, 2013). Indices used to classify firms into micro, small, and medium enterprises include the number of employees, size of capital, sales, and assets

(Aigboduwa, & Oisamoje, 2013). In Iran, SMEs are firms having between 10 and 250 employees; in Malaysia, SMEs are service enterprises having between five and 50 full-time employees, or manufacturing enterprises having between five and 150 full-time employees (Jahanshahi et al., 2013). Within the European Union, SMEs are firms having greater than 10 but less than 250 employees (European Union, 2015). An SME in the European Union also must have a turnover of between 10 million euros and 50 million euros, or a balance sheet total of between 10 million euros and 43 million euros (European Union, 2015). In Nigeria SMEs are firms employing 10 to 199 persons and having total assets (excluding land and buildings) of more than 5 million naira but not more than 500 million naira (SMEDAN, 2013). SMEDAN classified as micro enterprises, firms with employees not exceeding nine and total assets (excluding land and buildings) of less than 5 million naira (SMEDAN, 2013). From the preceding definitions, there is no globally applicable definition for SME. This lack of a global definition for SME makes it imperative for researchers defining SME to do so in context.

The case of the United States is unique, as no standard definition exists for SME that cuts across all industries. In the United States, an SME may refer to a firm from a small-office-home-office (SOHO) to a large corporation (Dan, 2014). The United States classified small businesses according to industries. Although the United Kingdom and the European Union have simple definitions applied to all industries, the United States has established size standards for each industry under the North American Industry Classification system (Arafat & Ahmed, 2013). The most common size standards for small businesses in the United States are 500 employees for most manufacturing and

mining industries, 100 employees for wholesale trade industries, and for most retail and service industries the set size standard is \$6 million of annual receipts (Arafat & Ahmed, 2013). The lack of a clear definition for SME in the United States represents a departure from the pattern observed in other countries mentioned above. Researchers discussing SMEs in the context of the United States may need to give explicit information about their definitions for SME or small business.

Electronic Commerce

Some scholars have acknowledged the Internet as the foundation of e-commerce and as an enabler of business innovations. Advancements in Internet technology have influenced the world of business and led to new strategies of competition, new business models, and new management approaches by firms (Agwu & Murray, 2015). The Internet has resulted in the emergence of new business models, has affected the social life of people (Xiang, Wang, O'Leary, & Fesenmaier, 2014), and has become an innovative tool for marketing products and services (Clemes, Gan, & Zhang, 2014). The innovations in business models, goods, and markets because of the technological changes brought about by the Internet form the foundation of e-commerce (Elseoud, 2014). The Internet is the foundation that led to the development and growth of e-commerce systems. In addition to being a catalyst and driver of e-commerce, the Internet has contributed to the emergence of new business models and new strategies of competition.

No common definition of e-commerce existed in the literature. E-commerce involves carrying out commercial transactions through computer networks such as the Internet (Hajli, Sims, & Shanmugam, 2014; Huseynov & Yildirim, 2016). Elseoud (2014)

described e-commerce as sales transactions that take place among individuals, businesses, and organizations through computer-mediated networks. Abebe (2014) defined e-commerce as the process of buying and selling of information, products, and services through computer networks. Muhannad and Ahmed (2014) described e-commerce as the exchange of business information and transactions using electronic methods. According to Muhannad and Ahmed, the electronic methods of transacting e-commerce business include internal and external computer-connected networks such as the Internet, exchange of business documents via electronic data interchange (EDI), the use of telephone and fax, ATMs, smart cards, and wireless networks to conduct transactions and obtain digital cash. Although these authors have varied definitions of e-commerce, all the authors recognized e-commerce as a channel for carrying out commercial transactions electronically. The lack of a common definition for e-commerce makes it imperative for researchers discussing e-commerce to take into consideration the multiple perspectives that exist in the literature.

E-commerce growth and drivers. Statistics obtained from the literature showed a steady growth of e-commerce in the years past. E-commerce has witnessed a fast growth, with the Internet providing a platform for value innovation in service delivery in the areas of speed, personalization, convenience, and price (Torres et al., 2014). Global e-commerce sales grew from US\$270 billion in 2000 to US\$10 trillion in 2012 (AlGhamdi, Nguyen, Nguyen, & Drew, 2012). In the European Union, retail e-commerce sales were 241 billion euros in 2011 (Gomez-Herrera et al., 2014). Besides the Internet, growing adoption of information and communication technology among nations, decreasing cost

of personal computers and Internet subscription fees, and the emergence of smartphones have all contributed to the growth of e-commerce globally (Deng & Zhang, 2014). These statistics showed a sharp growth in global e-commerce revenues in the period 2000 to 2012. With the growing population of Internet users and increased use of smartphones, the world may continue to witness increased use of e-commerce and rise in global e-commerce revenues.

Globalization is one of the drivers of e-commerce growth. Globalization and increasing competition have made firms adopt information technology-based strategies to remain competitive (Jabeur, Mohiuddin, & Karuranga, 2014). Dan (2014) described globalization as the integration of regional and national economies, societies, and cultures through trade, transportation, and communication. Technological advances in logistics and distribution have made it possible for almost every organization to transact business and cooperate at a global level (Savrul et al., 2014). Globalization has facilitated the growth of commerce with the Internet driving interconnection of supply chains (Patil & Divekar, 2014). E-commerce may aid SMEs international expansion by providing an attractive distribution channel for exports (Frackiewicz & Grzesiuk, 2013). Globalization, aided by advances in technology, logistics, and distribution has contributed to e-commerce growth. With the Internet interconnecting global supply chains, globalization may lead to increased electronic transactions for goods and services worldwide.

SMEs could leverage the opportunities created by globalization to sell their goods internationally. Globalization creates an opportunity for distribution of goods produced only in certain countries to other countries, and SMEs can take advantage of this

opportunity to access to foreign markets (Dan, 2014). SMEs may leverage their small sizes by offering specialized goods and services (Savrul et al., 2014). Globalization, however, involves costs, risks, and requires certain knowledge and experience, process and cultural change, and SMEs have limited financial and human resources to embrace globalization (Dan, 2014). SMEs need to implement competitive strategies to succeed in the globalized environment, and instead of competing against large international firms, SMEs may adopt e-commerce technologies to expand into global markets (Savrul et al., 2014). With increasing globalization, SMEs have more opportunities to sell their goods and services internationally. Considering their resources constraints, adoption of e-commerce and offering of specialized goods and services are strategies that may help SMEs to succeed in the globalized environment.

E-commerce business models and trends. There are different categorizations of e-commerce regarding business models. Agwu and Murray (2014) identified seven models of e-commerce from literature: customer-to-customer (C2C), business-to-customer (B2C), business-to-business (B2B), customer-to-business (C2B), customer-to-government (C2G), business-to-government (B2G), and government-to-citizen (G2C). The B2B and B2C constitute the two main categories of e-commerce (Carlucci et al., 2014; Ghobakhloo, Hong, & Standing, 2015). The designation of each business model is a reflection of the nature of the transactions and the parties involved in the transactions. The transactions may involve individuals, businesses, and the government.

The categorization of e-commerce as either B2B or B2C model depends on the nature of the transactions and the parties involved in the transactions. The B2B e-

commerce model enables companies to use Internet-enabled technologies or applications to buy and sell goods, as well as share information with their business partners (Sila, 2015). The B2C e-commerce model enables businesses to provide goods and services to individual consumers through the Internet (Masoud, 2013; Huseynov & Yildirim, 2016). Examples of B2C activities include online shopping, Internet banking, and online travel services (Huseynov & Yildirim, 2016). Whereas B2B e-commerce transactions are between businesses entities, B2C e-commerce transactions are between a firm and the firm's customers. Online retail e-commerce stores operate on the B2C model.

Emerging trends in e-commerce include mobile commerce (m-commerce) and social commerce. Deng and Zhang (2014) described m-commerce as electronic transaction carried out using mobile devices such as smartphones. Rapid growth in m-commerce in developing countries of Asia and Africa because of increasing use of mobile devices has facilitated the growth in global e-commerce (Deng & Zhang, 2014). In the United Arab Emirates (U.A.E.), more people are using mobile phones than personal computers for online shopping, as 29% of Internet users in the U.A.E. have bought products using their smartphones compared to 26% of users who made purchases using their personal computers (Muhannad & Ahmed, 2014). The growing number of smartphone users is a key driver of the growth witnessed in m-commerce. The growth in m-commerce, on the other hand, is a key contributor to the growth in global e-commerce.

Social commerce is one of the emerging trends in e-commerce. Social commerce is a new stream in e-commerce that involves social interactions of people on the Internet through social networking sites (Hajli, 2013). Through social commerce, businesses can

reach consumers with greater efficiency than traditional retail outlets by integrating user-generated content into the storefront (Zhou, Zhang, & Zimmermann, 2013). Social commerce involves delivery of e-commerce via social media sites such as Twitter, Facebook, and LinkedIn, driven by developments in Web 2.0 technology (Hajli, 2013). Social media affords consumers the opportunity to promote their products and services (Abed, Dwivedi, & Williams, 2015). Social commerce can enhance a firm's competitive advantage through influence on the firm's operational efficiency, customer relationships, product and service offerings, and revenue (Zhou et al., 2013). The delivery of e-commerce via social media sites could be a source of competitive advantage for e-retailers. The use of social commerce may enhance interactions between businesses and their customers and may contribute to building customer loyalty.

Benefits of e-commerce. The benefits of e-commerce accrue to both businesses and consumers. E-commerce has changed the dynamics of business in the retail and service sectors and provided the benefit of convenience shopping for customers (Jahanshahi et al., 2013). E-commerce enables the customer to shop at any time with the latest information on product varieties from different vendors, availability, and prices (Agwu & Murray, 2014; Akroush & Al-Debei, 2015). With e-commerce, working parents can shop and work conveniently, thus saving them valuable time (Agwu & Murray, 2014). Akroush and Al-Debei (2015) argued that online purchase process could save customers valuable time and cost through the ease of information search and price comparisons among online vendors. Findings by Freathy and Calderwood (2016) indicated that Scottish Island consumers' primary reasons for shopping online were price,

convenience, and range. The benefits of e-commerce to consumers include convenience shopping and savings in time and cost. Discussed next are the benefits that businesses may derive from the use of e-commerce.

Businesses could benefit from the use of e-commerce in several ways. E-commerce adoption by firms can lead to rationalization of business processes, cost savings, and productivity gains (Savrul et al., 2014). Adoption of ICT by firms can lead to improvement in the coordination of processes and automation of tasks that are repetitive (Alonso-Almeida & Llach, 2013). E-commerce can help small businesses improve efficiencies, increase revenue, and achieve a competitive advantage (Dan, 2014). Dan (2014) argued that by selling products directly to end users without intermediaries, SMEs using e-commerce could achieve better competitiveness through a reduction in transaction costs. Key benefits of e-commerce to firms include the possibility of achieving competitive advantage through cost and efficiency gains. Discussed next are some other benefits that firms may derive from the use of e-commerce.

Some scholars argued that firms using e-commerce might achieve improvements in customer service and supply chain management. Compared to traditional businesses, firms using e-commerce have the advantage of reduced links, better speed, and lesser pressure on inventories (Elseoud, 2014). Khan, Liang, and Shahzad (2014) argued that e-commerce provides efficiency gains through cost reductions and improvement in supply chain management. Hande, Ghosh, and Govil (2015) underscored the importance of e-commerce firms having robust supply chains to achieve on-time delivery and inventory management. E-commerce provides a platform for SMEs to provide a more efficient and

faster customer service, as e-commerce firms may add online customer services such as package tracking systems, which can reduce customer phone calls and save cost (Dan, 2014). Findings by Jahanshahi et al. (2013) indicated that enhancement of company brand and image, reduction of transaction costs, and customer service improvement were some of the benefits reported by SMEs for adopting e-commerce. These arguments indicated that e-commerce use by firms might lead to improvements in customer service and supply chain management. Improvements in customer service and supply chain management may help a firm to achieve competitive advantage.

Local manufacturers could leverage export opportunities with e-commerce. Manufacturers can take advantage of e-commerce to sell beyond their traditional markets and expand sales to new overseas markets (Frackiewicz & Grzesiuk, 2013). With e-commerce, small local producers of goods can sell directly to consumers, which reduces the organizational distance between producers and consumers and creates an opportunity for market expansion from local to global (Carlucci et al., 2014). Frackiewicz and Grzesiuk (2013) argued that with e-commerce, SME exporters have the opportunity to sell their products on a global scale without the need to incur costs involved in setting up foreign offices. A study by Gomez-Herrera et al. (2014) on the drivers and impediments of cross-border e-commerce in the European Union showed that while distance-related trade costs reduced compared to offline trade in the same goods, language-related trade costs increased. The findings of Gomez-Herrera et al. showed that online trade introduces new sources of trade costs such as parcel delivery and online payment systems costs. Through e-commerce, local producers may export their products that meet export

requirements to overseas markets. The export of locally produced goods to overseas markets may lead to increased revenues and profitability for the local producers.

Levels of e-commerce adoption. There are various levels of e-commerce adoption. Ghobakhloo and Hong Tang (2013) described e-commerce adoption as a technological innovation adoption that involves different stages. Thong (2001) described technological innovation as a multi-stage process involving three stages: adoption, implementation, and post-implementation. According to Thong, the adoption stage is the decision-making phase to adopt a new technology; the implementation stage involves going ahead to implement the new technology after the firm takes a decision to adopt the technology, while the post-implementation stage is a post-evaluation phase that provides organizational learning. Based on these arguments, e-commerce adoption follows a logical time sequence, starting with the decision-making phase and ending with the post-implementation phase. Discussed next is another perspective that described the levels of e-commerce adoption based on the transactions carried out from a website.

Some scholars described the levels of e-commerce adoption from transactions perspective. E-commerce adoption progresses from simple initiation adoption using technology to carry out low-level activities, to usage of advanced and integrated technologies to perform sophisticated commercial transactions (Abou-Shouk, Megicks, & Lim, 2013). Al-Somali, Gholami, and Clegg (2015) proposed a stage-oriented model for e-commerce adoption, which incorporates three stages of e-commerce adoption among firms. The first stage of the e-commerce adoption process proposed by Al-Somali et al. (2015) is non-interactive e-commerce adoption; the second stage is interactive e-

commerce adoption, and the third stage is the stabilized e-commerce adoption at which point a firm uses e-commerce to carry out web-based transactions such as online purchase of goods and services. Based on the transactions perspective, the final stage of e-commerce adoption by a firm is at the point where someone could execute full commercial transactions from the company's website. Discussed next are the factors that could influence consumer attitudes and behaviors towards online shopping.

Consumer online purchase behavior and antecedents. There were factors identified in the literature that could influence consumer attitudes and behaviors towards online shopping. Knowledge of the factors that influence customers' disposition to shop online, customer loyalty, and customer satisfaction could help managers of retail e-commerce firms to enhance their organizations' competitiveness (Frackiewicz & Grzesiuk, 2013). Chen and Teng (2013) argued that understanding what transforms a website visitor into a shopper is important for e-commerce merchants. Online shopping attitudes depict consumer attitudes that influence their intention and decision to engage in online shopping (Muhannad & Ahmed, 2014). Hsu, Chuang, and Hsu (2014) described attitude as the extent of a person's positive feelings about shopping online. Attitude influences actual behavior to use the system (Ahmed & Akhlaq, 2015). Knowledge of the factors that influence consumer attitudes and behaviors towards online shopping may help managers of e-retail businesses adopt practices that may promote consumers' disposition to shop online. Below is a description of some of the factors identified as predictors of consumer attitudes and behavioral intention to purchase online.

Relative advantage/perceived value. Some scholars argued that consumers' perception of the relative advantage of online shopping compared with the traditional offline channel could influence the consumers' attitudes towards online shopping. Relative advantage refers to consumers' perception of the advantages or benefits of shopping online compared to shopping through the traditional offline stores (Akroush & Al-Debei, 2015). Chiu, Wang, Fang, and Huang (2014) linked customer online shopping benefits to two types of perceived value: utilitarian value and hedonic value. Utilitarian value reflects the functional aspects of the online shopping experience and consists of four major utilitarian benefits: convenience, product offerings, product information, and monetary savings (Chiu et al., 2014). Hedonic value consists of the emotive benefits of the online shopping experience: adventure, social, gratification, idea, role, and value (Chiu et al., 2014). Consumers' propensity to shop online may increase with higher perceived value of online shopping. If consumers do not perceive any significant value in online shopping, the consumers may be reluctant to engage in online shopping.

Some empirical findings validated the argument that perceived value influences online purchase intention. Perceived value of online shopping positively influenced Malaysian e-shoppers' attitudes towards online shopping (Lim, 2015). Findings by Akroush and Al-Debei (2015) on the factors affecting consumer attitudes toward online shopping in Jordan showed that perceived relative advantage has a positive influence on consumers' attitude towards online shopping, and supported the findings by Lim (2015). To attract and motivate consumers' interest in online shopping, e-retail managers need to communicate effectively to consumers, the relative advantage and benefits of online

shopping compared with the traditional channel (Akroush & Al-Debei, 2015; Lim, 2015). Based on these findings, perceived value has an influence on online purchase intention. Communicating to consumers, the relative advantage of online shopping compared with the traditional channel may increase the consumers' perception of value of online shopping, which may in turn increase the consumers' propensity to shop online.

Perceived usefulness. Users' perception of how a new system might improve their performance could influence the users' attitudes towards adopting the new system. Perceived usefulness refers to the extent of someone's perception of job performance enhancement due to the use of a particular system (Ahmed & Akhlaq, 2015). Usefulness connotes an online shopper's perception of how effectively an online store provides anticipated useful information that could enhance online transactions (Chen & Teng, 2013). Findings by Ahmed and Akhlaq (2015), and Chen and Teng (2013) indicated that perceived usefulness has a positive influence on online purchase intention. Lim (2015) found a positive relationship between perceived usefulness of e-shopping sites and e-shoppers' attitudes towards e-shopping. These findings indicated that perceived usefulness has a positive influence on online purchase intention. People are more likely to shop at an online store if they perceive that the online store has useful information that may enhance their transactions.

Perceived ease of use. The perceived ease of use of a website could influence consumers' attitudes towards online shopping. Perceived ease of use depicts the degree of perception of an online shopper that a website is easy to use (Chen & Teng, 2013). Ahmed and Akhlaq (2015) argued that a user is more likely to adopt an application or

system the user perceives to be easier to use than one perceived to be difficult. A website that is easier to use enables a user to search for useful information more easily, enhances the user's perception of usefulness and improves the chances of the user making a purchase (Chen & Teng, 2013). Lim (2015) found that perceived ease of use of e-shopping sites has a positive influence on both e-shoppers' attitudes towards e-shopping and perceived usefulness, and ultimately on purchase intention. Findings by Chen and Teng (2013) indicated that perceived ease of use has a positive relationship with both usefulness and trust. Ahmed and Akhlaq found that perceived ease of use has a direct positive relationship with online purchase intention. These findings indicated that perceived ease of use has a positive influence on online purchase intention. Consumers' propensity to shop online may be higher if the consumers perceive e-commerce websites to be easy to use.

Perceived website/online store image. Consumers' mental image about an online store website could influence the consumers' attitudes towards online shopping. Perceived website image is a reflection of the consumer's mental image about an online store website (Akroush & Al-Debei, 2015). A positive online store image can enhance consumer purchase intention (Chang & Tseng, 2013). Findings by Akroush and Al-Debei (2015) indicated that perceived website image has a positive effect on consumer attitudes towards online shopping. Chen and Teng (2013) investigated the relationship between online store image and purchase intention using six attributes of online store image: usefulness, enjoyment, ease of use, trust, familiarity, and settlement performance. Findings by Chen and Teng indicated that usefulness and settlement performance directly

influence online purchase intention, whereas enjoyment and ease of use indirectly influence purchase intention through their influence on usefulness. Ahmed and Akhlaq (2015) found a direct positive relationship between perceived enjoyment and purchase intention. These findings indicated that perceived website image has an influence on online purchase intention. Consumers' positive mental image about an online store may enhance the consumers' online purchase intention.

Trust. Consumers' perception of trust about an online store and online transactions could influence the consumers' attitudes towards online shopping. Trust is an indication of an e-shopper's belief that the e-retail store brand can deliver on its obligations and promises, and has a genuine regard for its customers (Chen & Teng, 2013). Sharma and Lijuan (2014) argued that trust is an important factor in e-commerce because of the consumers' limited knowledge of the store owners and the consumers' exposure to uncertainties and risks. Trust helps mitigate consumer risk in online purchase by allaying the fears of the consumer about any untoward acts of the online store owner, including the abuse or misuse of consumers' personal information (Chen & Teng, 2013). Findings by Ahmed and Akhlaq (2015) indicated a negative relationship between distrust and purchase intention. Consumers are more likely to purchase online when the consumers have a high perception of trust in the website owners and in the web transactions. Implementing measures that promote consumer trust by e-retailers may positively influence consumers' attitudes towards online shopping.

Some scholars investigated the predictors and antecedents of trust. Akroush and Al-Debei (2015) found that trust is a direct predictor of consumer online shopping

attitude, whereas relative advantage and website reputation are antecedents of trust.

Finding by Hsu et al. (2014) indicated a positive relationship between trust in a website and consumer online shopping attitude, thus, corroborating the results of the study by Akroush and Al-Debei. Hsu et al. found a negative relationship between trust in a website and perceived risk, and in addition, found that security, privacy, and IT quality are antecedents of trust in a website. Sharma and Lijuan (2014) made consistent findings with Hsu et.al about the positive relationship between trust, security, and privacy. Sharma and Lijuan also found a positive relationship between trust and customer loyalty. These findings indicated that trust is a predictor of consumer online shopping attitude and customer loyalty. The antecedents of trust in a website include security, privacy, and IT quality.

How to address the issue of consumer trust in online purchase was a subject of debate among scholars. Ahmed and Akhlaq (2015) argued that having an established legal system that addresses cyber crimes could help address trust issues in online purchase. Akroush and Al-Debei (2015) suggested that adopting cash on delivery (COD) strategy by online retailers might effectively help in raising consumer trust and online shopping attitude. Akroush and Al-Debei further argued that online store managers could help build trust by adopting measures to enhance the reputation of their websites as well as communicating the benefits of their online stores compared to the traditional channels. Adopting these suggestions may enhance consumer trust in online purchase. Enhancing consumer trust in online shopping may increase the propensity of consumers to engage in online shopping.

Perceived risk. Consumers' perception of the risks involved in online transactions could influence the consumers' attitudes towards online shopping. Perceived risk is the likelihood that a consumer in pursuit of a desired end from online shopping may incur some loss (Masoud, 2013). Chiu et al. (2014) argued that the inability of consumers to monitor the behavior of online shop owners and concerns about the security of making online purchases contribute to a high perception of risk by the consumers. Masoud (2013) examined the effects of perceived risk on the online shopping behavior of consumers in Jordan and found that financial risk, product risk, delivery risk, and information security risk negatively affect online shopping behavior, whereas time risk and social risk do not affect on online shopping behavior. The results of studies by Clemes, Gan, and Zhang (2014), and Ahmed and Akhlaq (2015) showed that perceived risk negatively affects online purchase intention. These findings indicated that perceived risk of online shopping has an influence on consumers' attitudes towards online shopping. When consumers have a high perception of risk involved in online shopping, the consumers may be reluctant to engage in online shopping.

Some scholars investigated the relationship between perceived risk, utilitarian value, hedonic value, and consumer purchase intention. Chiu et al. (2014) investigated the role of utilitarian value, hedonic value, and perceived risk on customer repurchase intention and found that a higher perceived risk lowers the effect of utilitarian value on repurchase intention and raises the effect of hedonic value on repurchase intention. Findings by Chang and Tseng (2013) however showed that perceived risk has no moderating effect on the relationship between utilitarian value, hedonic value, and

purchase intention. There were inconsistent results regarding the nature of the relationships between perceived risk, utilitarian value, hedonic value, and consumer purchase intention. The nature of the relationships between these variables may need further exploration.

Perceived service quality. The perception of consumers about the quality of service of rendered by an online store could influence the consumers' attitudes towards online shopping. Consumers' perception of the quality of service of an online store influences consumer purchase intention (Clemes et al., 2014; Yang, Lu, & Chau, 2013). Yang et al. (2013) measured service quality as a multidimensional construct consisting of five components: (a) tangibles such as the visual attractiveness of web appearance, (b) reliability of the online channel, (c) responsiveness to customer requests, (d) assurance of safety in transactions with the online channel's information system, and (e) perception of empathy of the online channel towards the customer. Yang et al. found a positive relationship between perceived quality of service of an online channel and consumers' intention to shop from the online channel. Clemes et al. (2014) found that poor quality of service negatively influenced online shopping adoption among Chinese consumers, thus, corroborating the findings of Yang et al. Online retailers may improve the quality of their services through prompt delivery of goods and adopting a mix of communication channels, such as e-mail and online chats with customers (Clemes et al., 2014). Based on these findings, perceived service quality has an influence on consumers' attitudes towards online shopping. Consumers are more likely to purchase from an online store when the consumers have a high perception of the quality of service rendered by the online store.

Other factors. There are some other factors identified in the literature that could influence consumers online purchase behavior. Hande, Ghosh, and Govil (2015) identified ease/method of payment as an important factor shaping consumer online buying behavior in India, and COD as the preferred method of payment by the consumers. Ahmed and Akhlaq (2015) identified the availability of a legal framework to protect online consumers in electronic transactions as a factor affecting online purchase intention. Findings by Ahmed and Akhlaq indicated a positive relationship between the perceived effectiveness of legal framework and consumer online purchase intention. Clemes et al. (2014) examined the relationship between consumer demographic characteristics and online purchase behavior of Chinese consumers and found that female consumers, younger people, single persons, and people with higher education are more likely to adopt online shopping. These factors, together with the factors identified in the earlier sections may influence consumers' attitudes towards online shopping. Knowledge of the factors that influence consumer attitudes and behaviors towards online shopping may help managers of e-retail businesses adopt practices that may promote consumers' disposition to shop online.

SMEs and E-commerce Adoption

Some scholars have compared SMEs' adoption of e-commerce with the adoption of e-commerce by large businesses. Despite the important role SMEs play in the global economy and the potential benefits of e-commerce, e-commerce adoption among SMEs is limited compared with large firms (Dan, 2014; Yeng et al., 2015). Yeng et al. (2015) attributed the limited adoption of e-commerce by SMEs to the unique characteristics of

SMEs compared with large firms. Some of the unique characteristics of SMEs, compared with large firms which limit their capacity to adopt new technologies include limited resources (Ates et al., 2013; Zach et al., 2014), ownership structure (Savrul et al., 2014; Zach et al., 2014), focus on short-term priorities and internal operations, and lack of external orientation (Ates et al., 2013). The unique characteristics of SMEs may have contributed to the limited adoption of e-commerce by SMEs compared with large firms. SMEs' limited resources, the ownership structure of the SMEs, and focus of SME business owners on short-term priorities are important contextual factors that may have contributed to the limited adoption of e-commerce by SMEs.

Some researchers reported a low rate of e-commerce adoption by SMEs in different countries. There has been a low rate of adoption of e-commerce by SMEs (Ahmad, Abu Bakar, Faziharudean, & Mohamad Zaki, 2015; Mutua, Oteyo, & Njeru, 2013). Mutua et al. (2013) investigated the extent of e-commerce adoption by SMEs in Kenya and found that many of the SMEs were yet to adopt e-commerce. Ahmad et al. (2015) reported a low rate of e-commerce adoption among SMEs in Malaysia, and Khan et al. (2014) found a low rate of e-commerce adoption among SMEs in Pakistan. Studies by Agwu and Murray (2014, 2015) and Faloye (2014) showed that the rate of e-commerce adoption among Nigerian SMEs was low. These findings corroborated the view that the rate of e-commerce adoption by SMEs was low. However, the low rate of adoption of e-commerce by SMEs may not be the case in all regions of the world, as all the countries reported in these studies were in Africa, Asia, and the Middle East.

There were arguments among scholars about the level of e-commerce adoption by SMEs with regard to carrying out online transactions. The level of e-commerce adoption among SMEs is mainly at the non-interactive adoption stage and restricted to the use of the Internet and e-mail to carry out basic activities (Al-Bakri & Katsiolouides, 2015). Agwu and Murray (2014) also reported that e-commerce adoption among SMEs in Nigeria was at the basic level. Mutua et al. (2013) found that 43% of the SMEs in Kenya lacked functioning websites, 31% operated static websites, 22% operated active interactive websites with customers, while only 4% engaged in online sales. Firms need to integrate e-marketing and e-payment processes to their business operations to adopt e-commerce effectively (Al-Bakri & Katsiolouides, 2015). Many SMEs that adopted e-commerce were operating at the basic level of e-commerce. Operating at the basic level of e-commerce implied that many of the SMEs' websites could not support the execution of full commercial transactions.

Comparison of e-commerce adoption among SMEs in developing and developed countries revealed some disparities. A disparity exists in the state and pattern of e-commerce adoption among SMEs in developing and developed countries (Al-Somali et al., 2015; Hajli et al., 2014; Makame, Kang, & Park, 2014). Dan (2014) asserted that compared to the developed countries, there is a lower rate of adoption of e-commerce among SMEs in Africa and other developing countries. Jahongir and Shin (2014) argued that developing countries have many infrastructural challenges, unlike the developed countries with developed infrastructure and regulatory systems to support e-commerce. Whereas researchers in the developed countries focus on issues about e-commerce

success factors, payment systems, and institutions, researchers in developing countries still focus on e-commerce adoption factors (Makame et al., 2014). SMEs in developing countries lag behind their counterparts in developed countries with regard to e-commerce adoption. The disparity in the rate of adoption of e-commerce by SMEs in developing and developed countries indicated that the low rate of adoption of e-commerce by SMEs might not be the case in all countries of the world.

Some contextual factors account for the disparities in the rate of e-commerce adoption by SMEs in developing and developed countries. Contextual factors, such as limited availability and accessibility of ICT and other relevant infrastructure for e-commerce, lack of financial resources, and lack of appropriate legal and regulatory environment contribute to the relatively lower rate of adoption of e-commerce in developing countries compared to the developed countries (Al-Somali et al., 2015; Dan, 2014). Recognizing cultural and contextual factors that might be relevant to e-commerce adoption in developing countries, Hajli et al. (2014) proposed and empirically tested an e-commerce pre-adoption model for SMEs in developing countries using survey data collected from SMEs in Iran. Similarly, Makame et al. (2014) developed and empirically tested a model for e-commerce adoption in developing countries, which extended the technology adoption model (TAM) by including three new factors: (a) national policy initiatives, (b) technology infrastructure, and (c) trust. Ghobakhloo and Hong Tang (2013) proposed an integrated model for analyzing the relationships between owner/manager characteristics and e-commerce adoption in small businesses of developing countries, which incorporated some elements of the diffusion of innovation

(DOI) theory. The identified contextual factors may have contributed to the disparities in the rate of e-commerce adoption by SMEs in developing and developed countries. The various e-commerce adoption models for developing countries developed by these researchers were to account for the contextual differences between developing and developed countries.

Some researchers have linked SMEs' e-commerce adoption to organizational performance. Abebe (2014) conducted a study on the relationship between e-commerce adoption and SME performance using data collected from SMEs in Texas, USA, and found that e-commerce adoption has a positive influence on SMEs average sales growth. Abebe found that SMEs that implemented e-commerce recorded higher average sales growth than those that did not use e-commerce. Carlucci et al. (2013) carried out a study on the quality and retail prices of extra virgin oil (EVO) sold directly to consumers through online retail stores of local SME producers in Italy. Carlucci et al. found that the average price of EVOs sold through the SME e-commerce channels was higher than the average price sold by large-scale Italian retail shops. According to Carlucci et al., the EVOs sold through the SME e-commerce channels commanded price premiums because the EVOs had more differentiation in terms of variety, packaging, and geographical indication (GI) certification compared to the ones sold in offline retail stores. These findings indicated that SMEs' e-commerce adoption might lead to improvements in their organizational performance. Apart from the prospect of higher sales performance, SMEs' e-commerce adoption might lead to improvements in other aspects of organizational performance.

Some other studies indicated a relationship between SMEs' e-commerce adoption and performance. Khan et al. (2014) investigated the effect of e-commerce and electronic supply chain management (E-SCM) adoption by SMEs in Pakistan. Findings by Khan et al. indicated that e-commerce and E-SCM adoption had a positive influence on SMEs, as the SMEs recorded higher average sales growth rate, on-time order management, and delivery process than non-adopters of the technologies. Yang et al. (2015) investigated the relationship between SME e-commerce capability and firm performance, measured as return on sales, and found that e-commerce website sophistication is positively associated with firm performance, whereas capital IT investment has no positive association with firm performance. Yang et al. also found that complimentary human resources and complimentary business resources have a positive relationship with firm performance. The results of Yang et al. are consistent with the findings of Alonso-Almeida and Llach (2013) which indicated that ICT adoption and use by small businesses has a positive influence on company competitiveness, primarily by enhancing human resources and organizational performance. SMEs' e-commerce adoption may lead to improvements in organizational performance. Adoption of e-commerce by SMEs may lead to improvements in organizational supply chain management as well as enhance human resources.

Factors that influence SMEs adoption of e-commerce. There were factors identified in the literature that could influence SMEs' adoption of e-commerce. E-commerce adoption factors refer to factors that can either motivate e-commerce adoption or inhibit it (Garg & Choeu, 2015). Yeng et al. (2015) argued that understanding the

critical factors that influence e-commerce adoption among SMEs could help both SMEs that have adopted e-commerce and aspiring SMEs to focus on these factors to ensure a successful adoption. According to Yeng et al., knowledge of the e-commerce adoption factors could help SME business owners manage the challenges of implementation. Knowledge of the e-commerce adoption factors may be beneficial to SME business owners who may wish to implement e-commerce. Some of the identified factors that inhibit adoption of e-commerce by SMEs may necessitate government intervention to mitigate the problems.

Some researchers investigated the factors that influence SMEs' adoption of e-commerce using different frameworks and models. Ghobakhloo and Hong Tang (2013), Mbatha (2013), and Kurnia, Choudrie, Mahbubur, and Alzougool (2015) used the DOI model to investigate e-commerce adoption factors among SMEs. Ahmad et al. (2015), Rahayu and Day (2015), and Yeng et al. (2015) used the TOE framework to carry out a similar investigation. Ramdani et al. (2013) used the TOE framework to investigate the factors that influence SMEs adoption of enterprise applications. Awiagah, Kang, and Lim (2015) used a multi-framework perspective incorporating the TOE framework and the theory of planned behavior (TPB) to investigate the factors that influence e-commerce adoption among Ghanaian SMEs. These were some of the frameworks researchers used to investigate the factors that influence SMEs e-commerce adoption. The DOI and TOE frameworks were the most widely used frameworks by the researchers.

Studies on the relationship between technological context, organizational context, environmental context, and SMEs' e-commerce adoption showed mixed results. Yeng et

al. (2015) investigated e-commerce adoption among SMEs in Malaysia and found that organizational context and technological context influenced e-commerce adoption among the SMEs, whereas environmental context had no influence. Kurnia et al. (2015) however, made contradictory findings to those of Yeng et al. by revealing that perceived environmental pressure influenced adoption of all e-commerce technologies by SMEs in Malaysia. Findings by Rahayu and Day (2015) that environmental context has no influence on e-commerce adoption among SMEs, whereas organizational context and technological context have influence, are consistent with those of Yeng et al. Ramdani et al. (2013) investigated the factors that influence SMEs' adoption of enterprise applications using data collected from SMEs located in the northwest of England, and found that technology, organization, and environment contexts, all influence SMEs' adoption of enterprise applications. There were inconsistent findings regarding the influence of technology, organization, and environment contexts on SMEs' adoption of e-commerce. Below is a description of some of the individual factors identified in the literature that could influence e-commerce adoption by SMEs.

Relative advantage/perceived benefits. Business owners and managers' perception of the relative advantage of adopting e-commerce could influence their attitudes towards e-commerce adoption. Relative advantage refers to the degree of perception of the benefits an organization can derive from adopting an innovation relative to its non-adoption (Garg & Choeu, 2015). Rahayu and Day (2015) argued that when managers appreciate the relative advantage of adopting e-commerce, they are more likely to channel organizational resources to ensure its actualization. Ramdani et al. (2013)

found that perceived relative advantage is one of the factors that influence SMEs adoption of enterprise applications. Findings by Garg and Choeu (2015), Ghobakhloo and Hong Tang (2013), Ahmad et al. (2015), and Rahayu and Day indicated that perceived relative advantage of e-commerce is one of the factors that influence the decision of SME owners and managers to adopt e-commerce. Agwu and Murray (2015) found that lack of awareness of the benefits of e-commerce is one the barriers to e-commerce adoption by SMEs in Nigeria. SME business owners/managers' propensity to adopt e-commerce may increase with higher perceived value of e-commerce adoption. If the SME business owners/managers do not perceive any significant value in adopting e-commerce, the SME business owners/managers may be reluctant to adopt e-commerce.

External pressure from competitors and trading partners. External pressure from competitors and trading partners could influence SMEs' adoption of e-commerce. Adoption of e-commerce by SME trading partners or suppliers has the likelihood to influence their SME collaborators to do the same thing to maintain their competitive standing (Al-Bakri & Katsioloudes, 2015). Similarly, Rahayu and Day (2015) argued that adoption of e-commerce by competitors might influence other firms to follow suit to maintain their competitiveness. Garg and Choeu (2015) found that competitive pressure is one of the factors that influence e-commerce adoption among SMEs in South Africa. Findings by Al-Bakri and Katsioloudes (2015) indicated that external pressure from trading partners and competitors influence e-commerce adoption among SMEs in Jordan. However, findings by Rahayu and Day and Ahmad et al. (2015) showed inconsistent results, as pressure from suppliers and competitors did not influence e-commerce

adoption among SMEs in Indonesia and Malaysia respectively. SME business owners/managers' propensity to adopt e-commerce may increase if the SMEs' trading partners or competitors adopt e-commerce. The fear of loss of business opportunities with trading partners and loss of market share to competitors may increase the SME business owners/managers' propensity to adopt e-commerce.

IT knowledge and experience. The level of IT knowledge and experience that exists within the top management of a firm could influence management's decision to adopt a new technology such as e-commerce. Rahayu and Day (2015) argued that possession of prior IT knowledge and experience by the SME owner/manager could minimize the degree of uncertainty and perceived risk of adopting e-commerce. Awa, Baridam, and Nwibere (2015) found that IT-related experience of top management has a positive influence on e-commerce adoption among SMEs in Nigeria. Rahayu and Day found that owners' IT ability and owners' IT experience are factors that influence e-commerce adoption among SMEs in Indonesia. Findings by Garg and Choeu (2015) are consistent with those of Rahayu and Day, whereas the results obtained by Ghobakhloo and Hong Tang (2013) are contradictory, as owners/manager's IT knowledge and experience did not influence e-commerce adoption among the Iranian SMEs. Findings by Faloye (2014), and Jahanshahi et al. (2013) indicated that lack of knowledge and understanding of e-commerce is one of the barriers to e-commerce adoption among SMEs in Nigeria and the three Asian countries of India, Malaysia, and Iran. There were inconsistent findings regarding the influence of IT knowledge and experience of owners/managers on SMEs' adoption of e-commerce. However, SME business

owners/managers may be more positively disposed to adopting e-commerce if the SME business owners/managers have prior IT knowledge and experience.

Perceived compatibility. There were arguments that the perceived compatibility of e-commerce with existing systems and values in a firm could influence the management's decision to adopt e-commerce. Perceived compatibility is an indication of how well the introduction of e-commerce in the firm will fit with existing business processes, infrastructure, culture, and values (Ahmad et al., 2015; Rahayu & Day, 2015). Findings by Ramdani et al. (2013) indicated that perceived compatibility is one of the factors that influence SMEs adoption of enterprise applications. Ghobakhloo and Hong Tang (2013), and Ahmad et al. (2015) found that perceived compatibility is one of the factors that influence SMEs adoption of e-commerce, which is consistent with the findings of Ramdani et al. However, Rahayu and Day (2015) made a contradictory finding which indicated that perceived compatibility is not one of the factors that influence SMEs adoption of e-commerce among Indonesian SMEs. Senarathna, Warren, Yeoh, and Salzman (2014) investigated the influence of different organizational cultures on e-commerce adoption and found a positive correlation between adhocracy culture and e-commerce adoption and a negative correlation between hierarchy culture and e-commerce adoption. SME business owners/managers may be more positively disposed to adopting e-commerce if the introduction of e-commerce in the SMEs would fit with existing business processes, infrastructure, culture, and values. If the SME business owners/managers perceive that the introduction of e-commerce may necessitate a re-

engineering of business processes, infrastructure, culture, and values, the SME business owners/managers may feel reluctant to adopt e-commerce.

Management support. The attitude of management towards e-commerce could influence SMEs' adoption of e-commerce. Management support of e-commerce adoption refers to the degree to which management promotes and supports the use of IT and other development initiatives among the workers in the organization (Awiagah et al., 2015). Ahmad et al. (2015) argued that firms that have management with a positive attitude towards e-commerce are more likely to adopt e-commerce. Findings by Awiagah et al. (2015) indicated that management commitment and support is one of the factors that influence SMEs adoption of e-commerce in Ghana. Al-Bakri and Katsioloudes (2015), and Ahmad et al. found that management attitude towards e-commerce is one of the factors that influence SMEs adoption of e-commerce, thus, corroborating the findings of Awiagah et al. Ramdani et al. (2013) found that top management support is one of the factors that influence SMEs adoption of enterprise applications. These findings indicated that SMEs that have management with a positive attitude towards e-commerce are more likely to adopt e-commerce. Where the attitude of management towards e-commerce is negative, management support for e-commerce adoption may be lacking.

Perceived cost. The perceived cost of implementing e-commerce could influence the decisions of SME business owners/managers to adopt e-commerce. When owners/managers of small businesses perceive the cost of adopting e-commerce to be high, their commitment to adopt the technology may be low due to SMEs' limited financial resources (Ghobakhloo & Hong Tang, 2013). Ghobakhloo and Hong Tang

(2013) found that the perceived cost of adopting e-commerce is one of the factors that influence SMEs adoption of e-commerce in developing countries. Findings by Mbatha (2013), Agwu and Murray (2015), and Jahanshahi et al. (2013) indicated that the perceived cost of adopting e-commerce is a barrier to e-commerce adoption among SMEs in South Africa, Nigeria, and the three Asian countries of India, Malaysia, and Iran. Agwu and Murray stated that many of the SMEs in Nigeria did not have the income to purchase computers and necessary broadband Internet connectivity equipment, including sustaining the recurring cost of broadband Internet subscriptions. Rahayu and Day (2015), however, made a contradictory finding, as the researchers found that the perceived cost of adopting e-commerce does not influence SMEs' adoption of e-commerce in Indonesia. There were inconsistent findings regarding the influence of perceived cost on SMEs' adoption of e-commerce. However, considering the limited resources of SMEs, the propensity of SME business owners/managers to adopt e-commerce may be low when the SME business owners/managers have a high perception of the cost of adopting e-commerce.

Trust, perceived risk, and security concerns. The perceptions of SME business owners/managers regarding trust, risk, and security in carrying out online transactions could influence the decisions of the business owners/managers to adopt e-commerce. Trust, security and privacy concerns arise because e-commerce operates on computer networks, which hackers can attack, thus, breaching the security of the system (Jahanshahi et al., 2013). Findings by Ghobakhloo and Hong Tang (2013) indicated that the perceived risk of adopting e-commerce is one of the factors that influence SMEs

adoption of e-commerce in Iran. Jahanshahi et al. (2013) found that doubt about security and privacy of e-commerce transactions is a barrier to e-commerce adoption among SMEs in the three Asian countries of India, Malaysia, and Iran. Agwu and Murray (2015) found that perceived risk of e-commerce and trust issues constitute barriers to e-commerce adoption among SMEs in Nigeria. Garg and Choeu (2015), however, made contradictory findings, which showed that security is not a factor that influences e-commerce adoption among SMEs in South Africa. SME business owners/managers may adopt a negative attitude towards e-commerce adoption if the SME business owners/managers have a low perception of trust and perceive a high risk in exposing their systems to the public for online transactions. The fear of security and privacy breaches on the servers and networks of the SMEs may negatively influence the attitude of the SME business owners/managers towards e-commerce adoption.

Physical and regulatory infrastructure. Poor physical and regulatory infrastructure is one of the identified factors that could influence SMEs' adoption of e-commerce. Aminu (2013) identified insufficient availability of broadband Internet connectivity and slow speed of available Internet connections as factors that inhibit e-commerce adoption among SMEs in Nigeria. Agwu and Murray (2015) identified the epileptic nature of electric power supply in Nigeria and the absence of a regulatory framework on e-commerce security as barriers to SMEs' adoption of e-commerce in Nigeria. Consistent with the findings of Agwu and Murray, Faloye (2014) found that the epileptic nature of electric power supply in Nigeria and lack of a developed legal and regulatory system to support e-commerce are barriers to e-commerce adoption among

SMEs in Nigeria. SME business owners/managers' attitude towards e-commerce adoption may be negative where there is poor physical and regulatory infrastructure. Ubiquitous availability of high-speed broadband Internet infrastructure and availability of a developed legal and regulatory system to support e-commerce may motivate SME business owners/managers to adopt e-commerce.

Firm size. Firm size is one of the identified factors that could influence SMEs' adoption of e-commerce. Larger businesses are likely to possess more resources to acquire organizational assets than small firms (Rahayu & Day, 2015). Ramdani et al. (2013) found that firm size is one of the factors that influence SMEs' adoption of enterprise applications. Agwu and Murray (2015) identified firm size as one of the barriers to e-commerce adoption among SMEs in Nigeria. According to Agwu and Murray, many of the SMEs in Nigeria operate as family businesses and suffer limitations of size and resources. Jabeur et al. (2014) found that firm size is a factor that influences e-business adoption among forestry sector SMEs in Quebec, Canada. Rahayu and Day (2015), however, made contradictory findings, which indicated that firm size has no influence on e-commerce adoption among SMEs in Indonesia. There were inconsistent findings regarding the influence of firm size on SMEs' adoption of e-commerce. However, compared to large businesses, some small businesses may lack the resources and organizational structure to support e-commerce implementation and operations.

External support. Support from external agents is one of the identified factors that could influence SMEs' adoption of e-commerce. External support from parties such as the government and IT companies can influence e-commerce adoption by SMEs

(Rahayu & Day, 2015). Garg and Choeu (2015) stated that government intervention in the areas of regulation, data protection and security, and policies aimed at bringing down Internet access prices, could have a positive influence on e-commerce adoption among firms. Findings by Ahmad et al. (2015) indicated external agents as one of the factors that influence e-commerce adoption among SMEs in Malaysia. Awiagah et al. (2015) found that government support is one of the factors that influence e-commerce adoption among SMEs in Ghana. Rahayu and Day (2015) made a contradictory finding, which indicated that external support has no influence on e-commerce adoption among SMEs in Indonesia. Support from external agents may motivate SME business owners/managers to adopt e-commerce. In particular, government intervention in the areas of infrastructure and development of legal and regulatory systems to support e-commerce may motivate SME business owners/managers to adopt e-commerce. Support from external IT companies and e-commerce solution providers may also be beneficial to SMEs, as some SMEs may outsource IT services due to resource constraints to maintain in-house IT personnel.

Other factors. There were some other factors identified in the literature that could influence SMEs adoption of e-commerce. Owner/manager's innovativeness is one of the factors that influence SMEs adoption of e-commerce (Ghobakhloo & Hong Tang, 2013; Rahayu & Day, 2015). Ghobakhloo and Hong Tang (2013) argued that an innovative manager is more likely to adopt a perceived risky technology such as e-commerce. Awa et al. (2015) found that company location is one of the factors that influence SMEs adoption of e-commerce. According to Awa et al., firms in the cities are more likely to

adopt e-commerce than those in the rural areas due to the relatively poor infrastructure in the rural areas. Ramdani et al. (2013) found that the industry in which firms operate is a factor that could influence SMEs adoption of enterprise applications. According to Ramdani et al., firms in manufacturing, retail, and service sectors have different tendencies to adopt e-commerce. Findings by Awa et al. indicated that the demographic composition of top management such as age, education, and gender, has an influence on e-commerce adoption by SMEs in Nigeria. Awa et al. found that younger, more educated executives are more likely to adopt e-commerce than older, less educated ones, and male executives have more influence on e-commerce adoption than their female counterparts do. These factors may have varied influence on SMEs' adoption of e-commerce. Discussed next are Nigerian SMEs and e-commerce adoption.

Nigerian SMEs and e-commerce adoption. Some researchers have investigated the problem of e-commerce adoption by Nigerian SMEs. E-commerce adoption among Nigerian SMEs is low and mainly at the basic non-interactive adoption level (Agwu & Murray, 2014; Faloye, 2014). Agwu and Murray (2014) found that many SMEs that engaged in e-commerce in Nigeria restricted themselves to the use of e-mail and websites for communication and display of product information respectively. Some empirical studies (Agwu & Murray, 2015; Faloye, 2014) indicated that the barriers to e-commerce adoption among Nigerian SMEs include lack of awareness of the benefits of e-commerce, lack of knowledge and understanding of e-commerce, and perceived cost of adopting e-commerce. Agwu and Murray (2015) observed that many of the SMEs in Nigeria lack resources to purchase computers and necessary broadband Internet connectivity

equipment, including sustaining the recurring cost of broadband Internet subscriptions. Many Nigerian SMEs operated at the basic level of e-commerce adoption. Operating at the basic level of e-commerce adoption implied that many of the SMEs' websites could not support full commercial transactions.

There were other identified barriers to e-commerce adoption by Nigerian SMEs. Other factors that constitute barriers to SMEs adoption of e-commerce in Nigeria are size (Agwu & Murray, 2015), perceived risk of e-commerce, and the epileptic nature of electric power supply in Nigeria (Faloye, 2014). Agwu and Murray (2015) stated that many of the SMEs operated as family businesses and suffered limitations of size and resources. Insufficient availability of broadband Internet connectivity, slow speed of available Internet connections (Aminu, 2013), and lack of a developed legal and regulatory system to support e-commerce constitute barriers to e-commerce adoption among SMEs in Nigeria (Aminu, 2013; Faloye, 2014). Aminu (2013) argued that cultural barriers also impede e-commerce adoption among Nigerian SMEs, as e-commerce is alien to the retailers culture of conducting sales at physical stores. Agwu and Murray argued that Nigeria is a cash-based economy where people like touching cash. The major barriers to e-commerce adoption by Nigerian SMEs were infrastructural, financial, cultural, and regulatory constraints. The barriers to Nigerian SMEs e-commerce adoption were similar to the identified barriers that contributed to the low rate of e-commerce adoption by SMEs in developing countries compared to the developed countries.

There are prospects of growth in e-commerce activities in Nigeria. Although the level of e-commerce adoption among Nigerian SMEs is low, the Nigerian e-commerce

retail segment is witnessing growth driven by the increasing penetration of Internet services and entry of more online retailers in the country (Aminu, 2013). The number of Internet users in Nigeria grew from 200,000 in 2000 to 45 million by December 2011 (Aminu, 2013), and has grown further to 76,494,696 by December 2014, with the Nigerian mobile GSM operators accounting for 99.7% of the total active Internet subscriptions (Nigerian Communications Commission, 2014). The growth in Internet usage has attracted more e-retailers and propelled the growth of dominant online retailers like Konga.com and Jumia.com (Chiejina & Olamide, 2014). These statistics indicated a sharp rise in the number of internet users in Nigeria since 2000. The increasing number of internet users represents an opportunity for e-commerce entrepreneurs.

E-commerce System Success Strategies

Firms that do not adopt a strategic approach to e-commerce implementation may not reap the desired benefits from e-commerce adoption. The essence of strategy is to create a fit among the activities of a firm (Porter, 2008). E-commerce is a strategic tool for SMEs to achieve competitive advantage (Abebe 2014; Dan, 2014). An e-commerce strategy indicates how an organization deploys its assets to achieve and sustain competitive advantage in the online market space (Torres et al., 2014). Porter (2008) posited that a firm could enjoy a competitive advantage through either cost leadership or differentiation relative to its competitors, depending on the methods of performing activities within the firm's value chain. Torres et al. (2014) identified three e-commerce strategy dimensions: differentiation via marketing, cost leadership via efficiency, and differentiation via innovation. Yasin, Alavi, Czuchry, and Shafieyoun (2014) argued that

adopting a strategic approach to e-commerce system implementation is essential to achieve success. Findings by Mutua et al. (2013) on the extent of e-commerce adoption by SMEs in Kenya indicated that more than 80% of the SMEs lacked any form of e-commerce strategy, which might have contributed to the low level of e-commerce adoption among the SMEs. E-commerce implementation goes beyond the acquisition of requisite IT infrastructure. Having a strategic roadmap for e-commerce implementation may help SME business owners/managers succeed in their e-commerce ventures.

Some scholars underscored the importance of organizational alignment and strategic fit to achieve competitive advantage. Achieving and sustaining competitive advantage through cost reduction or increased differentiation requires a strategic fit among the company's entire system of activities (Porter, 2008). Torres et al. (2014) argued that firms could achieve cost leadership via efficiency through lower transaction costs, economies of scale and scope in alliance with strategic networks, and using advanced technologies for data collection, analysis, and management. Salih and Doll (2013) argued that organizational alignment is necessary to ensure success in strategy implementation, and emphasized the need for organizational leaders to work towards aligning their strategic intentions with employee actions and activities. Yasin et al. (2014) argued that organizations that do not implement e-commerce through strategic and systemic approaches carry the risk of investing in new technologies without reaping its benefits. Achieving competitive advantage in e-commerce requires organizational alignment and a strategic fit among an organization's chain of activities. SME business owners/managers may achieve successful e-commerce implementation if the SME

business owners/managers work towards aligning their strategic intentions with employee actions and activities within the firm.

Some scholars argued that differentiation strategy could be a more viable option for SMEs using e-commerce than cost leadership strategy. Achieving differentiation via innovation entails new products or services development, or reconfiguration of existing services, which will depend on having a competent workforce (Torres et al., 2014). Findings by Carlucci et al. (2013) on the quality and retail prices of EVO sold directly to consumers through online retail stores of local SME producers in Italy indicated that SMEs could achieve competitive advantage through differentiation. According to Carlucci et al., the EVOs sold through the SME e-commerce channels attracted price premiums because the EVOs had greater differentiation in terms of variety, packaging, and GI certification compared to the ones sold in offline retail stores. Torres et al. (2014) noted that maintaining a cost advantage in e-commerce is difficult and rather than focus on technology, efficiency, and cost advantage, e-commerce retailers should focus on differentiation and factors that promote customer satisfaction and loyalty to achieve a sustainable competitive advantage. Adopting differentiation strategy may be more beneficial to SMEs since maintaining a cost advantage in e-commerce is difficult. SMEs may achieve price premiums or achieve competitive advantage through differentiation of their products or services.

There are other factors identified in the literature that could contribute to e-commerce system success. Sharma and Lijuan (2014) highlighted the strategic importance of building consumer trust and maintaining unblemished ethical conduct by

retail e-commerce firms. Chen and Teng (2013) argued that trust has a relationship with consumers brand identification with an online shop. Torres et al. (2014) identified firm reputation and brand identification as switching costs, which if combined with new products and services could help in customer retention. Chen and Teng advised that online store managers pay attention to issues relating to prompt and reliable delivery system to enhance settlement performance and customer loyalty. Akroush and Al-Debei (2015) argued that adopting COD strategy by online retailers might effectively help to mitigate consumer distrust towards online payments. Sharma and Lijuan advised that e-retail firms should take measures to address consumers' security and privacy concerns, including incorporating protection and privacy policy statements on their websites. These factors are not exhaustive but may contribute to achieving success in e-commerce systems implementation. Paying attention to these factors by SME business owners/managers may help the SME business owners/managers achieve success in e-commerce systems implementation.

Some researchers investigated the relationship between e-commerce strategy and performance. Yang et al. (2015) investigated the relationship between SME e-commerce capability and firm performance and found that whereas e-commerce website sophistication has a positive association with firm performance, capital IT investment has no positive association with firm performance. Yang et al. also found that complimentary human resources and complimentary business resources have a positive relationship with firm performance, and argued that e-commerce adoption and use by SMEs has a positive influence on company competitiveness, primarily by enhancing human resources and

organizational performance. Torres et al. (2014) found that although efficiency is an important factor in competing in the e-commerce environment, only marketing and innovation factors have a positive association with corporate performance. SMEs might not reap the desired benefits of e-commerce if they approach e-commerce only from the technology perspective (Yasin et al., 2014). These findings indicated that SMEs that invest in IT without paying attention to marketing and innovation factors might not achieve success in e-commerce. Successful e-commerce adoption requires a holistic consideration of technology and non-technology issues.

Some scholars argued that firms operating in environments of rapid change require dynamic capabilities to achieve sustained competitive advantage. Strategy involves deployment of dynamic capabilities to respond to the changes in the environment through an organization's business model (DaSilva & Trkman, 2014). Teece et al. (1997) argued that acquisition and deployment of firm-specific dynamic capabilities could be a source of competitive advantage for firms operating in rapidly changing market conditions. Teece (2007) expanded the concept of dynamic capabilities to include the capacities of (a) sensing and shaping opportunities and threats; (b) seizing opportunities; and (c) adapting, configuring, and reconfiguring the firm's tangible and intangible assets to achieve competitive advantage. Cui and Pan (2015) posited that successful e-commerce adoption requires firms to build focal capabilities in response to the dynamic nature of the market and competition. The e-commerce business environment is dynamic, and firms operating in such an environment may need to build dynamic capabilities to respond effectively to the changes in the environment. Building

dynamic capabilities by e-commerce firms may enhance their capacity to meet changing market expectations and may lead to a sustained competitive advantage.

Transition

In Section 1, I have provided an overview of the background of the problem, the problem statement, and the purpose statement. There was a revelation that despite the strategic importance of SMEs and the potential benefits of e-commerce, the rate of e-commerce adoption among Nigerian SMEs was low. The purpose of this study was to explore the strategies that Nigerian SME business owners used to implement e-commerce systems. Other topics discussed in this section include the nature of the study, the research question, the interview questions, and the conceptual framework for the study. Finally, this section includes a discussion of the significance of the study and a review of the professional and academic literature. The literature review includes the search strategy for relevant articles and a critical analysis and synthesis of literature relating to the topic of e-commerce adoption among Nigerian SMEs. The broad topics covered in the literature review include the DCF, SMEs, e-commerce, SMEs and e-commerce adoption, and e-commerce system success strategies.

In Section 2, I discuss the role of the researcher in the data collection process and strategies to recruit participants, and I provide a more detailed justification for the research method and research design. Other topics discussed in this section include population and sampling, strategies to ensure ethical research, data collection and organization techniques, data analysis, and strategies to ensure reliability and validity.

Section 2: The Project

In this section, I cover the following topics: (a) role of the researcher in the data collection process, (b) strategies to recruit participants, (c) research method and research design, (d) population and sampling, (e) strategies to ensure ethical research, (f) data collection and organization techniques, (g) data analysis technique, and (h) strategies to ensure reliability and validity of the study.

Purpose Statement

The purpose of this qualitative multiple case study was to explore the strategies that Nigerian SME business owners used to implement e-commerce systems. The targeted population consisted of four SMEs in Lagos, Nigeria, that have successfully implemented e-commerce systems. The implications for social change may include employment and wealth creation opportunities for the business owners, their employees, and the communities in which they live in Nigeria.

Role of the Researcher

The role of the researcher includes choosing appropriate strategies for data collection, data recording and management, and data analysis (Marshall & Rossman, 2016). The qualitative researcher serves as the research instrument (Erlingsson & Brysiewicz, 2013; Marshall & Rossman, 2016; Yilmaz, 2013). As a researcher using the qualitative method for this study, I was the primary instrument for data collection. As the research instrument, my role in the data collection process included the following: (a) recruiting appropriate participants to answer the research question, (b) interviewing participants using an interview protocol for consistency, (c) ensuring accurate

representation of the views of participants through member checking, (d) obtaining relevant documents to corroborate the evidence from the interview process, and (e) ensuring that the data collection process yielded data saturation.

I had no relationship with the participants of this study. Although a philosophical assumption of multiple realities with qualitative studies exists, a researcher has an obligation to report realities from the perspectives of the participants (Yilmaz, 2013). With a basic theoretical knowledge, but no working knowledge of e-commerce, my knowledge and worldview did not bias my approach toward data collection, analysis, and interpretation. Throughout the processes of data collection and interpretation, my role was neutral as advised by Khan (2014).

A researcher should observe high ethical standards during the research process (Yin, 2014), and should adopt procedures to ensure the protection of human subjects involved in the study from harm, whether physical, mental, or social (Ketefian, 2015). The Belmont Report published by National Commission for the Protection of Human Subjects of Biomedical and Behavioral Research (1979) indicated three basic ethical principles researchers conducting studies involving human subjects should observe. The three basic ethical principles indicated in the Belmont Report include (a) showing respect for the participants by engaging them without coercion and acknowledging their rights to personal opinions, (b) maximization of benefits of the research and minimization of harm to the participants, and (c) ensuring justice and fairness in the distribution of benefits and burden of the research. I observed the ethical principles and guidelines contained in the Belmont Report, and I complied with the Walden University Institutional Review Board

(IRB) ethical requirements for research before collecting data from participants. In observance of the principles of informed consent, the participants received clear and relevant information about the research, their participation was voluntary, and they received assurance of confidentiality as advised by Ketefian (2015).

Bias can occur at any stage of a research process such as during data collection, data analysis, data interpretation, and publication of findings, and bias may lead to false conclusions (Simundic, 2013). No research process is value-free, as researchers' values and personal biases sometimes influence the outcome of their investigations (Yilmaz, 2013). It is unethical for a researcher to introduce bias deliberately into his or her study (Simundic, 2013). One of the strategies that mitigated bias in this study was reflexivity, which required me to be self-aware of the biases, values, and motivations for the study and bracket them from influencing my data collection, analysis, and conclusions.

Through reflexivity, a researcher reflects on the personal biases that could influence the research process and takes measures, including bracketing to mitigate them (Darawsheh, 2014). Being an attentive listener during participants' interviews was another approach that limited bias. A researcher should have the capacity to listen and assimilate large amounts of new information without bias, should hear the exact words used by the participants, and should infer the right meaning intended by the participants (Yin, 2014). I listened attentively to the participants, controlled my emotions, and avoided putting the participants under any form of pressure during the interview process.

Data collection from participants was through face-to-face, semistructured interviews, using open-ended questions. Semistructured interviews involve the use of a

predetermined set of questions, but a researcher can ask follow-up questions as needed for clarification (Doody & Noonan, 2013). I conducted the interviews with the aid of an interview protocol (Appendix C) so that I followed the same steps and processes. Using an interview protocol makes for consistency in the data collection process and enhances reliability (Asselt-Goverts, Embregts, Hendriks, & Frielink, 2014).

Participants

The eligibility criteria for participation in this study were as follows: (a) the participants must be owners or managers of retail SME businesses who have successful strategies for implementing e-commerce systems, and (b) the SME must be in Lagos, Nigeria. The use of inclusion criteria to define the sample universe helps to ensure sample homogeneity (Robinson, 2014). Considering that case study involves indepth investigation of a contemporary phenomenon within its real-world context (Yin, 2014), the targeted participants were leaders of SMEs who played key roles in the decision-making, implementation, and operational phases of their e-commerce systems. Since a researcher is responsible for recruiting appropriate participants to answer the research question (Simundic, 2013), having eligibility criteria helped in the recruitment of participants whose attributes aligned with the research objectives.

Recruiting research participants demands careful planning, collaboration, and flexibility (Sullivan-Bolyai et al., 2007). A researcher may recruit participants through online means, print advertising, or face-to-face strategy (Robinson, 2014). MacDougall and Fudge (2001) advised a three-stage process of recruiting participants: prepare, contact, and follow-up. The prepare stage involves finding information sources and key

contacts; the contact stage involves making initial contact and negotiating with key contacts, and the follow-up stage involves maintaining a relationship with the contacts (MacDougall & Fudge, 2001). To gain access to participants, I conducted an online search, as well as checked trade publications, for SME businesses in Lagos with functional e-commerce systems. From the identified population, owners or managers of four companies with strategies for e-commerce systems implementation received an invitation to participate in this study. Each participant received through e-mail or personal visit, a letter of introduction (Appendix A) that included an explanation of the intent of the study, and the participant consent form. I got the contact information of the participants through online information obtained from the company websites, and through personal visits to some of the organizations to get the contact details of the business owners or managers.

To establish a working relationship with the participants, I maintained a close contact with them as advised by Yilmaz (2013), and established a feedback mechanism as suggested by MacDougall and Fudge (2001). Strategies to maintain a working relationship with the participants included maintaining communication with them by e-mail and phone, and paying them occasional visits to obtain feedback on the research process. The importance of personal visits is that meeting a participant face-to-face during recruitment eliminates the problem of fraudulent identity associated with the Internet and helps in building trust between a researcher and the participant (Robinson, 2014).

Other actions used to build trust with the participants included providing the participants detailed information about the study, assuring the participants of their confidentiality, and assuring them of their right to withdraw at any point as advised by Khan (2014). Each participating organization provided me a signed letter of cooperation as a proof of the organization's support for the study. A participant was eligible for interview only after providing me with a signed letter of cooperation from his or her organization and his or her signed participant consent form. All the interviews took place at the participants' workplaces, at their conveniently chosen times, and followed an interview protocol (Appendix C).

Research Method and Design

Research methods represent different lines of action to study an empirical reality (Denzin, 2009). A research design is a logical plan that shows how the data to be collected connects with the research question and the conclusions of the study (Yin, 2014). This section contains a description and justification of the research method and design for the study.

Research Method

The qualitative method is an inductive, interpretive approach, based on the ontological assumption that reality is not static or fixed, but multiple, socially constructed, and context-dependent (Erlingsson & Brysiewicz, 2013; Hesse-Biber, 2010; Yilmaz, 2013). Researchers using the qualitative method view social phenomenon as complex and adopt a holistic, iterative reasoning in interpreting reality (Marshall & Rossman, 2016). The qualitative method is an effective strategy when the nature of a

study is exploratory (Muhannad & Ahmed, 2014). Using the qualitative method creates an opportunity for discovery and the emergence of new information (Hesse-Biber, 2010). I used the qualitative method for this study.

In choosing the research method, three options were available: qualitative, quantitative, or mixed-methods. Quantitative researchers use mathematical models to investigate the relationships and differences among variables (Yilmaz, 2013). The quantitative researcher believes that knowledge in the social world has an objective or static reality that is measurable numerically (Erlingsson & Brysiewicz, 2013; Yilmaz, 2013). Researchers carrying out confirmatory studies, such as those involving theory testing, usually use the quantitative method (Venkatesh et al., 2013).

Mixed-methods is a combination of quantitative and qualitative methods within the same study and helps in developing a greater understanding of a phenomenon than when a researcher uses only either of the two methods (Agerfalk, 2013). Researchers using mixed-methods can address both confirmatory and exploratory issues within the same study (Venkatesh et al., 2013). Using mixed-methods may create confusion in the mind of the researcher who may have to switch between interpretative philosophical paradigm that assumes multiple realities and postpositivist paradigm that assumes static reality (Hesse-Biber & Johnson, 2013). Because the objective of this study was not to investigate or confirm any mathematical relationships between variables, but to explore strategies that Nigerian SME business owners used to implement e-commerce systems, I considered both quantitative and mixed-methods inappropriate for the study. Using the

qualitative method enabled me to collect data that were context-dependent to interpret reality holistically.

Research Design

Case study design enables a researcher to carry out an indepth investigation of specific situations, events, or processes (Cronin, 2014; Kurnia et al., 2015; Sangster-Gromley, 2013). The focus in a case study is to understand a complex social phenomenon that may affect individuals, organizations, or groups, such as studying the effect of organizational processes, organizational performance, and group behavior (Yin, 2014). The case study researcher can draw evidence from multiple sources of data such as interviews, documentation, direct observation, participant observation, archival records, and physical artifacts (Yin, 2014). A researcher has the option of using single case or multiple case designs (Singh, 2014). Multiple case studies lead to more robust analytical conclusions than single case studies (Kurnia et al., 2015; Yin, 2014). Multiple case studies help in mitigating bias and enhancing the credibility of the findings (Singh, 2014). I used a multiple case study design for this study because it enabled me to collect and analyze multiple sources of data from different organizations in order to arrive at conclusions that are more credible.

In choosing the research design, four options were available: case study, ethnography, phenomenology, and narrative. Ethnographic researchers focus on the description and interpretation of shared patterns of behaviors, experiences, and beliefs within a cultural or social setting (Drake & Harvey, 2014). The focus in ethnography is on the culture within human groups, communities, and organizations (Marshall &

Rossman, 2016). Through participant observation, ethnographers study and report how people interact daily in their social settings (Jerolmack & Khan, 2014). The ethnographic design was inappropriate for this study because the objective of the study was not to explore the cultural or social interactions among people in the organizations.

Researchers using a phenomenological design focus on description and interpretation of the lived human experiences of participants (Mayoh & Onwuegbuzie, 2015; Tuohy, Cooney, Dowling, Murphy, & Sixsmith, 2013). Phenomenological researchers study phenomena by conducting long, indepth interviews with people who at some point in their lives experienced the phenomena (Marshall & Rossman, 2016). The phenomenological design was inappropriate for this study because the objective of the study was not to focus on the lived experiences of the participants but to rely on both interviews and documentary evidence to understand the strategies that Nigerian SME business owners used to implement e-commerce systems.

Researchers using narrative design use participants' stories to describe and reconstruct their personal experiences (Suarez-Ortega, 2013). Narrative researchers focus on the description and interpretation of stories participants tell about themselves, others, or situations (Polkinghorne, 2007). The focus of the narrative researcher is the individual rather than the social setting (Marshall & Rossman, 2016). Narrative design was inappropriate for this study because the objective of the study was not to reconstruct people's experiences based on stories they tell about themselves and others. The objective of the study was to use multiple approaches, including interviews and documentary evidence, to understand the strategies that Nigerian SME business owners used to

implement e-commerce systems. The multiple case study design was the most appropriate to realize the objectives of this study.

Data saturation occurs when there is no new information emerging from the collected data (Houghton, Casey, Shaw, & Murphy, 2013). At data saturation, there is adequate information to replicate the study (Fusch & Ness, 2015). One of the strategies used to achieve data saturation was triangulation. Triangulation helps in achieving data saturation through exploration and analysis of different perspectives on the phenomenon (Fusch & Ness, 2015). Triangulation is a means of achieving convergence of information from multiple data sources (Carter, Bryant-Lukosius, DiCenso, Blythe, & Neville, 2014; Marshall & Rossman, 2016). Case study findings have more accuracy when they result from the convergence of information from multiple sources of evidence (Yin, 2014). I ensured data saturation by conducting interviews with participants and reviewing company documents until data redundancy occurred, with no new information emerging.

Population and Sampling

The study population denotes the total population of individuals or cases available for a researcher to draw a sample from (Robinson, 2014). The population for this study consisted of four SMEs in Lagos, Nigeria, who have successfully implemented e-commerce systems. From the population, I selected owners/managers of the SMEs with strategies for e-commerce systems implementation to participate in the study.

Selection of the cases for this study was through a purposeful sampling strategy. Purposeful sampling is a non-random strategy in which a researcher includes in the sample specific cases that could yield useful data for the study (Lucas, 2014; Robinson,

2014; Rowley, 2014). Sampling is a deliberate method of selecting particular cases from a population (Uprichard, 2013). Qualitative researchers adopt a flexible sampling strategy (Marshall, 1996). Considerations such as the nature of the case, the nature of the population, and the logistics involved in accessing cases influence the choice of sampling strategy (Uprichard, 2013).

Alternative sampling methods such as snowball sampling and convenience sampling were inappropriate for this study. With convenience sampling, a researcher selects readily accessible sites and participants for the study (Marshall & Rossman, 2016; Robinson, 2014). Convenience sampling is less tasking to a researcher in terms of time and resources but lacks rigor, which may affect the quality of data collection and credibility of the study (Marshall, 1996). With snowball sampling strategy, a researcher asks previous participants to recommend other potential participants for the study (Isaacs, 2014; Lucas, 2014; Marshall & Rossman, 2016). Using snowball sampling has a drawback of excluding participants outside the network of the initial contacts (Lucas, 2014). Through purposeful sampling, I did not focus on selecting readily accessible cases but selected cases that were relevant in answering the research question.

Based on purposeful sampling, I conducted an online search, as well as checked trade publications, for SME businesses in Lagos with functional e-commerce systems. From the identified population, owners/managers of four companies with strategies for e-commerce systems implementation received an invitation to participate in this study. Qualitative studies involve the use of small sample sizes because the focus in such studies is on the depth of investigation and building relationships with the participants (Marshall

& Rossman, 2016). The adequate sample size for any qualitative study is one that is sufficient to answer the research question (Marshall, 1996). A qualitative researcher should choose a sample size that is likely to yield data saturation (Fusch & Ness, 2015). In a multiple case study design, using a sampling logic to determine the sufficient number of cases may be misleading, as cases are not equivalent to respondents in a survey; rather, a researcher should adopt replication logic and think of the number of case replications for the study (Yin, 2014). The plan was to carry out a multiple case study of the four SMEs, and thereafter, carry out case studies of more companies if necessary until data redundancy occurred, with no new information emerging.

I ensured data saturation through triangulation. Data saturation occurs when there is no new information emerging from the collected data (Houghton et al., 2013). At data saturation, there is adequate information to ensure replication of the study (Fusch & Ness, 2015). Triangulation is a means of achieving convergence of information from multiple data sources (Carter et al., 2014; Marshall & Rossman, 2016). Triangulation helps in achieving data saturation through exploration and analysis of different perspectives on the phenomenon (Fusch & Ness, 2015). Other sources of evidence apart from interviews are necessary for a researcher to draw any conclusions about a case study (Yin, 2014). Collecting enough data to ensure saturation enhances the credibility of the study (Marshall, Cardon, Poddar, & Fontenot, 2013). Achieving data saturation through triangulation in this study entailed conducting interviews with participants and reviewing company documents until data redundancy occurred, with no new information emerging. The strategy to achieve data saturation was to carry out a multiple case study of the four

SMEs, and thereafter carry out case studies of more companies on failure to achieve saturation.

I used purposeful sampling strategy to recruit participants and cases that met the following eligibility criteria: (a) the participants must be owners or managers of retail SME businesses who have strategies for implementing e-commerce systems, and (b) the SME must be in Lagos, Nigeria. Purposeful sampling is a non-random strategy in which a researcher includes in the sample specific cases that could yield useful data for the study (Lucas, 2014; Robinson, 2014; Rowley, 2014). Having eligibility criteria helps to ensure recruitment of participants with the right attributes to answer the research question (Simundic, 2013). Delineating the sample universe with inclusion criteria helps to ensure sample homogeneity (Robinson, 2014). The targeted participants were people who played key roles in the decision-making, implementation, and operational phases of e-commerce systems in their organizations.

The interview setting was a convenient place where the participant comfortably shared information as suggested by Jacob and Furgerson (2012), and Turner (2010). The interviews took place at the participants' chosen times and locations as advised by Dowdy and Noonan (2013). An interview protocol guided the interviews process. Before conducting interviews, each participant gave his consent by signing the participant consent form. The participants received an assurance of their confidentiality and their rights to withdraw from the study at any time. Researchers must provide participants, detailed information about their intended studies to ensure that their participation is voluntary (Khan, 2014). Each participating organization provided me a signed letter of

cooperation as a proof of the organization's support for the study. A participant was eligible for the interview only after providing me a signed letter of cooperation from his/her organization and his/her signed participant consent form.

Ethical Research

As outlined by Ketefian (2015), the elements of informed consent include (a) providing participants relevant information about the study, (b) ensuring participants have a clear understanding of the consent information, (c) ensuring that each participant is competent to give consent, and (d) ensuring that participant consent is voluntary. I observed the principles of informed consent as outlined above, as well as the three basic ethical principles outlined in the Belmont Report: respect for persons, beneficence, and justice. Each potential participant received through e-mail or personal visit, a letter of introduction that included an explanation of the intent of the study, and the participant consent form. The participant consent form contained background information about this study, the benefits, and risks that may result from the study, and included statements indicating that participation in the study was voluntary. Each participating organization also provided me a signed letter of cooperation indicating approval of the study in the organization. A participant was eligible for interview only after providing me a signed letter of cooperation from his/her organization and his/her signed participant consent form.

A researcher has an obligation to inform the participant of his/her right to withdraw from the study at any point in time (Khan, 2014). The participant consent form included statements indicating the voluntary nature of this study and the right of the

participant to withdraw at any time. Any participant that wished to withdraw from the study could do so through e-mail or phone call. Where a researcher intends to offer any compensation for participation in a study, the researcher should include an option for the participant to withdraw from the study at any time (Ketefian, 2015). I had no intention to offer any payments to the participants for taking part in this study. The participant consent form contained a statement indicating that there would be no compensation for taking part in the study.

I took measures to assure adequate ethical protection of participants during this study. One of the measures was to observe the principles of informed consent as outlined by Ketefian (2015) through: (a) providing participants relevant information about the study, (b) ensuring participants had clear understanding of the consent information, (c) ensuring that each participant was competent to give consent, and (d) ensuring that participant consent was voluntary. The study participants were adults considered competent to give consent and with the capacity to carry out the responsibilities of the study. My completion of The National Institutes of Health (NIH) Office of Extramural Research web-based training on the protection of human research participants (Appendix B) enhanced my capacity in the area of ethical protection of humans while carrying out research. Investigators planning to conduct studies involving human subjects should be competent and pass a test indicating their understanding of ethical issues relating to human subjects involvement in research (Ketefian, 2015). A researcher should follow his institution's IRB guidelines and obtain approval before commencing data collection (Yin,

2014). Obtaining Walden University IRB approval preceded data collection from any participant. Walden University's approval number for this study is 03-13-17-0500620.

I took measures to protect the names of individuals and organizations involved in the research by ensuring confidentiality of all information and data related to them. Protection of human subjects in a case study is important, as the interaction with human subjects may include interviews and review of documents related to employees (Yin, 2014). Ensuring participant confidentiality is one of the ways of showing respect for persons (Ketefian, 2015). To maintain confidentiality, participants' real names were not included in the data collected. Using codes to identify participants such as *Participant 1*, *Participant 2*, through *Participant 4*, helped to ensure participant confidentiality. Gandy (2015) used this strategy of coding participants' real identities to ensure participant confidentiality. A researcher should store all printed and audio-recorded data in a filing cabinet and store any electronic data in a password-protected computer after data collection (Khan, 2014). To ensure confidentiality of information relating to the participants and their organizations, there shall be storage of all printed and audio-recorded data in a safe cabinet and any electronic data in a password-protected external hard drive for 5 years, after which deletion or shredding of all the stored shall take place. Gandy (2015) used this strategy to ensure participant confidentiality.

Data Collection Instruments

As a researcher using the qualitative method for this study, I was the primary instrument for data collection. The qualitative researcher serves as the research instrument (Erlingsson & Brysiewicz, 2013; Marshall & Rossman, 2016; Yilmaz, 2013).

The case study researcher can draw evidence from multiple sources of data such as interviews, documents, direct observation, participant observation, archival records, and physical artifacts (Yin, 2014). Data collection for this study was through face-to-face semistructured interviews and document analysis.

Interviews may be structured, unstructured, or semistructured, and enable participants to answer questions directly in their words (Doody & Noonan, 2013). Interviews are credible sources for obtaining case study information (Tellis, 1997). Conducting structured interview involves interviewing participants using the same questions and order; conducting an unstructured interview involves asking the participant an initial broad question and basing further questions on the participant's responses (Doody & Noonan, 2013). Many multiple case studies use semistructured interviewing approach (Marshall & Rossman, 2016). A researcher conducting semistructured interview uses a predetermined set of questions but can ask follow-up questions as needed for clarification (Doody & Noonan, 2013). I collected primary data by conducting face-to-face, semistructured interviews with open-ended questions (Appendix D).

The source of secondary data for this study was document analysis. Document analysis in this study entailed reviewing relevant company documents, including documents obtained from company websites. Document analysis is a systematic procedure that involves finding relevant documents, both printed and electronic, and synthesizing the data from the documents (Bowen, 2009). The usefulness of documents as an instrument is to corroborate and support evidence from other sources (Tellis, 1997; Yin, 2014). Document analysis may entail an evaluation of documents used for

advertisements and review of manuals, books, brochures, company reports, event programs, charts, diaries, and other records that may be available in the public domain (Bowen, 2009).

I enhanced the reliability and validity of the data collection instruments and process by (a) using an interview protocol to guide the process of interviewing participants, (b) using the technique of member checking to ensure correct interpretation of participants' views expressed during the interviews, and (c) triangulation of data sources. Reliability denotes the degree of consistency in the results obtained each time the same case study is repeated using similar data collection procedures (Yin, 2014). Validity indicates the degree of accuracy of data obtained from a measuring instrument (Yilmaz, 2013). Validity is an indication of how credible, trustworthy, and defensible collected data are (Venkatesh et al., 2013).

Using an interview protocol (Appendix C) entailed following the same steps and processes in interviewing each participant, thus, minimizing bias and ensuring consistency in the interview process. The interview protocol is a procedural guide that helps a researcher to follow consistent steps in conducting interviews with participants (Jacobs & Furgerson, 2012). Using an interview protocol helps to ensure consistency in the data collection process (Asselt-Goverts et al., 2014; Wilson & Post, 2013).

Through follow-up member checking, a researcher shares his interpretations of collected data with the participants and asks the participants to suggest any corrections before writing up the final report on the study (Loh, 2013; Marshall & Rossman, 2016). Member checking is a participant validation strategy to ensure the truthfulness of

information and credibility of the study (Reilly, 2013). After transcribing the audio-recorded interviews, each participant received a summary of his/her interview data interpretation for member checking.

Triangulation is a means of achieving convergence of information from multiple data sources and aids in establishing the validity of the qualitative study (Carter et al., 2014; Marshall & Rossman, 2016). Triangulation of multiple sources of data improves the reliability of the data collection process (Tellis, 1997). Using triangulation in this study, by relating the interview data collected from the owners/managers of SMEs that have implemented e-commerce systems with documentary data from the case organizations helped to enhance the validity and reliability of the data collection process.

Data Collection Technique

The purpose of this qualitative multiple case study was to explore the strategies that Nigerian SME business owners used to implement e-commerce systems. I collected primary data by conducting semistructured, face-to-face interviews using open-ended questions (Appendix D), with the participants who were owners or managers of SMEs that have implemented e-commerce systems. The source of secondary data for this study was document analysis. Document analysis entailed reviewing relevant company documents domiciled within and outside the company. The collected documentary evidence helped in corroborating the evidence from interviews and enabled me to arrive at conclusions that are more accurate. The qualitative researcher should aim at collecting evidence from two or more sources to arrive at convergent findings (Bowen, 2009; Yin, 2014).

To be successful at conducting interviews, a researcher should first develop a plan for the interview process, taking into consideration the research question (Doody & Noonan, 2013). I used an interview protocol (Appendix C) to guide the process of interviewing participants. Using an interview protocol to conduct the interviews helped minimize bias and ensured consistency in the format of questioning participants as advised by Wilson and Post (2013). In conducting semistructured interviews, a researcher uses a predetermined set of questions but can ask follow-up questions as needed for clarification (Doody & Noonan, 2013). Considering that case study research involves investigation of a contemporary phenomenon within its real-world context (Yin, 2014), all the interviews took place in the participants' natural work environments. Only participants that voluntarily consented to the study by signing the participant consent form took part in the interviews. As advised by Doody and Noonan (2013), the interviews took place at the participants chosen times and locations. Interview dates and times with participants were set up via phone calls and e-mails.

Before the commencement of the interviews, I reviewed the interview purpose and process with the participants and assured the participants of my neutrality in the data collection exercise. Each participant received his/her previously signed consent form and confirmed his/her readiness to proceed with the interview. As advised by Khan (2014), before commencing each interview, I informed the participant of his/her right to withdraw from the interview or the study at any time. After each participant agreed to proceed with the interview and gave his/her permission to audio-record the interview, the interview commenced with the audio recording device turned on. A researcher can carry

out the audio recording of an interview if he/she obtains the participant's permission to do so (Khan, 2014). At the end of each interview, the participant received verbal thanks for taking part in the interview. After transcribing the audio-recorded interviews, analysis and coding of the data followed to determine emerging themes.

Document analysis was the source of secondary data for this study. The process of document analysis is an iterative one whereby a researcher identifies relevant portions of text, and through thematic analysis, performs coding and categorization of texts to identify themes (Bowen, 2009). Document analysis entailed a review of different forms of company documents, including documents obtained from the companies' websites. Websites convey information about organizations and can serve as a source of documentary data (Marshall & Rossman, 2016). Document analysis is a systematic procedure that involves finding relevant documents, both printed and electronic, and synthesizing the data from the documents (Bowen, 2009). Potential sources of documents for analysis include minutes of meetings, policy statements, logs and announcements (Marshall & Rossman, 2016), advertisements, manuals, books, brochures, company reports, event programs, charts, diaries (Bowen, 2009), and letters, memoranda and study reports (Tellis, 1997). For this study, I identified relevant documents, analyzed and coded documentary data into categories, and thereafter, through triangulation, related the documentary data to the interview data to determine emerging themes.

One of the advantages of conducting interviews is that interviews provide opportunities for participants to describe what is important to them (Doody & Noonan, 2013). Interviews provide a means of capturing participants' perceptions and meanings

(Yin, 2014). Conducting face-to-face interviews provides an opportunity for a researcher and the participants to seek clarifications from one another on any issue (Khan, 2014). Interviews provide an instrument to answer complex research questions (Doody & Noonan, 2013). One of the disadvantages of using interviews is that they can lead to response bias, as a researcher's presence and disposition may influence participant responses to questions (Yin, 2014). Conducting interviews could be time-consuming and expensive, as they may involve traveling and other logistics (Doody & Noonan, 2013).

Collecting documentary evidence has the advantage of providing additional information to corroborate evidence collected from other sources (Bowen, 2009; Tellis, 1997; Yin, 2014). Documents can be a source of obtaining background information and understanding the historical context of an issue being investigated (Marshall & Rossman, 2016). Document analysis is less time-consuming and more cost-effective than other methods of data collection, and documents are more exact in referencing names (Bowen, 2009). The weaknesses in using documentary evidence include difficulty in gaining access to relevant documents, and the possibility that some documents may be prone to reporting bias (Tellis, 1997; Yin, 2014).

To use member checking for data interpretation, after transcribing the audio-recorded interviews, each participant received a summary of his/her interview data interpretation to check for any errors or misrepresentation of opinion. Through follow-up member checking, a researcher shares his/her interpretations of the collected data with the participants and asks the participants to suggest any corrections before writing up the final report on the study (Loh, 2013; Marshall & Rossman, 2016). Member checking is a

participant validation strategy to ensure the truthfulness of information and credibility of the study (Reilly, 2013). It is ethical to give participants an opportunity to comment and review a researcher's interpretation of data derived from the participants (Loh, 2013). I made suggested corrections from the participants to ensure that my interpretations of the collected interview data accurately reflected the participants' views.

Data Organization Technique

I uploaded the transcribed interview data and documentary data from the case companies into NVivo software for data analysis and data management. NVivo software assists a researcher in data management and organization, as well in data analysis and themes identification (Sotiriadou, Brouwers, & Le, 2014). I used codes such as *Participant 1*, *Participant 2*, through *Participant 4*, to denote the participants, and used codes such as *document 1*, *document 2*, through *document 4*, to indicate the documents from the participating organizations. Gandy (2015) used the strategy of coding participants' real identities and documentary evidence to ensure confidentiality. Using codes help in integrating data derived from different methods (Bowen, 2009).

As advised by Khan (2014), I organized and stored the soft copies of transcribed interview data and the data synthesized from company documentation in separate folders in a password-protected computer, and stored any hard copies in a safe cabinet. Organizing the collected case study data in a database that may include electronic files and physical storage in a file drawer is essential for ease of future retrieval (Yin, 2014). Destruction of all the hard and soft copies of stored data shall take place after a period of

5 years. Gandy (2015), Johnson (2015), and Lomas (2016) used this strategy of securing and destroying all collected data after a period of 5 years.

Data Analysis

I used triangulation in the analysis of the case study data, comprising the transcribed interview data generated from owners and managers of SMEs that have implemented e-commerce systems and documentary evidence from the case organizations. Triangulation is a means of achieving convergence of information from multiple data sources and aids in enhancing the validity of the qualitative study (Carter et al., 2014; Marshall & Rossman, 2016). Case study findings have more accuracy when they result from the convergence of information from multiple sources of evidence (Yin, 2014). Triangulation is a means of achieving data saturation through exploration and analysis of different perspectives on the phenomenon (Fusch & Ness, 2015). Denzin (2009) described four forms of triangulation: data triangulation involving data sources over time and space, methodological triangulation involving data from different methods, theoretical triangulation involving the use of multiple theories, and investigator triangulation involving the use of multiple investigators to research a phenomenon. Using methodological triangulation in this study entailed relating the synthesized, coded data from document analysis with the coded interview data to determine emerging themes.

Qualitative data analysis follows an inductive, interpretive, bottom-up approach, whereby a researcher arrives at conclusions through an analytical process that includes coding to identify emerging themes and patterns (Yilmaz, 2013). Yin (2014) described the inductive analytic strategy as a bottom-up approach that ensures key concepts emerge

through a researcher's scrutiny of data, rather than from prior theoretical assumptions. The data analysis involved repeated reading of the textual data, coding parts of the text, and generating themes through a combination of codes, as suggested by Erlingsson and Brysiewicz (2013). The unit of analysis in a case study is the organization and not the individuals that participated in the interviews (Yin, 2014). To ensure confidentiality of information, I used codes to designate the interviewed participants' data and the documentary evidence from the respective organizations. Using codes helped in integrating data derived from different methods, and I used similar codes for both the transcribed interview data and the documentary data as suggested by Bowen (2009).

I uploaded the transcribed interview data and documentary data from the case companies into NVivo software for composite data analysis, coding, and themes identification. NVivo assists a researcher in data management and organization, as well in data analysis and themes identification (Sotiriadou et al., 2014). The NVivo software quickens the data analysis process, as a researcher can upload raw data such as interview transcripts into the software, code, and store the information in a way that makes for easy cross-referencing and retrieval (Erlingsson & Brysiewicz, 2013). Computer-assisted tools such as the NVivo software can help a researcher in coding and categorizing data generated from multiple sources such as interviews and documents (Yin, 2014).

During data analysis, I focused on the key themes and correlated the themes with the literature and the conceptual framework. Theme identification involves searching for emerging patterns from different elements of the data (Erlingsson & Brysiewicz, 2013). The NVivo software has inbuilt tools for classification and sorting of information and

helps a researcher to analyze data and identify themes (Sotiriadou et al., 2014). With the NVivo software, coding the data and identification of themes and categories is a researcher's responsibility (Sotiriadou et al., 2014). The computer software only helps a researcher in data organization; thus, a researcher plays the role of a research instrument for data analysis (Erlingsson & Brysiewicz, 2013). In using computer software for data analysis, a researcher is the main analyst that should direct the software tool (Yin, 2014). Data analysis process involves a researcher swinging between the text, his experience, theories, and prior studies (Erlingsson & Brysiewicz, 2013). I correlated the identified themes with the past and present literature on SMEs and e-commerce adoption, as well as with the DCF, which is the conceptual framework for this study. Correlating the themes with the propositions advanced by the DCF assisted me in answering the research question: What strategies do Nigerian SME business owners use to implement e-commerce systems?

Reliability and Validity

Researchers use the terms reliability and validity to describe the quality or rigor of empirical studies. Earlier attempts to establish the trustworthiness or soundness of qualitative studies drew from the established criteria for analyzing the quality of quantitative research such as reliability, validity, objectivity, and generalizability (Marshall & Rossman, 2016). The more appropriate quality criteria for qualitative research include dependability, credibility, confirmability, trustworthiness, and transferability (Yilmaz, 2013). The qualitative researcher should put in place strategies to ensure rigor in the study (Erlingsson & Brysiewicz, 2013; Houghton et al., 2013).

Reliability

Reliability refers to the degree of consistency in the results obtained each time on repetition of the same case study using similar data collection procedures (Yin, 2014). According to Yin (2014), the focus in reliability, as applied to a case study, is not to replicate the results of a case by doing another case, but rather, to ensure that another researcher repeating the same case study and following similar procedures will arrive at similar conclusions. Another objective of reliability is to reduce bias and errors in research (Yin, 2014).

A researcher can ensure dependability through clear explanation and justifications of the processes relating to the research strategies and procedures, and confirmation by an auditor (Yilmaz, 2013). I addressed dependability by using the following strategies: (a) using an interview protocol to conduct all interviews, and (b) member checking of the data interpretation. The interview protocol is a procedural guide that helps a researcher to follow consistent steps in conducting interviews with participants (Jacobs & Furgerson, 2012). Using an interview protocol helps to ensure consistency in the data collection process (Asselt-Goverts et al., 2014; Wilson & Post, 2013). Following the same steps and processes in the interview of each participant ensured consistency in the interview process and helped to minimize bias.

Through follow-up member checking, a researcher shares his/her interpretations of the collected data with the participants and asks the participants to suggest any corrections before writing up the final report on the study (Loh, 2013; Marshall & Rossman, 2016). Member checking is a participant validation strategy to ensure the

truthfulness of information and credibility of the study (Reilly, 2013). After transcribing the audio-recorded interviews, each participant received a summary of his/her interview data interpretation for member checking.

Validity

Validity denotes the degree of accuracy of the data (Yilmaz, 2013). Validity is an indication of how credible, trustworthy, and defensible collected data are (Venkatesh et al., 2013). Discussed below are measures that addressed quality issues of credibility, transferability, and confirmability in this study.

I ensured the credibility of the study by using the following strategies: (a) data saturation, (b) triangulation, and (c) member checking of the data interpretation. Credibility is an indication of the degree to which the study participants consider the findings of the study to be true (Yilmaz, 2013). Collecting enough data to ensure saturation enhances the credibility of the study (Marshall et al., 2013). Data saturation occurs when there is no new information emerging from the collected data (Houghton et al., 2013). At data saturation, there is adequate information to replicate the study (Fusch & Ness, 2015). Achieving data saturation entailed conducting interviews with participants and review of company documents until data redundancy occurred, with no new information emerging. The strategy to achieve data saturation was to carry out a multiple case study of the four SMEs, and after that conduct case studies of more companies if necessary to ensure saturation.

Triangulation is a means of achieving convergence of information from multiple data sources and aids in establishing the validity of the qualitative study (Carter et al.,

2014; Marshall & Rossman, 2016). Triangulation is a way of improving the accuracy of the findings through the convergence of information from different sources (Yin, 2014). Triangulation is a means of achieving data saturation through exploration and analysis of different perspectives on the issue under investigation (Fusch & Ness, 2015). Using triangulation in the analysis of the case study data, comprising the transcribed interview data and documentary evidence from the case organizations helped me in arriving at conclusions that are more credible.

Through member checking, the participants had an opportunity to correct perceived errors in data interpretation as advised by Reilly (2013). During follow-up member checking, a researcher shares his/her interpretations of the collected data with the participants and asks the participants to suggest any corrections before writing up the final report on the study (Loh, 2013; Marshall & Rossman, 2016). Where any participant found errors in my data interpretation of his/her interview, I made corrections to ensure that my data interpretation accurately reflected the views of the participant.

I ensured transferability by using the following strategies: (a) thick description of the study, and (b) using an interview protocol to guide the data collection process. Through transferability, it is possible to extend the findings of a study to other similar contexts or situations (Marshall & Rossman, 2016; Yilmaz, 2013). According to Marshall and Rossman (2016), qualitative research findings are transferable to other settings even though are not generalizable in a probabilistic manner. Extension of case study findings to other contexts is through analytic generalization, rather than statistical generalization (Yin, 2014). Through analytic generalization, case study findings may extend to other

settings if researchers follow similar theoretical concepts used in the original case study (Yin, 2014).

One of the strategies I used to achieve transferability was ensuring a thick description of the research processes. A thick description of the research processes and setting helps to achieve transferability (Anney, 2014; Houghton et al., 2013; Yilmaz, 2013). Thick description entails giving detailed information on the research processes starting from data collection, the research context, up to the writing of the final report (Anney, 2014). A thick description of the research processes and setting facilitates replication of the study by researchers in other settings (Anney, 2014; Houghton et al., 2013; Marshall & Rossman, 2016). Providing a thick description of the research process may guide readers and future researchers in making informed decisions on the transferability of the findings to other settings.

I used an interview protocol, which entailed following the same steps and processes in interviewing each participant, thus, minimizing bias and ensuring consistency in the interview process. The interview protocol is a procedural guide that helps a researcher to follow consistent steps in conducting interviews with participants (Jacobs & Furgerson, 2012). Using an interview protocol helps to ensure consistency in the data collection process (Asselt-Goverts et al., 2014; Wilson & Post, 2013). The use of an interview protocol may assist readers and future researchers in making informed decisions on the transferability of the findings to other settings.

I ensured confirmability of the study by using the following strategies: (a) maintaining an audit trail of actions taken during data collection and analysis, (b) asking

probing questions when conducting interviews, and (c) member checking of the data interpretation. Confirmability refers to the extent to which the results of the study relate to the analysis of the data collected and are verifiable through an audit trail (Yilmaz, 2013). Researchers can address confirmability by maintaining an audit trail of data and decisions (Anney, 2014; Archer, 2015; Houghton et al., 2013). Using the NVivo software helps in maintaining a comprehensive trail of actions taken during data analysis and enhances confirmability (Houghton et al., 2013). The use of NVivo software in this study for data analysis and storing the interview transcripts and documentary evidence in a database helped in maintaining a trail of the actions taken to arrive at the findings of the study. Asking probing questions during interviews is a means of clarifying and elaborating on participants' initial responses (Doody & Noonan, 2013; Jacobs & Furgerson, 2012; Marshall & Rossman, 2016) which enhances confirmability.

Through member checking, participants have an opportunity to correct perceived errors in data interpretation (Reilly, 2013). During follow-up member checking, a researcher shares his/her interpretations of the collected data with the participants and asks them to suggest any corrections before writing up the final report on the study (Loh, 2013; Marshall & Rossman, 2016). Member checking is a participant validation strategy to ensure the truthfulness of information (Reilly, 2013). After transcribing the audio-recorded interviews, each participant received a summary of his/her interview data interpretation for member checking. I made corrections suggested by the participants to ensure that the data interpretation accurately reflected their views

I ensured data saturation through triangulation. Data saturation occurs when there is no new information emerging from the collected data (Houghton et al., 2013). At data saturation, there is adequate information to ensure replication of the study (Fusch & Ness, 2015). Triangulation is a means of achieving convergence of information from multiple data sources (Carter et al., 2014; Marshall & Rossman, 2016). Triangulation helps in achieving data saturation through exploration and analysis of different perspectives on the phenomenon (Fusch & Ness, 2015). Achieving data saturation through triangulation in this study entailed conducting interviews with participants and reviewing company documents until data redundancy occurred, with no new information emerging. The strategy to achieve data saturation was to carry out a multiple case study of the four SMEs, and thereafter carry out case studies of more companies on failure to achieve saturation.

Transition and Summary

In Section 2, I discussed the role of the researcher in the data collection process, strategies to recruit participants, and provided a more detailed justification for the research method and research design. Other topics discussed in this section include population and sampling, strategies to ensure ethical research, data collection and organization techniques, and data analysis technique. Gaining access to the participants was through purposeful sampling strategy. Data collection was through semistructured interviews and review of company documents, whereas NVivo software served as the data analytical tool. Finally, discussed in this section were strategies to ensure reliability and validity of the study, including how to ensure dependability, credibility,

transferability, confirmability, and data saturation. Some of the strategies identified to ensure reliability and validity include triangulation, member checking, and the use of interview protocol.

In Section 3, I discuss the study's findings, which include identification of themes, discussion of the findings in relation to the themes and the conceptual framework, and comparison of the findings with the results of other studies in the literature to identify any similarities or differences. Other topics discussed in Section 3 include the following: (a) applications to professional practice, (b) implications for social change, (c) recommendations for action, (d) recommendations for further research, (e) reflections, and (f) conclusion.

Section 3: Application to Professional Practice and Implications for Change

Introduction

The purpose of this qualitative multiple case study was to explore the strategies that Nigerian SME business owners used to implement e-commerce systems. The specific problem that I addressed in the study was that some Nigerian SME business owners lacked strategies to implement e-commerce systems. The overarching research question that guided the study was: What strategies do Nigerian SME business owners use to implement e-commerce systems? Data analysis involved analysis and triangulation of the case study data, which was composed of transcribed interview data generated from interview of Nigerian SME business owners/managers who have implemented e-commerce systems and documentary evidence from the case organizations. Three major themes emerged from the data analysis: (a) service delivery strategies, (b) dynamic marketing strategies, and (c) learning and adaptation.

Presentation of the Findings

The overarching research question that guided the study was: What strategies do Nigerian SME business owners use to implement e-commerce systems? The qualitative multiple case study involved four retail SMEs that have functional e-commerce systems. The participants consisted of owners/managers of the four retail SMEs that have implemented e-commerce systems. I collected primary data by conducting semistructured face-to-face interviews with the participants using open-ended questions. I performed member checking with each participant after transcribing the audio-recorded interviews and made corrections suggested by one of the participants. Documentary data in the form

of company manuals, service charter, and other information collected from the case companies' websites formed the secondary data used in data analysis.

Data analysis involved analysis and methodological triangulation of case study data, which was composed of the transcribed interview data and documentary evidence from the case organizations. I uploaded the transcribed interview data and documentary data into NVivo 11 for Windows qualitative software, which assisted me in coding and the identification of themes. Data analysis involved repeated reading of the textual data, coding parts of the text, and generating themes through a combination of codes. The NVivo 11 software assisted me in the identification and coding of words, phrases, and sentences from participants' responses that relate to each theme. The number of words, phrases, or sentences coded to each theme or subtheme represents the frequency for the theme or subtheme. I used relevant texts from the documentary evidence stored in NVivo to support each theme. Three major themes emerged from the data analysis: (a) service delivery strategies, (b) dynamic marketing strategies, and (c) learning and adaptation.

Theme 1: Service Delivery Strategies

Service delivery strategies emerged as a key theme that defined the service implementation logic in relation to infrastructures and customer service. Critical infrastructures that contribute to success in e-commerce include having a functional and easy-to-use website (Chen & Teng, 2013) and an effective logistic infrastructure for prompt delivery of goods (Samadi, Gharleghi, & Syrymbetova, 2015). The participants acknowledged the criticality of having a functional website and an efficient, cost-effective delivery system. Chen, Pan, and Ouyang (2014) argued that implementing

logistics for e-commerce calls for a reconfiguration of existing routines that exist in traditional retail businesses because of the need to deliver goods to individuals located in diverse areas.

The four SMEs that participated in this study offered specialized goods and services: two of the SMEs were selling computers and IT-related goods, whereas two of the SMEs were in the fashion business. This corroborates the assertion of Savrul et al. (2014) that SMEs may leverage their small sizes by offering specialized goods and services. The findings indicated that the SMEs operated in niche markets where they could be leaders and adopted unique ways of serving their customers. Lu and Zhang (2016) argued that small firms could differentiate their products and services to meet the demands of niche markets. As indicated in Table 2, two subthemes emerged from data analysis regarding service delivery strategies: (a) outsourcing and (b) commitment to quality and customer satisfaction.

Table 2

Service Delivery Strategies

Theme	<i>n</i>	% of frequency of occurrence
Outsourcing	16	34.04
Commitment to quality and customer satisfaction	31	65.96

Note. *n* = frequency.

Outsourcing. The findings indicated that the SME business owners/managers used partnership with service vendors as a cost-effective strategy to run their operations and deliver services to their customers. The participants' companies outsourced

technology and product delivery functions to external partners. Whereas two of the case companies were computer companies that received technical support from their parent IT firms, the other two company participants relied on external IT firms for technical support. All the case companies outsourced the delivery of goods to external logistics companies. Outsourcing delivery to third-party logistics firms reduces logistics cost, reduces delivery delay risk, and enables a firm to focus on its core business activities (Giri & Sarker, 2017). Samadi et al. (2015) found a positive relationship between logistics infrastructure and e-commerce implementation. Participants 2 and 3 described how they used outsourcing of core activities as a strategy to overcome the financial challenges they faced. Participant 2 explained that work done by the third-party service providers determined their pay, which ensured that the cost of services aligned with the business revenue.

The participants acknowledged that IT outsourcing benefited their organizations. IT outsourcing by SMEs helps to reduce IT costs and enables the firms to access quickly new technologies (Grama & Pavaloaia, 2014). Participant 3 stated that outsourcing IT activities to technology firms was helpful as the company lacked the financial capability to retain IT personnel. Yang et al. (2015) identified two categories of IT resources: technology-based IT assets and intangible IT resources that complement physical assets. Yang et al. described e-commerce website sophistication as an invaluable resource often embedded in a firm's processes that enable distinctive capabilities when combined with the physical IT assets. Getting the e-commerce sites to be functional at all times and being user-friendly was a major implementation objective for the business

owners/managers which outsourcing helped to overcome. Participant 1 highlighted the importance of the website being available at all times and being easy to use. Participant 3 highlighted the importance of the website application being responsive to both computer devices and mobile phones due to the increasing population of mobile phone users. Lim (2015) found that perceived ease of use of e-shopping sites positively influenced both e-shoppers' attitudes toward e-shopping and perceived usefulness, and it ultimately influenced purchase intention.

Acquisition of assets does not confer competitive advantage in environments of rapid change; firms require dynamic capabilities to integrate, adapt, and reconfigure internal and external skills, competences, and resources in line with the conditions in the environment (Teece et al., 1997). Managing the third-party service providers required coordination/integration capabilities as described by Teece et al. (1997). Participants 1 and 3 highlighted the need for the manager to follow-up with the logistics company to ensure prompt delivery to customers and prompt resolution of issues that might affect timely delivery.

Commitment to Quality and Customer Satisfaction. Data obtained from the participants indicated the commitment of the SME business owners/managers to quality and customer satisfaction. Yang et al. (2013) measured online channel service quality as a multidimensional construct consisting of five components: (a) tangibles such as the visual attractiveness of web appearance, (b) reliability of the online channel, (c) responsiveness to customer requests, (d) assurance of safety in transactions with the online channel's information system, and (e) perception of empathy of the online channel

towards the customer. Subramanian, Gunasekaran, Yu, Cheng, and Ning (2014) identified quality factors in e-retailing and found that reliability, responsiveness, and e-service purchasing experience were key factors that determined customer satisfaction. Nathan (2014) described e-service quality as overall consumer evaluation of service received through the online channel. Torres et al. (2014) noted that maintaining a cost advantage in e-commerce is difficult and rather than focus on technology, efficiency, and cost advantage, e-commerce retailers should focus on differentiation and factors that promote customer satisfaction and loyalty to achieve a sustainable competitive advantage. Participant 1 corroborated the customer orientation of the SMEs by stating: “I believe my customers are why I am here.” The findings corroborated the argument of Tajeddini, Elg, and Trueman (2013) who stated that small retailers tend to have a customer orientation.

The SME business owners/managers ensured quality and customer satisfaction through: (a) commitment to having a functional and user-friendly website, (b) prompt delivery of goods and services, (c) commitment to deliver the brand and specifications of the customer, (d) empathy for the customer, and (e) total support of the customer. The various forms of support identified in the study include online support, offline (in-store) support, and after-sales support. These quality factors align with the e-service quality dimensions described by Yang et al. (2013). Subramanian et al. (2014) found that product delivery factor (logistics) has greater effect on e-retailers' competitiveness than other intangible quality factors. The participants asserted the importance of having a functional and user-friendly website. Participant 1 highlighted the criticality of the website being

available at all times and being easy to navigate by customers. Participant 3 highlighted the importance of the website having a well-designed graphical interface.

The SMEs operated both physical (offline) and online stores. Participant 3 stated that the company used similar strategies to retain customers offline and online. Yang et al. (2013) found a positive association between the service quality of an offline channel and the perceived quality of an online channel. As advised by Torres et al. (2014), customer satisfaction and retention remained the focus of the SME business owners/managers. Lu and Zhang (2016) argued that small enterprises could devote their limited resources and attention to serving their target customers to get the customers loyalty. Participant 3 stated that in e-commerce, someone could not afford to put prices high because of the competition, thus corroborating the assertion of Torres et al. that having a cost advantage in e-commerce is difficult and retailers should focus on differentiation and factors that promote customer satisfaction and loyalty.

The findings indicated that the owners/managers had a service strategy of building relationship with the online customers and viewing the customers as critical strategic assets. Teece et al. (1997) described a firm's customer base as a relational asset and part of the specific assets that determine a firm's competitive position within the DCF. The participants indicated that relationship building starts from the first time the customer comes online to shop, and the overall objective is to keep the customer for a lifetime. As stated by Participant 4: "You deal with the client today, the client is your client tomorrow, and not just a customer who buys today and never comes back to buy." Strategies described by the participants to build relationships with online customers

include chatting with the customers online with affection, understanding their needs, helping them to resolve their issues online or offline, and calling the customers on their special anniversaries to celebrate with them. Subramanian et al. (2014) argued that e-retailers' provision of personalized services could minimize the risk of online shopping. The results of the study corroborated the importance of leveraging relational assets as a strategy to ensure the long-term success of the e-commerce firms.

Each of the case organizations had a unique way of serving its customers that differentiated the firm from its competitors. The owner/manager's tacit knowledge and experience reflected in the approach each firm used to serve its customers. From the interview data, and verified from the various documentations from the SMEs, all of the company participants involved in the study had a return policy that enabled customers to return goods that did not meet their expectations. Participant 1 described how a customer that purchased a dress that did not fit well had the option of either returning the item to get another one or getting a refund, as a way of building trust and building a relationship with the customer. Participant 4 described how the firm supported customers through a unique strategy of satisfying and capturing the customers for life by offering a complete service bundle: sales of devices, repairs, installation, trade-in of old devices for new ones, and consultancy services. Evidence from document 4 corroborated how passionate the owner/managers were in serving their customers. In document 4, the company stated: "We treat our clients with unwavering passion and promptness."

All the participants asserted the importance of having after-sales capabilities by retail SMEs implementing e-commerce. Participants 1 and 3 highlighted the need for the

manager to follow-up personally on all orders to ensure that customers get their items delivered on time, and the items must be of the same brand and quality the customer saw online. Participant 1 noted that close follow-up by the manager to ensure customer satisfaction was critical for first time customers because failure to impress the customers the first time could result in loss of trust, which might ultimately lead to loss of the customer. Participant 4 stated that anyone in e-commerce business who could sell and fix customers' problems would not only be keeping those customers; the person would also be having a long-lasting relationship with the customers. The statements of the participants corroborated the argument that consumers' perception of the quality of service of an online store influences consumer purchase intention (Clemes et al., 2014). Yang et al. (2013) found a positive relationship between perceived quality of service of an online channel and consumers' intention to shop from the online channel.

Theme 2: Dynamic Marketing Strategies

The use of dynamic marketing strategies by the SME business owners/managers emerged as a major theme in this study. Dynamic marketing capabilities enable a firm to track market trends and adapt organizational resources to respond to the changes in the marketplace (Wang et al., 2013). CRM, social media, and alliance/networks managements are key enablers of dynamic marketing capabilities, which embed the underlying processes of sensing, learning, integrating, and coordinating capabilities (Barrales-Molina, Martinez-Lopez, & Gazquez-Abad, 2014). The findings indicated that the SME business owners/managers adopted different strategies in marketing, which enabled them to sense and seize opportunities, as well as learn and adapt their processes

to meet changing market demands. As shown in Table 3, two subthemes emerged from data analysis regarding the use of dynamic marketing strategies: (a) customer network, and (b) market intelligence.

Table 3

Dynamic Marketing Strategies

Theme	<i>n</i>	% of frequency of occurrence
Customer network	19	45.24
Market intelligence	23	57.76

Note. *n* = frequency.

Customer network. The use of customer networks creates opportunities and values for firms through customer referrals, intelligence generation, and information about products and competitors, which could enable firms to respond appropriately to the dictates of the market (Jones, Suoranta, & Rowley, 2013). Rather than use traditional marketing channels, the findings indicated that the SME business owners/managers leveraged their customers' networks as a strategy of boosting sales and reaching out to new customers. The data analysis provided an insight into how the participants engaged in the use of customer networks to create value for their firms. Through the customers' referral network, the SMEs acquired new customers introduced by existing customers. From data obtained from the participants, the drivers of the customer referral system included (a) customer satisfaction and (b) incentives and reward schemes. All the participants alluded to the use of customers' network as a marketing channel.

Customer satisfaction reflects the degree to which consumers' online shopping experience meets their expectations (Muhannad & Ahmed, 2014). Participant 1 corroborated the importance of customer satisfaction in network marketing by stating that the company's strategy always was to win the customer's heart such that the customer would not have any reservations coming back to shop, or introducing friends to shop on the company's website. Participants 3 and 4 admitted that customers had been a major source of advertisements for the participants' firms, as the customers told other people about the companies' websites. According to Participant 4 "apart from doing adverts on Google ad service and social media, our good works speak for us outside." Evidence from document 4 showed how seriously the SMEs valued customer satisfaction, as the company defined satisfaction as "satisfied customer is the best source of advertisement." Participant 3 explained that the strategy of using customers as a source of adverts was particularly helpful at the early stages of the business when the company did not have enough budget for advertisements. The assertions by the participants corroborated the argument of Tajeddini et al. (2013) who stated that small retail firms lack resources for advanced market research and tend to have a customer orientation.

The use of promotions was to encourage both old and new customers to shop, whereas the use of incentives and rewards was to encourage existing customers to shop repeatedly. One of the ways the SME business owners/managers used the incentives and rewards strategy was to set thresholds for returning customers such that they received certain discounts or gifts based on the number of times they shopped. Evidence from document 1 corroborated this strategy as the company ran a promotion for "VIP"

customers that entitled them to a free dress on the purchase of a certain value of goods for four consecutive months. The strategy adopted by the SME business owners/managers also included having a referral bonus scheme such that existing customers received certain discounts on their next purchases, or got special gift items when they referred new customers to shop. As explained by Participant 2, if a customer was happy with the services received and knew of the prospects of getting a reward by referring others, the customer would always be willing to refer others.

The SME business owners/managers used a strategy of using specific promotions to target loyal customers by offering the customers discount vouchers of different percentage values if they shopped within certain periods. There were also general promotions done at certain periods that targeted old and new customers by offering them certain percentages of discounts if they shopped. Other forms of promotions the SME business owners/managers implemented included (a) organization of competitions for customers on the companies' social media sites where the customers could win prizes and (b) offering bundled packages whereby customers could buy certain items and get a similar product or an accompanying accessory free. Participant 3 gave an insight into how the firm implemented promotions by stating that apart from offering their loyal customers voucher values of up to 50% at a time, there were times the firm organized competitions on its social media sites where customers participated and won gift items. Barrales-Molina et al. (2014) described social media and alliance/networks managements as key enablers of dynamic marketing capabilities that could help firms in generating market knowledge.

Market intelligence. Reconfiguration of organizational assets and processes in line with environmental needs requires market intelligence and the ability to monitor market and technology trends to sense and seize opportunities (Pavlou & El Sawy, 2011). Daniel and Wilson (2003) identified organizational intelligence to reconfigure resources to match changing market dynamics, the ability to reconfigure the sales/service process to take advantage of new channel capabilities, and the ability to integrate the existing and new channels as some of the essential capabilities for e-business transformation. The data analysis indicated that the SME business owners/managers deployed market intelligence tools that helped the business owners/managers to keep abreast of customer needs and market trends. Some of the ways the SME business owners/managers gathered market intelligence were through (a) the setup and use of customers' database, (b) periodic use of questionnaires to get feedbacks from customers, and (c) the use of social media to interact with customers. Critical information collected from customers and stored in the database included the customer's name, e-mail, phone number, and special anniversary dates.

The participants explained that with customers' database and feedbacks received from customers, they had a better understanding of (a) what kind of products their customers wanted, (b) customer behavioral characteristics, (c) customer shopping patterns, and (d) issues relating to service delivery. The intelligence gathered enabled the SME business owners/managers to adjust when necessary their methods, processes, and systems. In document 2 and document 3, the companies stated that they collected user information to serve the customers well. The actions of the SME business

owners/managers aligned with the concept of dynamic capabilities described by Teece (2007) to include (a) the capacities of sensing and shaping opportunities and threats, (b) seizing opportunities, and (c) reconfiguring the firm's assets to achieve competitive advantage. Developing the three capabilities of sensing opportunities, seizing opportunities, and reconfiguration is essential for enterprise success in environments of rapid technological change (Teece, 2007).

The participants described various ways they used market intelligence to create value for their organizations and customers. Participant 3 illustrated how the use of the customers' database provided market intelligence by helping the managers identify customers who were making repeated sales and classified such customers as priority customers whom the managers or their company personnel called on their special anniversaries to celebrate with them. Participant 2 explained how the use of questionnaires to get customer feedback revealed that online customers: (a) were time-conscious, (b) were cost-conscious, (c) wanted speedy delivery, (d) wanted a seamless shopping experience, and (e) wanted an effective after-sales support. Participant 4 explained that through market intelligence, the company identified products people bought repeatedly, as well as products that attracted after-sales support services and concentrated on those products. Evidence collected from the websites of the four SMEs showed that all the SMEs had a presence on social media sites like Facebook, LinkedIn, and Instagram through which they interacted with their customers.

Theme 3: Learning and Adaptation

The use of learning and adaptation strategies by the SME business owners/managers emerged as one of the three major themes in this study. Learning and reconfiguration/adaptive capabilities are among the core elements of dynamic capabilities described by Teece et al. (1997) within the DCF. Successful e-commerce adoption requires firms to build focal capabilities in response to the dynamic nature of the market and competition (Cui & Pan, 2015). Learning capability includes the ability to apply new knowledge to improve existing operational capabilities (Pavlou & El Sawy, 2011). Being able to sense opportunities and threats requires learning about the environment and technologies (Teece, 2007). The participants described various ways in which they exercised learning and adaptation strategies. As shown in Table 4, two subthemes emerged from data analysis regarding learning and adaptation: (a) learning and (b) adaptation.

Table 4

Learning and Adaptation

Theme	<i>n</i>	% of frequency of occurrence
Learning	33	66.00
Adaptation	17	34.00

Note. *n* = frequency.

Learning. Learning is a dynamic process by which improvements in tasks performance could occur through experimentation and repetition (Teece et. al, 1997). Teece (2007) stated that learning could occur at individual or organizational levels, as

well as occur through experience. Thong (2001) described the post-implementation stage of technological innovation adoption as a post-evaluation phase that provides organizational learning. The findings indicated that the SME business owners/managers exercised learning through: (a) feedback from customers, (b) learning from established players in the industry, (c) formal training, and (d) experience. From the account of the participants, learning was a continuous process that involved both the manager and employees because of the dynamic nature of e-commerce business environment.

Learning enabled the participants to (a) keep abreast of customers needs and market trends, (b) overcome some implementation and operational challenges, and (c) implement some product/service strategies. Participant 2 explained how through periodic customer feedback, the company had a better understanding of customers' needs, assessed the user-friendliness of its website, and got the customers views concerning the company's products and services which resulted in some process changes within the firm. Participant 4 explained the strategy of learning from established players in the e-commerce industry by stating that the company learned from global e-commerce players like Amazon and Alibaba and acquired some knowledge by studying the methods of operation of the established firms. The strategy of learning from established players in the e-commerce industry aligns with the findings of Gely (2015), who found that learning from other brewers was one of the strategies adopted by microbrewers to navigate through microbrewery licensing requirements.

Learning from experience and through formal training were other strategies SME business owners/managers exercised. Participant 3 illustrated learning from experience

by explaining how the company's website software at the time of deployment of e-commerce worked well with computers but could not easily work with mobile phones, and this was at a time when many Nigerians had acquired mobile phones. Participant 4 explained the strategy of learning from experience by stating that the company's strategy of trade-in of old devices for new ones was something learned from the company's offline store business. The participants highlighted the need for formal training to fill any gaps in knowledge both for the organizational personnel engaged in e-commerce and the owner/manager of the business. Participant 2 explained the relevance of formal training for staff by stating that the company engaged in training and retraining of staff to ensure that the staff mastered the art and mastered the processes of e-commerce, which helped to minimize mistakes and hedged against high staff turnover.

The participants underscored the importance of having some knowledge of the e-commerce industry as well as the specific area of trade or service someone may want to engage in. From the account of the participants, both the tacit knowledge possessed by the business owner/manager and formal training contribute to success in the e-commerce business. Participant 3 stated that e-commerce involves many complicated processes; hence, the manager must be experienced in the industry. Participant 4 advised that anyone who wanted to venture into the e-commerce business should first go and learn the basics, arguing that many people failed in e-commerce business because such people did not learn the basics, which should be the foundation for success. The technical knowledge acquired by Participant 4 on how to repair computer systems after graduation from the University led to the establishment of the company and its foray into e-

commerce selling computers and IT accessories. The finding that many people failed in e-commerce business because they did not learn the basics aligns with the findings by Faloye (2014) and Jahanshahi et al. (2013) who reported that lack of knowledge and understanding of e-commerce is one of the barriers to e-commerce adoption among SMEs.

Adaptation. Adaptive capabilities indicate the ability of firms to learn and adjust to rapid changes in the market (Day, 2014). Adapting, configuring, and reconfiguring a firm's tangible and intangible assets to achieve competitive advantage is one of the core aspects of dynamic capabilities (Teece, 2007). Wilden and Gudergan (2015) stated that reconfiguring capability helps managers in reconfiguring organizational resources, structures, and processes, and the authors assessed reconfiguration with indices such as implementation of new strategies, processes renewal, and adoption of new management approaches. Based on these postulations, adaptive and reconfiguration capabilities may help managers in making changes necessary to achieve competitive advantage in a dynamic business environment.

The findings indicated that the SME business owners/managers carried out asset and process reconfigurations in line with the dictates of the business and the market, which contributed to the success of the SMEs in the e-commerce business. The participants carried out adaptations relating to (a) processes, (b) human resources, (c) operational methods, and (d) technology. Participants 1 and 3 explained how pressure from customers and competitive practices from established industry players made their organizations change their operational methods from payment for goods before delivery

to COD. Although the logistics companies did not want their personnel to carry cash around, the participants' companies negotiated with them to ensure the new model worked. Participant 3 explained that the company overcame the resistance of the logistics company to allow its personnel to carry cash by negotiating new terms that allowed the logistics company to collect cash, lodge the cash into the company's account, and then charge a certain percentage on the cash received.

Human resources are an integral part of an organization's intangible assets that constitute its competences and capabilities. The participants discussed how they adapted their personnel to cope with the dictates of the business and changes in the environment. Participants 2 and 4 explained the relevance of adapting the organizational personnel to the business and environmental dynamics. Participant 2 highlighted how the outcome of a study the company conducted in the implementation phase of e-commerce made the company to assemble a team of young, smart people who understood the demands of the e-commerce business and the need to work according to the dictates of the business. Participant 4 underlined the importance of personnel adaptation by stating that before anyone became a staff of the company, the person must pass through all the departments to know everything to represent the company effectively.

Reconfiguration capability includes the capability to renew processes in line with changes in the environment (Wilden & Gudergan, 2015). Reconfiguration entails continual surveillance of market and technological developments with a view to adopting best practices (Teece et al., 1997). Participant 4 explained how feedback received from customers led to process changes that cut across the company's ordering process,

delivery process, payment policies, warranty policies, and return policies. Participant 3 explained technology adaptation by highlighting how, based on observed challenges of accessing the company's website via mobile phones, the company changed its e-commerce website software to a more robust and higher version that made it possible for customers to shop seamlessly using either mobile phones or computers.

Applications to Professional Practice

Analysis of interview data generated from the four participants and documentary data from the case companies led to the identification of three main themes: (a) service delivery strategies, (b) dynamic marketing strategies, and (c) learning and adaptation. The participants were the owners/managers of the businesses and were experienced people who played active roles in the decision-making, implementation, and operational phases of their respective companies' e-commerce systems. The participants provided feedback regarding the strategies SME business owners/managers use to implement e-commerce. The strategies could have implications for the application to professional practice.

The finding that the SME business owners/managers used partnership with service vendors as a cost-effective strategy to implement e-commerce has the potential to influence the attitudes of SME business owners regarding the cost of implementing e-commerce. The participants' companies outsourced technology and product delivery functions to external partners. Outsourcing delivery to third-party logistics firms was a strategy aimed at reducing logistics cost and making the firms to focus on their core business activities. Outsourcing delivery to third-party logistics firms reduces logistics cost, delivery delay risk, and enables a firm to focus on its core business activities (Giri &

Sarker, 2017). IT outsourcing by SMEs helps to reduce IT costs and ensure quick access to new technologies (Grama & Pavaloaia, 2014). SMEs have limited resources (Ates et al., 2013) and may lack the financial capability to retain IT personnel. Considering that a firm's limited experience with IT may deter it from adopting a new technology such as e-commerce (Ramdani et al., 2013), outsourcing of IT services may be a viable option for SMEs. The findings may generate interest among SME business owners/managers on the use of outsourcing as a strategy to implement e-commerce.

The commitment of the SME business owners/managers to quality and customer satisfaction as a service strategy may motivate SME business owners/managers implementing e-commerce to pay attention to issues relating to quality and customer satisfaction. Torres et al. (2014) noted that maintaining a cost advantage in e-commerce is difficult and rather than focus on technology, efficiency, and cost advantage, e-commerce retailers should focus on differentiation and factors that promote customer satisfaction and loyalty to achieve a sustainable competitive advantage. Tajeddini et al., (2013) found a positive relationship between customer orientation of small retail firms and performance. Teece et al. (1997) described a firm's customer base as a relational asset and part of the specific assets that determines a firm's competitive position within the DCF. Business owners/managers of SMEs implementing e-commerce may achieve better performance if they show commitment to issues of quality and customer satisfaction.

The use of dynamic marketing strategies by ways of customer network and market intelligence demonstrated how SME business owners/managers could effectively

create value for their firms without embarking on costly marketing and advertising campaigns. Small retail firms lack resources for advanced market research (Tajeddini et al, 2013). Leveraging the customers' referral network supported by an incentive/reward system, and using the customers' database and social media to gather market intelligence enabled the SME business owners/managers to sense and seize opportunities and manage threats in the business environment.

Learning and adaptation strategies, which emerged as one of the themes of this study has implications for business practice. Being able to sense opportunities and threats requires learning about the environment and technologies (Teece, 2007). The e-commerce environment is a dynamic one characterized by rapid changes in technologies and the market. The participants highlighted that learning was a continuous process that involved both the manager and employees because of the nature of e-commerce business environment. Learning enabled the SME business owners/managers to (a) keep abreast of customers needs and market trends, (b) overcome some implementation and operational challenges, and (c) implement some product/service strategies. This finding implies that SME business owners/managers that wish to succeed in the e-commerce business should adopt measures that encourage individual and organizational learning.

The need for SME business owners/managers to have adaptive capabilities emerged as one of the subthemes of this study. Adaptive capabilities indicate the ability of firms to learn and adjust to rapid changes in the market (Day, 2014). The findings showed that SME business owners/managers engaged in asset and process reconfigurations in line with the dictates of the business and the market. The participants

carried out adaptations relating to (a) processes, (b) human resources, (c) operational methods, and (d) technology. There is a need for SME business owners/managers to have an understanding of organizational assets and processes and understand how to adapt the assets and processes to seize opportunities or overcome threats in the environment. Business owners/managers of SMEs who lack knowledge and skills in these areas may consider enrolling in relevant training programs to shore up their capabilities.

Implications for Social Change

The use of e-commerce by SMEs leads to higher sales performance, efficiency gains, and lower transaction costs (Dan, 2014). Global e-commerce sales were US\$10 trillion in 2012 (AlGhamdi et al., 2012), and in the European Union, retail e-commerce sales were 241 billion euros in 2011 (Gomez-Herrera et al., 2014). Despite the potential benefits of e-commerce, the level of e-commerce adoption by Nigerian SMEs is low. Nigerian retail SMEs lack the capabilities to sell their products beyond their immediate vicinities, which leads to a loss of potential revenues.

Lack of e-commerce strategy is one of the factors that contribute to the low level of e-commerce adoption by SMEs (Mutua et al., 2013). The purpose of the multiple case study was to explore the strategies that Nigerian SME business owners used to implement e-commerce systems. An e-commerce strategy indicates how an organization deploys its assets to achieve and sustain competitive advantage in the online market space (Torres et al., 2014). Cui and Pan (2015) posited that successful e-commerce adoption requires firms to build focal capabilities in response to the dynamic nature of the market and competition. The findings of this study revealed key strategies SME business

owners/managers used to implement e-commerce successfully in their organizations. The implications for social change include the potential to provide new insights on effective strategies for e-commerce implementation, which may be beneficial to both existing and aspiring SME business owners. Getting more Nigerian SMEs to adopt e-commerce may help them to access wider markets cost-effectively, which has a social change implication of increased wealth creation opportunities for the business owners, their employees, their host communities, and the government.

Recommendations for Action

The purpose of this qualitative multiple case study was to explore the strategies that Nigerian SME business owners used to implement e-commerce systems. Consideration of the findings of this study regarding the strategies Nigerian SME business owners used to implement e-commerce may be beneficial to existing and prospective SME business owners that may wish to implement e-commerce. The findings of this study corroborated the position of Yasin et al. (2014) that SMEs might not reap the desired benefits of e-commerce if they approach e-commerce only from the technology perspective. Successful e-commerce adoption requires firms to build focal capabilities in response to the dynamic nature of the market and competition (Cui & Pan, 2015).

The first recommendation is that SME business owners who may wish to implement e-commerce may consider the use of outsourcing as a cost-effective strategy. The findings showed that the SME business owners/managers outsourced technology and product delivery functions to service vendors as a cost-effective strategy to implement e-

commerce. With the limited resources available to SMEs, the use of outsourcing may prove to be a viable low-cost entry strategy.

The next recommendation is that SME business owners who may wish to implement e-commerce should have a customer orientation and show commitment to issues relating to quality and customer satisfaction. The findings indicated that having a customer orientation, including having an effective after-sales support capability helps to promote customer satisfaction and retention. Business owners/managers of SMEs may consider instituting CRM programs in their organizations to improve customer satisfaction.

Furthermore, SME business owners/managers wishing to implement e-commerce may consider using dynamic marketing strategies to create value for their firms without embarking on costly marketing and advertising campaigns. Finally, for successful e-commerce implementation and operation, SME business owners/managers may need to develop their learning and adaptation skills as well as adopt measures that encourage individual and organizational learning. Consideration of these recommendations may help existing and prospective SME business owners to achieve success in e-commerce implementation.

To disseminate the results of this study, I plan to publish the study in the ProQuest database and other scholarly journals. My plan also is to present the findings at conferences, seminars, and training that may include SMEs. The objective will be to share the new insights generated from this study with various stakeholders in the industry and the academia.

Recommendations for Further Research

I used a qualitative, multiple case study approach to explore the strategies that Nigerian SME business owners used to implement e-commerce systems. The use of the qualitative approach led to the emergence of multiple perspectives in answering the research question. For further research, I recommend the use of a quantitative approach to investigate any relationships that may exist among the variables identified in the themes from this study. Another issue for consideration is that this study was limited to participants and cases from Lagos, which might not be representative of all of Nigeria. Further research may consider the inclusion of participants and cases from other geographical areas of Nigeria. Furthermore, participation in this study was limited to only the business owners/managers of the SMEs. The perspectives of the business owners/managers and documentary evidence from the case organizations informed the study. Further research may generate new insights by expanding the base of the participants to include non-managerial employees of SMEs that have implemented e-commerce.

Reflections

My decision to pursue the DBA program was to fulfill personal and professional development goals, as well as socio-economic development goals. I come from a country with a huge population, a high level of unemployment, and many SMEs whose owners or managers lack basic managerial skills. I intend to help fill this void by occasionally sharing knowledge with, and mentoring SME business owners/managers. I believed that Walden's DBA program would equip me with the requisite knowledge and skills to not

only cope with the complexities of managing my personal businesses but also function as a key driver of business success and business activities in my country.

I have a scientific and analytical mindset, largely influenced by my engineering and professional ICT background. I trained as an electrical engineer and specialized in electronics and communications engineering at the masters' degree level before pursuing postgraduate degrees in business. My natural inclination was to adopt a quantitative approach to researching whatever topic I might choose. However, as I got deeper into the program, I began to view the world differently and came to appreciate the values inherent in both qualitative and quantitative approaches to research. I eventually used the qualitative method for this study.

My choice of doctoral topic was to address socio-economic development issues in my country. While SMEs in the developed world were reaping immense benefits from e-commerce, Nigerian SMEs were yet to embrace e-commerce on a significant scale. By undertaking this study to unravel strategies SME business owners/manager may use to implement e-commerce, I feel fulfilled, having accomplished one of my objectives for pursuing the DBA degree.

Throughout the processes of data collection and interpretation, I maintained a neutral role and did not allow my biases to influence the study. I only had a basic theoretical knowledge, but no working knowledge of e-commerce, which was not sufficient to bias me. I used an interview protocol to ensure process consistency, audio-tapped the participants' interviews, transcribed them, and did member checking with the participants before the conclusion of data analysis.

Reflecting back, I would say that Walden's DBA has enabled me to acquire advanced critical thinking skills, research abilities, and sound theoretical and practical knowledge in the field of business administration. The program met my expectations regarding my personal, professional, and socio-economic development goals. The rigors of the program were more than I expected at the beginning.

Conclusion

In 2013, MSMEs in Nigeria contributed 48.5% to the country's GDP, employed 84% of the total labor force, and contributed 7.3% to total exports (SMEDAN, 2013). The use of e-commerce by SMEs leads to higher sales performance, efficiency gains, and lower transaction costs. Despite the potential benefits of e-commerce, the level of e-commerce adoption by Nigerian SMEs is low when compared with their counterparts in Europe and the United States. Nigerian retail SMEs lack the capabilities to sell their products beyond their immediate vicinities, which leads to a loss of potential revenues. Lack of e-commerce strategy is one of the identified factors that contribute to the low level of e-commerce adoption by SMEs. The purpose of this multiple case study was to explore the strategies that Nigerian SME business owners used to implement e-commerce systems.

The findings of this study revealed key strategies Nigerian SME business owners/managers used to implement e-commerce successfully in their organizations. The findings provide insights on effective strategies for e-commerce implementation, which may be beneficial to both existing and aspiring SME business owners that may wish to

implement e-commerce. The main themes that emerged from the study are (a) service delivery strategies, (b) dynamic marketing strategies, and (c) learning and adaptation.

The findings of this study corroborated the argument that successful e-commerce implementation goes beyond the acquisition of IT infrastructure. Yasin et al. (2014) argued that SMEs might not reap the desired benefits of e-commerce if they approach e-commerce only from the technology perspective. Successful e-commerce adoption requires firms to build focal capabilities in response to the dynamic nature of the market and competition (Cui & Pan, 2015). Consideration of the findings and recommendations of this study may help more Nigerian SME business owners/managers to succeed in their quest to implement e-commerce in their organizations. Getting more Nigerian SMEs to adopt e-commerce may help them to access wider markets cost-effectively, which has a social change implication of increased wealth creation opportunities for the business owners, their employees, their host communities, and the government.

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Appendix A: Letter of Introduction

Dear (Participant Name),

Organization address

Date

Dear Sir/Madam,

As part of my doctoral research at Walden University, I would like to invite you to participate in a research study I am conducting to explore the strategies that Nigerian SME business owners use to implement successful e-commerce systems. The findings of the proposed study may help in raising the level of e-commerce adoption among Nigerian SME business owners.

The participants for this study shall be owners/managers of SMEs based in Lagos who have strategies for implementing e-commerce systems. The participating companies should be firms that have functional e-commerce systems.

The mode of data collection shall be through audio-recorded interview of approximately 30 minutes duration, preferably at your workplace, and review of non-confidential documentation relating to the subject of e-commerce implementation and usage. All data collected will be treated as confidential, and your participation in the study is voluntary. You will have an opportunity to perform member checking, by validating a summary of interpretation of the interview data to be e-mailed to you by the researcher after data analysis.

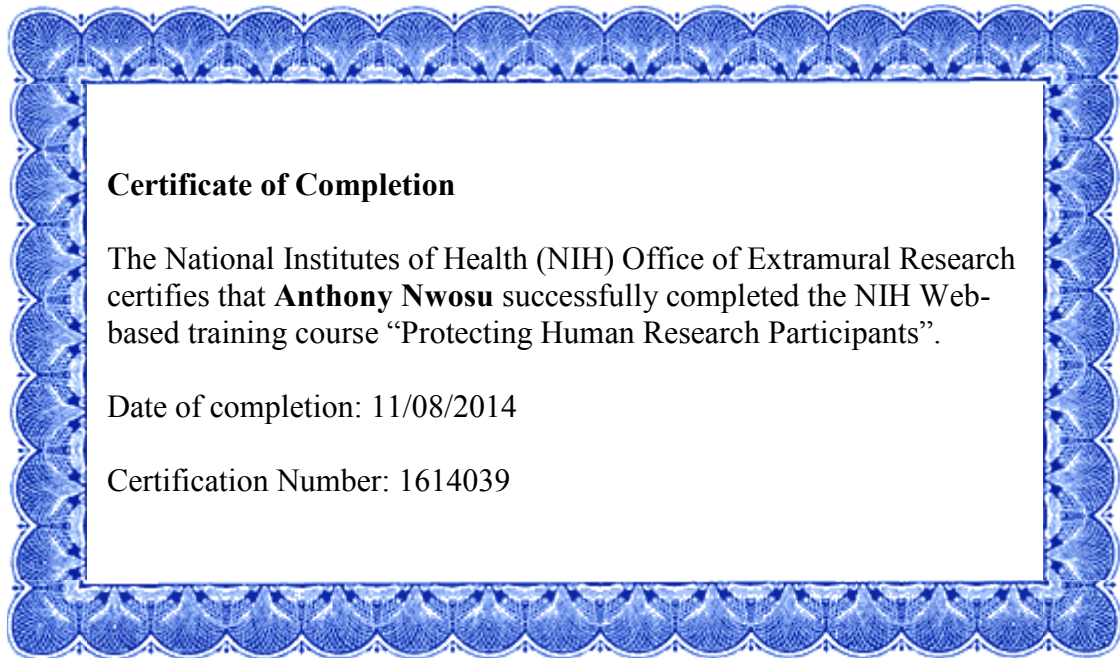
Enclosed with this letter is the Participant Consent Form, which you need to review carefully and sign if you wish to engage in the study. If you need any clarifications about the study before you sign the consent form, you may contact the researcher via phone at xxxxxxxx or e-mail at anthony.nwosu@waldenu.edu. If you want to talk privately about your rights as a participant, you can call Dr. Leilani Endicott. She is the Walden University representative who can discuss this with you. Her phone number is xxxxxxxx. Walden University's approval number for this study is xxxxxxxx and it expires on xxxxxxxx.

Your participation will not only contribute to the success of the proposed study but may help stimulate interest among Nigerian SME business owners to implement e-commerce systems.

Sincerely,

Anthony Nwosu

Appendix B: NIH Ethical Compliance Certificate



Appendix C: Interview Protocol

- a. Introduce self to participant.
- b. Review the purpose of the interview and the interview protocol with the participant.
- c. Present to the participant previously signed consent form and confirm his/her readiness to proceed with, or withdraw from the interview.
- d. Seek the participant's permission to audio-record the interview if the participant agrees to proceed with the interview.
- e. Inform the participant of his right to seek clarifications on any questions asked.
- f. Turn on the audio recording device to commence the interview.
- g. Introduce the participant using the assigned pseudo name to ensure participant confidentiality.
- h. Beginning with interview question #1, ask the interview questions until the last question. Ask follow-up questions where necessary to clarify participant's responses.
- i. After exhausting all the interview questions, discuss with the participant the process of member checking to validate the interpretations of the interview data.
- j. Thank the participant for taking part in the study.
- k. End of interview

Appendix D: Interview Questions

1. What strategies helped to ensure a successful deployment of an e-commerce system in your organization?
2. What strategies have you used to deal with the challenges associated with your organization's implementation of e-commerce?
3. What strategies have you used to attract and retain customers on your e-commerce site?
4. What strategies have you used to manage your in-house and outside resources to ensure a successful e-commerce system implementation?
5. What else would you want to share regarding strategies SME business owners can use to implement e-commerce?