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## Strategies to Integrate Innovation Into Business Practices in the Nigerian Private Sector

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# Walden University

College of Management and Technology

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John Chukwudifu

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Walden University  
2021

Abstract

Strategies to Integrate Innovation Into Business Practices in the Nigerian Private Sector

by

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MBA, University of Lagos, 1995

BSc, University of Benin, 1980

Doctoral Study Submitted in Partial Fulfillment

of the Requirements for the Degree of

Doctor of Business Administration

Walden University

December 2021

## Abstract

Business leaders not integrating innovation into their business practices exhibit lower financial performance. Business leaders integrating innovation into their business practices increase operational and financial performance. Grounded in the diffusion of innovation theory, the purpose of this qualitative multiple case study was to explore strategies business leaders in the Nigerian private sector use to effectively integrate innovation into their business practices to increase financial performance. Study participants were three business leaders who developed successful strategies to effectively integrate innovation into their business practices to increase financial performance. Data were collected from semistructured interviews, organizational documents, and artifacts. Thematic analysis was used to analyze the data. Four themes emerged: support from top management was critical for successful innovations, absorptive capacity of employees provided the knowledge for building capabilities, implementation of multiple innovations allowed business leaders to reconfigure resources into capabilities, and the deficient national innovation ecosystem inhibited innovations. A key recommendation is that firms adapt business models to avoid and optimize systemic risks to transform resources into capabilities. The implications for positive social change include the potential for business leaders to integrate innovation into their business practices to address social entrepreneurship by responding to the social needs of local communities.

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## Dedication

I dedicate this study to my wife, Uche, and children, Dinma, Ngozi, Jindu, and Amaka, who are the center of my life and supported my journey through the DBA program. To my late father, Chukwudifu Soomkulu, and late mother, Umerai Chukwudifu, whose resolve to educate their seven children from the proceeds of local farming and fish trading, respectively, is a model of family heritage to cultivate for future generations. To my doctoral student colleagues, I thank you for the opportunity to learn from you also. To my friends and other relatives, I say thank you for supporting me in different ways during the journey. Finally, to those who are in the process of acquiring a doctorate, though demanding and time-consuming, I encourage you to persist.

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## Table of Contents

List of Tables.....	iv
Section 1: Foundation of the Study .....	1
Background of the Problem.....	1
Problem Statement.....	2
Purpose Statement .....	3
Nature of the Study.....	3
Research Question .....	5
Interview Questions .....	5
Conceptual Framework.....	6
Operational Definitions.....	8
Assumptions, Limitations, and Delimitations .....	9
Assumptions .....	9
Limitations.....	10
Delimitations .....	10
Significance of the Study .....	11
Contribution to Business Practice.....	11
Implications for Social Change .....	12
A Review of the Professional and Academic Literature.....	13
Literature Review Organization .....	14
Application to the Applied Business Problem.....	15
Diffusion of Innovation Theory.....	16



Other Contrasting and Supporting Theories.....	36
Postadoption Implementation of Innovation .....	43
InterFirm Diffusion of Innovation .....	50
Transition .....	55
Section 2: The Project.....	58
Purpose Statement .....	58
Role of the Researcher .....	59
Participants .....	63
Research Method and Design.....	65
Research Method .....	65
Research Design .....	66
Population and Sampling .....	68
Ethical Research .....	70
Data Collection Instruments.....	73
Data Collection Technique.....	76
Data Organization Technique.....	82
Data Analysis .....	85
Reliability and Validity.....	91
Reliability .....	91
Validity.....	93
Transition and Summary .....	95
Section 3: Application to Professional Practice and Implications for Change .....	97

Introduction .....	97
Presentation of the Findings .....	97
Theme 1: Support From Top Management Was Critical for Successful Innovations.....	98
Theme 2: Absorptive Capacity of Employees Provided the Knowledge for Building Capabilities .....	110
Theme 3: Implementation of Multiple Innovations Allowed Business Leaders to Reconfigure Resources Into Capabilities.....	121
Theme 4: The Deficient National Innovation Ecosystem Inhibited Innovations.....	136
Applications to Professional Practice .....	148
Implications for Social Change .....	153
Recommendations for Action.....	154
Recommendations for Further Research.....	156
Reflections.....	158
Conclusion.....	160
References .....	163
Appendix: Interview Protocol.....	218

List of Tables

Table 1. Comparing Nigeria's 2020 GII Scores With Those of the Best Countries ..... 138

## Section 1: Foundation of the Study

Competitive forces and trending customer preferences within the contemporary global business environment pressure firms to adopt various innovation strategies to enable them to sustain competitive advantage and growth (Lichtenthaler, 2016). Although companies in developed economies dominating global business activities have acquired the capabilities for implementing innovation over time, firms in developing economies have not achieved this goal. The reasons behind the lack of successful integration of innovation into business practices by firms in developing economies include the fact that their macro-environments have not been sufficiently supportive and their leaders have not learned from multinational business partners (Caiazza, 2016; Lynch & Jin, 2016). Firms in developing economies need to adopt business approaches that will not only drive their individual performance but also support inclusive growth of the economies in which they do business, imitating the practices of successful multinational firms (Ashfaq et al., 2018).

### **Background of the Problem**

Business leaders' practices propelling the growth of their firms in the industrial world are anchored on the conditions fostering persistent innovative performance, which create and sustain their competitive advantage in the global market (Turulja & Bajgoric, 2016). Several researchers have found that 30% of firms' sales resulted from product innovation introduced in the previous 3 years, leading to macroeconomic expansion and economic growth (Chandran Govindaraju et al., 2013; Chatzoglou & Chatzoudes, 2018; Lichtenthaler, 2016). Business leaders must understand that any innovation solely used

by its innovator does not benefit humanity; instead, innovation becomes useful to humanity when the innovation transforms the socioeconomic landscape through massive diffusion within and across countries (Caiazza, 2016). Business leaders using innovations gain the competitive advantage and long-term profitability of firms, leading to macroeconomic expansion that causes economic growth (Gachie & Govender, 2017; Gries et al., 2018).

In light of the benefits of innovation, local leaders of enterprises should learn to innovate from the mature practice of multinational companies to enable them to grow into global prominence and facilitate the much needed socioeconomic transformation of their communities (Gachie & Govender, 2017; Gries et al., 2018; Jauhiainen & Hooli, 2017). In this study, I focused on the spread or diffusion of innovations among local firms from the multinational suppliers, rather than on engaging in first-mover innovations, which according to Sinfield and Freddy (2016), not only demand the commitment of more resources but also pose more risk than the former in transiting to competitive participation in the global market. Integrating innovation into the business practices of local firms in Nigeria entails adopting and implementing the innovations developed and supplied by multinational companies (Ashfaq et al., 2018).

### **Problem Statement**

Business leaders integrating innovation into their business practices exhibit better financial performance than those leaders not integrating innovation (Hooli & Jauhiainen, 2018). Business leaders integrating innovation into their business practices obtained a 58% increase in operational performance and a 47% increase in financial performance in

2016 (Agyapong et al., 2017). The general business problem is that some Nigerian business leaders are not taking advantage of the benefits associated with the integration of innovation into their business practices to increase financial performance. The specific business problem is that some business leaders in the Nigerian private sector lack strategies to effectively integrate innovation into their business practices to increase financial performance.

### **Purpose Statement**

The purpose of this qualitative multiple case study was to explore the strategies that business leaders in the Nigerian private sector use to effectively integrate innovation into their business practices to increase financial performance. The target population comprised three Nigerian business leaders with successful experience in using strategies to effectively integrate innovation into their business practices to increase financial performance. The implications for positive social change include the potential for business leaders to bring financial success to the business organizations they lead by implementing strategies to effectively integrate innovation into their business practices. Achieving financial success could provide the community with more employment opportunities and increase tax revenues. Business leaders integrating innovation into their business practices address social entrepreneurship by responding to the social needs of local communities (Candi et al., 2018).

### **Nature of the Study**

The three research methodologies available to a researcher are qualitative, quantitative, and mixed (Saunders et al., 2015). According to Yin (2018), researchers use

the qualitative method to explore a phenomenon through the perspectives of the participants and the interpretation of the researcher. Because the researcher explores the *what*, *why*, and *how* of a phenomenon in its natural setting, a qualitative study is naturalistic in form (Yin, 2018). In this study, I used the qualitative method because of the need to gain an in-depth understanding of the phenomenon by exploring the *what*, *why*, and *how* of the integration of innovation into business practices. In a quantitative study, the researcher examines the relationship between various variables posed in the research question and proposed in the hypothesis, using measurement instruments to collect and analyze data to ensure the validity and reliability of results (Green & Salkind, 2017; Yin, 2018). Because I did not intend to test hypotheses or examine relationships among variables using statistical analyses in the process of exploring the phenomenon, I did not select the quantitative method. The mixed method entails the combination of quantitative and qualitative research involving deductive and inductive reasoning (Marshall & Rossman, 2016). I did not select the mixed method because, to address the study's purpose, I did not need to test hypotheses about variables' relationships or groups' differences.

I considered narrative, phenomenological, ethnographic, and case study qualitative research designs for this study. The narrative design requires obtaining open and interpretive personal stories of participants' experiences, which is typically sequential and nonstructured (Yin, 2018). I did not select the narrative design because the study did not require open and interpretive personal stories of participants' experiences to address the research question. In a phenomenological design, which is interpretive, the

researcher uses the insights gained from participants' lived experiences with phenomena to construct meanings (Paul, 2017; Van Manen, 2017). Because I did not seek participants' lived experiences to construct personal meanings, a phenomenological design was also not appropriate for the study. Researchers use the ethnographic research design to conduct an in-depth exploration of the social and cultural aspects of everyday life for a specific community (Marshall & Rossman, 2016). I did not use the ethnographic design because the focus of my study was not to conduct an in-depth exploration of the social and cultural aspects of everyday life for a specific group's culture. Business and management researchers use the case study research design to gain insights into real-world business problems for providing solutions to business problems (Saunders et al., 2015). In gaining an in-depth understanding of the phenomenon under study, researchers triangulate data to validate the findings (Ridder, 2017). In this study, I used the case study research design because my intention was to explore the *what*, *how*, and *why* of the phenomenon, which was the integration of innovation into business practices. I selected a multiple case study because, according to Yin (2018), a multiple case design might have major analytic benefits.

### **Research Question**

What strategies do business leaders in the Nigerian private sector use to effectively integrate innovation into their business practices?

### **Interview Questions**

1. What strategies did you use to successfully integrate innovation into your business practices to increase financial performance?



2. How did your employees respond to those strategies?
3. How were strategies to successfully integrate innovation into your business practices to increase financial performance effectively communicated throughout the organizational ranks and among other key stakeholders?
4. What were the key barriers to implementing strategies to successfully integrate innovation into your business practices to increase financial performance?
5. How did you overcome the key barriers to implementing strategies to successfully integrate innovation into your business practices to increase financial performance?
6. What, if any, modifications did you apply to any strategy to improve its effectiveness in integrating innovation into your business practices to increase financial performance?
7. What are the principal business processes your organization used to successfully integrate innovation into your business practices to increase financial performance?
8. What else would you like to add about strategies your organization uses to successfully integrate innovation into your business practices to increase financial performance?

### **Conceptual Framework**

The conceptual framework for this study was Rogers' (1962) diffusion of innovation theory. Rogers used this theory to explain the process of innovation diffusion

among the members of a social system through certain channels over time. Rogers identified four elements of the diffusion of innovation theory, which are innovation, communication, time, and the social system. Mukred et al. (2019) and Venkatesh et al. (2016) reconceptualized these elements into organizational context factors influencing the intention to use technology (innovation) to apply them to organizations, which are technology, organization, and environment attributes. The first element consists of innovation attributes of relative advantage, compatibility, trialability, observability, and complexity, which determine the rate of adoption (Rogers, 1962). In the second element, communication, Rogers postulated that an adopter experiencing an innovation could act as a credible channel for influencing the other adopting units that had not used the innovation. The third element of the theory, time, comprises three components: innovation-decision process, adopter categories, and rate of adoption. In the fourth element, Rogers theorized that the social system facilitated, or inhibited, the diffusion of innovation through the functioning of the social structure, the effect of social norms, the roles of opinion leaders and change agents, the characteristics of innovation decision approaches, and the consequences of the innovation. These elements of Rogers's diffusion of innovation theory, when articulated by appropriate organizational leaders, could facilitate rapid diffusion of innovation in a given social system. I selected Rogers's diffusion of innovation theory to serve as a likely foundation to understand strategies business leaders in the Nigerian private sector use to effectively integrate innovation into their business practices to increase financial performance.

## Operational Definitions

*Business model innovation:* The transformation of the content, structure, and governance of a firm's business transactions to maximize value (Foss & Saebi, 2017; Howell et al., 2018).

*Confirmability:* This measures the extent to which the interpretation of data, informing the study findings, derived entirely from participants' perspectives, free of researchers' biases (Forero et al., 2018).

*Diffusion of innovation:* Diffusion of innovation is the process by which innovation is communicated through certain channels over time among the members of a social system (Rogers, 1962).

*Homophilous groups:* They are innovation adopter categories with similar behavior called innovators, early adopters, early majority, late majority, and laggards, respectively (Rogers, 1962).

*Management innovation:* Also referred to as organizational innovation, this term refers to the invention and implementation of a new management practice, process, structure, or technique to further organizational goals (Simao & Franco, 2018).

*Observability:* The extent to which the outcome of an innovation used by earlier adopters is demonstrable to persuade potential adopters (Rogers, 1962).

*Organizational innovation:* The introduction of knowledge management systems and practices, which usher in new management practices, collaborative relationships, structural changes, higher operational flexibility, and adaptability to the external

environment for the purpose of improving innovation skills required to drive efficient operations (Aichouche & Bousalem, 2016; Chandran Govindaraju et al., 2013).

*Process innovation:* The adoption of new processes to increase efficiency and effectiveness in the production and delivery of goods and services to the customers (Scafuto et al., 2018).

*Product innovation:* The development and launch of new products in the market (Aichouche & Bousalem, 2016).

*Service innovation:* Refers to the introduction of new services to fulfill customer expectation and induce loyalty (Clausen & Fichter, 2019).

*Trialability:* Refers to the extent to which an innovation is available for experimentation, assessment, and subsequent customization (if necessary) to enable adoption decision and proficient use (Rogers, 1962).

### **Assumptions, Limitations, and Delimitations**

Assumptions are beliefs based on the current world order which silently influence the research process (Martin & Parmar, 2012). Limitations are restrictions that the research process cannot modify but which influence the outcome of the study (Saunders et al., 2015). Delimitations are methodological choices made at the commencement of research to unravel a specific aspect of knowledge that delineates the scope of the study (Cassiano & Borges-Andrade, 2017; Rovai et al., 2014).

#### **Assumptions**

In research, philosophical assumptions underpin the methodological choices of a research study. In line with this inclination, my choice of three participants for this case

study research design and my interpretation of their perspectives reflect the constructivist approach to constructing reality (Saunders et al., 2015). The assumptions underlying this study were noted as follows: (a) the perspectives of the three participants selected for the interview truly represent the experiences of the respective firms they represented; (b) the firms they represented had implemented strategies aimed at improving their products, services, processes, business models, and management approach with a view to creating customer value and increasing their profitability in the Nigerian economy; and (c) the findings emanating from the rigorous analytical procedures represent the reality of the innovation practices among Nigerian firms, subject to the limitations of the study.

### **Limitations**

As a result of the constraints of financial resources and graduation schedule and the subsequent choice of only three participants from the business community in Nigeria for the research study interview, the generalizability of the findings to other firms within and outside the Nigerian economy is precariously weakened. The lack of multiple sources of evidence such as observation, documents, and serial interviews to complement and triangulate the interview data obtained from the participants could also bias the findings (Yin, 2018).

### **Delimitations**

The three participants for this study were selected from firms in Nigeria. Such firms could be into manufacturing, services, information and communication technology, and e-commerce or retail sales irrespective of their local or foreign affiliations. Each participant must have been a top manager with a background in strategy management,

research, and development, or as chief executive officer (CEO). In line with the purpose of this study, the firms represented by the participants must have implemented strategies directed at generating innovation in the past. This condition excluded micro and small enterprises that had never attempted formal or informal strategy formulation.

### **Significance of the Study**

Business leaders could use the results of this study to stimulate the integration of innovation into the business practices of Nigerian firms and to justify investments made to harness the benefits of innovation. Among the benefits of innovation are gaining competitive advantage, increasing regional and global market share, and sustaining financial performance. The process of diffusion of innovation may also generate business growth and sustainability with derivative social benefits in Nigerian communities.

### **Contribution to Business Practice**

The findings of this doctoral study apply to businesses deficient in organizational practices that foster innovation, such as business organizations in the Nigerian economy. Implementing strategies to integrate innovation into business practices of firms could help to improve competitive advantage and financial performance (Chatzoglou & Chatzoudes, 2018). The shareholders may benefit from the increase in the value of the firm arising from (a) enhanced competitive advantage and improved financial performance; (b) employees gaining professional development, empowerment, and succession expectations; (c) the increased sales volume and profitability of the suppliers; and (d) the businesses themselves growing into global players in their industries.

Lucena and Roper (2016) and Soto-Acosta et al. (2018) found that innovation practices increase the economic performance of a firm. Lucena and Roper indicated that knowledge combinative capabilities consisting of the absorptive capacity and research and development ambidexterity mediate the effect of technology alliance diversity on firm performance. Corroborating Lucena and Roper's postulations, Soto-Acosta et al. demonstrated that information technology and knowledge management capabilities as well as environmental dynamism positively correlated with innovation ambidexterity and economic performance of a firm. Business leaders in Nigeria may benefit from learning strategies used to effectively integrate innovation into their business practices to increase financial performance.

### **Implications for Social Change**

The diffusion of innovation across firms within the Nigerian economy can lead to business growth, which could progressively catalyze macroeconomic expansion, gross domestic product (GDP) growth, socioeconomic development, and improvement in the well-being of people in Nigeria (Gachie & Govender, 2017). Agyapong et al. (2017) postulated that sustained macroeconomic expansion arising from innovation practices creates more employment opportunities, increases and stabilizes government revenues for the development of infrastructure and communities, and upgrades the standard of living of the population. Consistent with Agyapong et al.'s and Gachie and Govender's (2017) arguments, Gries et al. (2018) found that widespread adoption of innovation among firms in emerging economies increased the international competitiveness of local firms. The effect of applying this concept to Nigeria's economy is that the spread of innovation

practices could potentially create employment opportunities, increase government revenues and tax base for the development of community-based projects and infrastructure, upgrading the standard of living in the Nigerian population.

### **A Review of the Professional and Academic Literature**

I reviewed literature regarding the integration of innovation into business practices published in various journals and seminal scholarly books. Google Scholar, linked to the Walden University Library's website, served as the primary source for accessing journal articles. The Walden University Library allows students access to various databases. Databases used to obtain literature for this study included Business Source Complete, ABI/INFORM Complete, Emerald Management, Sage Premier, Academic Search Complete, and ProQuest Central. I also accessed various open journals to obtain literature related to the integration of innovation into business practices. AOSIS OpenJournals provides open access to peer-reviewed scholarly journals from various academic disciplines. ScienceDirect also provides both tolled and open access to a full-text scientific database containing journal articles and book chapters. In some instances, I accessed government websites to obtain information about the integration of innovation into business practices.

The strategy for searching through the existing literature entailed the use of keywords and phrases in the various databases listed above. I applied filters to database searches to narrow down the search results. These filters included specific keywords, a specified period, and specific databases. When using Google Scholar, I gave preference to articles published in or after 2017, ensuring the literature was topical and relevant.



Secondly, I gave preference to articles available in the Walden University Library. The keywords and phrases I used in my search were *diffusion of innovation*, *integration of innovation*, *intrafirm diffusion*, *interfirm diffusion*, *spread of innovation*, and *adoption of innovation*. Crossref and Ulrich's Periodicals Directory are tools to verify that literature is peer-reviewed. The 347 references that the study contains include 312 scholarly peer-reviewed articles, representing 90% of the total; 11 non-peer-reviewed articles, representing 3%; five government websites, representing 1%; and 19 books, representing 6%. The total references published within the 2017–2021 period are 237, which is 68% of the total number. The literature review contains 105 references, with 46 references published within the 2017–2021 period, representing 44%, and 89 from scholarly peer-reviewed sources, representing 85%.

### **Literature Review Organization**

The literature review section has several subsections. It begins with an introduction, which includes information about the strategy for searching the literature, the frequencies, and percentages of peer-reviewed articles as well as publication dates. In the next section, I focus on the application of the literature to the research question and include a brief description of the purpose of the study. The themes I discuss in this literature review are preadoption innovation, postadoption implementation, and interfirm diffusion of innovation. Throughout the literature review, I compare and contrast different points of view and relationships between previous research and findings with this study.

The first theme, preadoption innovation, includes a critical analysis and synthesis of the conceptual framework I selected for my study, which is Rogers' (1962) diffusion of innovation theory, using supporting and contrasting theories from relevant literature on the topic of the integration of innovation into business practices. Some of the supporting and contrasting theories include Mannan and Haleem's (2017) theory on the determinants of diffusion and adoption of product innovation, Damanpour's (1991) theory on organizational innovation, Dewett et al.'s (2007) intrafirm diffusion theory, Wong's (2013) theory on management involvement in innovation, and Liu et al.'s (2005) theory on the impact of social network structure on diffusion of innovation.

The second theme, postadoption implementation of innovation, starts with a brief overview of the development of the integration of innovation into business practices construct over time. I discuss common concerns relating to the construct as well as the various definitions, antecedents, and consequences of integrating innovation into business practices. The third and final theme for discussion is interfirm diffusion of innovation. The theme starts with a general discussion about leadership and leadership styles as it relates to the integration of innovation into business practices.

### **Application to the Applied Business Problem**

The objective of this qualitative, multiple case study was to explore the strategies that business leaders use to integrate innovation into business practices. Developing an understanding of such strategies required the use of the qualitative methodology with an exploratory multiple case study design. The findings from this study may provide insight into integrating innovation into business practices from business leaders' perspectives.

The findings of the study may assist with the development of appropriate strategies for integrating innovation into business practices. Once an understanding of the underlying meaning emerges, appropriate strategies might equip leaders with the skills to improve the integration of innovation into business practices. The findings from this study might improve business practice by identifying appropriate strategies, leading to increased productivity and organizational competitiveness. The social change rests in the development of strategies to improve the integration of innovation into business practices and personal well-being.

### **Diffusion of Innovation Theory**

Rogers (1962) offered explanations about the way characteristics of an innovation disseminated through communication channels within a social system, influencing adoption decisions of members over time. Based on Rogers's definition of diffusion of innovation, four elements stand out as determinants of the speed of diffusion of an innovation. The four elements are the characteristics of the innovation, the communication channels, the time delay in a potential adopter's decision process, and the characteristics of the social system of the adopting unit (Rogers, 1962). In organizations, these elements constitute the organizational context factors consisting of technology, organization, and environment attributes, which determine organizational readiness or intention to use technology (innovation) and shape organizational formations for exploiting opportunities, depending on sectoral peculiarities (Mukred et al., 2019; Venkatesh et al., 2016). According to Rogers, the perceived attributes of an innovation

that affect adoption decisions are its relative advantage, compatibility, complexity, trialability, and observability.

The relative advantage is the extent to which potential adopters perceive an innovation as more beneficial than the existing one. Compatibility refers to the degree to which potential adopters perceive an innovation as being consistent with their existing values, past experiences, and needs (Rogers, 1962). Complexity is the measure of how difficult or easy an innovation is to understand and use. Trialability refers to the extent to which an innovation is available for experimentation, assessment, and subsequent customization (if necessary) to enable proficient use (Rogers, 1962). Observability is the extent to which the outcome of an innovation used by earlier adopters is demonstrable to persuade potential adopters (Rogers, 1962).

Communication channels in innovation diffusion are the means by which the knowledge of an innovation moves from suppliers or earlier adopters to potential adopters. Mass media channels such as radio, television, and newspapers are communication channels used by the innovation originators to create awareness of the existence of their innovation among potential adopters. Rogers (1962) observed that the adoption decision process depended more on the subjective evaluation of the communicated experience of peers who had earlier adopted and used the innovation. The diffusion process involved the modeling and imitation of network partners (who had adopted earlier) by other members of the social network (potential adopters).

The time element of Rogers' (1962) diffusion of innovation theory is the period within which the potential adopter follows five sequential stages in the process of

adopting an innovation. In the first stage, the potential adopter obtains information to increase knowledge about the innovation. The second stage in the adoption decision process involves persuasion, which occurs when a potential adopter develops a negative or positive attitude based on information received. In the third stage, the potential adopter makes a decision to adopt and commit resources for direct use or for customizing the innovation before use or rejects the innovation and terminates the decision process. The fourth stage involves implementation, which entails putting the innovation into use. Confirmation occurs at the fifth stage when positive reinforcing information or experience motivates the adopting unit to continue implementation and use or negative information or experience leads to reversal of adoption decision (Rogers, 1962).

The length of time taken by a potential adopter to complete the adoption decision process determines the adopter category comprising the innovator, early adopter, early majority, late majority, and laggard. The innovators are the originators of the innovation (Rogers, 1962). The early adopters are the early followers and risk-takers with the capability or absorptive capacity to use the innovation immediately and proficiently. The early majority learn from and imitate the early adopters to adopt and implement the innovation (Rogers, 1962). The early majority along with the early adopters testify to the positive outcome of the innovation and reinforce the late majority's intention to use it. The laggards depend on the social influence of the early and late majority to adopt and implement an innovation. The rate of adoption is the relative speed with which members of a social system adopt an innovation at different times (Rogers, 1962). According to Rogers (1962), the graphical representation of adoption rate over time shows that the first

to adopt, the innovators, constituted 2.5%. Next to them in time were the early adopters, making up 13.5%, followed by early majority, late majority, and laggards, who accounted for 34%, 34%, and 16%, respectively. The graph depicting the distribution of these homophilous groups of adopters based on time lag to adoption traced out to an S-shaped curve.

The fourth element of Rogers' (1962) diffusion of innovation theory is the social system of the adopting unit, defined as a group of interrelated units or individuals who cooperate to solve common problems with the aim of achieving a mutual goal. According to Rogers, the social structure, the norms, the role of opinion leaders as well as the activities of change agents, the type of innovation decision-making, and the expected consequences of adopting and implementing an innovation within a social system affect the speed of innovation diffusion. The social structure depends on the formal and informal relationships in a social system.

In the formal structure, the extent of formalization and centralization of authority defines the speed of diffusion. High formalization and high centralization slow down the speed of innovation diffusion while the opposite increase the speed (Rogers, 1962). The informal structure defines the communication network. Imitation occurs within homophilous groups whose members share similar characteristics, trust each other, and exchange information more frequently (Rogers, 1962).

The norms of a social system, defined as mutually acceptable behavior of members, affect the speed of innovation diffusion. Social systems that accommodate changes will support rapid diffusion while conservative ones will resist change or slow

down innovation diffusion (Rogers, 1962). Opinion leaders, as central members of a social system, exercise influence over others and speed up innovation diffusion within their network. Change agents combine their talent in the knowledge of the innovation with the popularity of the opinion leader to gain access to a social network to speed up diffusion (Rogers, 1962).

According to Rogers (1962), innovation decisions in a social network could be optional, collective, authority, or contingent within a social system. Optional innovation decisions occur when an individual has the choice to adopt or reject an innovation based on beliefs, norms of the social system, or the influence of interpersonal networks. Collective innovation decision refers to the adoption or rejection of an innovation based on the consensus of the members of a social system (Rogers, 1962). Authority innovation decisions are choices to adopt or reject an innovation based on the decision of few individuals of power, status, and technical expertise in a social system. Contingent innovation decisions are choices to adopt or reject an innovation based on a prior and enabling innovation decision that occurred earlier (Rogers, 1962).

The consequences of adopting and implementing an innovation could be desirable or undesirable, direct or indirect, or anticipated or unanticipated (Rogers, 1962). If the consequence of an innovation is desirable, direct, and anticipated, the diffusion will be fast in the social system. Undesirable and unfavorable indirect and unanticipated consequences on the members of the social system will slow down or terminate the diffusion of the innovation (Rogers, 2003).

The categorization of adopters into innovators, early adopters, early majority, late majority, and laggards reflects the length of time it takes the source of information to persuade different homophilous groups of members of a social system (Rogers, 2003). Dearing and Cox (2018) and Lechman (2013) showed that changes in the adoption rate in a social system over time formed S-shaped curve when plotted on a graph as predicted by Rogers (2003). In partial validation of this finding, Zhang (2018) found that the impact of frugal information and communication technologies (ICTs) on the diffusion of internet innovation in developing countries produced an r-shaped diffusion curve depicting a rapid diffusion emanating from the bridging of the chasm between the early adopters and early and late majority adopters. Zhang's (2018) findings contributed to the understanding of the change of the shape of Rogers' diffusion curve to (lower-case) R-shape in the diffusion of frugal ICT innovations in low-income countries. Frugal innovation is the low-cost version of a high-end product introduced for the adoption of the unserved lower end of the market to accelerate the diffusion of a product through customization to meet the requirements of the potential users (C. Lim & Fujimoto, 2019).

Mannan and Haleem (2017) expanded the four elements of Rogers' (1962) diffusion of innovation theory into 17 subelements and ranked them according to the preferences of the potential adopting units using analytical hierarchy process and systematic review of the literature. The four social system determinants of diffusion of innovation were the attitude towards change, rational relationships based on facts, homogeneity of members, and social and cultural policies of the society. The four communication-related determinants of innovation diffusion consisted of the mode of



communication, communication channels, understandable communication, and communication network in the social system. The four determinants of diffusion of innovation based on time of adoption included the appropriateness of the timing of introduction of innovation into the market, product development cycle, progressive technology, and time lag for adopting innovation. The five characteristics of innovation that determine the speed of diffusion were made up of uniqueness, relative advantage, compatibility with existing experience, norms, values, and skills of users, customizability to user specifications, and the opportunity to test the functionality of the innovation (Mannan & Haleem, 2017).

The result of the ranking carried out by Mannan and Haleem (2017) identified progressive technology, understandable communication, adoption rate, mode of communication, and product introduction timing, among twelve other factors, as the most relevant considerations of adopters in making adoption decisions. Mannan and Haleem supported Adelowo et al.'s (2015) study, which confirmed that firms acquired technological learning in Nigeria's Technology Incubation Center to develop innovative products for the improvement of their competitive advantage and profitability.

In advancing Rogers' (1962) diffusion of innovation theory, Brown et al. (2016) showed that the credibility of the source of information about an innovation persuaded adopters more than the inherent attractiveness of the innovation. In empirical testing of the diffusion of innovation theory in the diffusion of environmental agricultural innovations in New Zealand, Brown et al. found that farmers trusted those demonstrating success in applying environmentally friendly practices in their past farming experiences.

Brown et al. found that educational level and financial robustness of the source of information predicted trust in environmental information provided by government agencies.

For innovation to diffuse quickly within an organization and yield the expected results, business leaders have to identify and develop the capabilities and behaviors required to pursue full assimilation leading to innovation and financial performance within a firm and macroeconomic expansion in an economy (Dewett et al., 2007). In line with this philosophy, Dewett et al. (2007) recommended three modes of diffusion of innovation. The first mode is the internal preadoption stage of innovation, which is intended to prepare and reconfigure organizational capabilities in terms of creating a supportive structure, culture, and climate for postadoption implementation (Chen et al., 2018; Shahzad et al., 2017). The second mode is the internal postadoption implementation, which involves realigning the systems and resources of the organization, re-inventing the adopted innovation, and engaging the employees through training and motivation (Villaluz & Hechanova, 2019). The third mode is the interfirm diffusion of innovation involving the spread of innovation among firms in the private sector of an economy (Gries et al., 2018). While the internal postadoption implementation of innovation enhances business performance at the microeconomic level, interfirm diffusion or spread of innovation within an economy accounts for macroeconomic expansion that brings about socioeconomic development (Tigabu, 2018).

In comparing stage models of innovation adoption and implementation, Dewett et al.'s (2007) two-stage intrafirm innovation adoption model (preadoption and

postadoption) corresponds with the five stages of Rogers' (2003) model consisting of knowledge, persuasion, adoption, implementation, and confirmation and Ram et al.'s (2016) model consisting of initiation, adoption, implementation, use and performance outcome. In particular, the preadoption stage in Dewett et al.'s model is equivalent to the initiation and adoption stages of Ram et al.'s model and Rogers' innovation model made up of knowledge, persuasion, and adoption stages. The postadoption implementation stage in Dewett et al.'s model is equivalent to the implementation, use, and performance outcome stages in Ram et al.'s model and the fourth and fifth stages in Rogers' intrafirm diffusion process.

Organizations prospecting to adopt an innovation should reconfigure their internal structure, evaluate the innovation, develop their absorptive capacity, and realign the employees to facilitate rapid diffusion over time (Rogers, 2003). Dewett et al. (2007) posited that the internal diffusion of an innovation was influenced by the characteristics of organizational leaders (Carreiro & Oliveira, 2019), the organization (Awa & Ojiabo, 2016), and the context (Jaganathan et al., 2018). Dewett et al. developed a conceptual model that captured the effect of the characteristics of the organization, innovation, and employees and their interactions in the process of adopting and implementing an innovation (Blomberg & Kallio, 2017). According to Dewett et al., organizational factors consisted of the degree of structural formalization and centralization, functional differentiation, professionalism, size, capacity to coordinate multiple and interdependent innovations, resource allocation priorities, and availability of slack resources, as postulated by Damanpour (1991). Innovation factors included the number, types,

interdependency, visibility, utility, and cost of the innovation. Human factors concerned top management support, exercise of power, distribution of innovation roles, and communication network (Jia et al., 2018).

In an empirical testing of Rogers' (1962) diffusion of innovation theory on the impact of financial incentives on the adoption of residential solar systems in Western Australia, Simpson and Clifton (2017) found that the incentives increased the rate of adoption by apparently increasing the relative advantage. The incentives induced those who would otherwise not use the residential solar system, to adopt because of cost reduction occasioned by sales discount. This category of adopters has the tendency to discontinue adoption for lack of understanding of the real benefits beyond the incentives. According to Simpson and Clifton (2017), the incentives temporarily bridged the chasm between early adopters and early majority adopters by inducing the early majority to adopt because of cost reduction, not for reasons of pollution control and improved quality of living. Such adopters might withdraw from continued adoption when incentives cease. Simpson and Clifton recommended that incentives promoting the adoption of an innovation should go along with adequate information dissemination to ensure that potential adopters took well-informed and high-quality decisions. In the case of subsidies given to financially strong and weak firms to promote the adoption of ICT in Tunisia, the general level of adoption slowed down because of the fundamental barriers experienced by financially weak firms (Khalifa, 2018). The result of Khalifa's study supports Simpson and Clifton's (2017) findings indicating that incentives promoting the adoption

of an innovation were not sustainable unless accompanied by effective dissemination of information on the dimensions of the benefits of the innovation.

Research studies using Rogers' (1962) diffusion of innovation theory as conceptual/theoretical framework confirmed that the diffusion of additive manufacturing technology for over two decades had remained slow because of various barriers perceived by potential adopting firms (Marak et al., 2019; Oettmeier & Hofmann, 2017; Schniederjans, 2017). In one of such studies, Marak et al. (2019) confirmed that relative advantage, ease of use, and trial-ability positively and significantly affected the adoption of additive manufacturing technology while compatibility and observability did not. Marak et al. studied the effect of characteristics on the adoption decision of firms using traditional fabricating technologies.

Evidence shows that small and medium enterprises (SMEs) enhance their competitive advantage to overcome the pressure of global competition by leveraging emerging technologies and their structural flexibility (Mamun, 2018). Using the conceptual lens of Rogers' (2003) theories on the diffusion of innovation and organizational diffusion of innovation in his studies, Mamun (2018) found that innovation persuasion, strategic orientation, and firm characteristics impacted directly and positively on the adoption of innovation by manufacturing SMEs in Malaysia. According to Mamun, innovation persuasion referred to the perceived relative advantage of an innovation weighed against its compatibility, complexity, trialability, and observability. He conceptualized strategic orientation as entrepreneurial vision, customer focus, and market development to enhance competitive advantage. Organizational

antecedents associated with intrafirm diffusion of innovation comprised the organizational characteristics and reconfigurations that engender readiness for innovation implementation. They were robust absorptive capacity, availability of knowledge-based resources, and exercise of managerial risk-taking behavior. These findings were consistent with the positions of Oettmeier and Hofmann (2017), Asare et al. (2016), Felizzola Cruz and Anzola Morales (2017), and W. Li et al. (2018) on the need to realign resources and systems in readiness for innovation implementation.

The testing of Rogers' (1962) diffusion of innovation theory by Balas and Chapman (2018) on the diffusion of new clinical practice in the United States proved that its emergence from medical research in healthcare industry took about 17 years to reach 50% adoption because of the protocols of transformation, dissemination, adoption, and implementation. Balas and Chapman suggested that clinical research discoveries or best clinical practice recommendations should undergo peer review transformation through publications before dissemination for clinical trials. Consistent with Rogers' diffusion of innovation theory, Balas and Chapman identified the diffusion process as consisting of the innovators who were the researchers that made the discoveries through clinical study. Next in the diffusion process were the few early adopting institutions who pioneered the adoption of the practice and verified the public health impact. After the early adopters followed the early and late majority adopters who used coded standards of clinical practice, patient information, decision support, new incentives, and supportive policies for implementing safe clinical practice. Finally, the laggards, consisting of providers of

the clinical services to underserved communities, adopted the clinical practice to reach the last segment of the social system or population (Balas & Chapman, 2018).

Balas and Chapman's (2018) inter-hospital diffusion of new clinical practice in healthcare industry also validated the S-shaped diffusion curve depicting the rate of adoption over time as postulated in Rogers' (1962) diffusion of innovation theory. In support of Balas and Chapman's findings, Dearing and Cox (2018) observed that healthcare innovations, such as Extension for Community Healthcare Outcomes, did not attain a tipping point in national diffusion curve of the United States after fourteen years of introduction. Dearing and Cox argued that social influence and the consideration of an innovation's attributes improved the quality of the adoption decision. Dearing and Cox noted that the first adopters who were the innovators, adopted because of excitement over novelty, non-vulnerability to social influence, and existence of supportive absorptive capacity. Early adopters adopted the innovation because they perceived relative advantage while the early and late majority adopters did so to conform to social pressure from early adopters. The laggards adopted the innovation when its attributes became more customizable for more favorable and proficient use based on the recommendations of earlier adopters. In support of Rogers' diffusion of innovation theory, Dearing and Cox confirmed the role of opinion leaders in influencing other members through advice-seeking and advice-giving relationships as central members of the social network. As a central actor in a social network, an opinion leader exerts influence to increase imitation potential of other members (Blaney, 2015; Liu et al., 2005; Wu et al., 2017).

In another study on the diffusion of evidence-based clinical practice, Mohammadi et al. (2018) found that individual innovativeness, attitude, knowledge, and perception of innovation attributes influenced adoption among clinical practitioners in Iran. These findings were consistent with Rogers' (2003) diffusion of innovation theory. Mohammadi et al. found that attitude had the greatest effect than all other factors. This finding supports Brown et al.'s (2016) findings indicating that the attitude of New Zealand farmers was negative towards the information disseminated by government agents. In another research investigating the factors affecting the adoption of patient portal as against the use of telephone or visiting the doctor's office, Emani et al. (2018) distinguished adopters from non-adopters through the perception of relative advantage, ease of use, and trial-ability by the former. Emani et al. noted that relative advantage of patient portal over the use of telephone or visiting the doctor's office was the dominant consideration in increasing the adoption of patient portal in healthcare delivery.

The comparison of the diffusion patterns of positron emission tomography (PET), computed tomography (CT), and magnetic resonance imaging (MRI) by C. Yang (2018) in Taiwan showed that of PET was consistent with earlier technologies (CT and MRI), after PET became reimbursable under the National Health Insurance Program. This finding was contrary to established knowledge speculating that the global health budget caps coupled with the high cost of the new technology would slow down its diffusion in the healthcare industry. Instead, PET services increased from 14,673 in 2005 to 30,632 in 2010 (C. Yang, 2018). The competition among public, nonprofit, and private hospitals in



Taiwan spurred the purchase of the high-tech medical equipment in the effort to increase their respective market shares in the industry (Asare et al., 2016; Rogers, 2003).

In analyzing the diffusion of innovation during competition, Gündüç (2019) used a case study of iOS, Android, and other operating systems market to assess how diffusion of innovation occurred among competing firms. Gündüç observed that the loss incurred by some firms in the market translated to the gain or growth of others whose products diffused effectively during competition. The growth of Android from 2% share of operating systems market at the beginning of 2009 to 90% in 2016 translated to the exit of Microsoft, Rim, Bada, and Symbian operating systems and their replacement with a gain of 10% market share by iOS are examples of innovation diffusion during competition. In another study by Gouws and Rheede van Oudtshoorn (2011), the assessment of the diffusion patterns of fast moving consumer goods and high-involvement products, based on Rogers' (1962) diffusion of innovation theory, showed that noneconomic factors influenced the diffusion of the products. The study confirmed that the objectives of branding, communication, and reputation management were consistent with the factors driving the diffusion of a product. According to Gouws and Rheede van Oudtshoorn, functionality influenced the purchase of fast moving goods in the same way high-involvement products diffused for status symbolism. As postulated by Gouws and Rheede van Oudtshoorn, if a product's functionality or status symbolism accounted for its diffusion in the same way branding influenced consumer loyalty, then brand longevity correlated positively with effective diffusion.

In spreading the practice of Universal Design for college instruction, Scott and McGuire (2017) identified the elements of Rogers' (1962) diffusion of innovation theory and their application to the implementation of the innovation. The organizers of Universal Design for college education sought to provide educational access and inclusion to diversity of peoples, including disabled individuals. The extent of international awareness is an indicator of effective dissemination of information about the benefits of the program. The establishment of Project ShIFT (Shaping Inclusion through Foundational Transformation) paved the way for the implementation of Universal Design for college instruction and the related social model of disability in college campuses across the United States. ShIFT trained disability resource professionals from 25 college campuses to play the role of change agents to motivate intra-campus networking for awareness creation. At the beginning, ShiFT selected one faculty member in each college for training in the second year of implementation to work with the disability resource professional and play the role of early adopter or opinion leader (Scott & McGuire, 2017).

Combining the efforts of the change agent (disability resource professional) and the trained faculty early adopter (opinion leader) worked to bring observable Universal Design instructional practices to each institution's network of faculty colleagues and peers (Scott & McGuire, 2017). They collaborated with faculty development center and online support team to organize workshops to train some faculty members who, in turn, would spread the practice to their network of peers. In the implementation of Universal Design for college instruction in McGill University, Scott and McGuire (2017) noted the

collaboration of various offices within the institution in organizing workshops to train faculty members over a period of 18 months to facilitate information dissemination.

According to Scott and Mcguire (2017), the rapid diffusion of Universal design for college instruction across the world reflected the commitment of innovators, early adopters, and change agents. Their findings also indicated that allowing institutional discretion to customize the Universal Design practices to institutional specific requirements or contexts added impetus to the spread of the innovation. Lack of support from the leadership of the institution and faculty, inadequate planning, and limited institutional infrastructure slowed down the intra-campus diffusion efforts (Scott & Mcguire, 2017).

Using Rogers' (1962) diffusion of innovation theory to evaluate the acceptance rate of Japanese government policy on the enhancement of its citizen's proficiency in using English language, Sasaki (2018) found that the relative advantage, compatibility, complexity, trialability, and observability of the policy affected adoption. Because English, as a foreign language, did not serve authentic communicative purposes outside the classroom in Japan, its perceived relative advantage was not favorable to some student-adopters. The high success rate in high-stake university entrance examinations in English language was not only as observable as published in the mass media but also served as testimonies to persuade potential entrants to the universities to accept the foreign language.

In the research study investigating the factors influencing college faculty adoption of learning-centered approaches to teaching as against instructor-centered teaching,

Blumberg (2016) found that the distribution of the adopters did not conform to the bell-shape of Rogers' (1962) diffusion curve. The findings indicated that the learning-centered faculty members shared the characteristics of innovators while the instructor-centered faculty members represented the laggards. Blumberg also found that the newer faculties adopted learning-centered teaching more quickly than the older ones. Blumberg observed that younger faculty members were more inclined to undergo training on learning-centered teaching and comply with institutional strategy than the older faculty members. In other cases, faculty members adopted some components of learning-centered teaching practices that were compatible with their personal teaching styles or professional requirements.

In the effort to combat the incidence of high rates of obesity and chronic diseases among the financially impoverished population of the lower Mississippi region in the United States, the government intervened in the development and diffusion of nutrition education. The purpose was to promote the adoption and consumption of healthy diets based on regionally familiar foods (Huye et al., 2017). In the course of providing theory-based nutrition education in the Mississippi Communities through Healthy Living Nutrition Intervention Program, Huye et al. (2017) applied the elements of Rogers' (1962) diffusion of innovation theory.

In line with the purpose of the program and in conformity with Rogers' (1962) diffusion of innovation theory, Huye et al. (2017) selected professional women who perceived themselves as primary food providers for their families and were community opinion leaders, to play the role of early adopters. The constitution of an expert panel of

registered dietitians facilitated the alignment of the attributes of the dietary guidelines to Rogers' innovation characteristics of relative advantage, compatibility, complexity, trialability, and observability. In applying the element of communication in Rogers' diffusion of innovation theory, the program organizers disseminated information through nutrition education workshops that took place every six months and the community's newsletter. The innovators published the guidelines on the adoption of healthy diets and workshop details in the community newsletter. The selection of connected professional women as opinion leaders or early adopters served the purpose of reinforcing the information disseminated through workshops and newsletter publications to potential adopters. As posited by Rogers, the testimonies of early adopters in the social network of the communities demonstrated observability and served as a confirmation of the benefits of the innovation. The perception of the benefits of the innovation as a reality served to increase the speed of diffusion and adoption of the guidelines for healthy lifestyle (Huye et al., 2017).

As reported by Huye et al. (2017), the perceived relative advantage of adopting the dietary guidelines for healthy living was in adopting balanced nutrition for increased energy levels and protection against cancer and diabetes. To make the dietary guidelines compatible to the experiences, norms, and values of the members of the targeted communities, the panel of professional dietitians integrated the cultural food practices, familiar regional foods, and taste preferences of the communities. Recommended diets in the guidelines were easy and quick to prepare to ensure low complexity and to drive quick adoption. Demonstrating interactive food preparation methods (trialability)

encouraged gradual adoption and permanent lifestyle changes (Huye et al., 2017).

Because results of nutrition education might not be immediately observable, the program organizers published the positive effects of consuming healthy diets as testified by the innovators and early adopters to stimulate speedy adoption by other members of the communities. Huye et al. also found that the communities were not only enthusiastic to adopt the healthy lifestyle changes but were also ready to bequeath it to their future generations.

In the research study investigating the determinants of the intention to use buy-online-and-pickup-in-store (BOPS) retail service, Kim et al. (2017) found that the consumer perception of relative advantage, complexity, compatibility, and risks inherent in online shopping affected the intention to use BOPS. These findings reflect the elements of Rogers' (1962) diffusion of innovation theory used as the conceptual lens of the study. BOPS retail service, a new consumer shopping experience, entailed buying a product online and requesting delivery to a convenient 'brick and mortar' store or its representative for offline pickup. The extent of product involvement and convenience of the pickup location to the consumer moderated the effect of perceived relative advantage, complexity, compatibility, and risk perception of online shopping on the intention to use BOPS. Greater product involvement and greater pickup location convenience strengthened the perception of relative advantage, ease of use, compatibility, and less risk in online shopping. The effect of these relationships strengthened the consumer's intention to use BOPS. Lower product involvement and lower location convenience reduced the perceived relative advantage and compatibility, increased complexity, and

increased the risks of shopping online. The effect of these relationships reduced the consumer's intention to use BOPS (Kim et al., 2017).

### **Other Contrasting and Supporting Theories**

In this section, I discuss theories that support or contrast Rogers' (1962) diffusion of innovation theory. These theories include Wong's (2013) theory of management involvement in innovation, Damanpour's (1991) organizational innovation theory, and Liu et al.'s (2005) model of diffusion of innovation in social networks. Others are Christensen's (1997) disruptive innovation theory, Schumpeter's (1934) innovation-for-profit theory, and Moore's (2014) crossing-the-chasm theory.

#### ***Theory of Management Involvement in Innovation***

Wong (2013) conducted a quantitative study on the role of management in the implementation of innovation, using a survey of 196 firms in the Chinese electronics industry. Management involvement referred to senior managers' formulation and execution of plans and policies regarding innovative projects (Wong, 2013). Wong confirmed that top management support positively influenced innovation directly and indirectly. Direct influence pertained to the effect of plans and policies on product, process, and the implementation of marketing innovations. Indirect management involvement concerned organizational realignments, such as the development of human capital and changes in administrative mechanisms preceding and contributing to the visible innovations (Wong, 2013).

Sustained strategic commitment of resources by senior management to the implementation of innovation projects constituted top management support (Jia et al.,

2018; Sattayaraksa & Boon-itt, 2016). By implication, top management has to drive intrafirm diffusion of an innovation to achieve success (Kim & Pae, 2014). Gashema and Gao (2018) validated Wong's postulations by confirming that transformational leadership influenced innovation in SMEs through the mediation of innovation culture and the moderation of cross-functional integration. Carreiro and Oliveira's (2019) findings, that transformational leadership practices strongly influenced diffusion of innovation, also corroborated Wong's (2013) postulations and supports Rogers' (1962) diffusion of innovation theory.

### ***Theory of Organizational Innovation***

Damanpour (1991) studied the relationship between organizational characteristics and innovation and found the following 13 determinants of organizational innovation: (a) specialization, (b) functional differentiation, (c) professionalism, (d) centralization of authority, (e) managerial attitude toward change, (f) technical knowledge resources, (g) administrative intensity, (h) slack resources, (i) external communication, (j) internal communications, (k) vertical differentiation, (l) managerial tenure, and (m) formalization. In particular, formalization, managerial tenure, and vertical differentiation were not significantly associated with innovation, whereas centralization was significantly and negatively correlated (Damanpour, 1991). The other nine determinants correlated positively with innovation (Damanpour, 1991).

In support of Damanpour's (1991) postulations, Allen et al. (2017) identified organizational characteristics associated with successful adoption and implementation of innovations. They were age, size, maturity, and social network architecture; pattern of



information flow within an organizational social system; and organizational culture (Allen et al., 2017). Other attributes included organizational climate supportive of learning and proficient use of innovation; system compatibility; shared vision and strategic management practice; and equitable administration of incentives and rewards (Allen et al., 2017). Allen et al. confirmed also that knowledge management practices, slack resources, leadership support, and commitment of resources determined successful postadoption implementation of an innovation.

### ***Conceptual Model of Diffusion of Innovation in Social Networks***

Liu et al. (2005) developed a conceptual model of the relationship between the structural properties of a social network and the diffusion of innovations through it from the review of cross-disciplinary literature. The resulting model inferred diffusion curve parameters, which are the innovation and imitation coefficients, from network structure (Liu et al., 2005). Liu et al. identified the structural properties of a social network as centrality, constraint, and range, which influenced innovation potential and its diffusion through the network. Centralization, density, and embeddedness in the organizational social network influenced imitation potential and the speed of innovation diffusion (Liu et al., 2005; Rogers, 1962).

The central actor in a network is the opinion leader, who exercises influence over other members of the network and possesses the potential to influence innovation diffusion (Cho et al., 2012). According to Liu et al. (2005), the existence of constraints in a relationship, which operated when structural holes were absent, reduced an actor's propensity to innovate or vice versa (Blaney, 2015; Muniz et al., 2009). Liu et al. referred

to network range as the extent of diversity of an actor's ties to others, which increased innovation potential as its coverage expanded (Zappa, 2011). Network density connoted the existence of a large number of links among actors in a network (Liu et al., 2005; McCullen et al., 2012), which increased imitation potential at higher levels (Bloodgood et al., 2017; Kong & Bi, 2014). Network centrality of actors referred to the existence of opinion leaders in a social system, which implied a high imitation potential within the network (Kim & Lee, 2018). Network embeddedness reflected how the relationship with other partner-actors affected the behavior of actors, implying imitation potential (Chandler & Wieland, 2010). Both innovation and imitation potentials of actors in a network inferred diffusion of innovation potential within a social system in line with Rogers' postulations (Liu et al., 2005).

In support of Liu et al. (2005), Flight and Palmer (2013) posited that decentralized leadership favored the use of social networks as communication channels rather than leader-initiated communication in centralized leadership. Assenova (2018) argued that the process of opinion formation in social networks produced diffusion curves closely resembling Rogers' (1962) empirical (S-shaped) patterns in real networks. Together, the models developed by Flight and Palmer and Assenova offered complementary explanations to Liu et al.'s postulations supporting the diffusion of innovation in the network of a social system (Rogers, 1962).

### ***Disruptive Innovation Theory***

Christensen (1997) developed the theory of disruptive innovation. Disruptive innovation refers to the situation where small firms introduce lower-cost and lower-

performing innovations, which displace incumbent firms over time in the same industry (Christensen, 1997). Christensen et al. (2015) defined a disruption as a process by which a small company, with its characteristic scarce resources, successfully challenges the survival of larger and more established incumbent companies. Christensen further characterized the firms creating disruptive innovation as usually featuring lower gross margins, smaller target markets, and simpler products and services that are less appealing at the early stages of product introduction. Evidence has also shown that firms that failed to adapt during disruption eventually lost market share or went out of business (Gemici & Alpan, 2015; Gündüç, 2019). An example is when Blockbuster went out of business because it failed to adapt to the disruption of Netflix's online streaming and personalized DVD delivery service (Gans, 2016). In the case of Uber, Christensen et al. did not find its business model disruptive because it targeted customers already interested in personalized commuting, instead of low-end unserved customers. Both Uber and the traditional transportation model still competed in some markets.

The chasm between early adopters who constitute about 13.5% of the targeted social system and early majority adopters constituting 34% represented the period when incumbent firms divested low-margin products and still invested in high gross-margin ones instead of positioning for the new product with higher potential for growth (Moore, 2014). When early and late majority adopters of the new technology spin off a rapid diffusion of up to the scale of 68% of potential adopters, an irreversible displacement of industry leaders occurs (Christensen & Bower, 1996). In support of disruptive innovation theory, Gündüç (2019) depicted the displacement effect of disruptive innovation in the

translation of the losses of displaced firms to the gains of successful disrupters during competition. Despite Lepore's (2014) criticisms of Christensen's (1997) methodological and analytical inconsistency in developing the theory, Weeks (2015) still argued in favor of its contemporary relevance to business practice.

### ***Innovation For-Profit Theory***

Schumpeter (1934) developed the innovation theory of profit. In the theory, Schumpeter argued that entrepreneurs transformed ideas and inventions into innovations to spur profitability of firms, increase economic growth, and facilitate socioeconomic development. The theory explained the sources of innovation as (a) introduction of a new product, (b) the introduction of new method of production, (c) opening of new market, (d) discovery of new sources of raw materials, and (e) changing the structure of an industry. In the theory, Schumpeter also observed that by reducing overall cost of production, increasing demand, and sustaining firm profits, innovations stimulated macroeconomic expansion.

According to Schumpeter (1934), the huge profits emanating from entrepreneurs' monopoly eroded over time as competitors emerged, despite initial legal protections from patents, trademarks, copyrights, and intellectual property rights. Fritsch (2017) noted that, in spite of inadvertent identification of radical innovation as the only source of economic growth and omission of the role of knowledge management in innovation, Schumpeter pioneered the studies on the role of innovation in economic growth. Contrary to Schumpeter's recognition of radical innovation as the only source of economic growth,

Henderson and Clark (1990) found that incremental, modular, and architectural innovations spurred macroeconomic expansion too.

### ***Crossing the Chasm Theory***

Moore (2014) developed the crossing-the-chasm theory in 1991 to explain the adoption cycle of high-tech products using innovation adoption categories of Rogers' (1962) diffusion of innovation theory. In the chasm theory, Moore characterized the innovators as enthusiasts who explored new technology and products by themselves. Early adopters, referred to as visionaries, were mostly nontechnologists who followed their own intuition and did not rely on opinion leaders' influence to make purchasing decisions (Moore, 2014). According to Moore, early majority adopters, referred to as pragmatists, purchased because of the influence of early adopters or visionaries rather than their loyalty to brand reputation. The late majority, referred to as conservatives, depended on the support services provided by well-established supplier-companies because they were unable to use new technology. Laggards, known as skeptics, would not want to do with any new technology until it is mature and perceived reliable (Moore, 2014).

Moore (2014) identified the chasm as the transition from visionaries, who made up about 13.5% of the potential adopters, to pragmatists who relied on the influence of the former to scale up purchases by about 34%. Moore posited that new ventures that could transit into the segment of pragmatists would eventually cross the chasm. In advancing Moore's chasm theory, Q. Li and Deng (2017) identified the factors that supported the growth of knowledge-based international new ventures into multinational

corporations (MNCs) when they crossed the chasm in international markets. These factors included the development of research and development (R&D) resources and capabilities, and improvement of products in cooperation with lead customers when crossing the chasm (Q. Li & Deng, 2017). Other factors were building an ecosystem for ensuring close collaboration with leading partners, customers, and competitors worldwide; reliance on the brand reputation of the knowledge-based international new ventures' products; and closeness to the market through the establishment of subsidiaries in lead markets (Q. Li & Deng, 2017).

### **Postadoption Implementation of Innovation**

Postadoption implementation refers to the process of implementing innovation projects to ensure proficient use of innovation in enhancing competitive advantage (Ram et al., 2016). Dewett et al. (2007) categorized the factors influencing the process of postadoption implementation of innovation into organizational characteristics, innovation attributes, and human capital capabilities. According to Damanpour (1991), the effect of organizational attributes and human capital capabilities on the innovation process depended on the stage and the type of innovation. In this section, I will focus on various approaches to implementing innovation after adoption. Organizations implement innovations by using stage model, combining multiple innovation types, balancing exploitative (short-term) and exploratory (long-term) innovations, and developing absorptive capacity (Cohen & Levinthal, 1990; Damanpour et al., 2009; Hazen et al., 2012; Tushman & O'Reilly, 1996).

### ***Stage Model of Postadoption Implementation of Innovation***

Out of the five stages of Rogers' (2003) innovation diffusion process, preadoption activities, consist of knowledge, persuasion, and adoption decision, whereas postadoption processes comprise implementation and confirmation. Implementation occurs when the adopter puts the innovation into use, whereas confirmation occurs when the adopter seeks information to reinforce or reverse the innovation adoption decision (Ram et al., 2016). Ram et al.'s (2016) stage model classified postadoption processes as implementation, use, and performance outcome of innovation. Cooper and Zmud (1990) recommended a six-stage model comprising initiation, adoption, adaptation, acceptance, routinization, and infusion for implementing innovations. Out of these steps, adaptation, acceptance, routinization, and infusion formed the postadoption activities. According to Cooper and Zmud, the first postadoption stage was adaptation, which referred to the customization of the technology to organizational requirements in readiness for proficient use in the organization. The second stage was acceptance, which involved the realignment of employees to adopt and commit to using the technology (Cooper & Zmud, 1990). In the third stage, routinization occurred to integrate the technology into the governance structure of the organization. Finally, infusion occurred when using technology to its full potential (Cooper & Zmud, 1990). Hazen et al. (2012) identified postadoption stages of innovation of acceptance, routinization, and assimilation, corresponded to Cooper and Zmud's stage model except for the adaptation stage, which followed the agreement reached during adoption.

Cooper and Zmud's (1990) stage of *infusion* connotes Hazen et al.'s (2012) stage of *assimilation*. In support of the stage model of postadoption implementation, Xu et al. (2017) found that the extent of assimilation of an innovation depended on the complexity, relative advantage, and compatibility of the innovation. Xu et al. also showed that top management support, organizational fit, financial commitment, and competitive pressure facilitated the assimilation of innovation in a given business ownership structure. To achieve success in the postadoption implementation of innovation, Hornstein (2015) advocated that organizations should apply strategic and projects management skills. According to Cooper et al. (2000), the use of the stage-gate process for implementing innovation projects offers opportunities for periodic reviews and subsequent continuation of viable projects and timely termination of failing ones.

### ***Implementing Multiple Innovations***

Implementing product, process, service, business model, and management innovations jointly produces positive synergies that increase the value proposition of a product, which subsequently enhances a firm's competitiveness (Damanpour et al., 2009; Lichtenthaler, 2016). Henderson and Clark (1990) identified four ways of improving a product by reconfiguring its components and core design: incremental, modular, architectural, or radical innovation. Incremental innovation referred to product improvements involving changes within its components but not the links between them or core design. Modular innovation referred to changes in only the core design of a product. Architectural innovation referred to changes in only the relationships between the components. Radical innovation referred to changes in core design concepts and links



between components (Henderson & Clark, 1990). According to Lichtenthaler (2016), each of the four types of product innovation enhanced the competitiveness of a firm when the reconfiguration and realignment of the accompanying services, processes, management practices, and business models strengthened operational synergies and increased the value proposition.

In advancing Henderson and Clark's (1990) architectural innovation theory, Lichtenthaler (2016) described product, service, process, business model, and management innovations as first-order innovations and incremental, modular, architectural, and radical innovations as second-order innovations. Lichtenthaler argued that organizations derived positive operational synergies from the complementarities of multiple first-order innovations by reconfiguring and realigning them into second-order innovations. An example is that low reconfiguration and low realignment of first-order innovations gave rise to incremental, second-order innovation (Lichtenthaler, 2016). Lichtenthaler further posited that a major reconfiguration of a least one type of first-order innovation without a substantial realignment of other first-order innovations created modular, second-order innovation. Lichtenthaler indicated that a major realignment of first-order innovations accompanied by limited reconfiguration resulted in architectural, second-order innovation. Finally, a radical, second-order innovation occurred when an organization substantially reconfigured and realigned each of the first-order innovations (Lichtenthaler, 2016).

Lichtenthaler's (2016) arguments corroborated Henderson and Clark's (1990) postulation that incremental, modular, architectural, or radical nature of a product

required a different realignment and reconfiguration of accompanying services, processes, management practices, and business models to maximize positive synergies. In the study of multiple innovations implementation, Damanpour et al. (2009) built on Henderson and Clark's (1990) findings by proposing that adopting a specific type of innovation every year was detrimental to organizational performance. The consistent adoption of the same composition of innovation types overtime did not affect organizational performance. Adopting multiple innovations could be beneficial if the composition of the innovation types diverged from the industry norm (Damanpour et al., 2009). Multiple innovations generated superior financial performance when their composition addressed competitive pressure, rapid changes in the market, scarcity of resources, and customer and public demand for higher quality and better products and services (Damanpour et al., 2009).

In support of implementing multiple innovations, as postulated by Damanpour et al. (2009), Battisti and Iona (2009) found that large size and foreign managerial control of a firm positively affected a more intensive use of multiple innovations. Battisti and Iona explained that a more concentrated ownership structure and independence of the single organizations decreased the incentive to adopt multiple innovations. In the same study, the age of the organization did not significantly affect the intensity of joint adoption and the use of innovations (Battisti & Iona, 2009). Because the adopted management practices were complementary to each other, the pay-off from the adoption of one increased the marginal pay-off of any one of the others (Battisti & Iona, 2009). Battisti and Iona revealed that the extent of joint use and the extra gains from joint adoption

differed in intensity, depending on the weight of influence of each practice in a given situation. In their conclusion, Battisti and Iona observed that the joint adoption and use of innovative practices increased productivity, not necessarily profit margins.

To ensure short- and long-term profitability, postadoption implementation of multiple innovations must also balance exploratory (i.e., radical) and exploitative (i.e., incremental) innovations (Tushman & O'Reilly, 1996). Tushman and O'Reilly (1996) posited that organizations practiced ambidexterity to enable them to overcome the success trap. By success trap, Tushman and O'Reilly referred to a situation where the same mechanisms that brought about success to firms also prevented adaptation to environmental pressure, hindered business growth, or caused business failure over time. Business organizations fell into a success trap when they focused unduly on the exploitation of historically successful current business activities to the neglect of exploring new knowledge for long-term viability (Killen & Hunt, 2010; Tushman & O'Reilly, 1996). Building on Tushman and O'Reilly's postulations and contrary to propositions, Popadic et al. (2016) found that simultaneously pursuing exploratory radical and exploitative incremental innovations hindered firms' innovative performance. Stated succinctly, the two types of innovation were mutually exclusive and inhibited each other. Popadic et al. found that lower levels of external knowledge strengthened the positive effect of exploratory innovation while higher levels of external knowledge sources or relationships diversity moderated the positive effect of exploitative innovation on innovative performance.

### *The Role of Absorptive Capacity*

Organizations need to develop their absorptive capacities to enable them to adopt and use innovations proficiently to sustain their competitive advantage (Cohen & Levinthal, 1990). Absorptive capacity is the ability to use prior related knowledge to recognize the value of new information, assimilate it, and apply it to achieve commercial objectives (Cohen & Levinthal, 1990). For a successful postadoption implementation of innovations, a firm has to develop its ability to evaluate and utilize outside knowledge or technology through its internal R&D efforts, spillovers from competitors' knowledge, and extra-industry knowledge (Cohen & Levinthal, 1990).

Lucena and Roper (2016) conceptualized the combination of organizational ambidexterity (Tushman & O'Reilly, 1996) and robust absorptive capacity (Cohen & Levinthal, 1990) to form organizational knowledge combinative capability. Lucena and Roper proposed that knowledge combinative capabilities mediated the effect of technology alliance diversity on innovative performance. Ambidextrous absorptive capacity represented the ability of an organization to utilize internally and externally sourced knowledge to develop and implement innovations. In a similar study, Hagsall et al. (2019) applied Holland's (1995) theory of complex adaptive systems (CAS) in advocating the adoption and implementation of a CAS work environment in organizations.

According to Hagsall et al. (2019), the characteristics of a CAS work environment included the (a) robust absorptive capacity enabling knowledge workers to cope with changes, successfully assimilate technological innovation, and even engage in optimal

creation of technological innovations; (b) conducive interpersonal relationships between employees and managers; (c) freedom to act autonomously and promote employee personal interests; (d) ability of employees to manage the resources required for their work; (e) systems that are friendly and enhance quality; and (f) ability to update work activities in line with external pressure and cognitively apply organizational context.

Hagsall et al. (2019) agreed with the postulations of the CAS work environment. Teece (2007) postulated in the theory of dynamic capabilities, which explains how firms sense and shape opportunities and threats, seize opportunities, and maintain competitiveness through continuous firm capability reconfigurations. To be successful in postadoption implementation of innovations, organizations must develop robust absorptive capacity, engage in ambidextrous innovations, and create operational synergies from the complementarities of multiple innovation projects (Battisti & Iona, 2009; Cooper et al., 2000; Damanpour et al., 2009; Lucena & Roper, 2016).

### **InterFirm Diffusion of Innovation**

Interfirm diffusion of innovation is the process by which an innovation is communicated through certain channels over time among organizations to enhance competitiveness and improve financial performance (Dewett et al., 2007; Kim & Pae, 2014; Rogers, 2003). Firms adopt collaborative (i.e., interfirm) technologies to integrate operations among supply chain or cooperative alliance partners in their effort to eliminate redundant processes, lower system-wide costs, or exchange knowledge for innovation or achieve some or all of the objectives (Asare et al., 2016; Eiriz et al., 2017; Moon & Alle, 2015). Innovations become useful to an economy when they diffuse among a population

of firms over time and generate macroeconomic expansion, which generates inclusive economic growth (Caiazza, 2016).

Evidence from the literature contains studies whose researchers suggest that the characteristics of target technology, attributes of the adopting organization, changes in the external environment, and nature of business relationships with other firms influence the acceptance and use of technology in a firm (Asare et al., 2016; Damanpour, 1991, 2017; Dewett et al., 2007; Kefi & Bencherqui, 2014; Rogers, 2003; Tornatzky & Fleischer, 1990). Viewed from the user perspective in organizations, these factors substantially and contextually influence the intention of members of top management and employees to adopt or use technology (Venkatesh et al., 2003, 2016). Open innovation practices and the moderated interactions of actors in a country's national innovation system facilitate interfirm diffusion of innovation in an economy (Caiazza, 2016; Usman & Vanhaverbeke, 2017). I reviewed the unified theory of acceptance and use of technology (UTAUT1) that Venkatesh et al. (2003) developed and later modified in 2016 to explain the generic mechanism of interfirm diffusion of technology.

### ***Conceptual Model of Technology Acceptance and use in Firms.***

Interfirm diffusion of technology has two components: the aspect of adoption decision (i.e., acceptance) and the dimension of use or postadoption implementation (Dewett et al., 2007). Venkatesh et al. (2003) developed the UTAUT1, which Venkatesh et al. (2016) later modified, to provide the framework for explaining the mechanism of interfirm diffusion of technology. Venkatesh et al. integrated eight prominent theoretical perspectives from representative literature on the determinants of the intention to use

information technology in formulating the UTAUT1. This conceptual model captured how the behavioral intention of users mediated the effect of performance expectancy, effort expectancy, and social influence (three of four independent variables) on usage behavior (dependent variable). The fourth independent variable (facilitating conditions) influenced usage behavior directly, without the mediation of behavioral intention. In the mechanism of UTAUT, gender, age, experience, and voluntariness of employees moderated the relationship between the independent variables and the intention to use and actual use of technology (dependent variables).

In the empirical testing of the efficacy of the UTAUT1 and Rogers' (1962) diffusion of innovation theory, Schniederjans (2017) found that the adopter category and innate individual characteristics of members of the top management affected their behavioral intention or decision to adopt 3D-printing technology. In the modified UTAUT1, known as UTAUT2, Venkatesh et al. (2016) showed that individual and organizational contexts moderated the effect of the re-conceptualized independent variables on the intention to use technology, the mediating variable, and *acceptance and use* and *outcome phenomena*, the new dependent variables. Facilitating conditions, individual beliefs, and habits formed the new independent variables while the old independent variables, which are performance expectancy, effort expectancy, and social influence, constituted *individual beliefs*, which was one of the independent variables.

Individual contextual variables consisted of user attributes, technology attributes, task attributes and the stage of innovation (i.e., event) in UTAUT2. Organizational contextual factors comprised environment attributes, organization attributes, and location

attributes. Venkatesh et al. (2016) integrated the moderating influence of age, gender, and experience of users in the old framework into user attributes, one of the individual contextual factors in UTAUT2. Venkatesh et al. conceptualized facilitating conditions, social influence, and voluntariness as organizational attributes, one of the organizational contextual variables in UTAUT2.

In explicating the mechanism of UTAUT2, Venkatesh et al. (2016) identified adoption, initial use, and postadoptive use as the three stages of technology acceptance and use. These stages are consistent with Hazen et al.'s (2012) stage model of innovation diffusion in organizations and Dewett et al.'s (2007) interfirm innovation diffusion process consisting of adoption and postadoption implementation. Venkatesh et al. identified three types of users: consumers, employees, and citizens. Venkatesh et al. further identified the levels of employees using technology in organizations as the board of directors, senior managers, middle-level managers, and operational personnel. Because of the flexibility and comprehensiveness of UTAUT2 in capturing individual and organizational contextual factors, along with the independent variables in determining employee intention to adopt technology, it provides a robust mechanism for explaining technology acceptance and use in firms. The empirical test of UTAUT2 among consumers validated its robustness and reliability in explaining users' intention to use technology (Venkatesh et al., 2016). UTAUT2 is a valid framework that adapted Rogers' (1962) diffusion of innovation theory for application to organizations.



### ***The Role of the National Innovation System***

Diffusion of innovations among firms in an economy promotes economic growth and improves socioeconomic wellbeing of the population in a country (Caiazza, 2016; Fagerberg et al., 2010). Countries take an interest in promoting and facilitating the innovativeness of firms operating in their economies (Achim, 2009; Saidi & Douglas, 2018; Tigabu, 2018). In the study of how interactions among research and development laboratories, technological institutes, and participants in the system of production in an economy worked together to drive innovativeness, Lundvall (1985) found that the market process did not sufficiently mobilize systemic efforts to promote innovation for economic growth. In a similar study of the rapid technological transformation and economic growth of Japan, Freeman (1987) observed that the Japanese Government's involvement in developing its innovation ecosystem, in its role of systemic coordination and facilitation, substantially contributed to the country's pace of economic development. In support of Freeman's postulations, Alves De Oliveira et al. (2016) identified the systemic actors in a national innovation system. These actors included universities, different levels of government, funding and regulatory agencies, institutions in the financial system, intellectual property laws enforcement agencies, companies and their research laboratories, business associations, research institutes, and tertiary institutions for technical education (Alves De Oliveira et al., 2016).

Alves De Oliveira et al. (2016) enhanced the contributions of Lundvall (1985) and Freeman (1987) to the concept of national innovation system by describing it as the systemic interaction of public and private institutions for the development, diffusion, and

use of technological innovations in a country. Kebede and Mitsufuji (2017) and Tigabu (2018) further refined this concept by describing the functions of a national innovation system. These functions include (a) entrepreneurial development, (b) knowledge development, (c) diffusion of knowledge among firms, (c) providing services for technology development and diffusion, (d) the mobilization of resources, (e) market formation, and (f) conducting advocacy activities to create legitimacy in the economy (Kebede & Mitsufuji, 2017; Tigabu, 2018). According to Kebede and Mitsufuji and Tigabu, the weaknesses and strengths of an innovation system, observed from systemic interactions of actors, determine the path of evolution towards effective support of the relevant ecosystem.

World Intellectual Property Organization (2019), an agency of the United Nations Organization, consolidated these concepts of a national innovation system into the global innovation index, which it uses to measure the innovativeness of participating countries. World Intellectual Property Organization identified institutional development, improvements in human capital and research capabilities, infrastructural development, market sophistication, and business sophistication as parameters for measuring innovation inputs. Innovation outputs comprise the emergence of new knowledge, new technology, and creative works (World Intellectual Property Organization, 2019).

### **Transition**

In this section, I discussed the background of the business problem, problem statement, purpose statement, rationale for choosing research methodology and design, and significance of this study. This section also included the assumptions, limitations,

and delimitations of this research study. In the first theme of the literature review, I discussed Rogers' (1962) diffusion of innovation theory as the conceptual framework, the findings of empirical studies testing its validity, and other supporting and contrasting theories. In the second theme, I explained the importance of the stage model of the innovation process, ambidexterity, absorptive capacity, and multiple innovation projects in making the postadoption implementation of innovations successful. In the third theme, I discussed the mechanism of technology adoption by top management and employees using UTAUT2 and supported it with explanations of how a country's national innovation system and a firm's practice of open innovation facilitated interfirm diffusion of technology.

In Section 2, I explain my role as the researcher in this doctoral study, discuss the targeted population, and describe the eligibility criteria for selecting a sample of participants from it. I also describe and justify the research method and design as well as explain plans for adhering to ethical requirements in the research process. I identify and explain the instruments and techniques of data collection, organization, and analysis as applicable to this qualitative multiple case study. Finally, I conclude Section 2 by discussing rigorous measures adopted in the research process to ensure reliability, validity, credibility, transferability, and confirmability of my findings. Section 3 will contain the presentation of the research findings, their application to professional practice, and implications for social change. I will recommend conditions for effective application of the findings to business practice and propose how future research efforts

could improve on the identified limitations of the study. Finally, I will discuss my reflections on this research study and explain how its findings fulfill its purpose.

## Section 2: The Project

Section 2 includes the purpose of the study, the discussion of my role as the researcher, the description and justification of the research method and design, ethical considerations in the research process, and the plan for gaining access to the participants. In this section, I also describe the characteristics of the population of firms in the private sector of the Nigerian economy from which I select a representative sample of participants. I discuss the instruments and techniques of data collection, organization, and analysis applicable to this study. Finally, I discuss the way I intend to apply rigor in ensuring that the findings of my doctoral study are as valid as they are reliable through the infusion of credibility, transferability, and confirmability into the research process.

### **Purpose Statement**

The purpose of this qualitative multiple case study was to explore the strategies that business leaders in the Nigerian private sector use to effectively integrate innovation into their business practices to increase financial performance. The target population comprised three Nigerian business leaders with successful experience in using strategies to effectively integrate innovation into their business practices to increase financial performance. The implications for positive social change include the potential for business leaders to bring financial success to the business organizations they lead by implementing strategies to effectively integrate innovation into their business practices. Achieving financial success could provide the community with more employment opportunities and increase tax revenues. Business leaders integrating innovation into their

business practices address social entrepreneurship by responding to the social needs of local communities (Candi et al., 2018).

### **Role of the Researcher**

The researcher's role in collecting data entails obtaining access to study participants, establishing rapport through prolonged engagement, planning the components of the research, implementing the research project, and collecting and analyzing the data (Morse, 2015). My responsibility as the primary research instrument in this study was to execute and coordinate all the stages of the research process.

Ebneyamini and Sadeghi Moghadam (2018) described the phases of a qualitative case study to include defining the business problem, collecting data from multiple sources, conducting interviews, transcribing recorded interview responses, analyzing interview data, and coding data into themes. I collected data from multiple sources by conducting semistructured interviews and reviewing organizational documents and artifacts, as Hennink et al. (2017) recommended. To recruit participants, I contacted the local chamber of commerce to communicate with leaders of industry associations to compile a list of eligible firms from which I selected a representative sample of participants for this study.

My relationship with the topic of this study emerged from the experience I acquired as the controller of the Federal Capital Territory Branch of Central Bank of Nigeria, spanning 10 years. I served as an acting director of branches responsible for supervising all branches over a period of three months. Central Bank of Nigeria is the lead regulator of the financial services industry and banker to all banks and the Nigerian

Federal Government. Mitchell and Clark (2018) argued that incorporating researchers' personal perspectives based on their experiences enhances the authenticity of the results of their research. Indeed, my interactions with the employees of the financial services industry and the Federal Public Service expanded my understanding of organizational problems of Nigerian institutions. The work experiences I have gained allow me to have realistic perspectives for implementing this research project. My work experiences helped me to recognize the variables that drive or inhibit innovation implementation. The same experiences helped me formulate interview questions capable of unraveling participants' varied perspectives related to the phenomenon under investigation. I used my personal relationships to form a purposeful sample population, meeting the established participating criteria and willing to share their successful experiences with the phenomenon under investigation.

Researchers consider ethical issues in the form of guidelines, standards, and regulations enforced by professional or industry associations, participating organizations, and institutional review boards when conducting social research (Clark et al., 2018; Cumyn et al., 2019). Researchers must follow ethical guidelines when conducting research studies (Huang et al., 2016) and adhere to the principles contained in *The Belmont Report* (U.S. Department of Health & Human Services, 1979). The three ethical principles governing research involving human subjects consist of *respect for persons*, *beneficence*, and *justice* (U.S. Department of Health & Human Services, 1979). The respect for persons principle refers to the researchers' recognition of participants' autonomy and the careful protection of participants with diminished autonomy in the

course of research (U.S. Department of Health & Human Services, 1979). Under the beneficence principle, researchers must not harm participants and maximize benefits to participants (U.S. Department of Health & Human Services, 1979). The justice principle demands that researchers treat participants with fairness regarding the potential advantages and disadvantages of participating in the research study (U.S. Department of Health & Human Services, 1979).

*The Belmont Report* protocol contains information related to the manner in which researchers should apply the ethical principles, including researchers securing the informed consent from the participants, evaluating benefits and risks of participating, and selecting participants (U.S. Department of Health & Human Services, 1979).

Accordingly, I explained the informed consent process to the participants to ensure that they understood the information contained in the informed consent form and the voluntary nature of their participation (U.S. Department of Health & Human Services, 1979). Executing the research study required me to apply: (a) *The Belmont Report* protocol's three ethical principles, (b) any requirements of the Walden University Institutional Review Board (IRB), and (c) any ethical requirements of the participating organization. I did not initiate the data collection process until Walden University's IRB approved my IRB application, as Kavar et al. (2016) suggested. Upon receiving IRB approval, I conducted the study by first explaining the informed consent process to the participants and securing participants' signed informed consent through email agreement, ensuring an ethical research process. I treated each participant with fairness, informed participants of the voluntary nature of their participation, informed participants that they



could withdraw from the study at any time without giving a reason, and ensured participants' confidentiality.

Executing a research study without bias is a challenging task to accomplish because of the tendency of the researchers' personal perspectives to influence the research outcome (Anyan, 2013; Noble & Smith, 2015). In current literature, researchers are increasingly aware of the need to be careful not to create a new form of bias in the process of mitigating an already existing bias (Oscar et al., 2018). To mitigate bias, researchers use member checking by allowing study participants to review the researchers' interpretations of participants' answers to interview questions and asking participants to verify the accuracy of such interpretations (Naidu & Prose, 2018; Spiers et al., 2018). I used member checking in the study by providing participants with my interpretations of their answers to interview questions and asking them to verify the accuracy of my interpretations. I realistically disclosed the assumptions and limitations underlying the research process for this study to enable other individuals to determine the validity and reliability of the study, as Yin (2018) suggested.

An interview protocol comprises procedures, scripts, and prompts which a researcher integrates into the interview process to guide the rendition of interview questions, from introduction to closing, and for securing participant consent during interview (Castillo-Montoya, 2016). In this study, I standardized the interview process by developing an interview protocol (see Appendix) to serve as interview guidelines and to promote uniformity and consistency in my interview conversations with each of the participants, as suggested by Mohajan (2017).

## **Participants**

A researcher needs to determine qualified participants prior to embarking on data collection (Moser & Korstjens, 2018). Setting participant eligibility criteria helps researchers to recruit participants with the required characteristics to best address the research question (Morse, 2015; Reyes et al., 2016). Identifying and gaining access to organizations meeting the eligibility criteria for participation is a difficult task for researchers to accomplish (Amundsen et al., 2017; Hoyland et al., 2015). One other problem researchers face when conducting research studies is getting the participants to agree to participate in a research study (Oscar et al., 2018). To select qualified participants for a research study, researchers set the eligibility criteria, which constitute the boundaries and requirements that potential participants must meet to become eligible to participate (Reyes et al., 2016). Participants become eligible to participate in a research study if they possess knowledge of, and experience in, the phenomenon the researchers are investigating (Fusch & Ness, 2015).

In this study, business leaders in the Nigerian private sector met the eligibility criteria for participation because they possessed at least 1 year of successful experience in using strategies to effectively integrate innovation into their business practices to increase financial performance. I purposefully identified three business leaders from the Nigerian manufacturing, services, or retail sectors to participate in the study. According to Kenessey (1987) and the Central Bank of Nigeria (2018), the manufacturing, services, and retail sectors of an economy contribute substantially to the value-added output of a country.

The process of accessing participants and the organizations they represent is a challenge researchers face when conducting research studies (Amundsen et al., 2017; Eelmir et al., 2011; Hoyland et al., 2015; Oscar et al., 2018). Amundsen et al. (2017) suggested that researchers could access participants through regular communication with the relevant employees, by using other methods of selection and by considering the culture and power dynamics of the target population. Collaborating with top managers responsible for implementing innovative strategies proved useful because I discussed my research plan with them to identify business leaders representing firms in the manufacturing, services, or retail sectors respectively.

A researcher should maintain regular contact with the study participants to earn their trust and approval (Amundsen et al., 2017; Oscar et al., 2018). Establishing rapport with participants through such interactions enhances the depth and quality of information and experiences that participants are willing to share (Eelmir et al., 2011; Morse, 2015). The researcher's ongoing involvement with participants is one way to build trust and promote partnerships with participants (Amundsen et al., 2017). I adopted the recommendations from scholars mentioned in this paragraph and of Onwuegbuzie and Byers (2014) to engage the participants in ongoing communications to increase interactions, strengthen collaborative relations, gain their trust, and develop the rapport that was necessary to collect rich data.

When researchers select the research design, they keep in mind that the most appropriate design is one that allows researchers to align the participants with the study's overarching research question (Yin, 2018). Researchers use the participation eligibility

criteria that they established to select participants with successful experience in the phenomenon under investigation to increase the probability to be able to answer the overarching research question (Morse, 2015). I applied the suggestions of several researchers (Morse, 2015; Reyes et al., 2016; Ridder, 2017; Yin, 2018) to select participants with successful experience using strategies to effectively integrate innovation into their business practices to increase financial performance, which helped me answer this study's overarching research question.

## **Research Method and Design**

### **Research Method**

The three research methodologies available to a researcher are qualitative, quantitative, and mixed (Abutabenjeh & Jaradat, 2018; Yin, 2018). According to Yin (2018), researchers use the qualitative method to explore a phenomenon through the perspectives of the participants and the interpretation of the researcher. The qualitative research method is suitable for exploring the *what, why, and how* of a phenomenon in its natural setting (Yin, 2018). Because the researcher explores the what, why, and how of a phenomenon in its natural setting, a qualitative study is naturalistic in form (Yin, 2018). Qualitative researchers emphasize interpretive, naturalistic, and holistic investigation of a phenomenon (Anderson, 2017). In this study, I used the qualitative method because of the need to gain an in-depth understanding of the phenomenon by exploring the what, why, and how of the strategies business leaders used to integrate innovation into their firm's business practices in the private sector of Nigeria. In a quantitative study, the researcher examines the relationship between various variables posed in the research question and

proposed in the hypothesis, using measurement instruments to collect and analyze data for ensuring the validity and reliability of results (Green & Salkind, 2017). Researchers use the quantitative research method to describe variables and apply statistical analysis to test relationships proposed in the hypothesis (Bloomfield & Fisher, 2019). Because I did not intend to test hypotheses or to examine relationships among variables using statistical analyses in the process of exploring the phenomenon, I did not select the quantitative method. The mixed method entails the combination of quantitative and qualitative research involving deductive and inductive reasoning (Dewasiri et al., 2018; Piccioli, 2019; Yin, 2018). Researchers use mixed methods by combining quantitative and qualitative research components to gain deeper and context-rich answers to complicated questions (Johnson, 2019). I did not select the mixed method because, to address the study's purpose, I did not need to test hypotheses about variables' relationships or groups' differences.

### **Research Design**

I considered narrative, phenomenological, ethnographic, and case study qualitative research designs for this study. The narrative design requires obtaining open and interpretive personal stories of participants' experiences, which are typically sequential and nonstructured (Visser et al., 2019). Researchers use the narrative research design to construct meaning from the nonstructured stories of participants (Sahito & Vaisanen, 2019). I did not select the narrative design because the study did not require open and interpretive personal stories of participants' experiences to address the research question. In a phenomenological design, which is interpretive, the researcher

uses the insights gained from participants' lived experiences with phenomena to construct meanings (Bhar, 2019; Korstjens & Moser, 2017). As an interpretivist approach to research, researchers use the phenomenological design to obtain in-depth understanding of a phenomenon through the revealed lived experiences of participants (Bhar, 2019). Because I did not seek participants' lived experiences to construct personal meanings, a phenomenological design was also not appropriate for the study. The ethnographic research design focuses on understanding the meanings and behaviors associated with the membership of a group or team (Korstjens & Moser, 2017). Researchers use the ethnographic research design to conduct an in-depth exploration of the social and cultural aspects of everyday life for a specific community (Korstjens & Moser, 2017). I did not use the ethnographic design because the focus of my study was not to conduct an in-depth exploration of the social and cultural aspects of everyday life for a specific group's culture.

Ebneyamini and Sadeghi Moghadam (2018) described a case study as an empirical inquiry that researchers use to explore a phenomenon within its real-life context. Business and management researchers use the case study research design to gain insights into real-world business problems for providing solutions to business problems (Ebneyamini & Sadeghi Moghadam, 2018; Yin, 2018). In gaining an in-depth understanding of the phenomenon under study, researchers triangulate data to validate the findings (Abdalla et al., 2018; Mohajan, 2017). In this study, I used the case study research design because my intention was to explore the *what*, *how*, and *why* of the phenomenon concerning the strategies business leaders used to integrate innovation into

their firms' business practices in the private sector of Nigeria. I selected a multiple case study because a multiple case design might have major analytic benefits, as Yin (2018) suggested.

In line with Yin's (2018) suggestion, I interviewed three participants to attain data saturation. If I had not achieved data saturation with three participants, I would have continued to conduct interviews until reaching data saturation. When the researchers are unable to gather any new information from study participants, researchers achieve data saturation (Fusch et al., 2018). Researchers could achieve data saturation by conducting two to three semistructured interviews (Boddy, 2016; Yin, 2018) and obtaining in-depth and extensive data on the phenomenon under study (Hennink et al., 2017). The semistructured interviews featuring open-ended questions helped me to gain perspectives from study participants and attain data saturation. In the course of recruiting participants, I sent emails inviting participants meeting the established eligibility criteria for participation.

### **Population and Sampling**

Researchers need an effective sampling method to strengthen the credibility of their studies (Farrugia, 2019). Purposive sampling is a method of selecting participants from the target population based on streamlined qualification criteria related to the experiences of participants, which enable them to provide in-depth information about the phenomenon under study (Moser & Korstjens, 2018). Purposive sampling refers to the process of identifying and recruiting participants satisfying the established eligibility criteria for participation in a research study (Moser & Korstjens, 2018). I used purposive

sampling in this study to select participants meeting the established participant eligibility criteria to obtain meaningful information about the effective integration of innovation into business practices to increase financial performance.

I obtained data from three business leaders in the Nigerian private sector with successful experience using strategies to integrate innovation into their business practices to increase financial performance. To determine sample size, researchers consider the scope and nature of the phenomenon under investigation, the level of richness required of the data (Vasileiou et al., 2018), and the requirements for generalizing the findings (Boddy, 2016). Boddy (2016) and Vasileiou et al. (2018) supported the argument that three to five participants could be adequate for a case study, whereas Reyes et al. (2016) suggested that study participants whose experiences relate to the phenomenon under investigation are most eligible to provide information that sufficiently addresses the research question. In case study research, it is challenging to ascertain an appropriate sample size (Sim et al., 2018). Yin (2018), proposed that two or three participants might be adequate for case study research. In line with Yin's suggestion, I interviewed three participants to attain data saturation. If I did not achieve data saturation with three participants, I would have continued to conduct interviews until reaching data saturation.

When the researchers are unable to gather any new information from study participants, researchers achieve data saturation (Fusch et al., 2018). Researchers could achieve data saturation by conducting two to three semistructured interviews (Boddy, 2016; Yin, 2018) and obtaining in-depth and extensive data on the phenomenon under study (Hennink et al., 2017). The semistructured interviews featuring open-ended



questions helped me to gain perspectives from study participants and attain data saturation. In the course of recruiting participants, I sent emails inviting participants meeting the established eligibility criteria for participation.

In this study, ensuring the atmosphere for the interview was conducive to allow free conversation was fundamental. Making the participants comfortable during an interview creates a conducive environment for information sharing, contributes to relationship building, and frees the participants from stress (Moser & Korstjens, 2018). Researchers provide comfortable environments to foster free interaction for building rapport with participants (McVey et al., 2015). According to Dixon (2015) and Onwuegbuzie and Byers (2014), interviews should be conducted in such a way that participants do not feel uncomfortable because the interview setting is noisy and public, threatening the confidentiality of the participants. I chose an interview setting that was conducive for private and free conversations during the interview to protect the participants' confidentiality. Because of the COVID-19 Pandemic and with the consent of the participants, I conducted the participants' interviews with the Zoom videoconferencing platform as the IRB had approved. Before commencing the interview, I notified the study participants that the duration of the interview would be about 60 minutes.

### **Ethical Research**

Getting qualified participants to agree to participate in a study is a fundamental component of the research process (Widmer et al., 2020). I ensured that each participant signed the informed consent form before participating in the study. In the informed

consent form, the researcher describes the topic of study; explains the expected rights of the participants; identifies the potential risks and benefits of the research to participants; defines the duration and confidentiality of data sample and storage; and provides contact information to keep the relationship with participants open for further clarifications (Ekmekci et al., 2020; Ennever et al., 2019; Karbwang et al., 2018; Luhn et al., 2018).

As Ross (2019) suggested, I explained to the participants that participation in the study was voluntary. *The Belmont Report* stipulates that participants have the right to terminate their participation in a research study at any stage without explanation (Ross, 2019; U.S. Department of Health & Human Services, 1979). I assured participants that their right to withdraw from the study at any time without liability or explanation would be respected. A researcher should explicitly state in the informed consent form that participants have the right to withdraw from the study at any time without liability by indicating so verbally or in writing (Ross, 2019). Protecting the privacy and confidentiality of participants is key to the success of every research study (Ennever et al., 2019). I informed the participants that participation in this study was a voluntary service, not requiring remuneration. Because receiving any form of benefits may unduly influence the participants and bias their interview responses, I adopted Condit et al.'s (2015) framework to define my relationship with the participants as one that would not involve remunerating participants.

The age of eligible participants meeting the minimum participation criteria for this study must be at least 18 years. As recommended by Kaewkungwal and Adams (2019) and Wu et al. (2019), I commenced the interview process after Walden

University's IRB approved my application. I also complied with Walden University's IRB guidelines for conducting interviews by obtaining the participants' informed consent and protecting the participants from harm. The approval number issued for carrying out this study by Walden University's IRB was 11-11-20-0741868.

The informed consent process comprises two sections: designing the consent form and communicating the elements of informed consent to the study participants. Essentially, the latter aims to secure study participants' consent and assure their protection from harm (Karbwang et al., 2018). I designed the consent form in plain English, as recommended by Luhn et al. (2018) and Ennever et al. (2019) to enable participants with different educational backgrounds to understand and apply the information. I forwarded the consent form individually to the participants by email and discussed the informed consent information comprehensively with each participant. Reviewing the informed consent form with each participant allows every participant to have a working understanding of the conditions for participation without personally having to read the entire consent form (Karbwang et al., 2018).

I used pseudonyms to represent organizations or persons participating in the study to ensure participant confidentiality. The study was insulated from exhibiting any features associated with any of the study participants that could inadvertently give away the true identity of a particular participant or organization. To produce ethical, reliable, and valid research results, researchers minimize harm and maximize benefits to participants (Lynch et al., 2019). All the soft copies of documents related to this study were stored with a password in the hard drive of my personal computer. I will also store the hard copies of

such documents and analytical materials in a locked cabinet at my residence for 5 years. As stipulated in the Walden University's IRB guidelines and enforced by Walden's Office of Research Ethics and Compliance (2020), I will destroy the documents supporting the data utilized in this study after 5 years of the conclusion of this study.

### **Data Collection Instruments**

In conceptualizing the role of a researcher, Lincoln and Guba (1985) described a qualitative researcher as the primary instrument of research. Following the development of this concept, scholars have now established that qualitative researchers are the instruments of research (Brisola & Cury, 2016; Clark & Vealé, 2018). In conducting case studies, researchers perform their roles as the primary instruments of research by collecting data from participants through interviews, observations, and organizational documents and constructing meaning from the data collected (Moser & Korstjens, 2018; Yin, 2018).

Conducting semistructured interviews with open-ended questions is the most common practice among researchers in qualitative research (Heath et al., 2018). Researchers obtain an improved understanding of the phenomenon under investigation by interviewing qualified participants (Philipps & Mrowczynski, 2021). Follow-up questions leading to the development of rich and interpretive context result from the guided flexibility semistructured interviews with open-ended questions provide (Fusch & Ness, 2015; Nguyen, 2015). Researchers use semistructured interviews to ask follow-up questions, probing participants' lived experiences to deepen researchers' understanding of the phenomenon under investigation (Nguyen, 2015). Researchers also use

semistructured interviews to collect data from participants possessing the knowledge pertinent to the phenomenon under investigation (Moser & Korstjens, 2018).

I conducted semistructured interviews to collect data from at least three purposefully selected Nigerian business leaders with successful experience in using strategies to effectively integrate innovation into their business practices to increase financial performance. Collecting rich data from the revealed experiences of participants in a given study helps researchers develop a thick and rich description of the phenomenon under study (Roulston, 2018). Using semistructured interviews to collect data from participants could help researchers uncover new themes that emerged from the data (Connelly & Peltzer, 2016). Researchers use semistructured interviews with predetermined, open-ended questions to have the option of asking study participants follow-up questions to gain clarity (Wood et al., 2019). Using semistructured interviews with open-ended questions gave me the opportunity to ask follow-up questions and seek further clarifications that resulted in the collection of rich and thick data that led to the development of themes.

In the process of collecting data from participants, I was the primary research instrument and conducted, recorded, and transcribed semistructured, Zoom interviews, following the interview protocol (see Appendix). The participants responded to all the questions during the interviews as set out in the interview guide. According to Castillo-Montoya (2016), researchers pose concluding questions to participants at the end of the interview, which in the study elicited additional information pertaining to the integration of innovation into the business practices of firms in Nigeria. Researchers asking

participants for concluding thoughts allows participants to reveal ideas or experiences regarding the phenomenon under study that might not have emerged from conducting semistructured interviews (Connelly & Peltzer, 2016). Some biases present in a research study come from the researchers' personal biases (Noble & Smith, 2015). Overcoming researcher bias requires the researcher to practice reflexivity (Karagiozis, 2018; Tayaben, 2018). Reflexivity is the researchers' self-awareness and reflection exercises to understand their influence over the research process (Ibrahim & Edgley, 2015; Roulston, 2018). Researchers practicing reflexivity increase the transparency of the research process and strengthen the accuracy of the researchers' interpretive thinking by helping them to question and carefully appraise their bias-inducing decisions or choices (Ibrahim & Edgley, 2015; Karagiozis, 2018; Wiesner, 2020). Practicing reflexivity helped me to overcome my biases, increase the transparency of the research process, and improve my interpretive thinking with respect to the data I collected and the ideas and choices I recorded in my reflexive journal.

Document analysis is also a data collection instrument commonly used in qualitative research (Smith, 2018; Yin, 2018). Researchers increase the rigor of their studies by conducting methodological triangulation, which is the process of comparing data collected from semistructured interviews and document analysis to determine if data alignment occurs (Costa et al., 2018; Moser & Korstjens, 2018). The documents used to conduct document analysis in a study may include annual reports, financial statements, executive budget rationalizations, and related records (Yin, 2018). Researchers may find information in documents to authenticate interview data concerning the subject of study

(Costa et al., 2018; Yin, 2018). I analyzed documents related to the effective integration of innovation into business practices, such as records, minutes, reports, memos, letters, policies, photographs, publications, recordings, forms, and journals to compare these data with the data I obtained from conducting semistructured interviews to determine if data alignment occurred.

Member checking is a rigorous practice involving participants' validation of the researcher's interpretation of their answers to interview questions to ensure accuracy and enhance the truthfulness of the study outcome (Anderson, 2017; McGrath et al., 2019; Morse, 2015). Researchers use member checking to increase the credibility of the data by giving participants researchers' interpretation of participants' answers to interview questions and asking participants to verify the accuracy of such interpretations (McGrath et al., 2019; Naidu & Prose, 2018). To enhance the credibility of the data I collected from participants, I used member checking by giving participants my interpretation of their answers to interview questions and asking participants to verify my interpretations.

### **Data Collection Technique**

Researchers collect data from participants using semistructured interviews, obtaining participants' experiences regarding the phenomenon under study (Allen et al., 2019; Philipps & Mrowczynski, 2021). The use of open-ended interview questions allows participants to give a rich description of their experiences with the phenomenon under investigation (Abutabenjeh & Jaradat, 2018; Kross & Giust, 2019; Neri de Souza et al., 2016; Tasker & Cisneroz, 2018). The overarching research question in a study is pivotal to control the direction of the semistructured interviews and the use of supporting

questions to generate additional data related to the phenomenon researchers are investigating (Kross & Giust, 2019). I used semistructured interviews to explore the strategies that business leaders in the Nigerian private sector used to effectively integrate innovation into their business practices to increase financial performance. I also used eight interview questions derived from the central research question to execute the semistructured, Zoom interviews. Researchers also obtain organizational documentation and artifacts relevant to the phenomenon under investigation with the purpose of analyzing the content of those documents and artifacts (Ebneyamini & Sadeghi Moghadam, 2018; Hacklin et al., 2018; Maher et al., 2018). By using multiple methods of data collection to deepen the understanding of a phenomenon, researchers enhance the rigor of their studies through methodological triangulation (Anderson, 2017; Korstjens & Moser, 2018). I used the information obtained from organizational documents and artifacts pertaining to the strategies business leaders in Nigeria used to effectively integrate innovation into their business practices to increase financial performance.

In recruiting this study's participants, three of the ten recommended companies participated in this study. The Nigerian Association of Chamber for Commerce, Industry, Mines, and Agriculture I contacted to recommend participants for my study indicated that participants did not want to participate. Only one bank of the five recommendations of the Bankers' Committee responded to my invitation and participated in this study. Out of the four recommendations (two retail and two manufacturing companies) of three lecturers at one of the universities in Lagos, only one retail company responded to my invitation and participated. The head of manufacturing of a multinational company



participated in this study through the recommendation of his former colleague, a retired production engineer in the same company. To gain access to these potential participants, I obtained their telephone numbers from the Bankers' Committee, the university's lecturers in Lagos, and the retired production engineer, respectively. I contacted the potential participants with their telephone numbers and obtained verbal consent before emailing the invitation and informed consent forms. While the CEO of the retail company delegated his sales manager to participate on his behalf, the representatives of the services and manufacturing companies obtained their managements' approval to participate. I did not commence data collection until I received an email confirmation of informed consent from each participant. I conducted and recorded the participants' interviews in the Zoom video conferencing application between January and March 2021 at the convenience of the participants in line with COVID-19 guidelines. I did not offer incentives to participants other than promising to present a summary of the findings of this study after completion.

There are advantages and disadvantages of collecting data through semistructured interviews and organizational documents and artifacts (Wood et al., 2019). One of the advantages of a semistructured interview is that it avails the researcher the opportunity to ask follow-up questions that allow participants to provide a rich description of their lived experiences (Kross & Giust, 2019; Wood et al., 2019). Another advantage of semistructured interviews is that researchers could observe participants' nonverbal behavior during the interview process (Wood et al., 2019). Despite providing detailed information during the recording of the Zoom interview, I observed that participants were

reluctant to reveal strategic and confidential information, as one of them courageously acknowledged. Regarding the advantages of analyzing organizational documentation and artifacts is that researchers could conduct methodological triangulation, which involves the collection of data from multiple sources and the comparison of all of the data collected to determine if data alignment has occurred (Abdalla et al., 2018). I obtained the most current Annual or Strategic Reports from the companies' websites and confirmed publicly available management statements before comparing them with interview data. The documents corroborated and increased the contextual understanding of participants' interview revelations, contributing to theme development and findings derivation. One other advantage of using organizational documents and artifacts is that new themes requiring further exploration could emerge (Connelly & Peltzer, 2016).

Researchers analyzing organizational documents and artifacts could obtain a detailed description of activities, employees, and commitment of resources to projects related to the phenomenon under study (Smith, 2018). Because conducting semistructured interviews allowed me to ask clarifying questions and obtain a richer description of participants' experiences, I used semistructured interviews to collect data from participants. Conducting semistructured interviews and reviewing organizational documents helped me to conduct methodological triangulation, which allowed me to compare data collected from various sources, such as semistructured interviews and organizational documents and artifacts, to determine if data alignment occurred.

Using semistructured interviews and organizational documents and artifacts to collect data in a study has limitations (Wood et al., 2019). During semistructured

interviews, the researcher's recording of the participant's responses to interview questions may lead to the participant feeling uneasy or nervous (Dixon, 2015). The recording of the Zoom interviews did not lead to participants' uneasiness or nervousness because, having been notified in the informed consent form of the requirement to record the interview, they prepared the level of information they wanted to disclose during the interview. Conducting semistructured interviews is a daunting task for novice researchers because they may lack experience conducting research studies (Roulston, 2018). When participants answer interview questions in line with what they believe the researcher expects, instead of what they actually feel or think, participants may introduce bias into the research process (Dixon, 2015). Researchers could also create bias in their studies by sharing their views and displaying nonverbal cues indicating personal interests about the phenomenon being explored (Clark & Vealé, 2018; Johnson et al., 2020). Disadvantages of analyzing organizational documents and artifacts exist. For example, an employee of the participating firm could have integrated biases into the development of documents and artifacts based on personal interests (Costa et al., 2018). Organizational documents may contain incorrect information about the actual transactions of the participating firms because of biases employees might have integrated into the development of such documents and artifacts (Costa et al., 2018). Obtaining organizational documents and artifacts from the participating organization may be difficult for researchers (Amundsen et al., 2017; Johnson et al., 2020). I retrieved the most current Annual Reports and Strategic Reports from the participating companies' websites and confirmed management statements available publicly because the participants were reluctant to release

confidential information, including organizational documents and artifacts. I used my reflexive journal to record the participants' nonverbal cues when answering interview questions and thoughts generated from reviewing documents.

Researchers undertake pilot study if doing so will contribute meaningfully to the quality of their research (Castillo-Montoya, 2016; Yeong et al., 2018). Researchers use pilot studies to refine the activities and procedures that will support the scope and credibility of a study (McCaa, 2017). As a feasibility assessment tool, conducting a pilot study is a cumbersome and time-consuming task that may not be valuable (McCaa, 2017). Carrying out a pilot study may not increase rigor in situations where the researcher collects qualitative data from multiple sources, such as semistructured interviews and organizational documents (Yin, 2018). Because conducting a pilot study takes time, might not be relevant, and might not increase rigor when a researcher obtains data through semistructured interviews and organizational documents and artifacts, I did not conduct a pilot test.

Member checking is a rigorous practice allowing participants to scrutinize the researcher's interpretations of participants' answers to interview questions with the objective of ascertaining the accuracy of the researcher's interpretations (Anderson, 2017). Applying member checking in a study increases the credibility of the data researchers collect from interviewing participants (Johnson et al., 2020). The use of member checking has some drawbacks. The one drawback stems from the researcher's presumption that lack of feedback from study participants indicates participants' approval of the researcher's interpretations of their interview responses while, in fact, the

participants might actually be indifferent to the researcher's interpretations (Birt et al., 2016; Caretta & Pérez, 2019). Participants may also be averse to disagreeing with the researcher over the interpretations of participants' interview responses and would rather ratify the researcher's interpretations as presented (Caretta & Pérez, 2019). I conducted member checking by interpreting participants' responses to the interview questions and requesting participants to confirm that my interpretations were correct. While the services and manufacturing participants made minor corrections to align my interpretations summary to their perspectives, the retail participant agreed with my interpretations. To enhance the credibility of this study, I conducted member checking procedures.

### **Data Organization Technique**

Qualitative researchers need to establish an appropriate system for organizing data before embarking on data analysis (Yin, 2018). Organizing data facilitates the conduction of rigorous research (Yin, 2018). According to Yin (2018), using a database to systematically arrange qualitative data in a manner similar to quantitative data is a recommended practice. To effectively construct meaning in a study, a researcher has to proficiently organize the data (Moser & Korstjens, 2018).

To maintain the confidentiality of participants, including the de-identification of all participants, researchers must assign a unique code or pseudonym to each participant (Ennever et al., 2019). Each of the three business leaders participating in this study was assigned a unique participant code consisting of the letter "P" and a numeric suffix ranging from 1 to 3. I assigned the letter "O" and a number code ranging from one to three to the participating organizations. I used the following codes: P1O1, P2O2, and

P3O3. I further de-identified the participants by removing all features from the transcript that could be used to infer participants' identities. According to Ross et al. (2018), protecting the confidentiality of participants requires that researchers assign pseudonyms or codes to each participant and de-identify names, places, times, dates, and events mentioned during the interview to prevent inferential identification of the participants or their organizations. With this understanding of the need to deidentify participants's data, I assigned a unique code in the transcript of the audio-recorded interview to identify each participating business leader and de-identify any information that could give away the identity of the business-leader participant.

I stored the password-protected folders containing the electronic transcripts and observation notes in an external flash drive. Every observation note was identified with the special code assigned to the observed participant. Researchers convert hard copies of documents into PDF images through scanning to protect the integrity and confidentiality of data (Yin, 2018). Every organizational document and artifact scrutinized for evidence was identified with the code of the originating participant. The first stage of organizing documentary data involves converting hard copies of documents into electronic copies through scanning (Yin, 2018). Managing and retrieving data become easier when researchers store electronic documents in dedicated folders on the computer. To further improve the efficiency of managing documents, Yin (2018) recommended that electronic documents should have annotated bibliographies to facilitate more elaborate indexing and quicker retrieval.

I dedicated a folder in the password-protected external flash drive for the storage of all electronic data. Transferring data stored in the password-protected external flash drive into a computer-assisted qualitative data analysis software (CAQDAS) enhances the organization of research data (Maher et al., 2018). Researchers use CAQDAS to increase efficiency in organizing and analyzing data (Maher et al., 2018). Although CAQDAS improves the efficiency of data organization and analysis procedures, a researcher requires interpretive skills to put CAQDAS into effective use (Woods et al., 2016). Researchers use NVivo, a CAQDAS, because of its large cloud storage, password security, ease of use, and suitability for qualitative and mixed methods research. Because researchers can use NVivo to import, file, and organize audio recordings of interviews, interview transcripts, organizational documents, and observation notes or memos, I used NVivo (Version 12) to organize data for analysis. Storing all data in one application, such as NVivo, helped me to retrieve and analyze data more efficiently.

Chigwada et al. (2017) emphasized the importance of aligning the research data retention period to the data management policy of the researcher's institution or sponsor. Palys et al. (2018) recommended that researchers should keep data secured. Legislations, such as the National Research Act of 1974, about research data protection have set standards that researchers adopt to ensure adequate data protection beyond the study completion date (Ross et al., 2018). Researchers adopt the following standards: (a) determining the research objective of obtaining data, (b) securing participant informed consent, (c) gathering only the information relevant to the study, (d) ensuring that data

obtained serve only the purpose of the study, (e) maintaining an appropriate retention period for research data, and (f) restricting access to data citation.

I securely stored all data not actively in use to prevent unauthorized access. Soft copies of data were stored in a password-protected external hard drive while hard copies were kept in a locked cabinet to protect the data. Several researchers have proved the efficacy of using these modes of data storage to protect the confidentiality of data during and after the conduct of their studies (Kennan & Markauskaite, 2015). Ross et al. (2018) suggested that researchers should comply with ethical requirements to protect the data collected during studies. To conform with this requirement of protecting data confidentiality, a researcher stores hard copies of documents in locked cabinets and electronic documents in a password-protected external flash drive (Ross et al., 2018). At the completion of this study, I will use these established modes of data storage to protect all the data for 5 years in compliance with the guidelines of Walden University. Following the expiration of the stipulated data retention period of 5 years, I will destroy the flash drive and shred the hard copies of data kept in the cabinet.

### **Data Analysis**

Researchers use triangulation to develop a comprehensive understanding of a research phenomenon (Varpio et al., 2017). Methodological triangulation is one of the processes researchers adopt to obtain data from multiple sources to corroborate research data and findings (Fusch et al., 2018). Using methodological triangulation enhances the validity and credibility of research data and findings by helping researchers to compare the data collected from one source with data collected from another source to determine if



data alignment occurs (Saks, 2018). Researchers conduct methodological triangulation to explore a research phenomenon from various perspectives (Johnson et al., 2020). By triangulating data obtained from semistructured interviews after member checking data interpretations summary, reflexive journal, and organizational documents and artifacts, I achieved convergent evidence. Yin (2018) postulated that researchers achieving convergent evidence strengthen the construct validity in their case studies. I conducted methodological triangulation to obtain data from multiple sources, such as semistructured interviews and organizational documents and artifacts to determine if data alignment occurred, increasing the validity and credibility of the research data that I collected. I also used methodological triangulation to achieve convergent evidence to strengthen the construct validity of this case study. Researchers use member checking to enhance the validity and credibility of data collected by giving study participants the researchers' interpretation of participants' answers to interview questions and asking participants to verify the accuracy of such interpretations (Yin, 2018). I used member checking to increase the validity and credibility of the data I collected by providing participants with my interpretations of their answers to interview questions and asking participants to verify the accuracy of my interpretations. I then compared member-checked data with the data I collected from reviewing organizational documentation and artifacts to determine if data alignment occurred.

Researchers refine qualitative data analysis through the recursive collection of data to answer the overarching research question, resulting in data collection taking place parallel to data analysis (Johnson et al., 2020). Thematic, contents, and discourse

analyses are the different approaches to analyzing qualitative data (Cassell & Bishop, 2019). In thematic analysis, the researcher reads the interview transcripts and the reflexive journal as well as listens to the audiotape of the interviews several times to become familiar with the data (Lester et al., 2020). CAQDAS, such as NVivo, assist researchers in capturing, storing, analyzing, coding, categorizing, and sorting data to develop themes (Feng & Behar-Horenstein, 2019). Using CAQDAS also helps researchers to develop themes and identify relationships between themes (Antoniadou, 2017). Because researchers can use NVivo to import, file, and organize audio recordings of interviews, interview transcripts, organizational documents, and observation notes or memos, I used NVivo 12 to analyze the data.

According to Yin (2018), qualitative researchers carry out data analysis in five stages in the following serial order: (1) compile, (2) disassemble, (3) reassemble, (4) clarify, and (5) conclude. The first stage focuses on the compilation and organization of data to search for patterns and themes in various interview transcripts through interpretation-facilitating preparation and arrangement of data. To code and analyze research data for interpretation, Prabowo (2020) suggested that researchers should use CAQDAS, such as NVivo. In line with this suggestion, researchers use NVivo to efficiently organize, code, and sort large volumes of data (DeJonckheere & Vaughn, 2019). In the second stage, the researcher assigns codes to meaningful chunks of the text identified in the disaggregated data. The third stage entails reassembling coded data into categories and sorting data categories or clusters into themes. The objective in the fourth stage is to align the interpretation of data with interview transcripts during thematic

analysis. Thematic analysis of data facilitates the identification of patterns and themes in the data to answer the overarching research question (Williams & Moser, 2019). In analyzing data, I used NVivo 12 to organize data, assign codes, develop themes, and construct meaning from the data collected from semistructured interviews and organizational documentation and artifacts. I used NVivo 12 to sort data codes into clusters, combine related clusters into themes, and correlate themes in the compiled data. Member checking is the process in which a researcher requests participants to verify the researcher's interpretation of data emerging from thematic analysis (Birt et al., 2016). I used member checking to confirm the accuracy of my interpretation of data by interpreting participants' responses to interview questions and requesting participants to confirm the accuracy of my interpretations. While two participants made minor corrections during member checking, the third participant confirmed the accuracy of my interpretation of the answers to interview questions.

Collecting data from multiple sources is one of the features of case study research (Azungah, 2018). According to Yin (2018), triangulation of data helps researchers to collect rich data. Methodological triangulation is also useful to researchers in confirming the validity of data collected from different sources, such as semistructured interviews and organizational documents and artifacts (Saks, 2018). Documents obtained from the organizations participating in a research study constitute the second source of data for triangulation (Yin, 2018). I obtained current Annual Reports, Strategic Reports, and publicly available management statements on their websites and other social media, containing information corroborating and increasing the understanding of the context of

participants' interview revelations and contributing to theme development and derivation of study findings. Researchers use different methods of data analysis to examine documents (Desmond et al., 2018). The methods include thematic and content analysis (Fusch et al., 2018). I conducted content analysis procedures to analyze organizational documents containing information directly related to this study. In content analysis, the researcher analyzes data by sorting related codes into clusters and combining clusters with similar meanings into themes (Lemon & Hayes, 2020).

As an approach to analyze documents, content analysis comprises three steps: (a) preparation, (b) organization, and (c) reporting (Roberts et al., 2019). I prepared the data by breaking them into units of meaning called codes. To organize the collected data to construct meaning, I consolidated units of related codes into first-level categories. I reported on the data by combining the categories into themes or subthemes and deriving the findings from them. Researchers use methodological triangulation by comparing data collected from semistructured interviews and organizational documentation and artifacts to determine if data alignment occurs (Yin, 2018). I conducted methodological triangulation by comparing data collected from conducting semistructured interviews and reviewing organizational documentation and artifacts to determine if data alignment occurred. In the fifth stage, researchers conclude the study and make recommendations from the study findings to answer the central research question (Yin, 2018). I developed conclusions and provided recommendations from the findings to answer the central research question for the study. In summary, I organized and assembled all data collected, disassembled the data using codes, reassembled the data using themes to understand the

research phenomenon, interpreted data using thematic analysis, and developed conclusions from the results of the study.

Developing a matrix of composite themes emerging from various data sets enhances the interpretive framework for constructing knowledge from research data to answer the research question and also facilitates the correlation of key themes with the conceptual framework and the related literature (Azungah, 2018)

Maintaining a reflexive journal helps a researcher to increase the transparency of the research process (Orange, 2016) and enriches the researcher's synthesis of data in constructing meaning (Korstjens & Moser, 2018). Researchers use reflexive journals to record their observations on the activities of the participating organizations, the interview setting, and the participants' nonverbal cues with the aim of obtaining information for a thick description of the phenomenon under investigation (McDonnell et al., 2017). Using a reflexive journal helped me capture the context of data in their natural setting to stimulate ideas for consolidating, visualizing, and interpreting the data for theme development. Labeling data with codes helps the researcher to assemble all categories of data with the same theme codes and meanings in the relevant theme (Roberts et al., 2019). Researchers undertake frequency analysis to ascertain the number of thematic codes that form a data category (Isaac et al., 2019). I used NVivo 12 to generate a code frequency matrix consisting of data categories as columns and participants as rows to visualize potential themes and subthemes and derive the findings from the data. To increase the credibility of this study, I used NVivo 12's coding program to classify main themes into data categories, increasing the validity of the study. Researchers find key

themes in the conceptual framework and support them with related literature (Collins & Stockton, 2018). The theoretical propositions of the conceptual framework guide the literature review, determine the choice of methodology, and provide a benchmark for correlating the findings of the study (Moser & Korstjens, 2018). In this study, I correlated the main themes emerging from data collected with this study's conceptual framework and the literature.

### **Reliability and Validity**

Lincoln and Guba (1985) developed the concepts of dependability, credibility, transferability, and confirmability established in the literature as criteria for achieving reliability and validity in qualitative studies. The trustworthiness of a study depends on the extent to which researchers fulfill these four conditions in the research process (Walby & Luscombe, 2017). Ensuring the trustworthiness of a qualitative study is equivalent to achieving reliability and validity of a quantitative study (Rose & Johnson, 2020).

#### **Reliability**

The concept of reliability in qualitative research, especially in case studies, is an issue. To obtain convincing and reliable research findings, the instruments for collecting and analyzing data have to be reliable (Spiers et al., 2018). Based on the suggestions from Alsharari and Al-Shboul (2019), I used two sources of evidence common to case study research, which are semistructured interviews and organizational documentation and artifacts. According to Yin (2018), researchers should understand the complementary nature of sources of evidence and that no specific source has a complete edge in

providing evidence over the other sources. In a well-designed case study, a researcher should obtain evidence from as many sources as the situation allows.

Dependability refers to the stability of research findings over time, made possible by researchers' transparent disclosure of the procedures adopted in the qualitative research process to blaze the audit trail for consistency and repeatability of data collection, interpretation, and analysis (Noel et al., 2018). I remained consistent in asking the same questions across participants, in adherence to the interview protocol and Savage and McIntosh's (2017) recommendation. I further confirmed data dependability by conducting member checking, as Simpson and Quigley (2016) suggested. Member checking involves giving participants the researchers' interpretation of the participants' responses to interview questions and asking participants to review and verify the accuracy of the researchers' interpretations (Candela, 2019). Researchers increase data dependability by conducting member checking to prevent the researchers' biases from interfering with the interpretation of data (Chase, 2017).

Audio recording the interview conversation gives the researcher the opportunity to review and reflect on the interview responses the participants give and to develop dependable transcripts and themes (Rutakumwa et al., 2019). During the interview, I asked clarifying questions to obtain detailed answers to prevent ambiguity, which might allow my biases to dominate my interpretations. When participants' answers were not sufficiently detailed or useful, I asked follow-up questions to elicit more revealing information. I did not make suggestive statements about the study to the participants before the interview or ask leading questions during the interview to maintain neutrality,

prevent my view-point from influencing participants' perspectives, and strengthen the credibility of the study findings, following Daniel's (2019) and Devotta et al.'s (2016) recommendations. As Yeong et al. (2018) suggested, I adhered to the interview protocol and asked participants the same questions to achieve consistency and increase the study's reliability.

### **Validity**

Researchers establish credibility, transferability, and confirmability to increase the validity of a research study (Hayashi et al., 2019). In using the case study design, researchers collect data from multiple sources to compare evidence to determine if data alignment occurs, ensuring the credibility of a research study (Carmichael & Cunningham, 2017). In situations where only one researcher analyzes data, ensuring credibility requires that all data collected are inclusive and representative of the data as a whole (Ames et al., 2019). A reflective review of the interview transcripts helps researchers to understand the data and establish credibility (Braun & Clarke, 2019). I thoroughly reviewed the interview transcripts to enable me to capture all variants of participants' perspectives. I identified and compared data collected from all study participants to focus on their similarities and differences. To increase the validity of interview data, I followed Bastami et al.'s (2019) suggestions to conduct member checking after transcribing and before commencing analysis. I conducted member checking by giving study participants my interpretation of their responses to interview questions and asking them to confirm the correctness of my interpretations.



Transferability measures the extent to which researchers can apply the findings of a study to other contexts or settings similar to those of the original research (Guenther & Falk, 2019). According to Yin (2018), researchers aim to obtain credible findings from case study research by recruiting eligible participants, providing detailed demographics of participants, carrying out an exhaustive analysis of data, and making the report of the outcome of the research understandable enough to support transferability. I developed trustworthy study findings by recruiting appropriate participants, describing participants' demographic profile adequately, analyzing data exhaustively, and simplifying the report of the research findings for easy understanding and transferability.

Confirmability complements the other attributes of trustworthy research consisting of dependability, credibility, and transferability (W. M. Lim, 2019) and measures the extent to which the interpretation of data, informing the study findings, derived entirely from participants' perspectives, free of researchers' biases (Forero et al., 2018). I listened attentively to each participant's responses to interview questions and journalized my reflections, ideas, and biases. I meticulously transcribed the participants' answers to interview questions, derived the study findings from the data, and correlated the study findings with the established literature on the phenomenon to strengthen confirmability.

According to Ashour (2018), researchers use methodological triangulation to increase the validity of case study research. Using data collected from multiple sources to compare evidence is the objective of conducting methodological triangulation (Whitmore et al., 2019). I conducted methodological triangulation by comparing data obtained from

semistructured interviews with data collected from organizational documentation and artifacts to determine if data alignment occurred. Methodological triangulation of data sources is the appropriate analytical procedure for increasing the validity of case study research because the research design of a case study fundamentally depends on collecting data from multiple sources (Harrison et al., 2017).

I continued to collect and analyze data in an iterative process until I achieved saturation of data. Saturation of data occurs when a researcher obtains maximum information on the subject of study, implying that further collection and analysis of data does not yield additional information (Aldiabat & Le Navenec, 2018). Until a researcher attains data saturation, conclusions from study findings remain incomplete because the findings have not encapsulated all variants of participants' perspectives and associated meanings contributing to the understanding of the phenomenon (Saunders et al., 2018). I continued to collect and analyze data in an iterative process until I obtained maximum information on the phenomenon, indicating that additional data did not produce a new variant of participants' perspectives, as Forero et al. (2018) suggested.

### **Transition and Summary**

Section 1 included the problem statement, purpose statement, and the nature of the study to support the selection of a qualitative methodology and a case study design for this study. In Section 1, I also presented the interview questions; operational definitions; and assumptions, limitations, and delimitations for the study. The last two components of Section 1 were the significance of the study and a review of the professional academic literature. In the literature review, I presented a comprehensive

analysis of research relevant to the effective integration of innovation into business practices to increase financial performance.

In Section 2, I provided a restatement of the purpose of the study, an explanation of the role of the researcher, a description of the participants, the population and sampling methods, and ethical concerns related to this study. I provided a justification of the research method and design and discussed my plans for data collection, organization, and analysis. I concluded Section 2 with a description of reliability and validity concerns as they pertain to this study. Section 3 includes the following subsections: (a) Introduction, (b) Presentation of the Findings, (c) Application to Professional Practice, (d) Implications for Social Change, (e) Recommendations for Action, (f) Recommendations for Further Study, (g) Reflections, and (h) Conclusion.

### Section 3: Application to Professional Practice and Implications for Change

Section 3 includes the purpose of the study, research question, and presentation of the study findings. This section also includes the application of the study findings to professional practice, social change implications, and recommendations for policy actions and further study. In my concluding statements, I drew inferences from the findings.

#### **Introduction**

The objective of this qualitative, multiple case study was to explore the strategies that business leaders in the Nigerian private sector used to implement innovation. In the course of the study, I interviewed three business leaders in the services (P1), retail (P2), and manufacturing (P3) sectors of the Nigerian economy with a minimum of 3 years of experience in successfully integrating innovation into their firms' business practices. I used semistructured zoom interviews to collect data from participants and also reviewed organizational documentation, such as annual reports and other publicly available data. Four themes emerged from the data analysis: Support from top management was critical for successful innovations, absorptive capacity of employees provided the knowledge for building capabilities, implementation of multiple innovations allowed business leaders to reconfigure resources into capabilities, and the deficient national innovation ecosystem inhibited innovations. Theme 1 comprises four subthemes; Theme 2, five subthemes; Theme 3, five subthemes; and Theme 4, three subthemes.

#### **Presentation of the Findings**

The central research question for this qualitative, explorative multiple case study was: What strategies do business leaders in the Nigerian private sector use to effectively

integrate innovation into their business practices? I conducted semistructured interviews, reviewed organizational documentation and artifacts, and recorded my reflections on data in my reflexive journal to answer the overarching research question towards developing themes. The following four themes emerged after coding, triangulating, and constructing meaning from the data: Support from top management was critical for successful innovations, absorptive capacity of employees provided the knowledge for building capabilities, implementation of multiple innovations allowed business leaders to reconfigure resources into capabilities, and the deficient national innovation ecosystem inhibited innovations.

### **Theme 1: Support From Top Management Was Critical for Successful Innovations**

As a result of data analyses, the first theme that emerged was that support from top management was critical for successful innovation implementation. Based on data analysis, I observed that the top management of the three participating companies (O1, O2, and O3) steered the innovation process through the roles they played. The three business leaders interviewed (P1, P2, and P3) confirmed that top management decision-making authority over strategic objectives, including vision and mission; shared values, including organizational culture; resources; and reporting relationships in their organizations (coordination), enabled them to allocate resources. The findings in Theme 1 aligned with the result of Serrador et al.'s (2018) study indicating that top management support involving authority delegation, control over resources, and reward of final results helped or hindered a project. Top management support includes setting the strategic direction (Kohler & Zerfass, 2019), managing resources (Barney, 1991; Demirkan,

2018), entrenching innovation culture (Villaluz & Hechanova, 2019), and coordinating functional activities (Laursen & Killen, 2019; Moon & Alle, 2015) to hone organizational capabilities for exploiting opportunities and neutralizing threats (Dwi Nurhayati et al., 2021; Teece, 2007).

### ***Setting Strategic Direction***

P1, P2, and P3 revealed that their respective organizations' top management approved and communicated their firms' strategic direction. According to Kohler and Zerfass (2019), top management sets the strategic direction by communicating the vision, mission, core values, and strategic objectives to employees and other stakeholders. P1 said, "We also have an annual, annual strategy . . . What is it called? Annual strategy planning sessions and, you know, the outcomes of those sessions are also communicated accordingly in the organization." P1 further explained that new employees underwent organizational strategy orientation training after satisfying the recruitment criteria targeting innovative-thinking people.

P2 affirmed that O2's founder-CEO and management team integrated O2's strategy and communicated it to the employees. P2 shared that,

I would like . . . to talk about an asset that the company has that helps us to strategize properly. And that asset is the CEO, who is the founder of the business. This man is . . . like a guide and a mentor for us. Every Tuesday . . . in the company we meet by 9:00 a.m. and the executive team members meet every 9 a.m. and they take the meeting minutes down to their various departmental HODs to discuss what the people [employees] need to know.

P3 also pointed out that O3's global, regional, and country CEOs allocated substantial resources to communicate corporate strategy. According to P3,

We normally spend a lot of resources and energy around communication because we've seen in the past that innovation, poorly communicated, is innovation that is bound to fail. So communication strategy is key and is number one in terms of the strategies we use to implement innovation. And this communication happens in three layers: global communication, regional communication, and local communication.

The organizational documents I reviewed increased my understanding of the perspectives of P1, P2, and P3 obtained from the interview data. O1's 2019 annual report posted on O1's website disseminated information on its vision, mission, core values, and strategic objectives, confirming P1's statement that O1's management communicated the annual strategy session to employees. O1's Board Chairman clarified P1's perspective in declaring that O1's strategic direction would be in three sequential stages, which were to generate momentum, scale the business, and push for a clear leader in the industry.

After reviewing the case study article of O2, it became clear that O2's founder-CEO had set the tone for the company's future direction. This document noted that even when O2's CEO had the opportunity to bribe O2's way, the CEO refused to do it. Instead, O2's CEO insisted on complying with government policy. Additional information from the same document indicated that O2's CEO outsourced employees' recruitment to professional human resources practitioners in earlier years of O2. The

findings of the case study document of O2 amplified P2's description of the direction-setting role of O2's CEO.

O3's 2020 annual report confirmed P3's revelation that O3's top management allocated adequate resources for disseminating information on the company's strategic direction. O3's management wrote in the same annual report, "To boost communication further, we have recently launched a global communication platform [Workplace by Facebook], which helps employees stay up to date with international colleagues and share best practices. This has helped to enhance connections, collaboration and real-time communication."

### ***Managing Resources***

P1, P2, and P3 shared information on their respective firms' efforts to transform physical, human, and organizational capital resources into capabilities to sustain a competitive advantage. The resources of a firm include physical, human, and organizational capital (Barney, 1991; Teece, 2019). Physical capital consists of the advantages that technologies, plants and equipment, geographic location, and sources of raw materials contribute to a firm's competencies. Human capital comprises the contribution of training, experience, judgment, intelligence, relationships, and tacit knowledge to employees' skills and organizational competencies. Organizational capital is the advantage a firm gains from external relationships, formal and informal structure, and management control and coordination to form its competencies. Some of these resources lose their strategic value and become clogs in the wheel of progress, as the external environment changes over time (Teece, 2019). According to Teece (2019), top



management can transform resources into ordinary or dynamic capabilities through cumulative knowledge acquired from combining and exploiting the resources. Top management manages resources to transform them into capabilities to sustain a competitive advantage.

From P1's point of view, O1's top management administered resources by operating from one location to avoid systemic risks associated with the physical branch network, leveraging technology to render banking services through partnering with other firms, and hiring or developing and deploying skilled human capital to hone their banking services capabilities. In respect of managing resources, P1 said,

We leverage technology, we operate from one location . . . we don't do cash . . . we don't have the vault . . . So, all the associated costs and challenges . . . we don't just have to worry about . . . in terms of infrastructure, what have you, a [*sic*] very competent local players now that one can also depend on for services . . . to mitigate against the different infrastructure, security, and those other challenges that are pervasive in Nigeria . . . I mean, apart from we have the [competencies], we have the defined policies and procedures that govern all our processes . . . we have interdepartmental meeting . . . multiple times a week . . . where collaboration is fostered . . . we have a product development committee . . . a cross-functional committee across the bank.

P2 shared information demonstrating that O2's top management managed resources by (a) using franchising to expand O2's retail outlets to 72 stores across Nigeria, as of January 2021; (b) collaborating with foreign and local suppliers to deliver products

directly to O2's stores across Nigeria to avoid systemic risks; and (c) developing employees' skills and striving for ISO certification to sustain global supply chains' partnerships. About managing the resources of O2, P2 said,

But in Nigeria, we introduced what they call surrogate franchising . . . They [local or foreign suppliers] bring in the product for us . . . the shipping has been calculated in the costs of these devices to help reduce our expenses. So it comes into the country, to our warehouse.

From P3's perspective, O3's top management administered resources by (a) switching from legacy manufacturing enterprise resource planning (ERP) application referred to as MFG/PRO to new collaborative technologies, such as the product lifecycle management (PLM), sales and operations planning (S&OP), and systems, applications, and products (SAP) systems to recalibrate O3's competencies; (b) hiring required skills and updating existing competencies to meet the demands of the new product development project; (c) leveraging its global network for raw materials supply and products' sales; (d) using industry platform to advocate business-supportive economic policies and collaborate with the government; and (e) generating own electricity outside the national grid to stabilize manufacturing output.

The information contained in the company documents and artifacts of O1, O2, and O3 corroborated and provided a contextual understanding of the perspectives of P1, P2, and P3. O1's 2019 Annual Report elaborated on the competence of the Board and management team, capitalization robustness, prudent risk management, good asset quality, and strong liquidity, as P1 had shared. O1's board chairman's speech at the 2019

annual general meeting also confirmed O1's focus on digital banking and employees' competence development, targeting industry leadership in line with P1's statement. Augusto & Co. Ltd.'s and Global Credit Ratings Co. Ltd.'s (two credit rating companies) scores of Bbb and BBB, respectively, representing credit ratings of O1's operational performance based on December 31, 2019 financial statement aligned with the information P1 shared.

The document about O2 and its founder-CEO further enriched the context of P2's narrative in the following areas: (a) expanding to other African countries after establishing 100 stores in Nigeria, which O2's CEO proposed; (b) establishing the foundation for innovative and ethical culture; (c) setting standards for recruiting qualified employees and developing them to higher competency levels; (d) leveraging O2's organizational capital resources derived from partnering with global supply chains, such as Samsung, Techno, Apple, and other original equipment manufacturers (OEMs) of laptops and mobile devices; and (e) identifying O2's physical capital resources as the rapid spread of its stores across Nigeria.

After reviewing O3's 2020 and 2019 annual reports, I found that O3's management explained P3's perspectives by identifying O3's physical resources as manufacturing plant and equipment; functional integration applications (PLM, S&OP, and SAP systems); ensuring global presence in many countries; and sourcing of raw materials from multiple locations. In support of P3's revelations, the board chairman's 2020 annual general meeting speech emphasized human capital development to enhance employees' competencies and encourage employees to collaborate to improve O3's

efficiency. The 2020 annual report included text about O3 adopting a matrix organizational structure, deploying SAP application, and allowing employees to challenge conventions in participative decision-making explained P3's perspectives.

### ***Entrenching Innovation Culture***

P1, P2, and P3 expressed their top management's commitment to building an innovation culture creating an organizational atmosphere conducive for generating new ideas and allowing participative decision making. The perspectives of P1, P2, and P3 aligned with Villaluz and Hechanova's (2019) study findings, suggesting that organizational management builds an innovation culture by establishing an environment and deploying the infrastructure that induces employees to initiate and support ideas and actions necessary for innovation. Villaluz and Hechanova adopted the acronym CREATE in their innovation culture-building framework. CREATE stands for *communicating* desired values, *role* modeling by leaders, *evaluating* and reinforcing desired behaviors, *aligning* systems and resources, *training* for desired values, and *engaging* employees in the culture-building efforts.

P1 said that O1's top management communicated the outcome of the annual strategy session, promoted a work atmosphere encouraging innovative thinking, and deployed workflow applications for straight-through processing to support cross-functional collaboration. P2 testified that O1's top management recruited and developed innovative-thinking employees, communicated strategic decisions to employees, and established cross-functional collaboration among employees. P3 noted that O3's management (a) communicated the company's strategy to transform the bureaucratic

structure and the associated rigid mindsets of the aging workforce into innovative people, (b) deployed functional integration applications to support the matrix structure and facilitate collaboration, (c) selected the most competent employees across functions, and (d) deployed a PLM system to support the implementation of new product development projects.

I gained a more detailed understanding of the way top management of O1, O2, and O3 approached building an innovation culture from reviewing their respective organizational documents. In the 2019 Annual Report, O1's managing director/CEO commented that the competence of O1's employees was the company's source of innovation. The Director's Report also included language related to the fact that management encouraged employees' participation in decision making and viewed training and developing of employees as a critical activity to achieve success. The synthesis of information related to building an innovation culture in this annual report increased the contextual understanding of P1's revelations.

After reviewing O2's case study article, I understood the way O2's culture evolved from its foundation. As reported in the article, the CEO required each new employee to participate in an orientation process about the central role of ethics in O2's culture and encouraged employees to suggest improvements. This report on O2's CEO role modeling set the tone for building an enduring innovation culture and explained P2's description of O2's CEO's entrepreneurial competence.

In O3's 2020 annual report, management declared an open-door policy, allowing employees to challenge conventions and contribute to innovation. This document also

included text related to the deployment of the SAP application to support the matrix structure and the information-sharing practices for collaboration among employees. O3's organizational documents not only corroborated but also increased the contextual understanding of P3's narratives.

### ***Coordinating Organizational Functions***

All three participants revealed their firms' respective approaches to functional coordination to increase the efficiency and speed of operations. Top management coordinates all functional activities to achieve predetermined organizational goals (Rao Siriginidi, 2000; Tee et al., 2019). Tee et al. (2019) supported Moon and Alle's (2015) description of coordination as the effort to make two or more functions work together as one and also agreed with Westlund et al.'s (2021) and Menon and Mohanty's (2008) postulations that coordination was the ability to manage resource dependencies. Sunardi et al.'s (2020) findings that information systems facilitated real-time information-sharing among all stakeholders align with Rao Siriginidi's (2000) argument that ERP applications facilitated information-sharing practices and coordination, leading to functional integration and collaboration among employees. In support of Rao Siriginidi, Sunardi et al., and Tee et al., Moon and Alle suggested that organizations integrating their functions with ERP applications should first adopt a matrix structure; create a supportive culture; and clearly define their processes to facilitate collaboration, operational synergy, and efficiency.

P1 said that O1's senior management deployed information-sharing applications to support cross-functional collaboration and product development in rendering banking

services to customers. P2 emphasized that O2's top management held regular cross-functional meetings to coordinate the activities of the various departments. P3 revealed that O3's top management deployed PLM, S&OP, and SAP systems to integrate functions and facilitate collaboration to shorten O3's products' time to market.

In the 2019 annual report, O1's top management reported that O1 fostered an increase in collaboration between the wholesale banking business and the capital market subsidiaries, confirming the investment in workflow applications, as P1 had mentioned. O2's publicly available document confirmed that O2 had received awards locally and internationally, recognizing the founder-CEO's entrepreneurial ingenuity and implying that O2's management had coordinated its functions appropriately and operated efficiently, as P2 had said. P3's 2020 annual report confirmed that O3 invested in information and communication technology for real-time information sharing to facilitate high cross-functional bonding of employees. This annual report information, including the write-off of the cost of the SAP application as an intangible asset, corroborated the information P3 shared.

### ***Correlation to the Literature***

Theme 1 findings support Wong's (2013) and Su and Baird's (2018) suggestions that management involvement positively affects product, service, process, organizational, and marketing innovations, resulting in organizational innovation mediating all the innovations except marketing innovation. Hoang et al. (2020) found that organizational leaders influenced innovation by creating a climate that allowed employee autonomy and promoted innovation, supporting Wong's position. While Carreiro and Oliveira (2019)

discovered that organizational leadership determined innovation adoption, Jia et al. (2018) noted that transformational leaders enhanced the innovation performance of their firms. F. Yang and Zhang (2018) observed that higher levels of top management support drove firms to become more innovative than their competitors, which Kherrazi (2020) explained in the way the design of management control systems channeled a firm's innovation capability into innovative performance.

### ***Correlation to the Conceptual Framework***

The findings derived from Theme 1 apply to Rogers' (1962) diffusion of innovation theory in that communicating the favorable attributes of innovation to members of a social system using credible channels over time increased the innovation's diffusion speed. The innovation characteristics, credible communication channels, time delay to adoption, and characteristics of the social system are the four elements of the theory (Rogers, 1962). Organizational management's authority over, and accountability for, resources drives managers to articulate and apply the four elements of the theory to their advantage.

Top management evaluates the innovation's relative advantage, complexity, and compatibility before adoption by observing and testing its suitability for use. After adoption, management selects credible communication channels for disseminating information to employees, as members of the social system, about the potential benefits of the innovation. Employees accept the innovation over time in line with the attitudes characteristic of each homophilous group or adopter category. As Rogers (1962)



postulated, the social system's structure and norms and its members' perception of the innovation's benefits determine the adoption rate under voluntary conditions.

The social system's characteristics define the adopter categories when the intention to use the innovation is voluntary. Because employees' intention to use the innovation is mandatory in an organizational setting (Chatterjee et al., 2021; Venkatesh et al., 2016), top management must reconfigure and realign resources to speed up innovation diffusion among employees, considering the need to capture first-mover value. Top management of O1, O2, and O3 had committed resources towards communicating the reconfigurations and realignments that organizational social structures, norms, and employees' perceptions required to ensure timely and successful innovation implementation, which aligns with Theme 1 of this study and with Rogers' (1962) diffusion of innovation theory.

## **Theme 2: Absorptive Capacity of Employees Provided the Knowledge for Building Capabilities**

The second theme that emerged from analyzing data collected from all three participants was that absorptive capacity of employees provided the knowledge for building capabilities. According to Teece (2019), organizational capabilities evolve from combining resources, exploiting complementary assets, and learning from the accumulated knowledge. All three participants testified that the success of their companies' innovations depended on functional and architectural competencies developed from organizational absorptive capacity. According to Kurniawan et al. (2020), absorptive capacity comprises knowledge acquisition, assimilation, and

application. All three participants shared that they developed their absorptive capacities by combining the knowledge gained from cumulative experience and learning, interfirm collaboration, hired or acquired competencies, research and development activities, and knowledge resources. Dzhengiz and Niesten (2020) advocated a sufficient balance between internal and diverse external sources of knowledge to build organizational capacity for making novel linkages and associations necessary for incremental and radical innovative performance. Theme 2 findings align with Fernald et al.'s (2017) suggestion that building innovative capability required a robust absorptive capacity.

### *Experience and Learning*

All three participants said that their companies' brands resulted from their capabilities evolving from their experiences and learning in the various sectors of the Nigerian economy. Moi and Cabiddu's (2021) agile marketing capability maturity assessments in the tourism industry confirmed participants' varying levels of learning, which aligns with Killen and Hunt's (2010, 2013) suggestions that absorptive capacity level depended on learning from the tacit accumulation of experiences and the codified and articulated knowledge and that organizational governance processes provided the channel for transforming them into capabilities. From P1's perspective, O1 leveraged technology to render banking services across Nigeria from one location for more than 3 years. P1 explained O1's experience and learning in these words:

So . . . having the ability to have that advantage of, the ability of hindsight because many of the existing incumbents obviously this is the environment they have always been in, you know, of course, I know we have the ability of hindsight

to say, oh, this is how these are the challenges that people have historically . . . faced. How do we ensure that, you know, we are protecting our business from such challenges?

P2 said that O2 had learned from its operations for over 23 years and evolved capabilities that built O2's retail brand in the following words: "One, we have the brand, the brand is 23 years old . . . It is a known brand, is a trusted brand, is tried and tested." Regarding O3's learning from experience and training, P3 noted that O3's new product development process evolved for over 120 years and used the PLM system to manage its projects. P3 said, "we normally spend a lot of resources and energy around communication because we have seen in the past that innovation, poorly communicated, is innovation that is bound to fail."

The organizational documents and artifacts retrieved from O1, O2, and O3 corroborated or explained all three participants' perspectives. O1's 2019 Annual Report explained that O1's capabilities in corporate banking, investment banking, advisory services, securities trading, wealth, and asset management were evolving through experience and learning with clients operating in the oil & gas sector, commodity & agricultural business, utility & infrastructure, fast-moving consumer goods, trade & services, and financial institutions. The management of O1 posted in the 2019 Annual Report the following text: "It is privately owned by Nigerian and foreign institutional investors who have distinguished themselves in areas such as financial services and the real sector over several decades." The document also contained information on the management's focus on updating employees' skills to meet future requirements.

O2's documents validated the information P2 volunteered about O2's management focus on employee development and periodic business model adjustment based on experience and learning. In the document, O2's CEO explained that some global supply chains partnered with O2 after evaluating its governance processes, proving that O2 had evolved capabilities by learning from experience and benchmarking international standards. O3's management's statements in the 2020 Annual Report indicated that P3 focused on experiential learning and functional and leadership capabilities development, which explained P3's revelation that the success of the new product development project depended on the deployment of the most competent employees.

### ***Interfirm Collaboration***

All three participants narrated the way O1, O2, and O3 engaged in acquiring knowledge from customers, suppliers, hires or acquired companies, and research institutions to develop their absorptive capacities towards building capabilities. While Prváková (2020) developed the conditions for knowledge flow across company boundaries, De Zubieta et al. (2015) identified university-industry partnerships, published research results, consultants, employment of new graduates and academic staff, customer and supplier or business-to-business customer relationships, and international collaboration as external sources of knowledge for developing absorptive capacity. Randhawa, West, et al.'s (2021) findings imply that organizations acquire knowledge to build absorptive capacities from the co-creators of innovation, restating Kefi and Bencherqui's (2014) proposition that interfirm cooperation increased absorptive

capacities for innovation from horizontal, vertical, or both relationships. While vertical relationships occurred between customers and suppliers, horizontal relationships were interfirm R&D agreements with firms in the same or other industries based on sectoral peculiarities.

P1 acknowledged that O1 built its absorptive capacity by acquiring knowledge from its technology suppliers to render banking services and share real-time information among functional units. An example of this finding is that the Nigeria Interbank Settlement System (NIBSS) transferred knowledge by integrating O1's interbank fund's transfer technologies to the national networks. According to P2, as a credible retail outlet for mobile devices and computers, O2 collaborated and learned from universities and its global supply chain suppliers in developing its absorptive capacity. In terms of O3, P3 observed that the company acquired knowledge to build its absorptive capacity from its overseas parent company, suppliers, and industry advocacy for economic policy consistency. O3's investment in collaborative technologies also implied that it had to learn from its suppliers and consultants to use the technologies.

Organizational documents and artifacts from O1, O2, and O3 either corroborated or amplified the information provided by all three participants. A portion of O1's Chairman's speech in the 2019 Annual Report read as follows: "Going forward, the Bank will continue to widen the scope of its partners in the technology ecosystem to provide a wide variety of options and innovative solutions to all our customers." The documents retrieved from O2 corroborated P2's perspectives that the mobile devices' OEMs entered into a business partnership with O2 after three weeks of screening. O3's 2020 Annual

Report amplified P3's observations in that "going forward, we shall continue to build our bench strength, enrich ways of working across the business and uphold strategic relationships with our internal and external partners." The same document also included a statement that O3 would continue to engage appropriate government agencies using industry platforms to ensure level ground for all players, corroborating P3's statement.

### ***Hiring and Acquiring Competencies***

While all three participants emphasized that their respective companies hired employees to fill skill gaps, only P3 mentioned that O3 acquired competencies through mergers and acquisitions to execute specific projects. While Leiva et al. (2017) found that hiring skilled people to fill competency gaps increased the absorptive capacity index of firms, Fernald et al. (2017) noted that building competencies from mergers and acquisitions enhanced absorptive capacity only at higher levels of the latter. P1 said that O1 recruited people with different backgrounds to complement its competencies for providing banking services to its customers. P1 stated:

You know, you can also filter out . . . the kind of . . . people that would fit into the organization given where the organization is going and you can also use that as criteria as well in ensuring that people they are bringing on board . . . will align with em the directions of the organization.

P2 pointed out that O2 recruited people from universities and other mature organizations to fill management positions and increase its absorptive capacity. P2 stated that, "We have a number of . . . alumni from . . . [named] Business School as head of departments." P3 mentioned that O3 acquired companies to fill its competency requirements for

implementing projects. In this regard, P3 said: “Can we acquire? Can we do what I call mergers and acquisition? Can it be a strategy for us? And we have had instances in the past, even in the present, where we have used this strategy.” P3 also emphasized that project success in O3 depended on the deployment of a team of skilled employees.

My understanding of the manner in which O1, O2, and O3 acquired the competencies they required to enhance their absorptive capacities was clearer after reviewing their organizational documents and artifacts. In the 2019 Annual Report, O1’s manager wrote: “As part of the Bank’s plan to scale its business during the year, it made several strategic hires to bolster its senior management ranks and foster the achievement of its corporate goals.” In O2’s documents, managers explained that O2 established a recruitment process that screened all applicants before employment, supporting P2’s perspective. O3’s management wrote in the 2020 Annual Report that “our people agenda holds firmly on the pillars of attraction, engagement, and retention of vibrant and resourceful employees. We continue to develop our people and equip them with necessary capabilities to thrive in tough economic terrains.”

### ***Research and Development Activities***

According to P1, O1 had a product development committee, referred to as service design, that management used to design banking services to meet each customer’s requirements. As a retail company, P2 said that O2 held a cross-functional meeting to design the services that met their customers’ requirements and secured their competitive advantage. P3 reported that O3 had been using its new product development team to develop new products based on project management principles. While O3 developed new

products as a manufacturing company, O1 and O2 used their cross-functional meetings or product development committees to design services for their customers. While O1, O2, and O3 engaged in applied or exploitative research, only O3 had the opportunity to engage in basic or exploratory research through its global research facilities.

According to Kurniawan et al. (2020), organizations should engage in exploratory and exploitative research to balance radical and incremental innovation capabilities to sustain quality performance. Randhawa et al.'s (2021) suggestions that firms develop business models that support ambidextrous market orientation align with Tushman and O'Reilly's (1996) findings that organizations pursuing innovative performance and competitive advantage should blend diverse external knowledge with internal knowledge to enhance their ambidexterity and absorptive capacity. The organizational documents of O3 amplified the perspectives of P3 as per O3's management posting in the 2020 Annual Report: "The Group's research and development efforts, supported through licensing and technical services agreement with overseas associated companies in [O3's] group are designed to ensure a constant program of product improvement and new product introduction." The documents retrieved from O1 and O2 confirmed that their cross-functional management teams designed the services the companies rendered to their customers.

### ***Knowledge Resources***

All three participants discussed their unique brands as the outcome of their managements' creative effort in configuring and aligning resources to address the external environment to gain a competitive advantage. Patents, copyrights, and



trademarks are knowledge resources, creations of the mind, or intellectual property rights conferring brand equity that companies leverage to sustain competitive advantage (Bican et al., 2017). Bican et al. (2017) described intellectual property rights as inventions; literary and artistic works; designs; and symbols, names, and images that human minds created for commercial application. While the trademarks of O1, O2, and O3 in symbols, images, and colors epitomized their unique brands, O3's copyrights and patents provided vantage capabilities for capturing value. In the organizational documents for the three participating organizations, their vision and mission statements, shared values, strategic objectives, and trademarks portrayed their respective brands. The three participating organizations developed their brand names from the absorptive capacities underlying their knowledge resources and capabilities.

### ***Correlation to the Literature***

Theme 2 findings align with Cohen and Levinthal's (1990) absorptive capacity theory and Teece's (2007, 2019) dynamic capabilities theory. Miroshnychenko et al.'s (2021) postulation on developing potential and realized absorptive capacities to increase business model flexibility supports Cohen & Levinthal's study findings that an organization's absorptive capacity provides the knowledge for reconfiguring and realigning resources to address changes in the external environment and sustain competitive advantage. Teece (2019) suggested that organizations develop the behavioral orientation to quickly reconfigure and realign resources to address environmental changes before capabilities become outdated. Fernald et al. (2017) noted that acquisitions of

pharmaceutical companies and alliances with biotech companies only had a positive effect on innovation performance at sufficiently high levels of absorptive capacity.

Mahmood and Mubarik (2020) indicated that despite the direct influence of intellectual capital on a firm's R&D ambidexterity, the absorptive capacity also mediated the relationship. Duan et al. (2020) suggested that realized absorptive capacity mediated the influence of the available slack on the innovative performance of high-tech manufacturing firms and that potential slack influenced their innovative performance through potential and realized absorptive capacities. In support of Duan et al.'s findings, Miroshnychenko et al. (2021) proposed that potential absorptive capacity determined both business model innovation and strategic flexibility while realized absorptive capacity increased a firm's strategic flexibility. Bican et al. (2017) noted that absorptive capacity determined the extent to which a firm captured value from intellectual property rights, such as patents, copyrights, and trademarks. S. Y. Yang and Tsai (2019) found that cross-functional integration mediated the relationship between absorptive capacity and innovation and that stronger customer orientation strengthened the relationship. Theme 2 findings align with Cohen and Levinthal's (1990) and Miroshnychenko et al.'s concepts of absorptive capacity and Teece's (2007, 2019) dynamic capability theory, suggesting that updating a firm's absorptive capacity was a critical driver of innovative performance.

### ***Correlation to the Conceptual Framework***

Theme 2 findings support Rogers' (1962) diffusion of innovation theory in that innovation diffuses faster in social systems that communicate the value of the innovation through credible channels over time among its members. Absorptive capacity refers to

acquiring, accumulating, and transforming knowledge into organizational ability to recognize strategically valuable information, integrate knowledge into governance processes, and use knowledge for innovative performance (Cohen & Levinthal, 1990; Miroshnychenko et al., 2021). Organizations need to develop their absorptive capacities to facilitate innovation diffusion among their employees (S. Lim & Ok, 2021). When developing the diffusion of innovation theory, Rogers assumed that an individual's intention to use innovation was voluntary, the use of innovations in organizations is not only mandatory but also more complex for employees (Hagsall et al., 2019).

Managing innovation in an organization is complex because of its ramifications that transcend organizational context factors requiring adaptation. Reforming the social structure, norms, and employee attitudes increases the diffusion of innovation involving processes, products, services, and business models, which represent organizational complexities (Abdi et al., 2018). For employees to contribute more effectively to innovative performance, they must understand the dynamics of the contemporary business environment and the complexities they impose on innovation processes (Hagsall et al., 2019). Developing absorptive capacity, involving employees' knowledge and skills enhancement to recognize strategically valuable information, is critical to the innovation diffusion process. Theme 2 findings fundamentally relate to Rogers' diffusion of innovation theory but realistically align with Venkatesh et al.'s (2016) UTAUT2 and Mukred et al.'s (2019) combined UTAUT1 and technology-organization-environment (T-O-E) framework, integrating individual and organizational contexts influencing the intention to use technology.

### **Theme 3: Implementation of Multiple Innovations Allowed Business Leaders to Reconfigure Resources Into Capabilities**

The third theme that emerged from the analysis of data obtained from all three participants was that the implementation of multiple innovations allowed business leaders to reconfigure resources into capabilities. This theme supports Wang and Ahmed's (2007), Kodama's (2017), and Čirjevskis' (2021) study findings in that even though organizations configured and aligned their resources into core capabilities, they also needed dynamic capabilities to renew, reconfigure, and re-create resources and core capabilities to address environmental changes. While Wang and Ahmed ranked primary resources as zero-order capabilities, core capabilities as first-order, and dynamic capabilities as second-order, Kodama and Teece (2019) classified resources into ordinary and dynamic capabilities. Wang and Ahmed, Kodama, Teece, and Čirjevskis emphasized that resources became capabilities when organizational management reconfigured and realigned them to address changes in the external environment, making them exhibit strategic value, rarity, inimitability, and nonsubstitutability.

Theme 3 also supports Damanpour et al.'s (2009), Arranz et al.'s (2019), García-Piqueres et al.'s (2020), Battisti and Stoneman's (2021), and Teece's (2019) suggestions that complementary multiple innovations transformed resources into difficult-to-imitate and dynamic capabilities to sustain competitive advantage. The complementarity of multiple innovations transforms resources into core and dynamic capabilities and increases organizational productivity (Aldieri et al., 2021; Arranz et al., 2019). The three organizations that participated in this study implemented organizational, service, process,

and business model innovations to adapt to the Nigerian business environment and sustain competitive advantage. Only the manufacturing company (O3) implemented product innovation, while O2 provided market intelligence to original equipment-manufacturer supply chain partners for product innovation.

### ***Organizational Innovation***

All three participants shared their companies' efforts to entrench innovation culture by implementing organizational innovation involving new approaches in business practices, workplace organization, and external relations. Damanpour (2014), Arranz et al. (2019), and Pauget and Wald (2018) agreed that organizational innovation involves adapting organizational structures, administrative systems, and management practices to fulfill innovation objectives and support organizational characteristics for delivering value. Merono-Cerdan and Lopez-Nicolas (2017) described organizational innovation as new methods for organizing routines and procedures for work, structuring and integrating functions and decision-making, and organizing relations with other organizations agreeing with Damanpour's concept.

Based on the data collected from P1 and P3, their respective companies (O1 and O3) deployed information and communication technology infrastructure to support information sharing and collaboration among employees. P1 spoke about building an innovation culture in the following words:

So the whole . . . idea of the bank, the whole premise of the bank was innovation.

And once that was the initial premise of the bank, it permeated everything else

that the bank did . . . In terms of the software that it went after, the kind of people that it employed, the business practices at work, and how it does things.

P1 also said that O1 has an open culture that encourages new ideas from employees in forums, such as cross-functional and town hall meetings, “you know . . . having a culture of openness, having a culture . . . where people are free to talk and also . . . having staff that are innovative-minded and forward-looking and progressive.”

In a similar revelation, P2 spoke about O2’s management focus on building an innovation culture in this statement:

So the culture is civil, the culture is embracing, is forward-thinking kind of culture . . . that we have here very smart people . . . so there is no resistance. We are looking out for the next thing. What is the next innovation? What is the next . . . strategy that cannot be copied by competition?

P3 pointed out O3’s efforts to build an innovation culture in the following words:

In terms of changing the structure . . . we have moved from functional structure to what we call matrix structure, trying to make sure we . . . improve communication and improve decision-making process, making sure that our time to market is faster and better . . . We have an aging workforce . . . one of the difficulties that come with that is that people have a mindset . . . that they have built over the years. Those mindset is of the opinion that this is the way we have always done it and we don’t think there is any better way to do it . . . And we try to use them [innovation champions] to work on those guys with the mentality of inflexibility and rigidity. So, mental shift is always important if we want to drive innovation.

P3 further revealed that O3's management supported this behavioral orientation towards innovation and structural changes with collaborative technologies, such as S&OP, SAP, and PLM applications.

Organizational documents retrieved from all three participating organizations either corroborated or increased the contextual understanding of all three participants' perspectives on the effort of their companies to implement organizational innovation. An example is O1's management confirmation in its 2019 Annual Report that it provided formal and informal opportunities for employees to participate on issues affecting the bank and its welfare. The management of O2 noted the refreshing family atmosphere of trust it created for employees in the document I obtained from O2. Finally, O3's management wrote in its 2020 Annual Report that it operated an open-door policy giving employees the freedom to challenge the status quo and contribute to decisions.

### ***Product Innovation***

Product innovation was a common response from all three participants. P1 observed that O1 rendered banking services, P2 spoke about O2's omnichannel retail store services, and P3 said that O3 manufactured physical products. While O3 engaged in product innovation, the other two companies implemented service innovations. According to Edwards-Schachter (2018), product innovation refers to a significant improvement in a product's characteristics or intended uses. Haleem et al. (2018) suggested that product innovation entails product improvement in the form of a new accessory or feature differentiating it from the competition and enhancing market position, brand name, and market share. Aldieri et al. (2021) described product

innovation as introducing products with new features or uses, in line with the suggestions of Haleem et al. and Edwards-Schachter.

According to P2, O2's management provided market intelligence to the OEMs to integrate dual-sim and torchlight into mobile devices to increase customer value in the local market. P3 revealed that O3 deployed PLM, S&OP, and SAP applications to manage its new product development processes. Providing market intelligence to the OEMs for integrating dual-sim, torchlight, and secondary school ebook-reader features into mobile devices, as O2's management reported in the organizational document, confirmed and extended P2's explanations. In the 2020 Annual Report, O3's management made the following statement increasing the contextual understanding of P3's views of its products:

The principal activities of the group are the manufacture, distribution and sale of a wide range of consumer products and home appliances through owned depots. These products are leading brand names throughout the country in detergent, soap, cosmetics, refrigerators, freezers and air-conditioners.

The management of O3 further explained its company's production capacity in the 2018 Strategic Report in the following words:

We manufacture products throughout Europe, Asia and Africa. We source our products through a combination of our own factories, whilst also outsourcing production to carefully selected third party manufacturers. In this way we ensure that we maximize efficiencies and can flex our production output to meet our future short- to medium-term needs.



O3 had a flexible production capacity that could support future customer demand.

### ***Service Innovation***

From all three participants' revelations, O1 rendered banking services; O2 provided omnichannel retail, computer, and mobile devices repair services; and O3 performed product development, logistics, and manufacturing services. The three participating organizations engaged in service innovations, among other types of innovations, to adapt to the deficiencies in the Nigerian business environment and to sustain profitability. Luo et al. (2019) described service innovation as a series of innovation activities centered on product conception, research, development, and production processes to commercialize a product with features that do the jobs of customers and sustain a competitive advantage. Edwards-Schachter (2018) extended Luo et al.'s service innovation concept to include transport and logistics, information, knowledge-based services, food, healthcare, and education, among others, which are intangible, heterogeneous, inseparable, and perishable. For service innovation to improve customer experience and sustain a competitive advantage, Jacobs and Chase (2018) identified three primary service designs for serving customers, which are the production line, self-service, and personal attention or face-to-face approaches. Vink et al. (2021) echoed Jacobs and Chase's postulation in suggesting that stakeholders in a service ecosystem should co-create services by integrating customer preferences to the extent technological capabilities can support them.

Based on the information P1 provided, O1 cocreated digital wholesale and investment banking services with corporate customers using its cross-functional product

development committee. According to P2, O2's services included having online and traditional store sales, delivering online orders to customers, and repairing computers and mobile devices. O2 outsourced the inward transportation of products from its suppliers to its warehouses. As a manufacturing company, O3 engaged in production, warehousing, and logistics services, as P3 had explained. The documents I obtained from all three participating organizations contained information either confirming or supplementing the views of all three participants concerning the service innovations they implemented. In the 2019 Annual Report, O1's management described O1's banking services in the following words:

Our products and services cover corporate banking, investment banking, advisory services, securities, wealth & asset management. We target private and public sector clients in addition to private individuals. Specifically, we focus on the oil & gas sector, commodity & agricultural business, utility & infrastructure, fast moving consumer goods, trade & services and financial institutions.

This statement in the 2019 Annual Report corroborated P1's view that O1's cross-functional product development committee cocreated the banking services with each customer. The information in O2's document revealing that the company commenced business with computer repairs supplemented P2's disclosure that every O2's store had a computer/mobile device repair unit. The management of O3 declared the service components of O3's operations in the 2020 Annual Report in these words:

The Group has 6 distribution depots across the country with over 1000 distributors . . . The principal activities of the group are the manufacture,

distribution and sale of a wide range of consumer products and home appliances through owned depots . . . The group also distributes products of . . . [three Nigerian affiliate companies].

In the 2018 Strategic Report, the management justified the insourcing of logistics services in this statement:

An example of this is in Nigeria where there are very few supermarket chains and consumers shop in a mix of open “wet“ markets, individual traders and small stores. In recent years, to successfully serve the region’s vast geography and respond to the needs of the consumer and the market traders, we have developed a comprehensive active distributor network. This means our factories or distribution centers dispatch direct to a network of approved active distributors, who then supply locally to smaller retailers and wet markets.

### ***Process Innovation***

P1 and P3 said that their respective companies invested in technologies that facilitated cross-functional collaboration and sharing of real-time information among employees in developing products or designing services for the customers. P2 mentioned that O2 used its online and traditional stores to sell products to customers. According to Scafuto et al. (2018), process innovation entailed carrying out an activity in a new way requiring specific change tools to transform business processes towards improving internal practices, promoting timely resource deployment that increased efficiency, and reducing operational costs. Aldieri et al. (2021) defined process innovation as introducing new production or delivery techniques, which may involve deploying new equipment and

software to increase operational speed, decrease unit costs, improve quality, and produce a significantly improved product or service.

According to P1, O1 deployed technologies to support cross-functional collaboration among employees in designing banking services to serve customers from one location. P2 explained that the suppliers delivered O2's product orders directly to its warehouses and customers ordered products online and picked them up in a specified location or received them at a chosen address. About O2's business processes, P2 said,

So we collaborated with some foreign partners to introduce buy-now-pay-later, which is . . . credit-based buying system. So you buy now you spread your payment for six months. There is another one you buy now you spread your payment in 12 months.

Technology drove online sales and provided the mechanism for capturing value through credit-based or direct purchases in O2. In O3's case, P3 noted that the management deployed PLM, S&OP, and SAP applications to ensure real-time information sharing, support cross-functional collaboration, and drive its new product development processes to increase operational speed, efficiency, and product quality in the global supply chain.

O1's management's posting in the 2019 Annual Report that the company invested in information and communication infrastructure to support employees' collaboration and drive digital banking services to its customers corroborated P1's narratives. O2's website hosted its online sales processes, as P2 had said. The management of O3 posted the following statement in the 2020 Annual Report, "going forward, we shall continue to drive business processes optimization, distribution network simplification, building

reliable manufacturing infrastructure, sourcing strategies and reduction in lead times to increase our speed to market.” This statement elaborated P3’s perspective on the deployment of technology-driven processes.

### ***Business Model Innovation***

The three participants said that their respective companies adopted business models that avoided some systemic risks or threats in exploiting opportunities in the face of other unavoidable environmental deficiencies. Rub et al. (2018) and Christensen et al. (2016) agreed that a business model is the design or architecture of the value creation, delivery, and capture mechanisms an organization employs. A business model is the mechanism by which a firm delivers value to customers, entices customers to pay for value, and converts those payments to profit (Franco et al., 2021; Hacklin et al., 2018). According to Foss and Saebi (2017), combining value creation, delivery, and appropriation mechanisms creates valuable resources that enhance a firm’s potential to capture more value than the competition. Franco et al.’s (2021) argument that the extant business model plays a significant role in shaping dynamic capability for business model innovation and that both co-evolve and mutually influence each other explains Foss and Saebi’s postulation as a dynamic process and supports Christensen et al.’s (2016) three-stage business model evolution. According to Christensen et al., creating customers, developing a customer base, and increasing efficiency are the evolutionary stages of a business model. Creating customers entails using the firm’s flexibility at inception to propose value to customers. The emergence of new processes and scaling operations to

meet growing demand expands the customer base. Process reengineering and product redesigning enhance efficiency and reduce costs.

All three participants emphasized their companies' respective business-model adapting operations to the systemic risks inherent in the deficient Nigeria's business environment. P1 shared that O1 used technology to provide wholesale and investment banking services from one location to serve customers across Nigeria. This business model avoided costs associated with operating a physical branch network that replicates public social services improvisation in every location. P2 elaborated on O2's business model embodying 72 sales and services stores, online sales platform, suppliers' direct delivery of products to O2's warehouses, membership of global supply chains, and franchising stores to increase outlets across Nigeria, including territories prone to political violence. Shipments of products directly to warehouses helped O2 to avoid costs associated with logistic risks, as P2 said,

Our unique business model incorporates our new strategy to help us create shared, sustainable value for all our stakeholders . . . So . . . we make purchases from China, Dubai, Hong Kong and the manufacturers like techno, . . . Samsung, . . . they bring in the product for us . . . We receive them in our warehouse. We don't bother ourselves with airport clearance . . . No . . . cargo, no. We don't bother with that. They bring it to our warehouse.

P3 said that O3 operated as a manufacturing member of a global supply chain, sourcing its raw materials, selling its products locally and abroad, and generating its electricity to sustain production and fulfill customer demand. According to P3, O3 used real-time

collaborative technologies in all core functions, including new product development processes, to increase process speed, operational efficiency, and product and service quality.

The information I collected from the organizational documents of the three participating companies confirmed or supplemented the data collected from all three participants. In O1's 2019 Annual Report, the management posted O1's only office address in Nigeria and emphasized building the information technology infrastructure to support digital banking services, corroborating P1's claims of leveraging technology to operate from one location. O2's documentary information increased the contextual understanding of P2's perspective on the management's rationale in franchising its stores in the following words:

He (CEO) saw franchises as a cost-effective means of expanding his reach . . . he considered it a safe way to give O2 a presence in regions of the country that were more difficult for him to reach directly. In recent years, terrorist attacks had become common in the northern states. Nonindigenous were frequently the first point of attack and, as a result, many major businesses run by nonindigenous of the north, had pulled out of those states. Franchisees originating from those states represented a safer strategy to reach those regions.

The same document provided information that O2's policy limited franchising to 30% of its stores and that O2's supply-chain partners or OEMs facilitated its capabilities development. In the CEO's documented statement:

[O2's] growth drew the attention of original equipment manufacturers . . . like Apple, Blackberry, Samsung, Nokia and LG. The volume of sales they were making through [O2] increased their interest in developing a closer working relationship with the company.

In confirming O3's supply chain business model, as P3 had said, its management wrote the following statement in the 2020 Annual Report:

During the financial year, our focus remained on building a world class supply chain despite the challenges posed by the COVID-19 Pandemic. Going forward, we shall continue to drive business processes optimization, distribution network simplification, building reliable manufacturing infrastructure, sourcing strategies and reduction in lead times to increase our speed to market. Building a flexible, agile, world-class supply chain will continue to be our ultimate goal.

The management stated in the 2018 Strategic Report that O3 outsourced manufacturing to third parties to complement its production capacity in the supply chain.

### ***Correlation to the Literature***

Theme 3, consisting of implementation of complementary multiple innovations allows business leaders to reconfigure and realign resources into capabilities, supports the studies conducted by Arranz et al. (2019), García-Piqueres et al. (2020), and Battisti and Stoneman (2021), proposing that the complementarity of multiple innovations generates positive synergies, leading to efficiency and system-wide cost reduction. Scafuto et al. (2018) found that process innovation increased the speed and efficiency of production and delivery of products or services, corroborating Arranz et al.'s claim that



complementary innovations increased a firm's performance. Gagliardi et al. (2018) proposed that innovation types must necessarily go together for a successful innovation, which aligns with Karabulut's (2015) suggestion that combining innovation types explained customer performance more than a firm's financial, internal business processes, and learning and growth performances. Aldieri et al.'s (2021) explanations of the way product or service, process, organizational, and marketing innovations complemented each other to increase a firm's productivity support Gagliardi et al.'s and Lichtenthaler's (2016) study findings. This study's findings related to Theme 3 that implementation of complementary multiple innovations allows business leaders to reconfigure and realign resources into capabilities support the studies of Gagliardi et al., Scafuto et al., Arranz et al., and Aldieri et al., confirming that joint innovations built organizational capabilities to sustain a competitive advantage.

### ***Correlation to the Conceptual Framework***

Theme 3, consisting of implementation of complementary multiple innovations allows business leaders to reconfigure and realign resources into capabilities, supports Rogers' (1962) diffusion of innovation theory in that communicating an innovation through credible channels over time increased the speed of its diffusion among members of a social system. The innovation characteristics communicated to the social system members to induce adoption are the innovation's perceived relative advantage, complexity, and compatibility determined through trial and observation (Rogers, 1962). Demonstrating, trying, and observing one innovation could clarify and simplify its complexity, influence the incorporation of other compatible innovations to maximize its

benefits, enhance its perceived relative advantage, and motivate adoption (Rogers, 1962, 2003).

Battisti and Stoneman (2021) agreed with Karabulut (2015) that a process innovation reduced unit production or delivery costs in implementing product innovation, thereby incentivizing the joint use of the innovations. Aldieri et al. (2021) and Battisti and Stoneman support Karabulut's findings that because a new product may require a new production method, organizational management implemented production process innovation along with product innovation to enhance a product's value proposition to customers. Adopting one innovation is not as beneficial as implementing complementary multiple innovations that generate positive synergies and reduce costs because the latter increases the former's relative advantage (Battisti & Stoneman, 2021). An organization's social system structure, norms, and employees' negative attitudes towards change need organizational innovation to build an innovation culture entrenching behavioral orientation towards innovation and facilitating future absorption of complementary innovations (Anzola-Roman et al., 2018).

The arguments of Battisti and Stoneman (2021), Anzola-Roman et al. (2018), and Aldieri et al. (2021) that joint innovations increased operational synergy and organizational performance validated the applicability of Rogers' (1962) diffusion of innovation theory to organizations. Battisti and Stoneman validated Battisti and Iona's (2009) proposition that complementarities among innovations increased the pay-off from adoption and that firms adopt sets of complementary innovations to speed up innovation diffusion within an organization's social system, in line with Rogers' (2003) suggestion.

Anzola-Roman et al. found that management implemented organizational innovation to provide a fertile ground for introducing other innovations, such as process and product innovations, supporting Battisti and Iona's findings. Theme 3, implementation of complementary multiple innovations allows business leaders to reconfigure and realign resources into capabilities, is the objective of diffusion of innovation in an organizational setting. Theme 3 justifies the application of Rogers' diffusion of innovation theory to organizations.

#### **Theme 4: The Deficient National Innovation Ecosystem Inhibited Innovations**

Theme 4 is that the deficient national innovation ecosystem inhibited innovation in all three companies participating in this study. The information I obtained from the three participants and their companies' documents confirmed that their respective management teams adopted business models to avoid and, at the same time, optimize systemic risks to exploit the opportunities in the Nigerian business environment. Each company's management team implemented product or service, organizational, and process innovations to reconfigure and realign its resources into capabilities embedded in its business model architecture for creating, delivering, and capturing value.

The stakeholders facilitating the development, diffusion, and use of knowledge for innovation in an economy, do so from the dimensions of institutions, infrastructure, human capital and research, market sophistication, and business sophistication (Dutta et al., 2020; World Intellectual Property Organization [WIPO], 2020). Alnafrah and Mouselli (2020) identified business environment, human capital, science and technology governance, technological infrastructure, international cooperation in innovation,

research and development, and linkages between the business and educational sectors as the components of the national innovation system of the Baltic countries. Alnafrah and Mouselli's suggestion supports the WIPO's and Jankowska et al.'s (2017) categories of the actors facilitating innovation diffusion in an economy in the following five systemic roles: (a) institutions ensure that the political, regulatory, and business environments support businesses; (b) human capital and research contribute new knowledge from education, tertiary education, and research and development activities; (c) infrastructure, comprising information and communication technology, general infrastructure, and ecological sustainability activities, support technology use and environmental safety activities; (d) market sophistication refers to the scale of credit, investments, trade, and competition underlying economic activities; and (e) business sophistication is the extent of availability of knowledge workers, innovation linkages among firms, and knowledge absorption capacity available to drive innovation.

According to Dutta et al. (2020) and Menna et al. (2019), these five pillars capture the elements of the national economy that enable innovative activities and measure the innovative capability of a country. The absence of the same elements in an economy weakens and limits innovative capability and inhibits innovation diffusion (Lee et al., 2021).

Nigeria's consistent poor performance in the global innovation index (GII) scores measuring its innovation capability over several years confirms the deficiency of its innovation ecosystem (WIPO, 2020). In 2018 and 2019, Nigeria was 118<sup>th</sup> and 114<sup>th</sup> out of 126 and 129 countries. In 2020, Nigeria's GII scores computed from these parameters

placed Nigeria 117<sup>th</sup> with 20%, while Switzerland had the best score of 63% out of 131 countries. In contrast, Singapore, The Republic of Korea, Norway, Hong Kong, and Sweden recorded the highest 2020 GII scores in institutions, human capital and research, infrastructure, market sophistication, and business sophistication, in that order (see Table 1).

**Table 1**

*Comparing Nigeria's 2020 GII Scores With Those of the Best Countries*

Description	Institutions	Human capital and research	Infrastructure	Market sophistication	Business sophistication
Nigeria's score %	51.10	11.20	21.30	41.60	23.80
Nigeria's position	110	121	124	102	75
Best country	Singapore	Republic of Korea	Norway	Hong Kong	Sweden
Best country's score %	94.80	65.20	64.60	86.50	68
Best country's position	1 <sup>st</sup>	1 <sup>st</sup>	1 <sup>st</sup>	1 <sup>st</sup>	1 <sup>st</sup>

*Note.* Adapted from *Global Innovation Index 2020*, by World Intellectual Property

Organization, 2020 (<https://www.wipo.int/portal/en/index.html>). In the public domain.

Comparing Nigeria's GII scores with those of the highest-scoring countries over several years confirms the deficiencies in Nigeria's innovation ecosystem, posing risks to local firms and justifying their efforts to adapt and gain international competitiveness. All three participants and their companies' documentary information support WIPO's (2020) GII scores in confirming Nigeria's business environment deficiencies. The following three subthemes emerging from data analysis reflect the three companies' efforts to adapt to the deficiencies in their operating environment: (a) adopting systemic risk-avoidance

innovations, (b) adopting systemic risk-optimizing innovations, and (c) adopting both systemic risk-avoidance and systemic risk-optimizing innovations.

### ***Adopting Systemic Risk-Avoidance Innovations***

All three participants narrated the way their respective companies adopted innovations to avoid some systemic risks in exploiting opportunities. Based on the GII measurements, the WIPO (2020) confirmed that the deficiencies in institutions, infrastructure, human capital and research, market sophistication, and business sophistication in an economy created systemic risks for businesses. For firms to navigate the threats in their external environment, Miroshnychenko et al. (2021) suggested that potential and realized absorptive capacities are prerequisites to firms' business model innovation and strategic flexibility. In support of Miroshnychenko et al., Cirjevskis (2021) proposed that companies develop their dynamic capabilities to continually update their absorptive capacities and renew resources and capabilities to drive prompt response to changes in the external environment to sustain a competitive advantage. In response to Nigeria's innovation ecosystem deficiencies, the three companies that participated in this study adopted innovations avoiding and optimizing systemic risks, in line with Cirjevskis' and Miroshnychenko et al.'s suggestions.

P1's revelation that O1 adopted innovations leveraging technology to render banking services from one location to its customers across Nigeria to avoid costs associated with having an extended branches' network was an example of risk-avoidance. Establishing several branches across Nigeria entails replicating and maintaining buildings, electricity generators, vaults, cash movement vehicles, automatic teller

machines with battery support, and physical security in every location with cost implications. P2 revealed that O2's management adopted the franchising business model to extend its stores to all parts of Nigeria to ensure proximity to customers and subsequently attract global supply chains partnerships, among other advantages. P2 also explained that O2 collaborated with its suppliers to deliver merchandise directly to its warehouses to avoid logistics risks. Logistics risks involved costs associated with poor road transportation infrastructure; delays in clearing goods at the ports; general insecurity, including banditry and kidnapping; and product quality issues during transit. P3 explained that O3 avoided the inadequate and erratic power supply in Nigeria by generating its own electricity, even though that increased manufacturing costs.

The information contained in the organizational documents of O1 and O2 confirmed or enriched the context of the respective participants' perspectives. O1's documentary information corroborated the technology-driven, one-office business model P1 had explained. In the organizational documentation of O2, the management emphasized professionalism and merit in recruiting personnel and exemplified its disdain for corruption in its operating business model. O2's management used the franchising business model to avoid business disruptions arising from ethno-political violence by franchising its stores to indigenous franchisees in prone communities. In O3's 2018 Strategic Report, the management confirmed avoiding the disruptive effect of inadequate and epileptic power supply by generating its own electricity to stabilize factory throughput, as P3 had narrated.

### *Adopting Systemic Risk-Optimizing Innovations*

Each company participating in this study differentiated its services or products by avoiding or optimizing systemic risks in exploiting opportunities. In support of this strategy, Pulka et al. (2021) found that the external environment moderated the impact of entrepreneurial orientation and competence and of government business support on small and medium enterprises' performance in Nigeria. Zinecker et al.'s (2021) study findings that legislative changes, public administrative sanctions for violations, labor market policies, and public education policy occurring in the external environment affected investment activities support Prajogo's (2016) explanation that the attributes of a business environment moderated the effectiveness of strategies in producing a competitive advantage.

By using technology to drive banking services, the management of O1 exemplified the optimization of the systemic risks arising from inadequate infrastructural and institutional services. Operating from one location did not eliminate all systemic risks but only minimized the scale of improvising deficient innovation-enabling services. In O2, the management continued its traditional and online store activities despite deficiencies in infrastructural and institutional services while using its credit-based sales processes to address declining consumer income. Despite the unstable supply of power and internet services, O2 continued with the repairs of computers and mobile devices. Logistics support for online sales delivery to customers also continued in the face of poor transportation infrastructure and pervasive insecurity. P3 shared that the management deployed O3's resources to resolve systemic risks in the following ways that advanced its



operations in the global supply chain: (a) generated electricity to stabilize factory throughput and fulfill products orders because the national electricity supply was unreliable and short of factory requirement, (b) monitored the reliability of national electricity supply to subscribe when it was sufficiently available to reduce the 25% share of electricity generation in the manufacturing cost, (c) negotiated economic policy support and consistency through the industry advocacy group to co-create guidelines with the government to prevent erratic government policies from disrupting activities in the manufacturing sector, (d) pruned project costs to the budget limits in response to the escalating cost of imported inputs due to the unabated local currency depreciation, and (e) transported its products to distributors across Nigeria through in-sourced logistics services due to the absence of supermarket chains.

The information in the documents of each of the three participating companies corroborated the views of the respective participants on optimizing systemic risks. O1's management postings in the 2019 Annual Report confirmed their inclination towards optimizing systemic risks in exploiting opportunities in the Nigerian business environment, despite avoiding some systemic challenges as the following statement implied, "following the successful generation of momentum in our business in 2018 . . . The Bank was able to achieve this [growing in scale] as it delivered major growth across all parameters though below the budgeted figures." I learned from O2's document that management exhibited the drive to grow its company despite crippling systemic obstacles, as explained in the following statement:

[O2] became a major attraction for international mobile phone brands that wanted to enter the Nigerian market. It not only had a wide retail network but also a high volume of die-hard loyal customers . . . It was frequent to find customers willingly waiting on a queue for attention. They preferred to queue in [O2] rather than go to other stores, where they could get quicker service but risked being cheated.

In the 2019 and 2020 Annual Reports, O3's management's statement on the effects of delays in clearing raw materials at the Nigerian ports, closure of Nigeria's borders, unabated local currency depreciation, and declined income of consumers on the prices of fast-moving consumer goods and electrical products, enriched P3's perspective.

These systemic challenges increased costs and, at the same time, reduced the purchasing power of consumers, resulting in a decrease in O3's customer base and in an obligated reduction of its products' prices. Despite avoiding some systemic risks and optimizing others, the three organizations that participated in this study continued to exploit opportunities in the challenging environment. The three participating companies' efforts to maintain operational resilience in the face of these systemic risks increased costs, limited the firms' opportunities, and weakened their abilities to engage in innovative activities to sustain international competitiveness.

### ***Adopting Systemic Risk-Avoidance and Systemic Risk-Optimizing Innovations***

All three participants implied in the information they provided that their companies implemented organizational, process, product, and service innovations to adapt to the deficient business environment and shaped the business models for avoiding

or optimizing systemic risks in exploiting opportunities. The information collected from the documents of the three participating companies not only corroborated but also increased the contextual understanding of all three participants' perspectives in pointing out that their management teams optimized systemic risks they could not avoid if they had to remain in business. The process of avoiding and optimizing systemic risks weakened the abilities and limited the opportunities to engage in innovative activities.

Because O1 and O2 rendered services and had optimally committed resources to build relationships with technology partners than fixed assets, they were more lean, dynamic, and flexible to avoid systemic risks than O3. Although transforming, O3 exhibited less dynamism and flexibility in avoiding systemic risks because of its legacy assets and resources accumulated for over 120 years. Having deployed these assets and resources to exploit opportunities and capture value in the past, O3's cumulative successes provided incentives to remain under the burden of outdated assets with diminished strategic values. These outdated assets included the organizational structure, employees' competencies, work processes, plant, and equipment. The result was bureaucracy and inflexibility in operations, leading to the inability to avoid systemic risks. O3 was more resilient in optimizing systemic risks than O1 and O2 due to its leaders learning from cumulative experience and the collaborative support of the global supply chain partners.

### ***Correlation to the Literature***

Theme 4, the deficient national innovation ecosystem inhibited innovation, is the corollary of the postulations of Freeman (2002), Lundvall (2016), Jankowska et al.

(2017), and Menna et al. (2019) that national innovation system actors, both private and public, interacted to facilitate interfirm innovation diffusion in an economy, leading to business and economic growth. Further to these postulations, the WIPO (2020) identified the facilitating role of stakeholders in institutions, human capital and research, infrastructure, market sophistication, and business sophistication as enablers of intrafirm and interfirm innovation diffusion in an economy. The absence of these enablers in an economy inhibited intrafirm and interfirm innovation diffusion (Ahmad et al., 2019; Lee et al., 2021).

Menna et al. (2019) empirically tested 5 years of developed countries' GII input and output data and confirmed that developed countries' national innovation ecosystem elements were sufficiently advanced to support hi-tech, information and communication technology production and export. Supporting Menna et al.'s findings, Zabala-Iturriagoitia et al. (2021) distinguished between innovation capacity and innovation efficiency, arguing that innovation efficiency explained the way countries used inputs to produce outputs, while innovation capacity explained the scale or size of an innovation system. Zabala-Iturriagoitia et al.'s postulation support Schot and Steinmueller's (2018) suggestion that the catch-up countries should promulgate policies to avoid playing catch up to the development model of the developed countries. According to Schot and Steinmueller, the policies should cover the following areas: (a) integration of science, technology, and innovation policy to address market failure in the private provision of new knowledge; (b) calibration of the national systems of innovation to create and commercialize knowledge; and (c) implementation of transformative change to address

the pervasive social and environmental challenges as enshrined in the sustainable development goals. Theme 4 aligns with the WIPO's (2020) GII and Menna et al.'s findings, confirming that while the developed innovation ecosystems of the technologically advanced countries enabled high-tech innovations, the deficient innovation ecosystems of developing countries inhibited innovation.

### ***Correlation to the Conceptual Framework***

Theme 4 findings, the deficient national innovation ecosystem inhibited innovation, support the theoretical advancements of Rogers' (1962) diffusion of innovation theory, introducing the external environment as a determinant of diffusion of innovation in organizational social systems (Hao et al., 2020; Mukred et al., 2019). In the original concept of diffusion of innovation, Rogers assumed that an individual's intention to use innovation in a social system was voluntary. Several researchers have since found that various compelling factors make the intention to use technology in organizations mandatory for employees (Hao et al., 2020). In the first instance, Tornatzky and Fleischer (1990) developed the T-O-E framework suggesting that the technology, organizational, and environmental characteristics influence the intention to use technology in organizations. Mukred et al. (2019) and Hao et al. (2020) found that technology, organizational, and external environmental factors affect the speed of innovation diffusion in organizations, which validated Tornatzky and Fleischer's T-O-E framework. Mukred et al. and Hao et al. followed with the propositions supporting Venkatesh et al.'s (2016) conceptual model that the attributes of the environment and location, among other factors, determined innovation diffusion in organizations. While a developed innovation

ecosystem within a firm's external environment enabled innovation diffusion, a deficient innovation ecosystem inhibited it (Chaabouni & Bouzaiane, 2020).

While the objective of intrafirm diffusion of innovation is to build organizational capabilities to sustain a competitive advantage, interfirm innovation diffusion's objective is to spread similar innovations to several firms across the entire economy, aiming to promote economic growth and socioeconomic development (Chaabouni & Bouzaiane, 2020; Jankowska et al., 2017). Efficient innovation diffusion in an organizational setting requires top management support (F. Yang & Zhang, 2018) to develop robust absorptive capacity (Medase & Barasa, 2019), ensure complementarity of multiple innovations (Aldieri et al., 2021), and collaborate with innovation enabling actors in the innovation ecosystem (Hooli & Jauhiainen, 2018). Governments play roles in the economy similar to the top management teams of organizations by facilitating and coordinating the enablers of intrafirm and interfirm diffusion of innovation in an economy.

Because the absence of these innovation enablers in the national innovation ecosystem within an organization's external environment inhibits innovation (Menna et al., 2019), governments, in their facilitation and coordination role, make deliberate efforts to mobilize these enablers to support interfirm innovation diffusion, translating business growth to macroeconomic expansion and socioeconomic development (Jankowska et al., 2017). The absence of profit incentives in providing some enabling services to support innovation renders reliance on the market mechanism unviable, reinforcing the need for government intervention (Torun et al., 2018). Government institutions play facilitating role in promoting interfirm diffusion of innovation through policies on open innovation

practices (Bogers et al., 2018), interfirm cooperation (Gries et al., 2018), business incubation programs (Tsaplin & Pozdeeva, 2017), and business cluster resource sharing (Iliescu & Lepadatu, 2021), among other interventions. By including the attributes of the external environment as one of the determinants of innovation diffusion, Mukred et al. (2019) and Tripopsakul (2018) validated Tornatzky and Fleischer's (1990) and Venkatesh et al.'s (2016) propositions. These T-O-E framework-based theoretical models applied Rogers' (1962) diffusion of innovation theory to organizations. Theme 4 aligns with the T-O-E framework-based studies applying Rogers's diffusion of innovation theory to organizations, confirming that the attributes of the external environment affect intrafirm and interfirm innovation diffusion.

### **Applications to Professional Practice**

This study's findings fulfill the purpose of exploring the strategies that business leaders use to effectively integrate innovation into business practices to increase financial performance in the Nigerian private sector. The four themes underlying the study findings align with the conceptual framework, answer the research question, and support the literature, confirming the study's contribution to understanding strategies for implementing innovation in Nigeria. The emergent themes are (a) support from top management was critical for successful innovations, (b) absorptive capacity of employees provided the knowledge for building capabilities, (c) implementation of multiple innovations allowed business leaders to reconfigure resources into capabilities, and (d) the deficient national innovation ecosystem inhibited innovations, which according to several researchers (Haddad et al., 2020; Pulka et al., 2021), induces firms to avoid

systemic risks and optimizes the unavoidable ones. Optimizing systemic risks may require industry- or cluster-negotiated government interim policy support or intervention. Business leaders operating in Nigeria or similar environments could increase the financial performance and enhance the international competitiveness of their firms by applying these findings to innovation implementation processes, as the participating companies exemplified.

The first strategy embedded in the study findings is leveraging top management's responsibility for, and control over, resources to set the strategic direction, manage resources, entrench innovation culture, and coordinate activities to create a competitive advantage and enhance financial performance, as Haddad et al. (2020) and Marei et al. (2021) suggested. While setting the strategic direction involves communicating organizational vision, mission, shared values, and strategic objectives to employees and relevant stakeholders, managing resources entails reconfiguring and realigning a firm's resources and assets into capabilities for exploiting identified opportunities. Entrenching innovation culture entails inculcating employees with innovative behavior and adapting organizational structure, processes, routines, procedures, and external relations to fulfill innovation objectives. Coordinating functional activities to increase operational speed and efficiency involves using information and communication technologies to facilitate functional interdependence and collaboration. In this study, all participating companies used cross-functional coordination and collaboration to develop products or design services to fulfill customers' expectations. Business leaders in Nigeria or similar environments could leverage top management support to transform resources into



capabilities appropriate for exploiting opportunities identified in the deficient business environment.

The second strategy involves developing the absorptive capacity to provide the knowledge for building organizational capabilities. This strategy entails acquiring, assimilating, and applying knowledge to build unique capabilities to gain an advantage over competitors (Miroshnychenko et al., 2021). The companies that participated in this study acquired knowledge to develop their absorptive capacities from cumulative experience and learning, interfirm collaboration, competencies of new hires or acquired firms' employees, research and development activities, and internally or externally created knowledge resources depending on innovation objectives. While knowledge from cumulative experience involves documenting lessons learned from past performance successes and failures to improve future performance, learning entails inculcating employees with those lessons and new competencies and integrating the learning into organizational processes and routines. Knowledge acquired from interfirm collaboration includes learning from vertical interfirm relationships involving customers and suppliers or horizontal interfirm relationships involving organizations within or outside the same industry. Business leaders acquire new competencies relevant to their innovation objectives by employing new employees or acquiring companies possessing such strategic competencies to renew their firms' capabilities. While the knowledge acquired from basic or exploratory research contributes to radical innovation, the one acquired from applied or exploitative research leads to incremental innovation. Knowledge resources are intellectual properties, such as patents, copyrights, trademarks, and trade

secrets, generated internally or acquired from other organizations. Business leaders in the Nigerian private sector or their counterparts in similar environments could apply this finding to develop their firms' absorptive capacities through any or a combination of these sources of knowledge.

The third strategy entails implementing multiple innovations to reconfigure resources into capabilities to shape the business model for addressing the deficiencies of Nigeria's business environment and sustaining competitive advantage, as Karami and Madlener (2021) advocated. Each participating company combined organizational, product or service, process, and business model innovations to create positive synergies securing a competitive edge. Organizational innovation inculcates employees with innovative behavior and modifies the organizational structure, business processes, policies, and internal and external relationships to meet innovation objectives. Product innovation entails introducing a new product, redesigning and creating new uses for an old product, or changing production techniques to increase the product's appeal to customers. Process innovation involves introducing new production or delivery techniques, requiring new equipment and software to enhance cross-functional collaboration, eliminating redundancies and related waste, and increasing operational speed, quality, and efficiency. Service innovation is the creation of new service offerings, service delivery processes, and service business models to fulfill customer expectations, induce customer loyalty, and increase the customer base. Finally, business model innovation is the realized business architecture for creating, delivering, and capturing value more than the competition. Business leaders in Nigeria or similar environments

could sustain their firms' competitive advantage by using project portfolio management practices to maximize the positive synergies deriving from the complementarity of multiple innovations orchestrating capabilities for avoiding systemic risks and optimizing the unavoidable ones.

The fourth strategy involves using systemic risk-avoidance and systemic risk-optimizing business models to address the innovation-inhibiting attributes of Nigeria's deficient national innovation ecosystem in exploiting opportunities to increase financial performance, as Pulka et al. (2021) and Nam and Bao Tram (2021) pointed out. Systemic-risk avoidance strategies involve using appropriate business models to eliminate the cost of improvising for inadequate infrastructure relating to electricity supply, logistics services, and other deficiencies of the business environment. An example of systemic risk is the poor transportation infrastructure that increases the cost of logistics services, as the national electricity supply shortage also causes firms to improvise, which increases the production or operations costs. Establishing representative offices across Nigeria increases operational costs more than leveraging technology to remotely render the same services to customers. Maintaining employees, buildings, electricity-generating plants, private security services, and other facilities in several locations across Nigeria constitute the costs associated with improvising for deficiencies in the business environment.

Systemic-risk optimizing strategies involve adopting business models minimizing the long-term cost of improvising for unavoidable systemic risks. In this regard, firms could optimize unavoidable systemic risks by using industry- or cluster- negotiated

government policy support or interventions and adopting suitable business models to drive long-term business growth rather than short-term cost reduction. An example of a systemic risk-optimizing strategy is that the participating manufacturing company installed an independent electricity-generating plant, instead of using the erratic national electricity supply to fulfill scheduled factory production to meet customer orders, increasing short-term costs but enhancing growth prospects. The same manufacturing company insourced logistics services to improvise for the absence of supermarket chains in the business environment.

An example of systemic risk-avoidance is that the retail company in this study avoided logistics services costs by outsourcing the underlying processes to suppliers or OEMs. Still exemplifying systemic avoidance, the services company used technology to serve its customers from one location to avoid replicating costs associated with systemic risks in several locations in Nigeria. Business leaders operating in Nigeria or similar environments could learn from this finding to outsource or insource and digitalize core business processes to support the systemic risk-avoidance or systemic-optimizing strategies, in line with Nam and Bao Tram's (2021) suggestion.

### **Implications for Social Change**

In this study, four strategies business leaders use to integrate innovation into business practices in Nigeria's private sector emerged. These strategies increase local firms' competitive advantage, win their customers' loyalty, and increase their customer base. Implementing these strategies could help local firms expand into global markets, enhance profitability, increase taxable income, create employment opportunities, and

accumulate organizational slack over time, as several researchers (Duan et al., 2020; Nam & Bao Tram, 2021) also found in their studies. At the microeconomic level, sustained accumulation of organizational slack creates excess funds for expanding innovative and community development activities, increases shareholder value, enhances customer value proposition, and deepens collaboration with suppliers to sustain mutual growth.

Disseminating this study's findings to business leaders and business-supporting institutions in Nigeria could increase institutional support and motivate the adoption of the inherent strategies among firms. Hence, I will share a summary of this study's findings with the participants, relevant private and public institutions, and industry associations through in-person or online conferences, seminars, and webinars. Motivating massive adoption of the strategies inherent in the findings across firms within the economy could translate business growth into economic growth, reduce unemployment, expand the tax base, and increase fiscal revenue on the horizon. Sustained government facilitation from increased fiscal revenue could improve the business environment consisting of institutions, human capital and research, infrastructure, market sophistication, and business sophistication. An improved business environment can attract foreign investments, boost future innovations, accelerate GDP growth, and bring about socioeconomic well-being of the population (Haddad et al., 2020).

### **Recommendations for Action**

There are four emergent themes in this study: Support from top management was critical for successful innovations, absorptive capacity of employees provided the knowledge for building capabilities, implementation of multiple innovations allowed

business leaders to reconfigure resources into capabilities, and the deficient national innovation ecosystem inhibited innovations and induces local firms to avoid and optimize systemic risks in exploiting opportunities. The recommendations for firms' and government institutions' improvement actions arise from the validity and reliability of the study findings and the need to maximize their social change impact. Business leaders in Nigeria using these strategies to integrate innovation into their business practices, especially with government-programmed or industry-negotiated facilitations, may experience increased financial performance.

I recommend that business leaders in the services, retail, and manufacturing sectors adopt the findings relevant for integrating innovation into their business practices to increase financial performance. Firms should transform their resources and assets into capabilities over time by capitalizing on top management support to develop absorptive capacities, implement multiple innovations, and avoid and optimize risks stemming from the deficient national innovation ecosystem to increase financial performance (Haddad et al., 2020; Su & Baird, 2018), as the participating companies exemplified. Business leaders should develop their firms' dynamic capabilities to drive periodic reconfiguration of resources and capabilities before existing capabilities become outdated to address environmental changes and eventually develop into clogs in the wheel of progress (Franco et al., 2021; Hutton et al., 2021). In the long term, the government should facilitate the development of institutions, human capital and research, infrastructure, and market and business environments in line with WIPO's (2020) GII criteria for enabling innovations aligning with an economy's international comparative advantage. To

effectively provide these innovation-enabling services, the government should also learn from the participating companies' technology-based product development or service design processes to apply project management principles in executing development projects (Soderlund & Sydow, 2019). Firms should use industry or cluster associations to negotiate government policy support or interventions to improve these innovation-enabling services in the short term (Nam & Bao Tram, 2021). Finally, I will disseminate a summary of these findings and recommendations to study participants, industry associations, relevant government institutions, and public and private research institutions to support business practice and spur further research. Channels of dissemination include conferences, seminars, training sessions, and publications in international research domains.

### **Recommendations for Further Research**

The credibility of a study's research process determines the transferability of the findings (Collingridge & Gantt, 2019). The validity and reliability of this qualitative multiple case study's findings determine the extent of transferability to similar situations. The limitations to the transferability of this study's findings include the following: (a) limiting interviews to three participants due to budget restraint to attain data saturation and measure up to the institutional graduation schedule, (b) using organizational documents as the only method of triangulating interview data, and (c) participants' reluctance to disclose or document confidential information, consistent with Abdalla et al.'s (2018) and Rose and Johnson's (2020) findings. Excluding SMEs from participating in this study also limited the transferability of its findings to that category of enterprises.

Finally, inadequate understanding of relationships between the variables embedded in the themes underlying the study findings may limit generalizability, as King et al. (2021) noted.

I recommend further research to overcome these limitations, increase the validity and reliability, and improve the transferability or generalizability of this study's findings. Researchers should conduct more extensive interviews in services, retail, and manufacturing subsectors using the same research design. Other researchers should also triangulate interview data using their perspectives, artifacts, and participants' observations, as Yin (2018) recommended. I recommend that researchers use quantitative or mixed-methods research methodologies to obtain confidential information from anonymous participants to test the hypothesis to determine statistical relationships among the variables embedded in the study findings. The variables in question include top management support, robust absorptive capacity, the complementarity of multiple innovations, the deficient national innovation ecosystem, innovativeness, and financial performance. I recommend further research using SME participants in the services, retail, and manufacturing sectors of Nigeria's economy to replicate this study due to the significant role they play in generating economic growth and employment. Finally, further research to extend knowledge on this study's findings will deepen understanding of strategies for implementing innovations in deficient business environments and lead to persistent innovation.



## Reflections

While reflecting on my journey through the DBA program at Walden University, I realized I had progressively advanced in knowledge through course work and doctoral study processes, which prepared me to access participants, collect and analyze data, and distill study findings from the emergent themes. I have now realized that every component of the DBA program was relevant to building my skills to undertake this doctoral study and generate knowledge. Before data collection, I had a preconceived idea that I could conduct interviews and conclude member checking immediately after negotiating access and sending the informed consent forms to participants. Contrary to this notion, the COVID-19 pandemic aggravated data collection challenges and prolonged the underlying processes. Based on other researchers' perspectives, I expected the participants to be reluctant to release confidential information at the commencement of the recording of each interview. True to expectation, most participants were not exhaustive in their explanations during the interview, despite using follow-up questions to ask for more details and reiterating data confidentiality.

The interview conversations with the participants and thematic analysis of the interview data increased my understanding of Nigeria's business environment challenges and strategies that business leaders adopt to implement innovation. I learned from the study that support from top management is critical for successful innovations, the absorptive capacity of employees provides the knowledge for building capabilities, implementation of complementary multiple innovations allow business leaders to reconfigure and realign resources into capabilities, and the deficient national innovation

ecosystem inhibited innovations. I also noticed that local firms addressed the adverse effects of the hostile business environment on financial performance by adopting systemic risk-avoidance and systemic risk-optimizing business models, in line with Haddad et al.'s (2020) suggestions. After a thoughtful reflection, I observed that the study findings deriving from participants' revelations aligned with the conceptual framework, answered the research question, and supported established literature. I have now learned that using industry- or cluster-negotiated and programmed government facilitation and positioning with these strategies could sufficiently improve the national innovation ecosystem services and drive local firms' innovativeness, spurring international competitiveness and increasing profitability. To effectively upgrade these innovation-enabling services, I contemplated that government facilitation should focus on improving institutions, human capital and research, infrastructure, and market and business sophistication, as Jankowska et al. (2017) and Menna et al. (2019) advocated.

Reflecting on the development of my knowledge culminating in this study's conclusions, I realized that Walden University's academic mentoring support had transformed my initial unstructured concept of innovation as a tool for developing an economy into a more advanced and evidence-based concept. I now understand also that applying this study's findings could help business and economic growth in Nigeria, contrary to my preconceived mechanisms. Reflecting further, I realized that my learning from the DBA coursework and the rigor of the doctoral research process advanced and refined my knowledge and developed my research skills.

I acknowledge that my journey through the DBA program was more challenging than I had expected. My specialization courses jointly fulfill my dream of specializing in business strategy, which firms apply to integrate innovation into their business practices. In this study, I explored the strategies business leaders use to integrate innovation into their business practices to improve financial performance in Nigeria. The experiences I gained during the data collection process helped me understand that maintaining a cordial relationship with study participants and using open-ended questions could deepen the information participants are willing to give, prevent participants' biases, and facilitate new knowledge emergence. I believe that undergoing the DBA program has increased my understanding of and respect for research and its contribution to developing new knowledge and realizing social change. I believe that the knowledge I acquired during the DBA program has prepared me to contribute more meaningfully to social change in the future.

### **Conclusion**

The purpose of this qualitative multiple case study was to explore the strategies that business leaders in the Nigerian private sector used to effectively integrate innovation into their business practices to increase financial performance. The diffusion of innovation theory was the conceptual framework of this study. The four elements of the theory, which enable or inhibit innovation diffusion, are the innovation characteristics, the credibility of channels disseminating innovation attributes information, potential adopters' readiness to use the innovation over time, and the social system characteristics (Rogers, 1962). Researchers applying the diffusion of innovation

theory to organizations reconceptualize the theory's elements as organizational context factors influencing the intention to use technology: technology, organization, and environment attributes (Chatterjee et al., 2021; Mukred et al., 2019).

I used semistructured interviews with open-ended questions to obtain data from three business leaders whose companies had successfully implemented innovations for at least 3 years in the services, retail, and manufacturing sectors of the Nigerian private sector, respectively. After analyzing the data, four themes underlying the strategies for integrating innovation resonated among all participants, which are (a) support from top management was critical for successful innovations, (b) absorptive capacity of employees provided the knowledge for building capabilities, (c) implementation of multiple innovations allowed business leaders to reconfigure resources into capabilities, and (d) the deficient national innovation ecosystem inhibited innovations and induces local firms to avoid and optimize systemic risks to increase financial performance. While the process of avoiding systemic risks may limit opportunities for innovation, optimizing systemic risks may increase costs and weaken the ability to engage in innovative activities to sustain competitive advantage. Government-programmed and industry- or cluster-negotiated facilitations improving institutions, human capital and research, infrastructure, and market and business sophistication could sufficiently reduce systemic risks and strengthen the innovation ecosystem to support innovations over time (Dutta et al., 2020). This study's findings support the theoretical applications of diffusion of innovation theory to organizational social systems, align with this study's conceptual framework, answer the research question, and fulfill the purpose of the study. Business leaders

applying these findings in Nigeria or similar environments could increase their financial performance and international competitiveness.

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## Appendix: Interview Protocol

**Strategies to Integrate Innovation Into Business Practices in the Nigerian Private Sector**

The purpose of this qualitative multiple case study is to explore the strategies that business leaders in the Nigerian private sector use to effectively integrate innovation into their business practices to increase financial performance.

Interviewee: \_\_\_\_\_ Location: Nigeria

Date: \_\_\_\_\_ Time: \_\_\_\_\_

Notes:

1. The researcher greets the interviewee and introduces himself.
2. Provide an overview of the study and indicate the usefulness of the outcome.
3. Receive participants' replies indicating "I consent" to the recruitment email sent to them. Offer to answer any questions that the interviewee may have.
4. Remind interviewees about their volunteer efforts to participate in the study.
5. Remind the interviewee about recording the interview and start the recording.
6. Start the interview by recording the interviewee's pre-assigned coded name, date, time, and location.
7. Start asking interview questions. Allow enough time to answer those questions.
8. Listen carefully to the interviewee. Ask probing and follow-up questions, if needed.
9. At the end of the interview, thank the interviewee for sparing time to participate.
10. Give contact information to participants to enable them to ask further questions.