

2022

Technology Strategies to Sustain Small Business Enterprises Beyond 5 Years

Eunice Colon
Walden University

Follow this and additional works at: <https://scholarworks.waldenu.edu/dissertations>



Part of the [Business Commons](#)

This Dissertation is brought to you for free and open access by the Walden Dissertations and Doctoral Studies Collection at ScholarWorks. It has been accepted for inclusion in Walden Dissertations and Doctoral Studies by an authorized administrator of ScholarWorks. For more information, please contact ScholarWorks@waldenu.edu.

Walden University

College of Management and Technology

This is to certify that the doctoral study by

Eunice Colon

has been found to be complete and satisfactory in all respects,
and that any and all revisions required by
the review committee have been made.

Review Committee

Dr. Annie Brown, Committee Chairperson, Doctor of Business Administration Faculty

Dr. Ify Diala-Nettles, Committee Member, Doctor of Business Administration Faculty

Dr. Patsy Kasen, University Reviewer, Doctor of Business Administration Faculty

Chief Academic Officer and Provost
Sue Subocz, Ph.D.

Walden University
2022

Abstract

Technology Strategies to Sustain Small Business Enterprises Beyond 5 Years

by

Eunice Colon

MS, Strayer University, 2010

BS, Strayer University, 2008

Doctoral Study Submitted in Partial Fulfillment

of the Requirements for the Degree of

Doctor of Business Administration

Walden University

November 2022

Abstract

Small businesses employ over half of the U.S. labor force, yet only 50% of small businesses survive beyond five years. Small business owners who do not sustain their businesses force employees to seek new employment and adversely impact the local economy. Grounded in Porter's five forces model, the purpose of this qualitative multiple case study was to explore technology strategies used by small businesses to achieve and maintain sustainability beyond the first five years of operations. The participants were four small business owners from Maryland who implemented successful technology strategies to achieve and maintain sustainability for more than five years. Data were collected from semistructured interviews, participants' websites, and reviews of company documents. Thematic analysis was used to analyze the data. Four themes emerged: emerging technology strategy, customer relationship-building, business model adaptability, and marketing and content design/engineering. A key recommendation is for small business owners to revise their business model to align with technology sustainability requirements and take advantage of the digital revolution and social media to increase sales, connect, and better serve stakeholders. The implications for positive social change include potentially providing small business owners with the technology strategies that will enable them to stay in business beyond five years.

Technology Strategies to Sustain Small Business Enterprises Beyond 5 Years

by

Eunice Colon

MS, Strayer University, 2010

BS, Strayer University, 2008

Doctoral Study Submitted in Partial Fulfillment

of the Requirements for the Degree of

Doctor of Business Administration

Walden University

November 2022

Dedication

I dedicate this doctoral achievement to my mother, Gertrude Ofosu-Appiah, who always encouraged me to be the best I could be and dream big because the sky is not the limit but another step. To my father, Col. S. K. Ofosu-Appiah, who was a victim of political instability in Ghana, your courage and determination for continuing to work hard despite enormous challenges is my inspiration. Dad, thank you for teaching me the value of tireless dedication to pursuing a goal and a process.

I also dedicate this achievement to my son, Ethan. I encourage you to put God first in everything, surround yourself with positivity, and strive for excellence. Trust in God and believe in yourself. Dream big, chase your dreams with hard work, and know that you are limitless.

I would also like to dedicate this doctoral achievement to all my family and friends who supported me during this journey. May the Lord guide you, bless you, and make his face shine upon you, and be gracious to you all always.

Acknowledgments

Completing this doctoral study has been my educational goal. I would like to thank Dr. Annie Brown, Dr. Ify Sarah Diala, Dr. Yvette Ghormley, Dr. Patsy Kasen, and all my instructors and classmates at Walden University for all the support and positive feedback. I appreciate your unwavering support, patience, guidance, and responsiveness toward completing my degree. I would not be where I am today without your commitment to me. I hope to one day pay it forward. I would like to thank all the participants who participated, finally making this study possible. Lastly, I would thank my family and friends who shared this journey with me. You gave me encouragement when I wanted to give up, pushed me as I wanted to quit, and now I have made it to the finish line of my journey.

Never underestimate the power you give someone by believing in them. I would like to thank all my family members, and friends who helped me reach this point in my academic career. I want to give a special thanks to Dr. Jo Anna Bennerson, who started on this journey with me and encouraged me along the way, Ms. Lee Antionette Fletcher, for your support and encouragement and to Dr. Gregory Anthony Nash, each day you inspire and push me to be the best version of myself. Thank you for being my best friend and soul mate.

Table of Contents

List of Tables	v
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.....	6
Assumptions, Limitations, and Delimitations.....	7
Assumptions.....	8
Limitations	8
Delimitations.....	9
Significance of the Study	9
Review of the Professional and Academic Literature.....	10
Small Business Classification.....	12
Small Business Failure: Definition and Meaning	12
Technology Strategies and Small Business Sustainability	13
Porter’s Five Forces	14
Other Small Business Technology Survival Strategies	21

Sustainable Business Models	26
Sustainable Operations in SMEs.....	33
Historical Contributions of Porter’s Five Forces	45
Transition	47
Section 2: The Project.....	48
Purpose Statement.....	48
Role of the Researcher	48
Participants.....	50
Research Method and Design	51
Research Design.....	52
Population and Sampling	54
Ethical Research.....	55
Data Collection Instruments	57
Interview	57
Documentation.....	58
Archival Records	59
Reliability and Validity Process.....	60
Data Collection Technique	60
Interview	61
Documentation.....	62
Archival Report.....	62
Data Organization Technique	63

Data Analysis	64
Compiling Data.....	66
Disassembling Data	66
Reassembling Data.....	66
Interpreting Data.....	67
Concluding.....	67
Software	68
Key Themes	68
Reliability and Validity.....	69
Reliability.....	70
Validity	70
Credibility	71
Transferability.....	71
Confirmability.....	72
Data saturation	72
Transition and Summary.....	73
Section 3: Application to Professional Practice and Implications for Change	74
Introduction.....	74
Presentation of the Findings.....	75
Theme 1: Emerging Technology Strategy	77
Theme 2: Relationship Building with Customers.....	82
Theme 3: Business Model Adaptability.....	84

Theme 4: Marketing and Content Design/Engineering	88
Applications to Professional Practice	92
Implications for Social Change.....	94
Recommendations for Action	95
Recommendations for Further Research.....	96
Reflections	97
Conclusion	99
References.....	101

List of Tables

Table 1. Frequency of Themes.....	76
Table 2. Relationship Building with Customers	83

Section 1: Foundation of the Study

Small business enterprise (SBE) owners must understand and possess the essential skills required to establish and sustain a successful business. Small businesses are classified as 99% of all employers and accounted for 64% of net new private sector jobs in the United States (Dilger, 2017). In the state of Maryland, small businesses make up 99.5% of all companies and employ 50.1% of the workforce (Small Business Administration [SBA], Office of Advocacy, 2019). However, more than 50% of small businesses fail within 5 years of startup (SBA, Office of Advocacy, 2018). According to Wiyatno et al. (2017), small business enterprise owners who do not utilize information systems effectively degrade business models, reduce customer value, and diminish the prospects for business stability, profitability, and growth. In this study, I explored the technology strategies used to sustain small business enterprises for longer than 5 years in Maryland. The focus of the study was on the factors that enabled small business enterprises to be sustainable. In this section of the study, I will present the background of the business problem, the purpose of the study, the research question, theory framing the study, and the importance of the study. Additionally, current literature related to the business problem will be reviewed.

Background of the Problem

The advantages of effective sustainability strategies for businesses, governments, and the community have been pointed out by several researchers (Dyllick et al., 2016; Hörisch et al., 2014). According to Dyllick et al. (2016), sustainability could be the conduit to small businesses profitability and long-term growth. Sustainability is an

effective strategy to increase business sales, investment, productivity, talent, workforce diversity, and company visibility as well as goodwill (Dyllick et al., 2016). Sustainability also provides tools for businesses to take advantage of technology and reduce operating costs while driving innovation, ethics, and high profitability (Dyllick et al., 2016; Wilshusen & MacDonald, 2017). As a result, sustainability may lead to a competitive advantage. Understanding the technology strategies small to medium-sized enterprises (SME) used to sustain their businesses beyond 5 years from start-up, while also meeting their organizations' social responsibility obligations, could be beneficial to determine the economic, social, and ecologic benefits of technology implementation for SME sustainability. Newer and existing business owners could use findings from this study to benchmark the best implementation strategies for building a business model that ensures profitability, growth, and competitive edge (Boyd, 2015).

Problem Statement

SBE owners who do not utilize information systems effectively degrade business models, reduce customer value, and diminish the prospects for business stability, profitability, and growth (Wiyatno et al., 2017). In 2016, the U.S. Small Business Association (SBA) reported that only 78.5% of new SMEs survived for 1 year, 51.4% survived 5 years, and one-third survived beyond 10 years (SBA, 2018, p. 1). The general business problem was that some SBE owners encountered a high IT adoption failure rate, which resulted in an adverse effect on business sustainability. More specifically, some SBE owners lacked technology strategies to sustain their business beyond 5 years.

Purpose Statement

The purpose of this qualitative multiple case study was to explore technology strategies some SBE business owners used to sustain their business beyond 5 years. The target population was four SBE owners from the state of Maryland with more than 5 years of experience who had successfully utilized technology strategies to achieve business sustainability beyond 5 years. The implication for positive social change included SBE owners (a) providing greater economic stability, (b) lowering the unemployment rate in the communities they serve, and (c) contributing to the state revenue for socioeconomic development. SBE owners are significant contributors to economic growth, creation of jobs, and promotion of sustainable communities (Hyder & Lussier, 2016).

Nature of the Study

Quantitative, qualitative, and mixed methods are the three types of research methodologies considered for this study. I proposed a qualitative approach. Qualitative researchers seek to explore a phenomenon through open discourse and discovery of participants' experiences, practices, strategies, and perceptions (Van & Struwig, 2017). Bristowe et al. (2015), Cairney and Denny (2015), and Yin (2018) used qualitative research methods to explain new insights, explore new concepts, and gain a detailed description of the phenomena under study. Quantitative researchers seek to produce generalizable findings and test the relationships and differences between variables and constructs (Landrum & Garza, 2015; Yin, 2018). The quantitative method was not suitable for this study because the goal was not to study the relationships or differences

among variables. Researchers utilized the mixed method approach to investigate holistic evidence, statistically and contextually, to increase their understanding of complex phenomena (Ahn & Ettner, 2014). Patton (2015) used the mixed method approach to explore issues relating to organizational problem solving by blending quantitative and qualitative elements. The mixed method was not suitable for this study because no reasons existed to combine qualitative and quantitative methods to address the proposed study's purpose.

Three common qualitative research designs are case study, ethnography, and phenomenology (Yin, 2018). Researchers use case study to study what, how, and why questions regarding a contemporary set of events over which the researchers have little or no control (Yin, 2018). Compared to other qualitative research designs, a case study was the most suitable design for this study because it was more flexible to use. The dimensions of a case study are either single or multiple. In a multiple case study, the researcher studies multiple cases to understand the similarities and differences between them (Yin, 2018). The multiple case study was selected as opposed to a single case design as it was appropriate for the current study. Using a multiple case study should allow for greater understanding of the technology strategies small businesses used to sustain their businesses beyond 5 years.

Business researchers often use ethnography designs to study business culture or the social world of a group of people (Hill et al., 2017). Ethnography was not an appropriate choice for this study because I was not studying a group or communities' culture. Similarly, phenomenology was not a suitable choice for this study because I did

not seek to explore the personal meanings of participants' life experiences. Narrative inquiry provides an understanding of people's experiences and methodologies through their personal stories based on their experiences, and hence does not address practical business research problems (Huber et al., 2013). I did not use a narrative inquiry as I was not gathering information through storytelling.

Research Question

What technology strategies do SBE owners use to sustain their businesses beyond 5 years?

Interview Questions

A list of the interview questions for addressing the research question are as follows.

What technology strategies do you use to sustain your business?

What were the key challenges incurred while implementing your strategies to sustain your business?

How did you address the key challenges to ensure you sustain your business beyond 5 years?

What role did IT play in sustaining your business?

How do you measure the effectiveness of the implemented technology to sustain your business beyond 5 years?

In sustaining your business, what technology strategies were most effective in maintaining a good relationship with customers and employees?

What else can you share about the strategies your organization used to sustain your business beyond 5 years?

Conceptual Framework

The conceptual framework for this study was Porter's (1980, 2008) model of competitive strategy, specifically, Porter's five forces model (5FM). Porter's 5FM reflects the concept of a market's competitive attractiveness and intensity (Porter, 2008). Porter's model was developed in 1979 as a simple framework to assess and evaluate a business organization's competitive strength and position. Business owners operate in environments with the following five competitive forces: (a) threat of new entry, (b) supplier power, (c) buyer power, (d) threat of substitutes, and (e) competitive rivalry. Porter's 5FM was relevant to understanding the findings of this study as the study can assist business owners in identifying the forces that drive sustainability for their respective organizations. According to Porter (2008), by considering the five forces, business owners can realize and address the issues affecting profitability and develop strategies to help them become successful. In this study, Porter's 5FM helped me understand technology strategies small business owners in Maryland utilized to sustain their businesses beyond 5 years.

Operational Definitions

Business capital. Business capital involves the resources available for entrepreneurs to use to create a business and to generate income (Sundararajan & Sundararajan, 2015). The capital includes human capital, social capital, cultural capital, and economic capital.

Business strategies. Business strategies include concepts such as vision, mission, values, practices, approaches, and technologies that confer a firm a competitive advantage on the market (Pattinson, 2016).

Business success. Business success refers to the point at which a firm or company has maintained sustainable profits for at least 5 years (SBA, 2018).

Business sustainability. Business sustainability refers to a business practice that creates competitive advantages through higher customer value while balancing stakeholders' interests, environmental protection goals, and community well-being (Wilshusen & MacDonald, 2017).

Corporate Social Responsibility (CSR). CSR is the voluntary integration of social and environmental concerns into business operations (Rahman et al., 2017). Business leaders engage in CSR to increase their interaction with stakeholders (Rahman et al., 2017).

Entrepreneur. An entrepreneur is someone who discovers unsatisfied needs in the community and creates an organization to realize them to make a profit or for a philanthropic goal (Pontikes & Barnett, 2017).

Assumptions, Limitations, and Delimitations

Assumptions are facts considered to be correct but are unverified (Marshall & Rossman, 2016). Limitations, challenges, and barriers create shortcomings in a study, place restrictions, and may cause vulnerabilities in the conclusions reached (Marshall & Rossman, 2016).

Assumptions

Researchers make assumptions when developing their research. Assumptions are the researchers' critically unverified, fundamental beliefs and presumptions about the research that might affect the outcome of the study (Davidson et al., 2017). Assumptions are important as they affect the methods in which a researcher views the research process. The main assumption in this study was that the participants would address all questions with honesty and accuracy. Additionally, I assumed the participants (a) had sufficient knowledge of the phenomenon and could provide valuable data to use in answering the research question, and (b) could accurately present the facts required regarding the successful information technology implementation implemented in their organizations.

Limitations

Limitations are matters, weaknesses, or deficiencies in a study due to factors beyond the researcher's immediate control (McCarthy & Muthuri, 2018). An identified limitation of this study was that the validity of interview data collected relied on the experience and opinions of SME owners in four companies located in the state of Maryland and did not reflect the views of the broader population of all SME leaders. A second limitation was that the participants may not fully disclose information regarding the strategies they used in their businesses, which could affect the accuracy of the data. Another limitation was that the study may benefit the SME owners who utilized technology and not necessarily small business organizations.

Delimitations

Delimitations refer to the boundaries of the research and deliberate limits set by a researcher on the focus and scope of the study (Marshall & Rossman, 2016; Yin, 2018). As such, delimitations are typically within the researcher's control (Baporikar et al., 2016). In this study, the delimitations were the concepts of my interests and perspectives, the chosen population, and the research business problem selection. A delimitation of this study was the geographic region of Maryland. A second delimitation was the sample population limitation of SME owners who had implemented information technology to create business sustainability beyond 5 years. A third delimitation focused on the specific implementation strategies that the participants used for information technology adoption to achieve business sustainability beyond 5 years. Additionally, this study did not address other information technology strategy issues that might affect business leaders with more than 999 employees.

Significance of the Study

The findings of this study may be a potential value-added to small businesses because the results could improve the understanding of how to effectively implement technology strategies to sustain small businesses beyond 5 years. Successful business owners provide benefits to their communities and society, such as job growth, local economic stability, and community development (Stephan et al., 2016)

SBE owners might utilize this study to improve their current business practices by implementing effective technology strategies and improving their business sustainability. Business owners effectively implementing successful technology strategies could, in turn,

contribute to effective business processes, experience cost savings, and increase productivity (Nwosu, 2017). Knowledge about effectively leveraging technology may improve business decisions and increase business sustainability in the marketplace. Implementation of information technology by SME owners may result in increased profitability and long-term business survivability (Juwita & Arifin, 2017). Additionally, the significance of the study on positive social change includes the potential for SBE owners to lower their community's unemployment rate, improve local standard of living for residents and employees, provide greater community economic stability and contribute to government revenue.

Review of the Professional and Academic Literature

The purpose of conducting this study was to explore the strategies small-scale business enterprises utilized to remain sustainable for more than 5 years. The primary research question for this study was, what technology strategies do small business owners use to sustain their business beyond 5 years? According to the small business administration reports, this study was essential because approximately 78.5% of all small and medium-sized enterprises (SMEs) in the United States do not stay in operation for more than one year (SBA, 2018). Sustainable business enterprises significantly contribute to the growth of societies by reducing unemployment rates, contributing to the country's Gross Domestic Product (GDP), fostering better living conditions for communities, and increasing innovativeness among the management and employees (Hann et al., 2017). This review provides an extensive investigation of the publications related to IT strategies and their connections with small business performance. I examined the relevant literature

on IT strategies, business sustainability, small businesses, the context and applicability of Porter's Five Forces model, and the role technology has played in promoting sustainability.

To do this, I analyzed contemporary peer-reviewed research related to entrepreneurship, small business, strategic management, strategic planning, business intelligence, innovation, sustainable development, corporate social responsibility, corporate accountability, stakeholder theory, consumer shift paradigm, and long-term business profitability. I searched various multidisciplinary databases in social and human sciences, economics, and management, and business. The databases utilized included ProQuest, EBSCOhost, ABI/INFORM Complete, Emerald Insight, and SAGE Publications. I also searched Google Scholar, Walden Library dissertations/books, government sites, and other relevant sources. I used the following keywords: *small businesses, business failures, Porter's Five Forces, small business strategies, small business owners, small business sustainability, profitability, innovation, small business performance, corporate social responsibility, ethics, business intelligence, digitization, stakeholders, leadership sustainability, entrepreneurship, and business success*. I ensured that at least 80% of all the sources cited within this review were peer-reviewed journal articles, and more than 90% of the articles were published within the last 5 years (2017-2021). The literature review was organized into sections including small businesses and business failures, technology strategies used to sustain businesses and small business sustainability, Porter's Five Forces model, alternative theories, and the roles and benefits of small business enterprises.

Small Business Classification

Small business classification can be interpreted in various ways. According to Hunter and Kazakoff (2014), the classification of businesses depends on the number of employees, the decision-making body, the financial aspect, and the relevant industry. According to the SBA, (2019), small businesses have between 1-999 employees. Similarly, Elephant (2018) noted the small business labor force in 2010 totaled 55 million employees nationally. Although most authors have agreed that businesses with less than 500 employees fall into the SME category, Bush (2016) argued that small businesses are enterprises with fewer than 250 workers. As seen here, small business definitions differ in terms of valuable assets or employee numbers. Runner and Endres (2017) defined small business owners as individuals who start a privately-owned small business, take a financial risk in looking for profits, and employ 50 or fewer workers.

Small Business Failure: Definition and Meaning

To comprehend what constitutes a failed business, various researchers and academics approach it from various contexts. Nwosu (2017) argued that the description of a failed business depends on the achievement (or non-achievement) of the business's set objectives. Nwosu further explained that small business failure was the cessation of business operations due to financial problems. Similarly, Modilim (2016) argued that failure was a summary of financial bankruptcy or cessation of business operations, as well as the inability of the management to execute their mandate as business leaders. Drawing from Beaver's (2003) argument, Modilim (2016) noted that failure was not a cessation of trading per se, but the lack of achievement of predetermined goals that

undermines the small business establishment. Akaeze and Akaeze (2017) stressed the first 5 years of a start-up as the most vulnerable and critical period for the survival of a small business. Additional relevant factors impacting commercial survival included both micro- and macro-environmental business factors. Micro-environmental or internal factors are associated with a business owner's characteristics, such as a managerial weakness, manifesting as a high IT adoption failure or a knowledge deficit hindering the effective incorporation of technology strategies into a business. Macro-environmental or external factors are extreme conditions impacting a business, such as government regulations or a harsh economy.

Technology Strategies and Small Business Sustainability

Technology is a key driver of economic growth of businesses as it allows for increased productivity and efficiency. Modern economists view technology as one of the theoretically approved measures implemented to reduce economic obstacles. For small businesses, a single timely improvement in technology can mean fewer and less costly production inputs. Conversely, technological problems and deficiencies can cost time and money while threatening the sustainability of a small business.

Technology has become the linchpin on which many businesses grow and thrive. According to Prasanna et al. (2019), technology refers to the process of invention and innovation in the economy; invention refers to the scientific discovery needed to upgrade the business operations and production of an economy, while innovation is the use of new scientific breakthroughs and its vitality to the continuing success of a business. Other identified limitations to full adoption and implementation of technology strategies in the

small business sector included a shortage of initial capital needed to purchase new and appropriate technology, inadequately skilled workers, lack of information, and uncertainty regarding the effects of such technologies on business outcomes (Prasanna et al., 2019). Given these limitations, it was paramount for small business owners to incorporate business collaboration through networking, employing human resources with technological capabilities, and obtaining the necessary information concerning the relevant, appropriate technology.

Porter's Five Forces

To determine why businesses succeed or fail, Porter (2008) focused on business's external perspectives to understand why some firms succeed while others do not. Porter developed the Five Forces model during the 1980s as a strategy to determine the level of profitability and sustainability of any industry (Porter, 2008). In his theory, Porter emphasized that the interaction of various structural factors is the reason why some businesses fail and others succeed. Several researchers, including Jakes (2018), Wani (2018), Krume (2014), Johnson et al. (2014), and Porter (2008), have asserted that small business owners can use Porter's Five Forces to apply strategies to better their market positions, attract customers, survive competitive pressure, and sustain their businesses beyond 5 years. Accordingly, this model was a suitable system for exploring the technological strategies small business owners in Maryland used to sustain their businesses beyond 5 years.

Technology Strategies and Porter's Five Forces

As technology rapidly changed in 2021, global business contexts, a lack of technological knowledge, integration, and utilization contributed to small business owners' difficulties in Maryland and beyond. According to Pessu (2015), a need exists for more knowledge concerning strategies and their effects on small business enterprises. As noted by Mohapatra (2014), IT is changing the rules of small businesses in three different ways. First, due to advancements in technology, business models are changing; second, IT is modifying business characteristics; and finally, an IT strategy is formulated to serve the customer base and ensure that all stakeholders' objectives are met. As such, technological knowledge has also helped small businesses maintain a competitive advantage and operate for more than 5 years. Using Porter's 5FM, Jakes (2018) found that the fundamental determinants of sustainability relied on the choices made by small business owners. In the quest for sustainability, Porter's model indicated that small business owners should consider the following five external forces responsible for all business performance (Porter, 2008): the threat of new entrants, supplier power, buyer power, the threat of substitutes, and competitive rivalry.

Information Technology and The Threat of New Entrants

With the strategic employment of technology, small business owners can increase their competitive advantage, react wisely to new entrants, optimize their chances of staying viable for more than 5 years, and adhere to two basic principles. According to Jakes (2018), new entrants into the small business realm can have severe impacts on profits due to the new competition. Thus, an existing business's proactive response to this

new competition can significantly determine its sustainability in the market. To prepare for new entrants' challenges and maintain viability, Krume (2014) argued that small business owners should adhere to two basic principles. First, small business owners should link IT solutions to their overall business strategies. Krume stated further that focusing on the overall objectives and business mission while considering IT allows small business owners to make suitable investments, provide value, and reduce costs. IT promotes a top-down method, whereby small business owners align their business procedures with their technology needs and business strategies. A need exists to determine necessary processes, like why and how a business should implement technological solutions. Such tasks defined the appropriate technology, which is later analyzed, decided upon, and utilized.

The second principle is keeping IT simple. Businesses tend to have complicated technology strategies; however, the literature shows that for small businesses to thrive, they must keep their IT simple by consolidating and simplifying their businesses. According to Krume (2014), keeping IT simple can be accomplished through (a) lowered or reduced costs, (b) overall administration, (c) easy-to-use resources (people, software, and hardware), and (d) an ability to quickly respond to change. Small businesses can achieve these goals by establishing and following relevant rules and policies, standardizing software and hardware, purchasing and implementing proven products from reliable and well-known vendors, limiting business workstation use to only business use, and choosing and combining application systems prudently.

Information Technology and Supplier Powers

As technology strategies affect small businesses' services, products, and operations, they inevitably alter the relations between business owners and their suppliers. When an industry becomes more dependent on technology, small businesses must consider a planning strategy, as the IT producer/supplier's bargaining power inevitably becomes essential. According to Johnson (2014), technology strategy is important primarily because suppliers can exercise power on small businesses by understanding there are no fallback suppliers to which such businesses can turn. Therefore, the more suppliers a small business has, the greater control it can exert on its suppliers in terms of product quality, prices, and delivery schedule. Today's buyers and suppliers are well informed about a specific business's services, products, and strategies. Thus, small business owners should explore the available technology strategies that are productive, survey the fallback suppliers they can rely on, and develop the most appropriate technology strategies.

Information Technology and Buyer Power

In small business environments, buyer power has always posed a threat by pitting competitors against one another. According to Johnson et al. (2014), buyer power is done in a various way, including bargaining for higher-quality products and services and forcing prices down, hence reducing profitability. Jakes (2018) noted that the power exerted by each buyer group is dependent on the group's purchases compared to the entire small business industry and its market attributes. With the use of technology strategies, these buyer forces can be monitored and controlled. For instance, technology-

enabled systems can automate orders, expedite vendor selection, and streamline inventory management. For a small business to operate for more than 5 years, the business owner should recognize the roles of e-commerce, social media, consumer-based blogs, interactive media, real-time support/customer service, and related digital\online processes. The internet brings together buyers, suppliers, analysts, support personnel, and related players to access details about the business, share information, solve problems, offer products, and offer real-time feedback. A business cannot sustain long without good relationships between business owners, suppliers, and customers. E-business makes the business process transparent to sellers and buyers and significantly impacted linkages throughout the supply chain. This online network further enables small business owners to plan their technology strategies. When technology strategies are effective, business owners can reap the benefits of stable revenues.

Through improved services, small businesses can ensure customer loyalty. Chen (2015) discussed aspects of technology that make it easier for small enterprises to perform their daily activities and ensure customer loyalty through improved services, focusing on how technology enhances customer loyalty in hotels. Chen highlighted the effects of technologies such as online surveys on customer satisfaction, along with online services like bookings and special discounts for frequent customers based on a customer's tracking record. Chen also referenced numerous technological improvements that can improve these services and reduce costs.

Information Technology and The Threat of Substitutes

Most small businesses had competitors that offer product substitutes. Small business owners should consider this a serious threat to their sustainability, especially when these similar products or services offer a lower price (Porter, 2008). As a result, small businesses explore strategies to address this threat and maintain their success. Carter (2014) recommended employing such social media platforms as Facebook, Twitter, Instagram, and YouTube to carry out sales and marketing strategies.

Customers do not view small businesses in sections or departments but as one unit; thus, various inquiries on social media are directed to businesses as a unit, including technical questions, ideas for product improvement, and customer feedback (Carter, 2014). To minimize the threat of substitutes, small business owners need to focus their social media strategies on customer satisfaction through procedures like customer complaint resolution and providing timely and appropriate responses to customer demands and suggestions (Carter, 2014). Carter (2014) further noted that small business owners' effective use of social media strategy is associated with lower costs and efficiency compared to other technology strategies. Pessu (2015) suggested that small business owners need to develop a more holistic marketing approach. This holistic strategy applies to relationship marketing as an efficient tool in meeting customers' needs and demands while overcoming the threat of substitutes. According to Rahman et al. (2013), small business survival is associated with online marketing. The researchers defined online marketing as the utilization of digital information. In their research hypothesis, the researchers suggested that more small business owners participate in

online marketing to secure their businesses' chances of survival for more than 5 years. Further, small business marketers can establish models that enhance the building of solid relations by offering personal benefits through selling and building transactional relations.

Small business owners can also consider dealing with products for which substitutes are difficult to create. Using Porter's Five Forces model, Johnson (2014) attested that the harder it is for prospective rivals to produce substitutes for a business's offerings, the more difficult it will be for a new entrant to avail themselves in the same production line. Pessu (2015) noted that employing effective marketing strategies is integral to effective creation, communication, and value delivery. Such a value-management strategy intends to make product and service selling easy and sustain profitability goals beyond 5 years.

Information Technology and Competitive Rivalry

In the small business field, competitive rivalry is intense. Small business owners must be alert to their counterparts (Jakes, 2018). In aiding this process, Berisha-Shaqiri (2015) argued that IT could be used as the best strategic mechanism for businesses to enhance their competitive advantage. Berisha-Shaqiri (2015) noted that small business owners can use technology for financial record keeping, quality control marketing, conducting research, word processing, operations, management, and production. Effectively employed, these functions put small business owners at a competitive advantage for sustainability beyond 5 years.

Small businesses thrive beyond 5 years when they have strategies in place to stay competitive. Consistent with Porter (2008), a small business could thrive beyond 5 years if it effectively establishes strategies that confront the competitive forces shaping the system of competition in small business environments. Krume (2014) promoted competitive strategies small business owners can use to gain a competitive advantage against their rivals and stay in operation for more than 5 years. These strategies included building an IT platform, differentiating, developing alliances, promoting growth, innovation, lowering costs, and improving product quality and efficiency.

Small business owners found themselves vulnerable to their counterparts who gave additional services and made high-quality products with competition. Berisha-Namani (2009) argued that small business owners should consider using technology to develop high added-value products and business processes and establish competitive mechanisms within the industry. Small business owners can differentiate themselves from competitors by developing a market niche; this is achieved by carrying out specialized employee training to equip employees with knowledge and expertise in product and service areas where competition may be evident. Developing a market niche can increase a business's chances to achieve a competitive advantage while facilitating sustainability (Berisha-Namani, 2009).

Other Small Business Technology Survival Strategies

Technology helps small businesses meet customer demand and explore additional markets. The survival and sustainability of a small business, particularly in the short term, is dependent on the extent to which these businesses implement appropriate strategies for

meeting specific business goals (Rahman et al., 2016). Modimogale and Kroeze (2011) insisted that small businesses should adopt state-of-art technology to ensure their survival. Information and communication technology (ICT) can help businesses achieve strategic, marketing, and operational objectives. Krume (2014) noted that businesses need technology to disseminate, create, and process information while providing goods and services. As technology helped small businesses meet customer demand and explore additional markets, businesses simultaneously facilitated profits for future expansion. Moreover, according to Krume, as technology advances, the business culture, efficiency, and relationships improved. Wilburn and Wilburn (2018) researched the impacts of technology on businesses and society and outlined how small businesses can improve through technology.

As businesses incorporated technology into various activities, the efficiency of product development improved. Consequently, efficiency and time management between product creation and customer delivery was also enhanced. Within this context, Wilburn and Wilburn (2018) suggested that the use of automated machines and robots helps reduce labor and improve efficiency and time management while enabling consumers to enjoy quality products at a fair price, thus minimizing production costs and improving the business. Hanadi and Aruna (2013) examined the value of technological innovation for SMEs, especially concerning sustainable growth. Hanadi and Aruna (2013) showed that technology was an important driver for the growth and sustainable development of small businesses. Through appropriate technology adoption, it becomes easier for businesses to improve their performance and market share, which are important aspects of the growth

and sustainability of small businesses. Turner and Endres (2017) examined the strategies for improving small business owners' success rates and demonstrated the significance of technology for small businesses through research conducted on three small businesses that sustained their success for more than 5 years.

Networking

The proliferation of social media has created an opportunity for an unprecedentedly high number of interactions between businesses and individuals. Social media technology has enhanced social networking and made social networking easier than ever before. Rahman et al. (2015) acknowledged that social networking is positively associated with the survival of Small Business Enterprises (SBEs). More investigation into the use of social media technology strategy by small business owners is needed (Carter, 2014). Turner and Endres (2017) identified social networking, interpersonal ties, and the ability to establish new connections as essential factors in the sustainability of a small business. Turner and Endres (2017) noted that social networking is essential for exchanging knowledge and that improvement in the knowledge of small business owners lead to higher sustainability rates.

Most small business owners initially lacked experience and prior history of success; thus, they needed timely information, technical training, and personal development. Such development and general technological fluency are achieved through various platforms, such as small business associations, where owners shared relevant information, discussed challenges, and sent queries and received feedback without relying solely upon business analysts for advice. Wu et al. (2018) discussed how a robust

and sustainable ICT system could ensure the sustainability of a business in the market. The researchers observed how poor communication systems in a business triggered the failure of both large and small businesses (Wu et al., 2018). They gave a detailed explanation of the various ICT strategies that can be adopted by any business to ensure an effective communication network and flow of information. Rahman et al. (2016) showed that it becomes easier for SMEs to survive and become sustainable by adopting technological innovation.

Small business owners should also take networking beyond the face-to-face encounters they conduct each day. Social media technology gave small business owners the ability to widen their networking footprint beyond their geographical locations. Warren and Endres (2017) noted how networking is carried out in various forms, ranging from networking with family and friends to formal networking through community groups, government groups, religious groups, and business groups. This type of value chain network, boosted by technology, was vital for building an active and loyal customer base and nurturing technological fluency and small business sustainability. Elephant's (2018) findings supported those of Noghor Pessu (2015) regarding the importance of social media platforms for networking. Elephant added that Instagram, Facebook, and other comparable networking platforms enabled businesses to create brands, market their products, source information, and groom customer loyalties, all of which are critical aspects of a successful business.

Human Resource Development and Capability Enhancement

The nature of a business's human resources determined the quality of technology strategies adopted, as employees are critical elements of production and distribution. According to Prasanna et al. (2019), one of the main requirements for technology strategies to be fully adopted and implemented in a small business setting is a capable human resource base. Given that internal factors are highly responsible for small business failures, researchers agreed that external support systems can attain positive outcomes for performance and sustainability (Prasanna et al., 2019). Small business owners need to identify the complex nature of the technology their business requires and, if the technology extends beyond their capabilities, reach out for suitable external expertise. Limitations in human resources existed in most business settings given disparate levels of education, experience, and insight. Thus, there was often a need to employ external assistance when applying complicated technological strategies.

Automation

Automation streamlined business processes and was an essential factor for sustainability. Wu et al. (2018) noted that technology provided affordable ways of ensuring business continuity. For example, the authors suggested that small businesses should adopt RFID technology and do away with the barcode system, rather than physically scanning inventory. Adopting RFID technology can make it easier to check items in and out with minimal human labor while streamlining the process and cutting costs, thus enabling the business to achieve savings for future growth (Wu, et al., 2018). Consistently, Gandy (2015) referred to the most successful strategies that can be

employed by a small enterprise to improve their service and product delivery and increase their profits. Gandy highlighted the effective use of technology and pointed out how the automation of some activities, such as using machines rather than human labor of kneading dough, can increase profitability in enterprises such as bakeries. As a result, the enterprise will save on the salaries paid to workers while expediting the production process.

Sustainable Business Models

SMEs utilized various sustainable models to compete. Battistella et al. (2016) investigated various sustainable models that suit small businesses operating in the service industry. The purpose of their research study was to identify the challenges facing the sustainability of small businesses and the use of sustainable models to compete favorably in the competitive service industry. Their case study research of yacht businesses established that a sustainable business model is necessary for the service industry (Battistella et al., 2016). Bocken and Geradts (2020) researched the drivers of and barriers to an innovative and sustainable business model. Bocken and Geradts embraced qualitative research to tackle the effects of organizational design on the competence of sustainable business model innovation. The authors ascertained that the leading multinational corporations applied sustainable business model innovation to attain corporate social sustainability and a competitive edge over rivals. They established that small businesses, just like multinationals, require sustainable business model innovation to compete favorably. Consistently, the management and administration of SMEs should design dynamic and innovative capabilities to eliminate barriers. Geissdoerfer et al.

(2018) elaborated on and compared the fundamental themes of sustainability to help businesses operate in the long term, first suggesting pertinent research questions and identifying the gap in sustainable business practices while depicting the relationship between innovative technology and the long-term sustainability of small businesses.

Business models give businesses a competitive advantage. Parida and Wincent (2019) analyzed the sustainability literature to enable readers to comprehend how a business model gave businesses a competitive advantage. Ford (2018) explored the managerial strategies implemented by small venture owners to sustain their operations for an extended period. Systems theory was employed to inform the study, with a holistic application of natural concepts and models to commercial organizations in highlighting their strengths and weaknesses. Taking this approach, Ford argued that technology could benefit the sustainability of small businesses by updating the business model and enhancing business efficiency.

Innovation

Small businesses adopted sustainable innovation models to beat rivals. Geissdoerfer et al. (2018) studied the link between sustainability and business innovation, noting that innovative businesses realized sustainability and high financial performance. Though most business innovation models failed in the short term, few research studies have been conducted to support the failure of more innovative business models. In support of the influence of innovation on business sustainability, Godwin (2019) stated that small firms could utilize inventive methodologies to improve the business's supportability through scaled and appropriate innovations for independent companies

instead of to medium or full-scale undertakings. He confirmed that small ventures should always upgrade to fit ever-evolving markets and that such organizations must rapidly adjust and change with the business sector to stay viable. Battistella et al. (2018) interviewed seven small and medium-sized yacht tourism businesses in Europe to determine if they embrace sustainable practices. The research indicated that innovation played a crucial role in the sustainability of small businesses in the tourism sector.

The nature of innovations is an integral part of sustainable practice. According to Nidumolu et al. (2009), businesses should create innovations that alter existing practices and connect sustainable solutions with innovation to beat competitors. Wani (2018) found that technological innovation has a substantial potential for increasing economic production and the fulfilment of goods and services while enhancing social welfare and overall capacity in start-up businesses. Linton and Solomon (2017) examined the connection between technology innovation, business management, and sustainability as applied in small businesses. Upon analysing current issues and trends about how small businesses can integrate technology, innovation, and business management for a sustainable future, the authors argued that it was natural for small businesses to undergo a series of transformations, including technological changes, before they can be successful and sustainable (Linton and Solomon, 2017). By examining a variety of current and reliable sources, they provided relevant information to understand the effects of technology on these small businesses in terms of growth and development in both the short and mid-term.

By adopting of current and appropriate technologies, small businesses significantly improved their supply chains and increased sustainability. According to Lopez (2017), sustainability for small businesses can be enhanced by improved product creation consistent with technological change. Durowoju (2017) studied the impacts of technological changes on small businesses and their performance in the business market using a descriptive survey research design to collect qualitative data. The results showed that technological changes had a positive effect on business performance of SMEs in the study area (Durowoju, 2017). With the adoption of appropriate technologies, it became easier for small businesses to improve performance and remain sustainable. According to Jakšić et al. (2018), the extent to which small businesses can benefit from technology adoption depended on the level of innovation and the types of sustainable technologies adopted by the business. The authors employed a literature review approach to categorize and structure the sustainable practices adopted by small businesses to ensure success while compiling a larger model for understanding their interactions and implications. In doing so, the authors suggested the most appropriate technological advances and developments adopted by small businesses seeking to remain competitive and successful in the business market.

Marketing

Business sustainability can be obtained through customer satisfaction and the planning of products that meet customer needs and ensured the timely development of technologies and products that aligned with market trends. Cheng and Liu (2017) studied the introduction of new products to satisfy customer requirements and effectively comply

with the market trend. The authors 'found that new technologies and product developments are vital for small ventures to retain their sustainability for a more extended period. The authors' work informed small businesses on how to develop marketing strategies consistent with firm requirements and customer needs to retain their sustainability and competitive advantage.

Effective social media marketing played an important role in business sustainability. Ford (2018) identified social media marketing strategies like content development and brand management as distinguishing features of effective social media for retaining potential customers and attracting prospective customers. Ford provided insights for small business owners on the best marketing approaches to implement for business productivity while considering the economic impact of technology on business growth, sustainability, and community wellbeing in small businesses. Rahman et al. (2016) aimed at empirically determining the existence of a link between technological innovation and the survival of small business enterprises. The authors' study showed that adopting current technological developments in marketing can be of great value in allowing small business enterprises to survive harsh market times and thus remain sustainable within the short and medium terms. According to the authors, technological innovations such as social networking can be critical in supporting the growth and development of SMEs. For instance, the adoption of social media marketing can be robust for small business owners to reach out to potential customers in different or far-reaching geographic locations. It was evident that for these businesses, there was a need to adopt current technologies such as social media marketing (Rahman et al., 2016).

Pessu (2015) concluded that incorporating social media as a marketing strategy continuously facilitated and controlled an extensive market segmentation and a larger market share.

Supply Chain and Sustainability

Supply chain integration and a sustainability orientation are ways for small businesses to increase performance, efficiency, and competitive advantage. Shashi et al. (2018) sought to analyze the technological benefits of supply chain integration to small businesses within the context of the pressures of globalization and how globalization has pushed companies toward sustainability as a strategic tool for their business obligations, ecological compliance, and overall competitiveness. Noting that SMEs are “globally responsible for approximately 60-70% of the industrial pollution,” Johnson (2016) studied the impact of supply chain integration and a sustainability orientation by SMEs. Among their findings, Shashi et al, established a positive relationship between a sustainability orientation and sustainable procurement and design, how the integration of external factors positively affected sustainable procurement, how the integration of internal factors positively affected sustainable design, and how sustainable procurement and design are beneficial for environmental performance and cost control. Lopez (2017) also examined how small businesses can improve the sustainability of their supply chains, thus improving their sustainability.

A smooth operation can improve a company’s overall sustainability. According to Lopez (2017), the overall sustainability of a business improved by ensuring a smooth operation of the small supply chain. By ensuring appropriate technological developments

and an effective streamlining of operations within the supply chain, small businesses could experience growth and sustainability. Marshall et al. (2015) studied drivers of the adoption of social sustainability supply chain practices in small business enterprises while generally seeking to assess what facilitated sustainability. The authors found that a firm's entrepreneurial orientation was relevant and beneficial in shaping and reinforcing its adoption of social responsibility measures and a culture of sustainability. Given their small data set, Marshall et al. (2015) stressed the need for further research in this area before noting the implications of their work for management, which included expanded facilitation of a sustainability culture and behavior within and surrounding supply chain practices (Marshall et al. 2015).

A relationship exists between green initiatives and environmental sustainability. Yacob et al. (2019) assessed how green initiatives were handled in the small business manufacturing industries. Working from questionnaires culled from several proposed hypotheses, the authors found a key relationship between energy management, waste management, and water conservation for environmental sustainability. The manager's mediation of such green practices positively influenced environmental sustainability. The authors concluded the results had a broader implication for manufacturing by various firms globally and emphasized the need for additional, related research on environmental sustainability. Nidumolu et al. (2009) asserted that small companies should create a sustainable supply chain using proactive mechanisms. Small businesses can be environmentally conscious by using their energy and resources. In addition to designing

sustainable commodities and creating new sustainable models, Nidumolu et al. (2009) advised small businesses to develop innovative and new eco-friendly platforms.

Sustainable Operations in SMEs

Small businesses can employ a variety of sustainability strategies to attain an advantage over rivals in competitive industries and overcome economic hardships. Parida and Wincent (2019) discussed and evaluated how organizations used sustainability practices to beat rivals. Contemporary trends show that sustainable businesses can survive and thrive in an uncertain economy. As increased digitalization and circular economic trends transform business operations, Parida and Wincent (2019) stressed that small businesses can use a sustainable framework to compete. According to Parida and Wincent (2019), small businesses will not survive more than 5 years if they do not introduce sustainable operations.

Small business owners that fail to implement technology strategies tend to experience sustainability challenges. Ford (2018) focused on the managerial approaches that successful start-ups apply to sustain their businesses beyond 5 years. Ford studied three small businesses in the United States that successfully sustained their businesses beyond 5 years and demonstrated that the main determinants for a sustainable business include addressing customer feedback, updating business models, and improving the efficiency of business production. Ford's research found that small businesses tend to benefit when utilizing technology in terms of continued growth and increased productivity, thereby improving their general sustainability. Miller (2010) also conducted a research study in the United States to assess whether sustainability is appropriate for

small firms. Nidumolu et al. (2009) described how sustainability practices in business drive innovation while establishing that sustainable development is relevant to the survival of small businesses. According to the authors, small businesses should treat environmental regulation compliance as a viable opportunity to reduce conflict with government agencies. Although small businesses strive to make employees happy through benefits and salaries, Miller (2010) suggested that stakeholders value sustainability.

Adopting sustainable practices is a long-term strategy that ensures small businesses survival. SMEs are increasingly going green to impact society and the environment and overcome rivals positively. Williams and Schaefer (2013) have studied the relationship between environmentalism and sustainable business strategy in England. They collected data from managers of small businesses to comprehend the impact of their operations on climate change. According to their findings, small business managers had implemented effective and innovative measures to prevent environmental pollution. Subsequently, key stakeholders, customers, and the local community became loyal to businesses that enacted such sustainable practices that positively impacted the environment and society.

Modern small businesses in developing countries require approaches that conserve the environment and reduce costs. Maheswari et al. (2018) advocated for sustainable development approaches to managing small businesses in developing countries. Upon evaluating the link between financial performance and the operational, social, and environmental approaches of SMEs, Malesios et al. (2018) used data collected

from Indian, British, and French small businesses to prove the connection between growth and sustainability practices. SMEs experience high financial performance when they incorporate sustainable practices. The authors encouraged small firms to consider sustainable skills and technologies that reduce operational costs and increase profitability. The high cost of operation commonly hinders small businesses from growing and withstanding economic uncertainties. Therefore, the research conducted by Malesios et al. (2018) promotes a culture of sustainability that embraces innovative technology in the modern world. Maheswari et al.'s (2018) researched the operations of small businesses in developing countries and found that these businesses maximized revenue collection while limiting environmental pollution. The authors concluded that environmental sustainability is necessary to beat competitors and operate in the long term.

Practices of Technology Integration in SMEs

For many years, business leaders and owners have explored the value of technological change on their businesses and organizations. Several important sources examined SMEs with regard to the effects of technology on the growth and sustainability of businesses. Based on a primary survey in which data was collected from 221 respondents in South India, Priya et al. (2019) explored the extent to which small business merchants used digital technologies to ensure the sustainability of their businesses. The results showed that the adoption of digital technologies by small business merchants was important in supporting the growth and sustainability of these small businesses. Most of the business merchants examined in the study used digital technologies to support payment systems and interact with their customers. These

technologies improved the efficiency of operations for these small businesses, thus sustaining them in the short and mid-term.

One of the fastest-growing areas of technology that has been of great value to small businesses is the development of IT. Xiong and Qureshi (2015) examined IT integration by SMEs and showed how small businesses benefitted from different types of information technologies, each designed to serve a particular purpose for the business. Similarly, Ghobakhloo et al. (2011) explored the extent to which SMEs adopted technologies and how these technologies affected these firms' business performance. The authors showed that IT adoption has developed to become a crucial asset for small firms. Many small businesses are investing in different types of technologies linked to benefits for the organization. Xiong and Qureshi (2015) found that the adoption of information technologies supported the growth and development of small businesses and further clarified this connection by identifying how IT can be integrated into small businesses to support growth and sustainability.

With the proper integration of technology into business, small entrepreneurs stand a better chance of benefiting significantly from these technologies. Maziriri (2020) assessed the effect of green advertising and packaging on the performance of small businesses in developing countries. The author conducted quantitative research using a conceptual approach to determine the relationship between business performance and green technology. The study targeted manufacturing SMEs from Gauteng province, South Africa, and found that green advertising and packaging positively affected the performances of small businesses in South Africa. The author urged owners of small

businesses use green technology to achieve a competitive edge over rivals in the market. Small businesses can be sustainable when they adopt green and innovative technology during the packaging and marketing of their products. Ghobakhloo et al. (2011) argued that, adopting of the appropriate technologies, small businesses stand a better chance of overcoming challenges in the market and becoming sustainable. Adoukonou (2019) analyzed success strategies for sustaining small businesses by examining five successful small businesses in the District of Columbia. Adoukonou found that successful small business leaders exploited business intelligence technology in collecting, storing, disseminating, and producing internal and external information essential to strategic decision making. Such practices help small businesses acquire a competitive advantage in the market.

Technology is vital for small businesses that wish to stay competitive and succeed in the future. Modimogale and Kroeze (2011) researched technology integration in SMEs in Gauteng. Modimogale and Kroeze identified the problem that it is difficult for SMEs that use traditional tools to stay competitive in a rapidly changing technological environment. The authors argued that both traditional tools and ICT tools are necessary for business competitiveness. However, Modimogale and Kroeze identified barriers to implementation such as ongoing deficits in knowledge, financial resources, skilled labor, and the associated technological tools before making recommendations on overcoming these daunting obstacles. Koyagialo (2016) also examined strategies that small business owners applied to sustain success. Koyagialo analyzed representative samples, including four successful small businesses that successfully sustained their businesses for more

than 5 years in Georgia. His research showed that technological innovation was one of the key drivers in their success. The author used the theory of disruptive innovation to address the significance of technological innovation for small businesses, observing that a reluctance to implement technology results in the premature failure of many existing businesses. In contrast, innovative small businesses remain profitable and competitive. Similarly, using entrepreneurship theory as a conceptual framework, Wani (2018) elucidates fundamental concepts, including the technology and innovation required to sustain small businesses.

Small businesses in many areas have managed to stay competitive and maintain pace with the world's changing economy using IT, which helps to remove the threat of lagging. Maintaining pace is demonstrated by studies like Berisha-Namani's (2009) research on the role of IT in SMEs in Kosova. Berisha-Namani reinforced that technology has become a powerful tool that small businesses use to produce quality goods and services enable leadership to define their business structures, processes, and competition strategies. Berisha-Namani noted that ICT has allowed small businesses to implement programs that facilitate regional and international integration for development. Bazhenova et al. (2012) studied the impact of ICT on business process management for SMEs in emerging countries. The authors performed an analysis of the existing practices of IT usage in business process management and found that technology can improve business activities and business management, depending on the economy of the country.

The adoption of ICT by SMEs provides them with opportunities to venture into international markets and access data while enabling them to remain competitive in the

market. Pessu (2015) researched the impact of technology in business, technological applications, and the long-term sustainability of businesses in Atlanta, comparing a variety of small businesses based on their application of technology in operations and service delivery. Pessu found that the influence and the dynamic trends of technology in small businesses should not be ignored. Linton and Solomon (2017) argued that small businesses that fail to implement adequate managerial strategies would experience reduced profits and sustainability challenges as technology advanced beyond their capacity. The authors explored various managerial strategies used by owners of successful small businesses and found that technological moves within the next 5 years will contribute to social moves and numerous changes. The strategies examined provided additional insight for owners of small retail businesses and, as a result, improved business productivity.

Internet technology benefits small businesses. Barhatov et al. (2018) analyzed the impact of internet technology on the success of small businesses in Russia. They revealed that internet technology greatly benefited many of the country's small businesses 20 years ago, which have successfully grown into large organizations today. The authors demonstrated the significance of the internet for SMEs by elaborating the functions of the technology for small businesses, customers, and public administration. They showed that the internet ensures faster interaction at low costs while reducing the length of the supply chain, leading to a less expensive business for start-ups.

Technology innovation affects sustainability. Chege and Wang (2020) conducted a research study in Kenya to establish how technology innovation affects the

sustainability of small businesses in developing countries. According to their work, small businesses economically grow when they embrace sustainable approaches that conserve natural resources. Chege and Wang argued that the social effect small business activities have on the environment determines environmental sustainability and noted that SMEs in developing nations are concerned about the impact of their activities on society and the environment. In particular, SMEs in Kenya used innovative technological strategies to prevent environmental pollution and realize sustainable development. Accordingly, Chege and Wang (2020) established a link between environmental sustainability and technological innovation and discussed how the latter affects small business performance in developing countries.

Advancement in information technology has increased the role of the internet in business. Consistently, Berisha-Shaqiri (2015) researched the impact of IT and the internet on business. The author noted that IT had changed business cultures and structures, giving businesses the potential to reach out to more customers, expedite introduction of new products and services into markets, and quickly access and open new markets. Moreover, communications between businesses and customers and between businesses and suppliers internationally and nationally are more effective and efficient because of IT.

Application of ERP Systems by SMEs

Enterprise Resource Planning (ERP) systems as an integrated management solution, are recommended for small businesses because ERP is a strategy for long-term survival. According to Bazhenova (2012, p. 5), an ERP system is a single standard

information system that offers combined assistance to an organization's business procedures. Due to this framework's integration of all business procedures, an ERP system makes it possible to reduce or eliminate boundaries between functional departments and improve access to the information within the business environment. An effective ERP system provides an appropriate infrastructure for managing growth and changes for small businesses by expediting and streamlining key processes like order processing and fulfilment; scheduling and planning; internal and external communications; end-to-end visibility of business processes; product or service delivery; and compliance with industry, government and customer standards. Small business owners can quickly respond to changing market conditions and competitive pressures from their rivalries with such an advantage.

Application of Principles of Software-as-a-Service (SaaS) on Small Businesses

Software-as-a-Service (SaaS) is a software distribution model in which a service provider hosts applications for customers and makes them available to these customers via the internet. The fundamental principles of Software-as-a-Service (SaaS) demand that programs are not installed on a company's computers but, instead, operate from the facilities of the serving company, with business owners using the program through a Web interface. According to Bazhenova (2012), though small business budgets for ICT are limited, it is increasingly important to access relevant software through the internet. Bazhenova (2012) recommended this since most small business enterprises do not have ICT experts and professionals onsite. It is cheaper for such commercial entities to hire an external expert when needed. SaaS technology strategy is advantageous to small business

survival because it directly means cutting costs and limiting human resources while still providing effective solutions.

Application of Mobile Technology Strategy by Small Businesses

Mobile technology enables users to conduct voice calls, run applications, send and receive messages, and interact with a global base. For Elephant (2018), mobile technology is a technology that goes where the user goes. Mobile technology consists of portable two-way communications devices, computing devices, and the networking technology that connects them. Within the context of small business enterprises, it is in a business owners' interest to effectively integrate such technology with available business procedures. Bazhenova et al. (2012) stated that mobile internet applications provide substantial benefits concerning their application in business operations and do not require modifications, significant investments, or technical expertise to handle them. For this reason, mobile technology strategies are suitable for all small business owners seeking to ensure their businesses' survival beyond 5 years.

Many mobile technologies have found value in 2021's business world. Elephant (2018) analyzed the importance of mobile technology for small businesses with study methods that involved a positivist approach followed by quantitative research. Elephant noted that most small business owners have access to mobile technology and used mobile technology to run their businesses. These technologies allowed business owners to monitor their business operations more efficiently while at the same time managing their customers. Elephant (2018) showed that small business owners accessed and owned mobile technology devices that supported their business objectives. His work further

reported that mobile technologies such as social networks were crucial in supporting objectives for small businesses while recommending the adoption of mobile technologies.

Technological Challenges Faced by SMEs

The technological challenges encountered by small businesses can significantly hinder their chances to succeed. Pessu (2015) examined the factors for the sustainability of small business entrepreneurs noting how technological innovation can produce problems for the small business entrepreneurs who engage in the global marketplace, such as a loss of market share for individual business owners. Accordingly, six themes or areas for consideration emerged from Pessu's (2015) analysis: forces that drive the introduction of technology, types of technology used to reach potential and existing customers, most commonly used and implemented types of technology, beliefs, and values related to the use of technology, obstacles that inhibit the use of technology, and the competitive advantage resulting from the use of technology for the small business entrepreneur. Pessu further acknowledged the social implications of small ventures, including creating of job opportunities for the local community and facilitating of the overall national growth.

Technology innovation can act as a catalyst for a company's sustainability. Prasanna et al. (2019) used a systematic review approach to examine the relationship between technology and the sustainability of small businesses given the competition in the market. The researchers identified factors that determined the adoption of technologies by small businesses and the extent to which these technologies improve the survival and sustainability of these businesses. Prasanna et al. (2019) also identified

possible challenges to the successful adoption of these technologies. The authors further highlight the conditions enabling effective technological adoption for small businesses, namely access to a technologically fluent and skilled labor force in the economy and the timely recognition of opportunities for new technologies.

The automation of primary business activities is consistently among the most important technological innovations enabling small enterprises to operate. Taneja et al. (2016) focused on the significant barriers that small enterprises face to ensuring they remain in the market. Among the barriers they highlighted is poor innovation. The authors encouraged small enterprises to engage with technological innovations that enabled their sustainability even in times of global crisis. Automated monitoring and service provision are some of the aspects featured in this research. Nor-Aishah et al. studied the impact of sustainable approaches and entrepreneurial leadership on the social, economic, and environmental performance of SMEs in Malaysia and found that small commodity-manufacturing businesses face triple bottom line challenges, having to account for their monetary and business growth and impact while assessing their impact on the social and physical environments in which they operate. They identified a connection between the performance of social, environmental, and economic sustainability and the leadership of entrepreneurs.

The leaders and owners of small businesses have embraced sustainable entrepreneurship to deal with the triple bottom line issues. Del (2017) discussed the effectiveness and usability of the international integrated reporting council (IIRC), a framework for SME reporting, and the associated adaptation of its integrated reporting

(IR) principles to meet business needs. Employing both deductive and inductive approaches, the author first outlined the theoretical background and model for integrated reporting for SMEs, then conducted and analyzed a single case study on an Italian company's integrated reporting. Del (2017) found several major challenges for the integrated reporting process, including clearly defining the relationship between sustainability and integrated reporting, adapting the main IR concepts (e.g., materiality, integrated thinking, and connectivity), and fully understanding the benefits derived from the implementation of IR. In addition, the findings highlighted the need for a more simplified process for integrated reporting and ongoing research in the area.

Historical Contributions of Porter's Five Forces

Various businesses, both small and large, have long benefited from Porter's Five Forces model. While presenting strategies that shape competition in most industries (Porter, 2008), this conceptual framework has helped many small entrepreneurs maintain superior positions over their competitors and remained in operation for years. According to Jakes (2018), small business owners who used this model stayed ahead of their rivals and effectively maintained control of the market by being innovative and quick to adopt new technology strategies and implement them wisely. Technology strategies helped small business owners penetrate the market boldly while managing competition, expanding market share and volume, and achieving long-term business viability.

Regarding the first force, the threat of new entrants, Porter analyzed a few companies that shook the economy. He attested that new entrant in most small business environments come with new capacities and the need to obtain market shares that put

pressure on costs, prices, and investment rate needed to compete. Consistently, the fear of new entry places limits, whether actual or anticipated, on most businesses' profit potentiality. New entrants use this opportunity to leverage the available cash flows and capabilities to shake up the competition. Large-scale examples include Pepsi's penetration of the bottled water business, Microsoft's initial entry into the internet browser business, and Apple's foray into the music distribution industry.

Through the application of Porter's Five Forces, life insurance brokerage owners were also able to combat competition and win over their competitors by instituting differentiation, focus strategy, and cost leadership. Jakes (2018) explored how life insurance brokerages can apply Porter's Five Forces to sustain their business, utilizing a sample of three life insurance brokerage owners in the state of Texas. In his application of the model, Jakes argued that using Porter's (1980) Five Forces helped the insurance brokerage owners and stakeholders to (1) establish workable and sensible strategies to help them solve the problem of competitive forces in small business enterprises and (2) acquire and maintain a competitive advantage over their rivalries.

Maintaining good customer relationships is paramount for widening the customer bases and revenues of these small business enterprises. Most insurance brokerages that took part in the study offered expertise to Jakes (2018) based on Porter's (1980) model. Insurance brokerages tailored each consumer based on the buyer power force and offered guidance in other dimensions. For Bruijl (2018), Porter's Five Forces model provided a conceptual foundation for small business owners to seek new or different strategic directions, helping them navigate and adopt technology strategies while considering the

necessary questions regarding their potential impact. For example, what is the cost of a specific technology, and how simple is it to use? What function will the identified technology serve, and what profit will it generate?

Transition

Section 1 included details of the background of the problem, problem statement, the purpose, the nature of the study, the research questions, the conceptual framework, the operational definitions, the assumptions, limitations and delimitations, the significance of the study, and the review of the professional and academic literature. The literature review is organized into sections including, small businesses and business failures, technology strategies used to sustain businesses and small business sustainability, Porter's Five Forces model, alternative theories, and the roles and benefits of small business enterprises. Section 2 contains methodology components such as the purpose of the study, the role of the researcher, participants, research method and design, population and sampling, ethical considerations, data collection and analysis, as well as reliability and validity.

Section 2: The Project

The goal of this qualitative study was to explore and identify technology strategies small business owners used to sustain their businesses beyond 5 years. The emphasis was on small business owners in the state of Maryland with sustainable record of doing business beyond 5 years. In this section, I discussed the purpose, the role of the researcher, participants, research method and design, population, and sampling. In this section, I also addressed ethical research practice, data collection, data collection instrument, data organizational techniques, data analysis, and how I ensured the reliability and validity of the research findings.

Purpose Statement

The purpose of this qualitative multiple case study was to explore technology strategies some SBE business owners used to sustain their business beyond 5 years. The target population was comprised of four SBE owners from the state of Maryland with more than 5 years of experience who had successfully utilized technology strategies to achieve business sustainability beyond 5 years. The implication for positive social change included SBE owners providing greater economic stability, assisting locally in lowering the unemployment rate in the communities in which they serve, and contributing to the state revenue for socioeconomic development.

Role of the Researcher

Researchers can conduct qualitative studies in numerous ways (Levitt et al., 2018), and they play a prominent role in such studies (Saxena, 2017). During data

analysis in a qualitative study, the researcher identifies and codes the themes to find the meanings that could emerge from the dialog with participants (Yin, 2018). My interest in conducting this research stemmed from my background in technology and experience as a small business owner who used technology strategies to sustain my business for more than 5 years. My interest grew as I read articles on technology strategies businesses utilized to sustain their businesses beyond 5 years and began to investigate how utilizing technology can help sustain a business. I conducted this research to explore technology strategies that small business owners used to sustain their businesses for more than 5 years. My goal was to gain knowledge about the phenomenon of small business sustainability through technology. My role included contacting potential participants, selecting participants, creating the research interview guide, interviewing participants, collecting, organizing, and analyzing the data through computer software.

While interviewing participants, I, as the researcher, listened and showed interest in their opinions (Kumar & Cavallaro, 2017). During data collection, I acted ethically according to the Belmont Report (National Institute of Health, 2020). The Belmont Report embodies three fundamental ethical principles that include (a) the principles of respecting persons, (b) beneficence, and (c) justice. I complied with these three principles during the interaction with the participants, and I asked questions and collected data in a way to avoid any influence on interviewees' opinions.

In this study, I utilized semi structured interviews to ask in-depth questions, collect evidence, and explore participants' answers (McTat & Leffler, 2017). Utilizing a semi structured protocol, the interviewer can ask a series of questions in different ways

according to participants' responses (Yin, 2018). Before initiating the interview, I developed and communicated the interview protocol with each participant. During face-to-face data collection, the researcher can take notes to summarize participants' conversations and record voices (Chongo et al., 2018). After collecting data, I identified themes from the patterns in the data and presented the research results. The findings can help increase small businesses' profitability and growth over time.

Participants

Purposive sampling is appropriate for getting the required information from respondents with superior knowledge about the research topic (Yin, 2018). I selected at least three SBE owners who had utilized technology strategies with a record of sustainability beyond 5 years of operation in the state of Maryland to participate in the research study. To identify the participants, I requested a database of active SBE business owners from the U.S. Commerce Department and the Maryland small business development center. I also requested a list of information that included business owners' names, addresses, counties, contact numbers, and years of establishment. I identified nine SBEs, from which I choose four to include in the study. The eligibility criteria were that participants (a) were business owners or CEOs, (b) owned businesses that have been in operation for a minimum of 5 years, (c) have worked within the state of Maryland, and (d) have between 1 and 99 employees.

To gain access to the selected participants, I conducted telephone calls and wrote introductory letters specifically to the business owners and CEOs describing the purpose of the calls, while also inquiring if they were interested in participating in the study. The

introductory letters include the nature and the purpose of the study. After identifying the participants for the study, I followed up with a telephone call and a letter.

Research Method and Design

Researchers use one of three methodologies in conducting research. Researchers use quantitative, qualitative, and mixed methods approach to conduct research (Maxwell, 2016). Qualitative researchers seek to explore a phenomenon through open discourse and the discovery of participants' experiences, practices, strategies, and perceptions (Van & Struwig, 2017). Researchers choose the most appropriate research method and design their study according to the research question, goals, and purpose. The purpose of this study was to explore strategies that small business owners used to sustain businesses beyond 5 years, making a qualitative study the most appropriate method. Researchers use qualitative research to describe a set of approaches that analyze data in the form of natural language or words and expressions of experiences gained from interactions and imaginative presentations of facts gained from the interactions (Levitt et al., 2018). The qualitative method was the ideal method for the study because it explored all the elements small business owners used to sustain their businesses beyond 5 years.

Researchers use other prevailing research methods, including quantitative and mixed methods, to conduct social science research. The quantitative method is used to increase methodological rigor and establish a relationship between or among statistical variables to evaluate and estimate values based on data collected from samples (Laher, 2016). Researchers adopting a quantitative method control the research fields during testing. A quantitative method is appropriate when the focus is on observable and

objective data and facts that researchers can quantify to demonstrate causality (Crane et al., 2017). The study did not involve collecting and analyzing statistical data, and the intention was not to draw conclusions based on a hypothesis. In addition, when using quantitative methods, researchers may not be able to provide an in-depth understanding of lived experiences or the complexity of the phenomenon of decision-making in business. Therefore, the quantitative approach was not appropriate to analyze and explain how small business owners used technology to sustain their businesses beyond 5 years.

The mixed method is where researchers collect and analyze both quantitative and qualitative data within the same study. Mixed method research incorporates both qualitative and quantitative elements to mitigate the limitations of choosing between a qualitative and quantitative approach (Alcon-Soler & Safont, 2018; Yin, 2018). The quantitative part of the mixed method made it unfit to use for this study because the goal was to conduct an in-depth exploration of the technology strategies small business owners used to sustain their businesses beyond 5 years. Thus, only the qualitative method was appropriate for this study.

Research Design

For this study, I considered three research designs: (a) phenomenology, (b) ethnography, and (c) case study. Phenomenology focuses on participant's articulated and contributive lived experiences to gain insights, thoughtfulness, and recognition of a phenomenon (Geiger, 2018). I precluded the phenomenology design as I was not focusing on participants' lived experiences as a means of data collection. Ethnography describes and interprets the shared patterns of group cultures, neighborhoods, or

organizations through the long-term involvement of the setting. Ethnography is more suitable to uncover and comprehend the real meaning of lived experiences (Marshall & Rossman, 2016). To conduct ethnographic studies, the researcher must live and experience the culture and the real life of the group (Marshall & Rossman, 2016). The ethnographic design was not appropriate for this study because the intent of this study was not to conduct long-term research onsite.

I decided to use a multiple case study. The multiple case study design enabled me to examine the organizational realities in a real-life setting by conducting an in-depth exploration of several cases (Schmidt et al., 2018). Researchers use multiple cases to explore the experiences of a small group of participants over time (Haines, 2017). A case study consists of developing an in-depth description and analysis of a case or multiple case to acquire an exhaustive understanding of the phenomena (Yin, 2018). I selected the multiple case study approach to increase the diversity of the data and the trustworthiness of the research findings.

A failure to reach data saturation affects the validity and quality of the research. Researchers attain data saturation when nothing new develops from interviewing participants of a study because none of the participants are sharing new information (Marshall & Rossman, 2016). Data saturation happens when the information participants provide does not generate any new materials or data about technology strategies that small business owners used to sustain their businesses beyond 5 years. I collected data through semi structured interviews, review of company documents and member checking until no new information, themes or patterns emerged to reach data saturation.

Population and Sampling

This research aimed to explore the technology strategies that small business owners employed to sustain their businesses beyond 5 years. The target population was small business owners who had sustained a company longer than 5 years in Maryland. As researchers should select participants whose characteristics align with the overarching research question before collecting data (Marshall & Rossman, 2016), I selected small business owners with relevant qualifications related to the research topic and purpose. To be eligible for this study, participants were (a) small business owners who (b) operated an established business in Maryland and (c) had been legally operating for more than 5 years.

Purposeful sampling is the intentional selection of participants based on their ability to illuminate a specific theme. Researchers use purposeful sampling to choose participants who meet specific eligibility criteria and possess the required knowledge to answer the research questions posed during an interview (Hennink et al., 2017). Researchers use two significant sampling forms of techniques: probability and nonprobability (Lucas, 2017). According to Lucas (2017), probability sampling is a statistical process to ensure that individuals in the population have an equal opportunity to be selected as a representative sample. In contrast, nonprobability relies on the subjective judgment of the researcher and does not give all the individuals in the population the same chance of being selected (Rafail, 2018). The typical sampling methods are convenience, snowball, criterion, extreme, and purposeful (Asiamah et al., 2017). The convenience method promotes the biases applicable through the location,

making it appropriate for this study. Snowball sampling involves starting with one or a few participants and extending the number of participants based on the links to the initial cases (Dorney, 2017). Snowball sampling was not suitable for this study due to the possibility of losing control of the sample size, which could lead to sampling errors.

Researchers use criterion sampling to identify and select participants who meet specific criteria for the study by filtering out the most relevant participants with the most meaningful information about the study. Criterion sampling was not suitable for this study because the sampling population of the study was not exactly equal. Extreme sampling focuses on an excellent and prominent outcome (Asiamah et al., 2017). Extreme sampling was unsuitable for this study because I did not want the research results to be inadequate but rather seek to understand the study phenomenon process. Purposive sampling is typical in qualitative studies for selecting a demonstrative population (Denzin & Lincoln, 2018). Purposeful sampling was appropriate for this study because it helped gain an in-depth understanding of the participants' technology strategies that sustained their businesses beyond 5 years. Researchers who conduct qualitative research specify the sample size of the data collection selected for the in-depth investigation of a phenomenon and build relationships with the participants (Asiamah et al., 2017). I decided to use at least three participants as the sample size.

Ethical Research

Research ethics govern the standards of conduct for scientific researchers. Ethical consideration is mandatory when conducting research involving living animal species, especially human beings (Pope, 2017). The informed consent process in social science

research is a form of agreement between two parties to ensure successful communication (Yin, 2018). Based on these standards, participation in the study was voluntary, and participants had the right to withdraw their consent to participate in the research at any time.

To ensure the research was ethical, before contacting any participants, I first obtained approval from Walden University IRB to ensure (a) participants' protection, (b) adherence to the recruitment plan, (c) protection of the research participants' privacy, and (d) the respect of their rights. Walden University's approval number for this study is 03-24-22-0439935. I also verified that the informed consent process was followed by utilizing it to roadmap the relationship with the participants. I obtained each participants' informed consent prior to data collection (see Appendix B). Participants had the opportunity to respond by indicating their full understanding of the terms of their participation, as well as the right to terminate their participation at any time. I ensured confidentiality by protecting participants' names, organizations' names, and all information collected. To promote transparency with the research participants, I shared a summary of the study details and the intent of the investigation with each participant before conducting the interview, as well as any data collected during the interview with the participants in person, thus allowing them to validate the accuracy of the data collected to eliminate any bias. To minimize participants' potential discomfort, participants responses were not disclosed to other research participants. I anticipated a lack of perceived physical, legal, or economic risk for participants, and no direct incentive for taking part in the study. The data I gathered during the study will remain in

a locked filing cabinet to which only I have access. Interview data are typically stored for 5 years (Oltmann, 2016; Yin, 2018). After storing the data for 5 years, all data will be destroyed by deleting electronic data and shredding any hard copies.

Data Collection Instruments

I was the primary data collection instrument in this study. The researcher acts as the primary instrument for qualitative studies and is active in collecting data from interviews and other sources of information (Lazard & McAvoy, 2020; Vidgen, et al., 2017). There were three sources of data for this study: in-depth face-to-face interviews, public published documentation, and the review of archival records. The data collection instrument process included administering the interview questions, capturing participant responses, organizing of the responses, analysis of the answers, and determining results and findings. In a qualitative multiple case study, the researcher is the primary data collection instrument (Damsa & Ugelvik, 2017). Yin (2018) identified several sources of data that can be used in qualitative research, including (a) interviews, (b) documentation, (c) physical artifacts, (d) direct observation, (e) archival records, and (f) participant observation. I viewed the data through semistructured interviews, review of company documents, archival records, and member checking.

Interview

I utilized an interview process that involved the use of the interview protocol (see Appendix A) to obtain data and results. The credibility of research is improved with the use of an interview protocol (Yin, 2018). I followed the order of questions in the interview protocol. However, when necessary, I varied the order of questions to

accommodate the flow and direction of a participant's response. Researchers gain a comprehensive data collection for their research using semi structured interview questions (King et al., 2019). I interviewed participants using a set of written semi-structured interview questions aligned with research themes in a one-on-one interviewing setting and a predefined interview protocol. The data collection instruments for this research were interviews and a review of relevant documents. Nordstrom (2015) stated that an audio-recorded interview allows researchers to capture the information they might miss during notetaking. Therefore, I audio-recorded some interviews and took handwritten notes during others at the request of the participants. To comply with member checking requirements, I contacted the participants to arrange for a follow up interview by telephone or in person to review the accuracy of the information collected and ensured no new information existed.

Documentation

I asked each participant to provide any documentation used by their organization in the implementing of technology strategies. These documents were valuable to my research of how small business enterprises were using technology strategies to sustain their businesses beyond 5 years. To collect information for their research, qualitative researchers use interviews, document analysis, and direct observations (Norlyk, et al., 2016). Primary data collected is supported through the analysis of secondary data such as documentation and effectively supports research (Norlyk et al., 2016; Yin, 2018). I used these organizational documents to support all primary data collected by checking consistency which added context and depth to the data gathered. The information

contained within these documents was used to analyze if such documentation was useful or necessary with regards to the overarching research question. The credibility of all findings is enhanced when the researcher includes multiple sources of evidence to the reader (Yin, 2018) thus enhancing the credibility of my research.

Archival Records

I reviewed archival records including internal documentation such as strategic plans, customer service guidelines, internal business records, written funding plans, product surveys, and marketing plans created during the first 5 years of business as well as external information such as websites, annual reports, social media sites and other documents available for public use. Relevant data may be collected through documents, archival records, interviews, direct observations, and physical artifacts (Yin, 2018). Baškarada (2014) noted that these archived records support the use of triangulation and enhance the trustworthiness of the research findings. Archival records are an invaluable tool of data gathering for case study research that is focused on the past and its impact on the present. According to Pacho (2015) researchers could collect data in a variety of ways including archival records, interviews, direct observation, participant-observation, or with physical artifacts such as internet information, government reports, and news clippings. Thus, the review of archival documents, when necessary, may also serve as an important data collection method. I reviewed archival records including internal documentation such as strategic plans, customer service guidelines, written funding plans, product surveys, and marketing plans created during the first 5 years of business as well as external information such as websites and social media sites.

Reliability and Validity Process

I used the member checking process to assure appropriate and accurate capturing of each participant's thoughts and stories during the interview. Marshall and Rossman (2016) found that the member checking process gives the participants the opportunity to review the summaries of the interview findings, check for correctness, and provide further insights. To enhance research transparency, researchers adopt member checking to validate the research data. Holmes and Parker (2017) recommended that researchers strengthen the reliability and validity of data by using member checking to corroborate the studies credibility. Member checking can occur at various stages, including both during the interview and afterward, to add to the validity and credibility of the study. I initiated this process after completing each of the interviews. Member checking is appropriate in a case study to ensure the credibility, reliability, validity, and transferability of data collected as well as the trustworthiness of the results. Additionally, Birt et al., (2016) noted that the member checking process enhances trustworthiness in data collected. Thus, to assure the reliability and validity of the data collection instrument process, and to enhance trustworthiness, I used the member checking process.

Data Collection Technique

Data collection is critical in a qualitative research study. The researcher's direct participation through data collection by interviews and other sources of information forms a significant part of the study (Yin, 2018). The data collection techniques used in this study included interviews, document reviews and archival records. Data collection methods in a case study involve integrating purpose and insightful data through a variety

of sources to gain a full and accurate view of an area of interest (Clark & Vealé, 2018). A primary source of data collection is open-ended semi structured interviews. I created an interview guide and template, listing the main questions and topics to answer the research questions. The purpose of the interview template was to solely serve as a guide to maintain uniformity in the wording of interview questions and preserve the interview's integrity and questions. The scheduling of the interviews was by phone call and email to the participants.

Interview

The advantages to conducting interviews face-to-face include (a) the ability to gain trust, (b) politeness, (c) nonverbal communication, and (d) the ability for participants to express themselves (Oltmann, 2016). Conducting interviews in a qualitative framework permits a deeper exploration of participants' thoughts, feelings, and experiences (Maramwidze-Merrison, 2016). Other methods of data collection may not produce the same outcome. Another advantage of a face-to-face semi structured interview is that it presents the most authentic primary data and may also present an excellent opportunity for document review, and unspoken communication (Yin, 2018). Researchers sourced qualitative data from observations, interviews, and business documents (Yilmaz, 2018). There are several disadvantages of using semi structured interviews that researchers must understand. Those disadvantages include (a) mistake in the analysis of the data collected, (b) incorrect recall of information by participants, (c) a misrepresentation of information from the participant due to a desire to satisfy the interviewer, or (d) the possible selective representation of data and misleading the

researcher (Oltmann, 2016; Wilson, et al., 2016). Researchers benefit from paying strict attention to the interview to control the direction of the conversation as needed and to ensure the participant does not digress (Yin, 2018).

Documentation

The primary advantage of a review of documents is to assure the validity of an applicable participant's interview response. Additionally, another advantage is that the researcher can gain an understanding of the participant's business activities and a broader view of the problem by reviewing the publicly available information (Meier & Calderon, 2016). Researchers must be vigilant in obtaining documents that are accurate and complete. Gathering the organizational documents from the participants has both advantages and disadvantages. By using document review of documentation directly from an organization with a record of successful project implementation, the researcher increases reliability and validity of the data gathered (Gresham & Burleigh, 2019; Yin, 2018). Document review can be used to corroborate evidence reliably (Evans, 2018). A disadvantage of using document review is that it is possible the documents gathered from the participants are outdated, incomplete, inaccurate, or biased in one form or another (Yin, 2018). The researcher should always check all documentation received to ensure the information on the documents is as accurate as possible.

Archival Report

The primary advantage of archival reports is to assure the validity of an applicable participant's interview response. Another advantage is that the researcher can gain an understanding of the participant's business activities and a broader view of the problem

by reviewing the publicly available information (Meier & Calderon, 2016). However, some disadvantages of archival reports as noted by Frels and Onwuegbuzie (2013) are inapplicability, unreliability, and lack of verifiability of data. Researchers use various sources to enhance data triangulation and data saturation, which improves the credibility of the results (Mazerolle & Eason, 2018). The interview process involved conceptualization of the interview project, establishing access, and contacting the interviewees, embarking on data collection, transcribing the data collected, presenting the data collected, and sharing the lessons learned and outcomes of the study with all the research stakeholders.

Data Organization Technique

A hard copy filing system and an electronic filing system was created to store all data gathered and both systems are secured. I created both of these systems prior to the collection and analysis of data as this is an important task before the data collection and data analysis tasks (Duffy et al., 2017). Additionally, I transcribed the interviews with personal information labeled for member checking purposes to allow me to connect themes and protect personal information.

Businesses are utilizing technology software to identify themes and patterns in data. The adoption of technology-oriented software for data organization is becoming more common in social science research (Ang et al., 2016). Some researchers have used computer-aided data software (CAQDAS) such as NVivo, MAXQDA, and other applicable software for digital analysis, storage, and organization (Ang et al., 2016). Researchers use NVivo due to its capability to aid with the proper compilation and

identification of the possible grouping of data relationships from the collected data (Sotiriadou, et al., 2014). NVivo is a useful tool for identifying patterns and themes for coding. I imported the collected data from the research participants and organized them using NVivo software for data organization, storage, and retrieval. Microsoft Word was utilized as the tool to transcribe the interviews. Microsoft Excel was also utilized as needed for other data requirements that required a spreadsheet format. All data gathered was organized into categories using both the hard copy and electronic format for easy retrieval. I transcribed the interview data, categorized the answers from the research question into subtitled paragraphs, and saved the data from each participant in a dedicated Microsoft Word file.

Walden University requires a 5-year retention period. I will maintain and protect the research data in a safeguarded media to preserve the confidentiality of participants and data collected during the research. I will store the physical hard drive device containing the interview recordings and all other research documentation in a locked fireproof and waterproof safe in my home office for the duration of the research study and the 5-year retention period.

Data Analysis

I analyzed the data from the collected information to attempt to generate themes and ideas. According to Davidson, Paulus, and Jackson (2016), researchers used data analysis to focus on identifying existing themes and organizing the discovered themes to match the studied phenomenon. Methodological triangulation is when researchers use more than one approach to address the fundamental question of the study. Researchers

use triangulation to gain more exposure to the lines of inquiry to increase the research's result validity and reliability of the data analysis (Yin, 2018). Researchers must define their research sample size in advance in their research proposal and protocols to indicate that the researcher has devised, refined, and strengthened the approach to data collection (Hennink et al., 2017).

Triangulation was used to ensure the credibility of the data. Researchers use triangulation by utilizing the responses to the semi structured interview questions to verify data findings (Denzin, 2017). Using a solid method of review, researchers can validate through triangulation both negatives and positives (Yin, 2018). I utilized methodological triangulation in the data analysis process by using established data and previous research associated with well-known methods and theories to offer supporting evidence for the study.

The five-step process described by Yin (2018) was used to analyze information as it relates to technology strategies used by Small Business Enterprises to sustain their business beyond 5 years. The five steps are (a) compiling, (b) disassembling, (c) reassembling, (d) interpreting, and (e) concluding (Yin, 2018). To ensure a high-quality analysis, Yin (2018) suggests that qualitative researchers take all information gathered and disassemble the data to regroup it prior to analyzing. This breakdown of the data and reassembling makes the process of analysis simpler as the data will then be grouped in a logical manner.

Compiling Data

The compilation is the process of gathering and organizing all the data collected. Researchers use the compiling phase to organize data sequentially to create a database (Yin, 2018). For the compiling tasks, I gathered data from interview participants, organizational documentation provided by participants, and from journal notes. Researchers must interpret and transcribe the data collected through the interview in the most applicable summary (Yin, 2018). Qualitative researchers can identify concepts, phases, and themes by examining data gathered several times thus revealing additional information that may not be identified immediately (Karadzhov et al., 2019). Organization of the study data prior to the analysis allowed me to develop a rich analysis.

Disassembling Data

After compiling the data, I began to disassemble the data. The disassembling process consisted of formal coding procedures, including breaking down the compiled data into manageable segments and labels (Yin, 2018). Researchers disassemble data to extract information (Yin, 2018). I disassembled the data into smaller segments to extract information and offer data interpretation and meaning. To identify themes or patterns correctly, a code was used to represent the data collected (DeVaney, et al., 2018).

Reassembling Data

This process involved clustering and categorizing the labels into a sequence of groups. The reassembling phase involves reassembling the data to identify common themes and putting them into sequences and groups (Yin, 2018). According to Yin (2018), reassembling the data occurs when the researcher considers or manipulates all

information in several arrangements or configurations until the emerging themes are satisfactory and consistent. Researchers reassemble data as part of the data analysis process (Yin, 2018).

Interpreting Data

The interpretation stage involved the creation of narratives from the sequences and groups for conclusions. Researchers must interpret the data to make sense of the information collected. (Van & Struwig, 2017). The interpretation stage requires creating narratives from the emergent themes and patterns found in the data (Yin, 2018). I interpreted the data based on the central research question in comparison to the information from the literature review. By interpreting data that has been reassembled, qualitative researchers may increase knowledge about the research question and may open additional areas of study (Yin, 2018). I also utilized data visualizations to support the interpretation and methodological triangulation during the data interpretation phase to analyze common patterns and themes that emerged from the interviews and company documents.

Concluding

The final stage of data analysis was the development of conclusions and findings. This phase is critical to the process to gain closure (Castleberry & Nolen, 2018). To enhance the integrity of the data analysis and complete study, qualitative researchers will include direct quotes from the participants (Karadzhov et al., 2019). Participants received a copy of my interpretation of the data gathered to allow them to add information or thoughts to my interpretations. By requesting the perspective of participants on

interpretations, qualitative researchers enhance the accuracy and credibility of their interpretations (Birt et al., 2016). I focused on themes and patterns uncovered during the data analysis phase to connect the themes and patterns from this phase to the themes and patterns discovered in the literature review. I also focused on the themes and patterns uncovered during the data analysis phase and correlated those themes and patterns to the conceptual framework chosen for this study.

Software

Researchers adopt several methods to analyze data to achieve research integrity. NVivo is a popular research software tool used in qualitative research to facilitate coding and analysis (Woods et al., 2016). This software can assist with entering notes and save comments during the analysis process (Oliveira et al., 2017). The use of NVivo software enabled me to identify the key themes from the transcribed data, thus leading to the reporting phase. Yin (2018) noted that the process of data analysis involves separating data into groups, regrouping data into themes, assessing data, and developing conclusions. I used the data initially analyzed by NVivo to conduct an in-depth data analysis.

Key Themes

Key themes and significant patterns emerged within the data. Through the use of auto-coding in the data analysis phase, researchers can use NVivo to discover themes and patterns (Cai et al., 2016). Following the pattern and theme recognition of the data analysis, the data was investigated and correlated to the data to the literature review. As recommended by Padgett et al. (2016), I utilized a thematic analysis approach to identify

and report all important themes. Researchers use qualitative data analysis software to convert raw data into common themes (Davidson et al., 2017). Data analysis involves preparing and organizing data, categorizing data into themes or subthemes, and interpreting the findings (Saunders et al., 2016).

I used methodological triangulation in this study to crosscheck my interview data with the document review data provided by participants to maintain the reliability of the findings. Triangulation refers to a means of using more than one approach to address fundamental questions about the study (Battaglio & Hall, 2019). Methodological triangulation is the process of collecting data using more than one data collection practice (Makrakis & Kostoulas, 2016). Methodological triangulation serves to limit bias by collecting data from multiple data sources (Yin, 2018).

Reliability and Validity

Reliability and validity are essential in qualitative research as well as in qualitative investigation. In a qualitative study, researchers use reliability and validity to ensure the accuracy, exactness, and trustworthiness of a study (Assarroudi et al., 2018). It is critical that researchers conduct qualitative studies using suitable designs and methods to evaluate the reliability and validity of the findings (Nowell et al., 2017). Scientific research must be valid and reliable to gain the confidence of readers and researchers (Lachmann et al., 2017). Qualitative researchers depend on subjective, interpretive, and contextual data thus researchers need to ensure the reliability and validity of their research findings as explained in the next section.

Reliability

Researchers use a variety of tactics to guarantee dependability. Tactics used to guarantee dependability are comprised of interviewee participation in the analysis by member checking their responses and providing a detailed description of the research method (Thomas, 2017; Yin, 2018). Researchers can generate audit trails by (a) clarifying the reasons for choosing the participants used in a study, (b) clarifying the reason for the study to the participants, (c) clarifying the data collection process, (d) clarifying the transformation of the data during the exploration, (e) clarifying the precise techniques used to define the credibility of the information, and (f) clarifying the research findings (Yin, 2018). An audit trail was used by delineating the process whereby I made all methodological decisions. Researchers use member checking and triangulation by providing participants with the findings for a review to confirm the data's accuracy. I ensured reliability in the study by utilizing the same data collection instruments techniques and analysis steps. The interview protocol ensured all the participants were asked similar questions. I then documented the sequence of the data process and analysis. Member checking was employed to allow participants consent of the data analysis and interpretation. The use of member checking enhanced the validity of the study since member checking entails having the participants verify their responses for accuracy.

Validity

Validity of a study commonly entails ensuring credibility, transferability, confirmability, and data saturation and is essential for ensuring the quality of qualitative research. Validity in qualitative studies ensures the data collected has the participant

responses' accuracy (Yin, 2018). A qualitative research study's validity relates to the linkages among the data, the results, and the conclusions (Hammarberg et al., 2016). To ensure validity, researchers provide triangulation by using several sources of information to validate the interview data (Kern, 2016). I provided methodological triangulation by using member checking to allow participants to authenticate the data analysis for accuracy of the data collected. The use of member checking and triangulation helped control any threats to the validity while preserving the value of the research.

Credibility

Credibility involves establishing that the research findings is credible from the perspective of the study participants. A study's credibility reflects on the researcher ensuring the integrity and trustworthiness of the findings (Nowell et al. (2017); Turner & Endres, 2017). Member checking is appropriate in research to enhance the collected data's validity and accuracy (Birt et al., 2016). As a final element, I ensured the credibility of this study's data by utilizing member checking until there was data saturation with no new information, themes, or concepts.

Transferability

Transferability is when the findings of a research study can be generalized or transferred to other contexts or settings. In qualitative studies, transferability pertains to whether the results of a study apply in different contexts or whether the results would be transferable to other similar populations and circumstances (Hammarberg et al., 2016; Marshall & Rossman, 2016). To inspire transferability, researchers provide valuable descriptions of the method they used and the contents of the study method (Yin, 2018).

By providing valuable descriptions of the owner's interviews and my interpretation of them, I ensured the transferability of the findings. In obtaining information regarding technology strategies, future researchers may use the strategies uncovered in this study for further research.

Confirmability

Confirmability is when others can confirm or corroborate the findings of a research study. Marshall and Rossman (2016) suggested that researchers provide evidence to allow other readers and researchers to confirm the findings. Qualitative research should be reflective and honest; these parameters are preferable as it increases the integrity of the research (Levitt et al., 2018). Through valuable descriptions, I provided thorough information to add to the confirmability of the study. To attain confirmability, I used multiple datasets and member checking. Member checking is a procedure a researcher uses to enhance the credibility, validity, accuracy, and transferability of a study (Yin, 2018). During the interview process, I confirmed that participants are sharing what they intended. Throughout the process, I attempted to build a level of trust with the participants and ensured they are at ease sharing their insights, experiences, and strategies for sustaining their businesses.

Data saturation

To ensure data saturation, I continued to collect data until nothing new emerged and at which point no new patterns emerged. Lowe et al. (2018) found that reaching saturation occurs when no new data or information is relevant to the research questions. Data saturation occurs by using member checking and through a complete exploration of

the themes and the literature (Fusch & Ness, 2017). I used member checking and studied the data as a method to ensure that no different patterns emerged through the data collection and analysis procedure. When no further information emerges through additional data collection efforts, the researcher has attained data saturation (Thomas, 2017).

Transition and Summary

The purpose of this qualitative multiple case study was to explore technology strategies SBE owners used in the effort to sustain their business beyond 5 years. In Section 2, I described the research methodology of this study and detailed the benefits and consequences of using the research methodology. Additionally, I detailed why the multiple case study design was the most effective design to use for this study. The role of the researcher, the participants that will participate in this study, and the selection criteria to determine the participants were also detailed in Section 2. I described the strategies I used for the data collection procedures and the data analysis stage. I detailed how reliability and validity of the study was established by including descriptions of the processes and procedures of the study. In Section 3, I presented the findings of the study, the recommendations for action, the recommendations for future research, and the implications of social change due to the study and the results.

Section 3: Application to Professional Practice and Implications for Change

Introduction

Section 3 includes the presentation of the findings, application to professional practice, implications for social change, recommendations for action, recommendation for further study, reflections, and a conclusion. This qualitative multiple case study aimed to explore technology strategies some SBE business owners use to sustain their business beyond 5 years. This section contains an overview of the study and presentation of the findings on the technology strategies some SBE business owners use to sustain their business beyond 5 years.

I collected in-depth experiences and data from four semi structured interviews of successful small business owners in Maryland. To ensure the participant's privacy, I designated the participants as P1, P2, P3, and P4. I reviewed participants' cash flow statements and their formal business plans as part of the data collection process. Additionally, I used methodological triangulation among the sources to develop themes from the interviews and business documents.

After transcribing the interviews and reviewing the observations and interview notes, I uploaded the participant data into NVivo 12 software. The software helped organize the data into logical and manageable groups and themes; next, I linked the research notes to coding and examined the relationship between themes. The use of NVivo for the data disassembly phase helps to ease the burden of data manipulation by reducing the time required to reassign codes to either different categories or move them

to higher conceptual levels (Yin, 2018). Member checking confirmed the accuracy of the information provided by the participants.

Presentation of the Findings

I conducted a one hour face-to-face, semi structured interviews with open-ended questions. Two interviews were recorded among the four participants, and the other two preferred that I take notes. I interviewed four small business owners who own a business with fewer than 150 employees. The research question for the study was: What technology strategies do small business owners in Maryland use to sustain business beyond 5 years? Each participant answered seven open-ended questions about strategies and strategy implementation. I reviewed the companies' strategic and project plans, interview transcripts, financial documents, websites, and business plans to obtain additional information on the companies. Participants' interview responses and the companies' archival documents enabled me to address the research question. Some participants' responses were consistent with the literature and conceptual framework. The responses of the business leaders and employees to the interview questions also aligned with Porter's Five Force.

I used NVivo 12 analysis software to code and organize the interview transcripts, company documents, and other data and categorize all relevant data into themes. The dominant themes that emerged from the data analysis were (a) emerging technology strategy, (b) relationship building with customers, (c) business model adaptability, and (d) effective marketing and content design/engineering. When the researcher has met data saturation and the study is credible, transferable, and confirmable, they have met the

criteria for a valid study. I continued to interview participants, with a minimum of four, until no new data or themes emerged. I achieved data saturation during my interview with my fourth organization when additional interviews failed to yield new themes. The themes and the corresponding frequency from the semi structured interviews and secondary sources are presented in Table 1.

Table 1

Frequency of Themes

Themes	Frequency	Percentage
Emerging Technology Strategy	43	31%
Relationship Building with Customers	31	23%
Business Model Adaptability	38	28%
Marketing and Content Design/Engineering	25	18%

Note: N represents the number of times participants mentioned subthemes that constitute the main themes (N=137). The percentage is the frequency of the emerging themes, which I rounded.

I supported the interview data with other sources such as field notes to ensure data triangulation, following the triangulation and data organization process established by Yin (2018). The four principles of data collection are (a) use multiple sources of evidence, (b) create a case study database, (c) maintain a chain of evidence, and (d) exercise care when using data from electronic sources (Yin, 2018). I used multiple sources of data—interviews, financial documentation, and formal business plans—and created a case study database, which included coded themes. I then used the database to maintain the chain of evidence between themes and different participants. Additionally, I used a limited amount of data from electronic sources, which was important in my review

of the academic literature but not needed for the convergence of evidence between study participants.

Information systems was vital to business owners. The business owners used information systems to make decisions related to their company's resource allocation, budgeting, and geographical expansion to gain customer loyalty. The integration of new technologies was a vital element of the small business owners' information system strategies to sustain their business beyond 5 years. The following themes include findings from the viewpoint of all four participants. Information collected from participants' responses were verified against company documents.

Theme 1: Emerging Technology Strategy

Irrespective of their business sectors, business leaders who are dedicated to delivering an acceptable and profitable products and services must embrace the adoption of emerging technologies. Schiavi and Behr's (2018) research about competition among companies in various industries is not exclusively dependent on developing new products, services, and technologies, which further confirmed this research theme. In all, there is a rise in the development of disruptive business models towards creating a replacement for known and existing business models due to the need for organizations to adopt modern technology.

Three participants indicated that developing new products and integrating emerging technologies was an essential element of business sustainability for their organization. Similarly, all participants stated that services such as customer engagement platforms, data storage, project management tools, and other relevant technologies

significantly contributed to their business growth. According to Islam et al. (2018) innovation simultaneously adopted with durability is a means for business owners to obtain better solutions for meeting existing organizational and marketplace needs. Business leaders who are inclined to embrace emerging technologies and make business decisions that invest in research and expansion of innovative products and tools contribute to their business sustainability and success. The findings from the participants showed that business owners implement strategies for sustaining their business beyond 5 years through investing in product development, innovation, process improvement, and customer relationships.

Investing in Technology

Business owners invest in state-of-the-art strategies to reach business sustainability. P2, P3, and P4 invested in innovation and product development, addressing different areas of need for their businesses. One way the participants noted they were investing in innovative products was by hiring new employees who possess the right innovation and product development skillset. The data collected from P2, P3, P4, and P5 confirmed Lichtenthaler's (2016) research, which proposed the following concepts as innovation classification: (a) business model innovation, (b) service innovation, (c) process innovation, (d) business model innovation, and (e) management innovation. Business leaders participated in capital investment by signing up employees for professional training geared towards gaining the appropriate knowledge and skill set for technology development programs to propel their organizational process

improvement. The findings of this subtheme suggested that information systems are a driver of firm performance for value creation for the company.

Capital

Small businesses face trade-offs that limit their ability to devote or reallocate resources and attention to technology adaptation. The absence of access to capital is a known constraint to small business leaders' investment in technologies. According to P4, "We invested in modern technologies to improve our long-term sustainability." Similarly, P3 stated, "The return on our investments in technology returned good dividends for the company." P4 and P3 both confirmed that technology investment through a partnership with other service delivery companies helped them reduce the overall cost of new technologies. According to P2, "By purchasing computing equipment rather than contracting to third-party companies, I saved a lot."

Business leaders continue to assess their products and their return on investment before engaging in capital spending. The findings gleaned from the participants' answers confirmed the research of Ulloa et al. (2018) that investment in technologies has a positive influence on performance-based organizations. Business leaders' capital investment level depends on the return on IT, as defined by the potential for cost reductions and the marginal return on the technology investment. P3 stated that although IT infrastructure is capital intensive, business leaders should plan for such strategic investments, as the long-term benefits are profitable. Giotopoulos (2017) posited that business leaders that invest hugely in IT infrastructure are more likely to have a plan for IT implementation, resulting in a high degree of internet integration, e-commerce

activities, and organizational changes. All the participants explored the value of the return on investment before engaging in any technology purchases to compare the cost of contracting with third-party technology providers. Three out of the four participants captured different metrics through their intelligence analysis database systems and evaluated the data to assist in making investment decisions. According to P4, his company measures the return on investment between product development or acquisition before making a choice. Baird et al. (2017) confirmed the findings of this subtheme. The authors explained that business leaders should remain committed to capital investment but with specific evaluation of the commitment and business oversight, attending extensive training, and hiring consultants as the means to regulate the process across the entire organizational activities.

Technology Integration and Adaptation

The adaptation of new and modern technologies in the process organizational leaders engage in expands their existing process from first or known awareness of the innovation, to the potential, formal adoption, and full-scale deployment of the selected technology. The research findings indicated that modern technology adaptation correlates to the organization becoming aware of, adopting, deploying, and incorporating technologies into their business practices to achieve sustainability. According to P3, "We empower our employees to research, access, and evaluate the most appropriate industry-standard technology that will make the daily activities efficient." The research findings confirmed the research of Jalil et al. (2019), who stated that support from the business leadership during innovative technology integration positively influences users'

perceptions. According to P1, adopting the remedy tools, such as a customer ticket resolution tool, helped the company leadership by fostering the company's interest in employing more people overseas and in new geographical locations as a strategy to engage new global customers.

Business leaders have a solid explanation for adopting modern technologies. According to Jalil et al. (2019), users of information systems who receive assistance from leadership understand the importance of the information system related to the apparent ease of use. Two of the participants mentioned the importance of acquiring security systems and antivirus software and stated that malware attacks might cause chaos to the business existence due to the vital confidential customer information stored in their systems. P2 acquired an antivirus protection technology to protect its company's brand, customer data, and intellectual property. To achieve business sustainability, P3 employed third-party tools that served a well-defined purpose, such as performance, business intelligence, remote access for employees, and payment processing. I examined the participants' computer networks and verified the data protection security systems managed by the third-party companies to validate the data. Additionally, I reviewed the business intelligence technologies utilized by the participants to capture business metrics and data analysis for leadership decision-making.

The collected data showed that business leaders adopted existing technologies, such as e-commerce, for transparent and secured payment processing systems for their customers. Participants confirmed they achieved success through the data management and data storage services used in place of traditional paper filing systems. Through

business intelligence, business leaders adopted tools useful to help them drive business decisions and business predictions through evaluated business risk and performance services attainable through business intelligence.

Theme 2: Relationship Building with Customers

According to all participants, excellence in customer service was essential to business survivability and success. Previous research showed that focusing on positive customer service experiences and involvement in the local community enables business survivability (Turner & Endres, 2017). In turn, customer satisfaction can lead to increased profitability and reduced consumer price sensitivity (Pooser & Browne, 2018). According to Khudhair et al. (2019), price-sensitive consumers respond more favorably to increased prices if the perceived quality of the product or service is high. Additionally, positive customer service experiences enable consumers' perceived trust of a business (Setiawan et al., 2019). Trust is an essential component of consumer retention and strengthens business branding (Zaefarian et al., 2017). Since customer satisfaction is so important to sustainability, business owners should consider real-time feedback provided by customers and tailor the service provided accordingly (Bi et al., 2019; Galvão et al., 2018).

P4 extensively commented on the importance of excellence in customer service, as well as the need to develop trusting and meaningful relationships with their clients. According to P4, "In industries like mine, some people feel like they are an assembly line, they just come in and get some work done, and then they are out." According to P3, "That is not how they chose to run their business." Instead of the assembly line approach,

P3 emphasized the importance of establishing relationships with clients, noting how these personal relationships with customers have retain customers and sustain business. P3 has been doing business for over 15 years and still has 50% of their original customers.

Similarly, P1 mentioned the multiple ways they interacted with customers inside and beyond his business through involvement in community service and donations to the local women’s shelter, churches, and school district. The actions referenced by P1 reflected a strong emphasis on building a positive customer service experience. P2 stated that they include personal handwritten thank-you notes inside each customer bag. Both P3 and P4 mentioned how focusing on building quality relationships with customers leads to greater consumer loyalty and increased profitability. P4 mentioned providing customers with the story behind each piece of jewelry purchased and stated that customers would return for more jewelry due to the connection they felt to the story behind the jewelry. In Table 2, I present the subthemes identified under the theme of relationship building with customers; the table includes the participant code, percentage of participants who contributed responses pertinent to the subtheme, and the frequency of the subtheme referenced by participants

Table 2

Relationship Building with Customers

Method	Frequency	Percentage
Customer Service	19	43%
Building Trust	15	34%
Community Involvement	10	23%

Relationship building with customers as a business survivability strategy aligns with Porter's (1998) competitive strategy theory. Differentiation strategies improve competitive advantage and organizational performance (David, 2017; Islami et al., 2020). Business owners employ Porter's differentiation strategy through (a) product or service design, (b) company branding, (c) networking, (d) technology, and (e) customer service (Islami et al., 2020; Porter, 1998). E-commerce entrepreneurs can apply Porter's differentiation strategy through positive relationship building with customers. In turn, positive relationship building with customers enhances consumer trust and strengthens business profitability by generating additional purchases by loyal customers. The identified theme of relationship building with customers and how participants use relationship-building to enhance business survivability align with Porter's differentiation strategy.

Theme 3: Business Model Adaptability

A small business owner should not only know that fast-moving conditions and some degree of unpredictability represent dynamic environments but should also know where to look for signs of accelerating change. In a constantly changing environment, implementing, and modifying new strategies is essential. The participants admitted that they adjusted their original business model to embrace change and technology at some point. P2 and P3 mentioned that rapid technological change is among their primary concerns. For instance, P2 stated, "Digitization became a must." According to P3, more and more of their customers go digital to learn about products and services before placing orders. "Utilizing online distribution and social media helped sustain my business."

According to P3, Maryland's technology and environmental protection campaigns made it vital for businesses to adjust their business model. P4 stated, "Customers are curious to see if our packages and products are environmentally-friendly or if we use any energy-saving equipment." All participants admitted switching from traditional bulbs and appliances to eco-friendly ones.

All participants acknowledged that the use of social media, the internet, and technology could expose the company to many issues that could have a negative impact on operations (Lantis & Bloomberg, 2018). Some of these issues are dependency on technology, credit card fraud, and hacking of customer accounts. Gutierrez et al. (2018) recommended that small businesses develop cybersecurity strategies in online business and smart devices. Businesses of any size require sufficient cybersecurity measures and appropriate training to inform employees of cybersecurity risks and best practices. According to Tadesse and Murthy (2018), 71% of all data breaches affected companies with fewer than 100 people on the payroll. Small businesses can employ cybersecurity measures such as training employees in security policies and procedures, building a robust firewall for the internet connection, and limiting access to sensitive data. Security awareness training is an effective way to prevent cyberattacks against small businesses (Fellnhofer, 2018). Participant P4 highlighted customers' complex and changing attributes, which require constant innovation by business leaders. Participant P4 further explained the significance of continuous innovation to meet the challenges of market trends. Participants P1 discussed the essence of acquiring specific IT infrastructure tailored to organizational needs and emphasized the role of an organization's

infrastructure in harnessing dynamic capabilities. Bouwman et al. (2018) suggested that IT infrastructure remains a strategic asset that influences value creation and business operations performance.

Cybersecurity is a priority in all businesses. Information is the most valuable assets in any market (Aishwarya et al., 2018). All the participants used an encrypted computer, and each user accessed the computers with a password. I observed that at P3 offices, there are restricted areas where employees must use a security badge to enter. Additionally, in P1's location, in addition to public access restrictions to some offices, employees must use security codes to open the doors. P1 stated, "We ensure our devices and computers are password protected and encrypted to avoid intrusions." P3 and P4 stated that they employed a third-party private security firm to manage their companies' data and information against hackers and cybercriminals. According to (Gutierrez et al., 2018), additional measures involve control of the Wi-Fi network, passwords, and authentication, making copies of critical business data and information, and trusted and antifraud banking credit card services. The NIST MEP Cybersecurity Assessment Tool allows small business owners to self-evaluate the level of cyber risk to their business (Jaruga et al., 2017). As businesses move more and business functions are conducted over the public network, they must take security measures to ensure that the data is not compromised.

All four small business participants are in different industries; therefore, all business models were different. Sustainability of new business models falls on the business owners (Medved et al., 2017). The differences and intricacies of the business

model were dependent on the specific needs of the organization and the areas for growth. All Participants suggested a business model that allows managers to use social media, smartphones, or the internet. All the participants utilized the internet, smartphones, computer, and digital camera to monitor the stores. P1 stated, “We use Spotify and Facebook to sell our products online.” Each participant uses the Google map service. According to P3, they use Google maps to find participants' location addresses. P1 stated, “Online business helps my business to run continuously regardless of nearby competition.” P3 agreed with the other participants that social media and Digitization provide unlimited access to customers and suppliers. P1 stated, “Despite potential cyber risks, social media and the help of the online sales increase sales, decrease operational costs and ensure continuous profitability.” Adu and Adjei (2018) stated that the development of IT infrastructure requires the development of policies for cybersecurity to prevent data loss and protection from threats.

All the Participants stated that big companies are serious threats. P3 said, “With larger capital, big companies can flood the market with cheaper products. That is the daily concern of small businesses.” P1 stated, “My prayer is not to have a big company in my direct neighborhood. That will be fatal to my business survival in this location.” P2 and P4 concurred that big companies have more money, human capital, and networks to offer better quality and cheaper products than small businesses. As a palliative, P3 stated that for businesses to sustain and remain competitive, leaders must adapt to trends and build a business model to support e-commerce integration. The market share of all e-commerce sales continues to grow across the United States with an increase of 0.75% per

year since 2010 (U.S. Department of Commerce, 2019). According to Molinillo et al. (2017), technology and media provide a powerful avenue to expand the small businesses' customer base to ensure profitability and growth over the times. Online commerce has many benefits for consumers, including timesaving, convenience, money-saving, and the possibility of browsing and comparing products and services from multiple channels in one place (Wei et al., 2018). An online business provides more visibility and leads to customer satisfaction and loyalty (Molinillo et al., 2017). P1 said, "I sell products online and in-store. Selling products online saves me money and increases sales."

Theme 4: Marketing and Content Design/Engineering

All participants stated that customer behavior fluctuates in the buying process. Therefore, according to the participants, content marketing in social media needs to be persuasive, informative, and engaging. Kraus et al. (2019) stated appropriate styles of marketing content communication that are vibrant, entertaining, and trustworthy. P1 and P2 stated that there are two types of content: persuasive and informative. According to P1, persuasive content consists of emotions and facts. P2 noted that persuasive content is influenced by appealing to logos, ethos, and pathos. Celebrity endorsement is ethos, philanthropic content results in empathy, and we call it emotional influence through pathos. Logos is about influencing consumers through facts about products and services. According to P1, informative marketing content includes product descriptions, targeted messages, deals, brand mentions, and sponsorship. According to P2, informative and persuasive marketing content in social media could result in customer engagement to connect to the brand.

All participants noted that informative and persuasive marketing content comes in different shapes, forms, and sizes. According to P2, marketers need to evaluate and consider content to improve its market effectiveness. Shrestha et al. (2019) noted that social media users prefer helpful links to aid their buying decisions. P1 stated that marketing content could include live videos, photos, tips and tricks, events, surveys, company news, and market data. Other marketing contents participants discussed include behind the scenes, animations, industry news, memes, interesting quotes, and press release. The participant posted informative and persuasive marketing content and provided helpful links and giveaways to engage customers, so they become brand advocates and recommend products. Fernandes and Moreira (2019) recommended developing marketing content regularly and timely, including giveaways to engage customers.

Social media was mentioned frequently as a success factor that affected online business success beyond 5 years. All four of the study's participants cited social media as a contributing factor to success. The use of social media has become a standard across e-commerce businesses due to the ability to use social network data to adjust marketing campaigns and make changes to products or services (Braojos et al., 2017). In reviewing the participants' public business sites, I discovered that every participant had an active social media business platform. The customer-targeted informational content and advertisements found on the participants' social media platforms such as Instagram, Twitter, YouTube, and Facebook and their interview responses indicated that they used social media as their primary way of connecting with potential customers to solicit

response and to expand their customer base. Wang and Kim (2017) stated that many e-commerce business owners also use social media to convert passive consumers into active participants of the firm's business model. According to (Minning, 2019), customer-targeted online content comprises social media written, or video communications directed to a business's target audience to drive a specific response. The participants' social media marketing content varies throughout the product life cycle. For instance, various content constitutes price comparison, humor, and small talk. P4 stated, "The marketing content in social media needs to be functional to grow sales, add value, engage customers, and extend brand name." P4 indicated that they connected with their target audience by using Facebook and Instagram to post informational content about new products, market services through videos and written content, and solicit feedback about past content through social media surveys. Globalization and stronger competition among industry leaders have made marketing an ever more essential aspect of business survivability through differentiation (Katsikeas, 2018). During the COVID-19 pandemic, many people were suddenly forced into digital platforms and had to figure out how to use Zoom for work. P4 started to create content to teach customers how to navigate the online business environment while offering services through Facebook and Instagram live videos and written content. A content marketing system involves using social media marketing business websites and social media platforms (Kose & Sert, 2017). When asked to expand customer engagement through content engineering, P3 noted that the various content benefits them to get closer to customers through two-way dialogue. According to P4, "Each social media platform has its own distinctive identity; therefore,

content engineering needs to be adaptive to the platform, meaning content must be trustworthy, welcoming, and consistent.” All participants stated that their media content needs to inspire and inform customers rather than push them. P1 noted that “our approach is to shift from passive to empowered customers through connectivity and customer choices.” When asked to define empowered customers, P1 said that “customers now have constant smartphone access. Consumers have more control and choices to access information. Therefore, the brand needs to earn customer loyalty by delivering value and understanding customer needs.”

According to the participants, the content varies depending on their marketing objectives. According to P4, “We use paid media, earned media, owned media, other channels to reach customers.” According to P3, “customers purchase products using their social media, landing page, product page, and marketing automation.” Participants stated that the Covid-19 pandemic affected their marketing approach as consumers' lifestyles changed, with customers shopping more online. According to P2, “Our brand adapted its content to Covid -19 while being considerate to their customers. We focused on retaining consumers through a positive brand image during Covid-19.” When asked how they improved brand image, P2 stated that customers are inclined toward authentic news and informative articles due to the pandemics; “therefore, we did not add irrelevant ads, hard-selling, or bombard customers with advertisements”. According to P2, to learn about the customers’ journey, the company’s social media routinely conducted surveys. P2 presented a document relating to the customer survey. The survey template had five questionnaires to grasp customer experience in their buying journey.

All participants use social media platforms to deliver a positive message to their customer base as the messages engage customers and bring the customers closer to the brand. Abalos (2020) identified social media as a great source of information that enables its customers and businesses to communicate and increase the business brand and trustworthiness. Customer engagement positively reached people outside of the customer base. P1 presented a document relating to benchmarks of social media engagement across industries. The report showed that the company has total engagement per post, indicating that the company's marketing leaders are catching up with industry standards when engaging customers on social media. Technology has become a vital resource for successfully operating online businesses (Schiemann et al., 2017). Similar to traditional brick-and-mortar businesses, online businesses require resources for daily operations, and their owners use technology for data analytics to develop strategies to understand customer behavior, forecast profits, and determine needed resources (Schiemann et al., 2017).

Applications to Professional Practice

The results of this study could contribute to and improve the professional practice of businesses by providing small business owners with insight into specific technology strategies to help them stay in business beyond 5 years. Researchers have recognized the advantages for small businesses in adopting a sustainability roadmap (Bandyopadhyay, 2017). The research findings revealed four major themes and several subthemes that provide a foundation for recommendations for professional practice. The analyzed data and research findings from the SME owners who participated in this study may guide

small business owners on the inevitability of technology relevant to improving business practice. Small business owners might use the findings of this study as a significant, positive influence to improve existing business practices, implement effective technology strategies, and improve the sustainability of their businesses. Future business owners may learn that to create a sustainable company; it is essential to learn proven strategies to ensure profitability and long-term growth.

Embarking on a technology pathway is vital to small businesses in the current fast-paced business environment. According to Nwosu (2017), business leaders implementing IT systems could contribute to effective business processes, improve account management, experience cost savings, and increase productivity. This research revealed that SME owners who use technology systems for online collaboration and process improvement might succeed quicker than business owners who do not apply technology tools and services.

Business leaders adopt innovative technology to achieve business sustainability. Innovative technology assimilation relates to organizational leaders adopting, deploying, and integrating organizational technologies into their business practices to achieve sustainability. SME owners seek knowledge about the effective use of technology strategies to increase their ability to use information systems to influence operational capabilities, increase business sustainability and improve business decisions. Small business owners who do not effectively use information technology systems degrade business models, reduce customer value, and diminish the prospects of business stability, profitability, and growth (Wiyatno et al., 2017). This study incorporates achieving

success during the 2020 COVID pandemic. Therefore, Small business owners may apply the findings in this study to significantly enhance their business improvement plan and gain business relevance continuity beyond 5 years.

Implications for Social Change

The implications for positive social change include providing small business owners with the technology strategies that will enable them to stay in business beyond 5 years and potentially lower local unemployment rates, improve the local standard of living for employees and residents, provide more local economic stability, and contribute to government revenue for socio-economic development. Additional implication for positive social change includes economic growth for the community where these businesses operate. According to Kumar et al. (2018), business owners need dynamic capabilities and relationship-based collaboration with their partners to develop and support long-term sustainability. The antonym for business sustainability is a business failure (Kotarsk & Brkic, 2017). According to Errasti et al. (2017), business failure is a shortfall for both the community and the local government. Sustainable businesses ensure long-term job creation, job security, and benefits for both the owners and employees and contribute to community wealth (Gopinath & Mitra, 2017). The adoption of technologies may increase customers and collaboration through modern technologies. Hence, small business owners can positively affect individuals, institutions, cultures, organizations, their respective communities, and societies by implementing technology strategies to sustain their businesses beyond 5 years. Firms that are not competitive and do not use

their technology resources to achieve a business advantage are less likely to remain profitable.

Recommendations for Action

This qualitative multiple case study aimed to explore the technology strategies SME owners used to achieve sustainability beyond 5 years. Small Businesses represent 96% of businesses in the world and contribute to 60% of GDP (Marina et al., 2020). In 2019, the U.S. SBA reported that only 78.5% of new SBEs survived for one year, 51.4% survived 5 years, and one-third survived beyond ten years (SBE, 2018). (Wiyatno et al., 2017), stated that small business owners who ineffectively utilize information technology systems degrade business models, reduce customer value, and diminish the prospects for business stability and growth. The research findings for this study confirmed that the SME owners serving as participants used information technology strategies to sustain their business beyond 5 years. I recommend that small business owners revise their business model to align with technology sustainability requirements. For instance, providing eco-friendly products and services, using energy-efficient equipment, having a system that values employees, and investing in the community is a royal path to ensure revenue increase and investment capital for growth. Sustainability requires some investment and operational costs. I recommend that small business owners analyze the cost and opportunity for technology investment to avoid unnecessary financial burdens. Specifically, I suggest small entrepreneurs focus on a few critical certifications and implement a simple and costless technology management system. Sustainability requires

that businesses continue to exist regardless of market threats and internal change (Baral & Pokhare, 2017).

My recommendation is for small business owners to take advantage of the digital revolution and social media to increase sales, connect, and better serve stakeholders. Small businesses should be consistent in creating content for their target audience. The findings indicates that consistent content creation and communication could lead to sustainability beyond 5 years. Digitization is the innovation creating an ever-changing retail experience (Gießmann, 2018). Using a digital device may help put in place a costless but robust business intelligence system to collect, store, and explore internal and external data (Bolton, Chapman, & Mills, 2018). Quality data help make strategic decisions, however, some challenge for going digital is the exposure of small businesses to potential cyber criminality activities. Hackers may get access to strategic information or customers' sensitive data to compromise the company's existence (Maxigas, 2017). For these reasons, I recommend that small business owners seek cost-efficient programs to secure their information technology systems. I intend to disseminate the findings to existing small business owners and other interested groups through conferences, seminars, training, and academic and business journals publication.

Recommendations for Further Research

This qualitative, multiple case study explored strategies small business owners use to sustain their businesses beyond 5 years while fulfilling their firms' social responsibility obligations. The findings of this study provide much information for further researchers to explore strategies small business owners use to ensure profitability

and long-term growth. The study was limited to four small businesses in the Maryland. Future studies may involve more participants in other cities or throughout the country.

This study may not explore in-depth technology strategy application in each discipline. Further, researchers can examine technology strategies small business owners use to ensure specific technology, economic, social, or environmental sustainability in their organizations. Such studies may identify details that might have been missed in the current research. The realities of this research may differ from one industry to another. Further studies may explore technology strategies small business owners in transportation, manufacturing, and other industries utilize to sustain their businesses beyond 5 years. Further researchers may consider technology strategies women, men, millennials, minorities, or immigrant business owners use to sustain businesses beyond 5 years.

Reflections

The doctoral study was challenging and yet rewarding. Throughout the journey, I gained exceptional knowledge about technologies and strategies that small businesses used to sustain their businesses in the United States and beyond. One lesson is that one must have discipline when on a mission to accomplish something significant. In my case, the discipline included time management and following routines. The study finding expanded my knowledge of SMM from a professional perspective and improved my writing and analytical skills. Considering the time and volume of work involved, choosing the research topic of interest is essential to avoid boredom. In this research, I analyzed approaches small business owners use to make a profit and ensure growth over

the years while creating social and environmental protection priorities. I learned that participants have different practices to ensure profitability and long-term growth without knowing that all these technology approaches are part of sustainability strategies.

Additionally, I realized that phone calls and emails might not be enough to convince small business owners to give away their precious time to share experiences with researchers. I attended the online NIH training to comply with Walden University IRR requirements and research ethics. I secured IRR approval before engaging with the participants, which improved my understanding of the requirements for using human beings in the research study. Using emails and telephone to contact the participants, I had the opportunity to enhance my inspiration, empathy, negotiation, innovation, and collaborative skills. A challenge appeared at the data collection stage of the research. The difficulty of securing eligible participants was a challenge I did not anticipate. I gained profound knowledge about small businesses, business owners, and their involvement in ensuring their businesses succeed. My desire was to provide technology strategies to increase the rate of success among small business owners. My hope is that small business owners will implement these technology strategies to sustain their businesses beyond 5 years. In the consent form, I advised the participants that the research study is focused on technology strategies small business owners use to sustain operations. Being a small business owner myself, I believe the study participants trusted me because the topic of this study was important to them. To mitigate personal bias, I used methodological triangulation and member checking to collect quality data and validate findings (Yin, 2018). In some instances, I found the doctoral process overwhelming, and I found

difficulties in motivating myself. However, my eyes were always on the grand prize, obtaining a terminal degree, and belonging to an elite group of academic scholars. Staying focused on the results, time management, and my discipline propelled me to the finish line.

Conclusion

Small business owners who do not use information systems effectively degrade business models, reduce customer value, and diminish the prospects for business stability, profitability, and growth (Wiyatno et al., 2017). This qualitative, multiple case study explores technology strategies small business owners used to sustain their businesses beyond 5 years from startup while fulfilling their firms' social responsibility obligations. I used open-ended questions and conducted a semi structured interview with four small business owners. Four main themes with several subthemes emerged from the data analysis. Emerging principal themes include (a) business establishment planning, (b) sustainability planning, (c) sustainability factors use, (d) access to credit, and (e) business model adaptability.

Sustainability became a royal roadmap for small businesses to ensure profitability, long-term growth, and competitive advantages in the current fast-paced business environment. The findings indicated that small business owners sustained their business beyond 5 years by embracing emerging technology and adapting their business models to market change to meet the needs of current and future customers, employees, and stakeholders. Business owners should understand the role of information technology systems and embrace the adoption and assimilation of emerging technologies to advance

their firms' resources. Small business owners could utilize the findings of this research to contribute to positive social change through job creation, economic growth, and the promotion of sustainable communities. Additionally, the findings from this study could assist small business leaders in gaining insights into crucial technology strategies required for improving small business survivability beyond 5 years.

References

- Abalos, W. F. (2020). Social network marketing of micro, small and medium enterprises in the province of Tarlac. *Review of Integrative Business and Economics Research*, 9, 128–157.
https://buscompress.com/uploads/3/4/9/8/34980536/riber_9-s2-33-s19-118_128-157.pdf
- Adoukonou, V. K. (2019). Strategies for small business sustainability. *Walden Dissertations and Doctoral Studies*.
<https://scholarworks.waldenu.edu/dissertations/6501>
- Adu, Kofi & Adjei, Emmanuel. (2018). The phenomenon of data loss and cyber security issues in Ghana. *Foresight*. 20. 00-00 <https://doi.org/10.1108/FS-08-2017-0043>
- Ahn, M. J., & Ettner, L. W. (2014). Are leadership values different across generations? *Journal of Management Development*, 33(10), 977-990.
<https://doi.org/10.1108/JMD-10-2012-0131>
- Aishwarya, K., Pratiksha, S., Hule, P., & Sayli, M. (2018). Survey on Network security. *International Journal of Current Trends in Science and Technology*, 8(1), 47-53.
<https://doi.org/10.15520/ctst.v8i1.352>
- Alcon-Soler, E., & Safont, P. (2018). Editors' introduction to missed method approaches in investigating pragmatic learning. *Mixed Method Approaches in Investigating Pragmatic Learning*, 75(1), 1-3. <https://doi.org/10.1016/j.system.2018.03.013>
- Ang, C. K., Embi, M. A., & Yunus, M. M. (2016). Enhancing the quality of the findings of a longitudinal case study: Reviewing trustworthiness via ATLAS.ti. *The*

- Qualitative Report*, 21(10), 1855-1867. Retrieved from <http://nsuworks.nova.edu>
- Asiamah, N., Mensah, H. K., & Oteng-Abayie, E. (2017). General, target, and accessible population: Demystifying the concepts for effective sampling. *The Qualitative Report*, 22(6), 1607-1621. Retrieved from <http://nsuworks.nova.edu/tqr/>
- Assarroudi, A., Nabavi, F.H., Armat, M. R., Ebadi, A., & Vaismoradi, M. (2018). Directed qualitative content analysis: The description and elaboration of its underpinning methods and data analysis process. *Journal of Research in Nursing*, 23(1), 1-14. <https://doi.org/10.1177/1744987117741667>
- Bachmann, J. W., 2002. Competitive strategy: It's O.K. to be different. *The Academy of Management Executive*, 16(2), 61-65. <https://doi.org/10.5465/AME.2002.7173533>
- Baird, A., Davidson, E., & Mathiassen, L. (2017). Reflective technology assimilation: Facilitating electronic health record assimilation in small physician practices. *Journal of Management Information Systems*, 34, 664-694. <https://doi.org/10.1080/07421222.2017.1373003>
- Bandyopadhyay, S. (2017). How a cost-effective social media plan can make a difference, for small businesses. *Journal of the Indiana Academy of the Social Sciences*, 19, 1-11. Retrieved from <http://www.iass1.org/>
- Baporikar, N., Nambira, G., & Gomxos, G. (2016). Exploring factors hindering SMEs' growth: Evidence from Namibia. *Journal of Science and Technology Policy Management*, 7(2), 190-211: <https://doi.10.1108/JSTPM-11-2015-0036>
- Barhatov, V., Campa, A., & Pletnev, D. (2018). The impact of internet-technologies

development on small business success in Russia. *Procedia-Social and Behavioral Sciences*, 238(1) 552-561.

<https://doi.org/10.1016/j.sbspro.2018.04.035>

Başkarada, S. (2014). Qualitative case study guidelines. *The Qualitative Report*, 19(40), 1-25. <https://doi.org/10.46743/2160-3715/2014.1008>

Battistella, C., Cagnina, M. R., Cicero, L., & Preghenella, N. (2018). Sustainable business models of SMEs: Challenges in the yacht tourism sector. *Sustainability*, 10(10), 3437. <https://doi.org/10.3390.su10103437>

Bazhenova, E., Taratukhin, V., & Becker, J. (2012.). *Impact of information and communication technologies on business process management on small and medium enterprises in emerging countries.*

https://dphu.org/uploads/attachements/books/books_5609_0.pdf

Berisha-Namani, M. (2009). *The role of information technology in small and medium-sized enterprises in Kosova.*

<http://www.africres.org/SMME%20Research/SMME%20Research%20General/Reports/Berisha+Paper+IT+in+SMEs+in+Kosovo.pdf>

Bi, J.-W., Liu, Y., Fan, Z.-P., & Cambria, E. (2019). Modelling customer satisfaction from online reviews using ensemble neural network and effect-based Kano model. *International Journal of Production Research*, 57, 7068–7088.

<https://doi.org/10.1080/00207543.2019.15>

Bocken, N. M., & Geradts, T. H. (2020). Barriers and drivers to sustainable business model innovation: Organization design and dynamic capabilities. *Long Range*

Planning, 53(4), 101950. <https://doi.org/10.1016/j.lrp.2019.101950>

Bolton, R. N., Chapman, R. G., & Mills, A. J. (2018). Harnessing digital disruption with marketing simulations. *Journal of Marketing Education*, 5(10), 1-17.

<https://doi.org/10.1177/0273475318803417>

Bouwman, Harry & Nikou, Shahrokh & Molina-Castillo, Francisco-Jose & de Reuver, Mark. (2018). The impact of Digitalization on Business Models. *Digital Policy, Regulation and Governance*. 20. 00-00. [https://doi.org/10.1108/DPRG-07-2017-](https://doi.org/10.1108/DPRG-07-2017-0039)

[0039](https://doi.org/10.1108/DPRG-07-2017-0039)

Braojos, J., Benitez, J., & Llorens-Montes, F. J. (2017). Contemporary micro-IT capabilities and organizational performance: The role of online customer engagement. IT Capabilities, Customer Engagement, and Performance: Twenty third Americas Conference on Information Systems, Boston, 2017

Brigitte, S. C. (2017). Rigor or reliability and validity in qualitative research: Perspectives, strategies, reconceptualization, and recommendations. *Dimensions of Critical Care Nursing*, 36(4), 253-263.

<https://doi.org/10.1097/DCC.0000000000000253>

Bristowe, K. B., Selman, S., & Murtagh, F. E. (2015). Qualitative research methods in renal medicine: An introduction. *Nephrology Dialysis Transplantation*, 30(9), 1424-1431. <https://doi.org/10.1093/ndt/gfu410>

Birt, L., Scott, S., Cavers, D., Campbell, C., & Walter, F. (2016). Member checking a tool to enhance trustworthiness or merely a nod to validation? *Qualitative Health Research*. 9(1), 1-25. <https://doi.org/10.1077/1049732316654870>

- Cai, Z., Huang, Q., Liu, H., & Liang, L. (2016). The moderating role of information technology capability in the relationship between supply chain collaboration and organizational responsiveness: Evidence from China. *International Journal of Operations & Production Management*, 36(10), 1247-1271.
<https://doi.org/10.1108/IJOPM-08-2014-0406>
- Cairney, P., & St Denny, E. (2015). Reviews of what is qualitative research and what is qualitative interviewing. *International Journal of Social Research Methodology: Theory & Practice*, 18(1), 117-125.
<https://doi.org/10.1080/13645579.2014.957434>
- Castleberry, A., & Nolen, A. (2018). Thematic analysis of qualitative research data: Is it as easy as it sounds? *Currents in Pharmacy Teaching and Learning*, 10(6), 807-815. <https://doi.org/10.1016/j.cptl.2018.03.019>
- Chege, S. M., & Wang, D. (2020). The influence of technology innovation on SME performance through environmental sustainability practices in Kenya. *Technology in Society*, 60(1), 101210. <https://doi.org/10.1016/j.techsoc.2019.101210>
- Chen, R. J. (2015). From sustainability to customer loyalty: A case of full service hotels' guests. *Journal of Retailing and Consumer Services*, 22(1), 261-265.
<https://doi.org/10.1016/j.jretconser.2014.08.007>
- Cheng, J. H., & Liu, S. F. (2017). A study of innovative product marketing strategies for technological SMEs. *Journal of Interdisciplinary Mathematics*, 20(1), 319-337.
<https://doi.org/10.1080/09720502.2016.1258837>
- Chongo, M., Chase, R. M., Lavoie, J. G., Harder, H. G., & Mignone, J. (2018). The life

story board as a tool for qualitative research: Interviews with HIV-positive indigenous males. *International Journal of Qualitative Methods*, 17(1), 1-10.

<https://doi.org/10.1177/1609406917752440>

Clark, R. K., & Veale, L. B. (2018). Strategies to enhance data collection and analysis in qualitative research. *Radiologic Technology*, 89(5), 482–485. Retrieved from 85
<https://www.ncbi.nlm.nih.gov>

Constantinou, C.S., Georgiou, M., & Perdikogianni, M. (2017). A comparative method for themes saturation (CoMeTS) in qualitative interviews. *Qualitative Research*, 17(5), 571-588. <https://doi.org/10.1177/1468794116686650>

Crane, A., Henriques, I., Husted, B W., Mexico, L., & Matten, D. (2016). Measuring corporate social responsibility and impact: Enhancing qualitative research design and methods in business and society research. *Business & Society*, 56(6), 787-795. <https://doi.org/10.1177/0007650317713267>

Damsa, D., & Ugelvik, T. (2017). A difference that makes a difference? Reflexivity and researcher effects in an all-foreign prison. *International Journal of Qualitative Methods*, 16(1), 1-10. <https://doi.org/10.1177/1609406917713132>

David, F. R. (2017). Strategic management: Concepts and cases: A competitive advantage approach. Pearson Education Limited.

Davidson, J., Paulus, T., & Jackson, K. (2016). Speculating on the future of digital tools 121 for qualitative research. *Qualitative Inquiry*, 22(7) 1-5.
<https://doi.org/10.1177/1077800415622505>

Davidson, J., Thompson, S., & Harris, A. (2017). Qualitative data analysis software

practices in complex research teams: Troubling the assumptions about transparency and portability. *Qualitative Inquiry*, 23(1), 779-788.

<https://doi.org/10.1177/1077800417731082>

Del, B. M. (2017). The implementation of integrating reporting in SMEs. *Meditari Accountancy Research*, 25(4), 505-532.

Denzin, N. K., & Lincoln, Y. S. (2018). *The sage handbook of qualitative research* (5th. Ed.). Sage.

DeVaney, S., Spangler, A., Lee, Y. A., & Delgadillo, L. (2018). Tips from the experts on conducting and reviewing qualitative research. *Family & Consumer Sciences*, 46(1), 396-405. <https://doi.org/10.1111/fcsr.12264>

Devotta, K., Woodhall-Melnik, J., Pedersen, C. Wendaferew, A., Dowbor, T. P., Guilcher, S. J., Hwang, S. W. (2016). Enriching qualitative research by engaging peer interviewers: A case study. *Qualitative Research*, 16(6), 661-680.

<https://doi.org/10.1177/1468794115626244>

Dorney, P. (2016). The empty desk: The sudden death of a nursing classmate. *Omega- Journal of Death and Dying*, 74(2), 164-192.

<https://doi.org/10.1177/0030222815598688>

Duffy, J. M. N., Rolph, R., Gale, C., Hirsch, M., Khan, K. S., Ziebland, S., & McManus, R. J. (2017). Core outcome sets in women's and newborn health: A systematic review. *An International Journal of Obstetrics and Gynaecology*, 124(1), 1481-1489. <https://doi.org/10.1111/1471-0528.14694>

Durowoju, S. T. (2017). Impact of technological change on small and medium enterprises

- performance in Lagos state. *Economic and Environmental Studies*, 17(44), 743-756. <https://doi.org/10.25167/ees.2017.44.7>
- Elephant, N. (2018). An analysis of the importance of mobile technology on small businesses in noordwyk. *International Journal of Entrepreneurship*, 22(4). <https://www.abacademies.org/articles/An-analysis-of-the-importance-of-mobile-technology-on-small-businesses-in-noordwyk-22-4.pdf>
- Errasti, A., Bretos, I., & Nunez, A. (2017). The viability of cooperatives: The fall of the Mondragon cooperative Fagor. *Review of Radical Political Economics*, 49(2), 181-197. <https://doi.org/10.1177/0486613416666533>
- Evans, B. (2018). HIPAA's individual right of access to genomic data: Reconciling safety and civil rights. *American Journal of Human Genetics*, 102(1), 5-10. <https://doi.org/10.1016/j.ajhg.2017.12.004>
- Fellnhofer, K. (2018). Game-based entrepreneurship education: impact on attitudes, behaviours and intentions. *World Review of Entrepreneurship, Management and Sustainable Development*, 14, 205-228. doi:10.1504/WREMSD.2018.089066
- Fernandes, T., & Moreira, M. (2019). Consumer brand engagement, satisfaction, and brand loyalty: A comparative study between functional and emotional brand relationships. *Journal of Product and Brand Management*, 28(2). <https://doi.org/10.1108/JPBM-08-2017-1545>
- Ford, T. L. (2018). Sustainability strategies for small business survival beyond 5 years. *Walden Dissertations and Doctoral Studies*. <https://scholarworks.waldenu.edu/dissertations/6020>

- Frels, R. K., & Onwuegbuzie, A. J. (2013). Administering quantitative instruments with qualitative interviews: A mixed research approach. *Journal of Counseling & Development, 91*(1), 184-194. <https://doi.org/10.1002/j.1556-6676.2013.00085.x>
- Galvão, M. B., de Carvalho, R. C., de Oliveira, L. A. B., & de Medeiros, D. D. (2018). Customer loyalty approach based on CRM for SMEs. *Journal of Business & Industrial Marketing, 33*, 706–716. <https://doi.org/10.1108/JBIM-07-2017-0166>
- Gandy, D. L. (2015). Small business strategies for company profitability and sustainability. *Walden Dissertations and Doctoral Studies*.
<https://scholarworks.waldenu.edu/dissertations/515>
- Geiger, M. W. (2018). Locating intersubjectivity in religious education praxis: A safe relational space for developing self-conscious agency. *British Journal of Religious Education, 40*(1), 20-30.
<https://doi.org/10.1080/01416200.2016.1143805>
- Geissdoerfer, M., Vladimirova, D., & Evans, S. (2018). Sustainable business model innovation: A review. *Journal of cleaner production, 198*(1), 401-416.
<https://doi.org/10.1016/j.jclepro.2018.06.240>
- Ghobakhloo, M., Sabouri, M. S., Hong, T. S., & Zulkifli, N. (2011). Information technology adoption in small and medium-sized enterprises; an appraisal of two decades literature. *Interdisciplinary Journal of Research in Business, 1*(7), 53-80.
- Gießmann, S. (2018). Money, credit, and digital payment 1971/2014: From the credit card to Apple pay. *Administration & Society, 50*(9), 1259-1279.
<https://doi.org/10.1177/0095399718794169>

- Giotopoulos, I., Kontolaimou, A., Korra, E., & Tsakanikas, A. (2017). What drives ICT adoption by SMEs? Evidence from a large-scale survey in Greece. *Journal of Business Research*, 1, 1-33. <https://doi.org/10.1016/j.jbusres.2017.08.007>
- Godwin, M. J. (2019). *Small business sustainability for longer than 5 years*. Walden Dissertations and Doctoral Studies. <https://scholarworks.waldenu.edu/dissertations/7144>
- Gopinath, N., & Mitra, J. (2017). Entrepreneurship and well-being: Towards developing a novel conceptual framework for entrepreneurial sustainability in organizations. *Journal of Entrepreneurship and Innovation in Emerging Economies*, 3(1), 62-70. <https://doi.org/10.1177/2393957516684464>
- Gresham, G., & Burleigh, C. (2019). Exploring early childhood preservice teachers' mathematics anxiety and mathematics efficacy beliefs. *Teaching Education*, 30(2), 217-241. <https://doi.org/10.1080/10476210.2018.1466875>
- Haines, D. (2017). Ethical considerations in qualitative case study research recruiting participants with profound intellectual disabilities. *Research Ethics*, 13(3-4), 219-232. <https://doi.org/10.1177/1747016117711971>
- Hammarberg, K., Kirkman, M., & de Lacey, S. (2016). Qualitative research methods: when to use them and how to judge them. *Human Reproduction*, 31(3), 498-501. <https://doi.org/10.1093/humrep/dev334>.
- Hanadi, A. L., & Aruna, M. (2013). Technology innovation for SME growth: A perception for the emerging economies. *Technology*, 4(3), 156-162.
- Hennink, M. M., Kaeser, B. N., & Marconi, V. C. (2017). Code saturation versus

- meaning saturation: How many interviews are enough? *Qualitative Health Research*, 27(1), 591-608. <https://doi.org/10.1177/1049732316665344>
- Hill, O'Connor, C. & Baker, R. (2017). Working with and for social enterprises: The role of the volunteer ethnographer. *Social Enterprise Journal*, 13(2), 180-193. <https://doi.org/10.1108/SEJ-07-2016-0033>
- Holmes, W. T., & Parker, M. A. (2017). Empirically testing behavioral integrity and credibility as antecedents for the effective implementation of motivating language. *International Journal of Business Communication*, 54(1), 70-82. <https://doi.org/10.1177/2329488416675450>
- Huber, J., Caine, V., Huber, M., & Steeves, P. (2013). Narrative inquiry as pedagogy in education: The extraordinary potential of living, telling, retelling, and reliving stories of experience. *Review of Research in Education*, 37(1), 212-242. <https://doi.org/10.3102/0091732X12458885>
- Hyder, S., & Lussier, R. N. (2016). Why businesses succeed or fail: A study on small businesses in Pakistan. *Journal of Entrepreneurship in Emerging Economies*, 8(1), 82-100. <https://doi.org/10.1108/JEEE-03-2015-0020>
- Islami, X., Mustafa, N., & Topuzovska Latkovikj, M. (2020). Linking Porter's generic strategies to firm performance. *Future Business Journal*, 6(1), 3. 89 <https://doi.org/10.1186/s43093-020-0009-1>
- Jalil, N. A., Prapinit, P., Melan, M., & Mustaffa, A. B. (2019). Adoption of business intelligence: Technological, individual and supply chain efficiency. 2019 International Conference on Machine Learning, Big Data and Business

Intelligence (MLBDBI), 67-73.

<https://doi.org/10.1109/MLBDBI48998.2019.00021>

Jakšić, M. L., Rakićević, J., & Jovanović, M. (2018). Sustainable technology and business innovation framework—A Comprehensive Approach. *Editorial Board*, 20(48),418. <https://doi.org/10.24818/EA/2018/48/418>

Jaruga, P., Coskun, E., Johnson, W. E., & Kimbrough, K. (2017). Biomarkers of oxidatively induced DNA damage in dreissenid mussels: An ecosystem health assessment tool for the Laurentian Great Lakes. *Environmental Toxicology*, 32(9). <https://doi.org/10.1002/tox.22427>

Johnson, M. P., & Schaltegger, S. (2016). Two decades of sustainability management tools for SMEs: How far have we come? *Small Business Management*, 54(2), 481-505. <https://doi.org/10.1111.jsbm.12154>

Juwita, O., & Arifin, F. N. (2017). Design of information system development strategy based on the conditions of the organization. In *Computer applications and information processing technology (CAIPT), 2017 4th International Conference* (pp. 1-5). IEEE. <https://doi.org/10.1109/CAIPT.2017.8320732>

Karadzhev, D., Yuan, Y., & Bond, L. (2019). Coping amidst an assemblage of disadvantage: A qualitative metasynthesis of first-person accounts of managing severe mental illness while homeless. *Journal of Psychiatric and Mental Health Nursing*.27(1), 1-21. <https://doi.org/10.1111/jpm.12524>

Katsikeas, C. S. (2018). Special issue on the future of international marketing: Trends, developments, and directions. *Journal of International Marketing*, 26(1), 1–3.

<https://doi.org/10.1509/jim.2611>

Khudhair, H. Y., Jusoh, A., Mardani, A., Nor, K. M., & Streimikiene, D. (2019). *Review of scoping studies on service quality, customer satisfaction and customer loyalty in the airline industry. Contemporary Economics, 13*(4), 375–387.

<https://doi.org/10.5709/ce.1897-9254.320>

King, J., O'Neill, B., Ramsay, P., Linden, M. A., Medniuk, A. D., Outtrim, J., & Blackwood, B. (2019). Identifying patients' support needs following critical illness: A scoping review of the qualitative literature. *Critical Care, 23*(187), 1-12. <https://doi.org/10.1186/s13054-019-2441-6>

Kokomo, G. (2017). *Implementation variables of corporate social responsibility in the financial services industry.* <https://scholarworks.waldenu.edu/dissertations/4148>

Kose, U., & Sert, S. (2017). Improving content marketing processes with the approaches by artificial intelligence. *Ecoforum. 1*(10), <http://www.ecoforumjournal.ro/index.php/eco>

Kotarsk, K., & Brkic, L. (2017). Political economy of banking and debt crisis in the EU: Rising financialization and its ramifications. *Review of Radical Political Economics, 49*(3), 430-455. <https://doi.org/10.1177/0486613415627151>

Koyagiolo, K. F. (2016). Small business survivability beyond 5 years.

<https://scholarworks.waldenu.edu/dissertations/2554>

Kraus, S., Gast, J., Schleich, M., Jones, P., & Ritter, M. (2019). Content is king: How SMEs create content for social media marketing under limited resources. *Journal of Macromarketing, 39*, 415-430. <https://doi.org/10.1177/0276146719882746>

- Krume, N., & PhD. (2014). The role of information technology in the business sector. *International Journal of Science and Research (IJSR)*, 358(12).
<https://www.ijsr.net/archive/v3i12/U1VCMTQzMjA=.pdf>
- Kumar, S., & Cavallaro, L. (2017). Researcher self-care in emotionally demanding research: A proposed conceptual framework. *Qualitative Health Research*, 28(4), 648-658. <https://doi.org/10.1177/1049732317746377>
- Lachmann, M., Trapp, I., & Trapp, R. (2017). Diversity and validity in positivist management accounting research: A longitudinal perspective over four decades. *Management Accounting Research*, 34, 42–58.
<https://doi.org/10.1016/j.mar.2016.07.002>
- Laher, S. (2016). Ostinato rigore: establishing methodological rigour in quantitative research. *South African Journal of Psychology*, 46(3), 316-327. <https://doi.org/10.1177/0081246316649121>
- Landrum, B., & Garza, G. (2015). A reply to Gergen (2015) and Madill (2015). *Qualitative Psychology*, 2(2), 226-228.
<https://doi.org/10.1037/qup0000029>
- Lantis, J. S., & Bloomberg, D. J. (2018). Changing the code? Norm contestation and US antipreneurism in cyberspace. *International Relations*, 32(2), 149–172.
<https://doi.org/10.1177/0047117818763006>
- Lazard, L., & McAvoy, J. (2020). Doing reflexivity in psychological research: What's the point? What's the practice? *Qualitative Research in Psychology*, 17(2), 159-177.
<https://doi.org/10.1080/14780887.2017.1400144>

- Levitt, H. M., Bamberg, M., Creswell, J. W., Frost, D. M., Josselson, R., & Suárez-Orozco, C. (2018). Journal article reporting standards for qualitative primary, qualitative meta-analytic, and mixed methods research in psychology: The APA Publications and Communications Board task force report. *American Psychologist*, 73(1), 26-46. <http://dx.doi.org/10.1037/amp0000151>
- Lichtenthaler, U. (2016). Toward an innovation-based perspective on company performance. *Management Decision*, 54, 66-87. Doi:10.1108/MD-05-2015-0161
- Linton, J. D., & Solomon, G. T. (2017). Technology, innovation, entrepreneurship, and the small business—technology and innovation in small business. *Journal of small business management*, 55(2), 196-199. <https://doi.org/10.1111/jsbm.12311>
- Lopez, C. (2017). Small sustainability supply: How small business and lean manufacturing can change supply chains. *Sustainable Development Law & Policy*, 17(2),
- Lowe, A., Norris, A. C., Farris, A. J., & Babbage, D. R. (2018). Quantifying thematic saturation in qualitative data analysis. *Field Methods*, 30(3), 191–207. <https://doi.org/10.1177/1525822X17749386>
- Lucas, S. R. (2016). Where the rubber meets the road: Probability and nonprobability moments in experiment, interview, archival, administrative, and ethnographic data collection. *Socius: Sociological Research for a Dynamic World*, 1(2), 1-24. <https://doi.org/10.1177/2378023116634709>
- Makrakis, V., & Kostoulas-Makrakis, N. (2016). Bridging the qualitative–quantitative divide: Experiences from conducting a mixed methods evaluation in the RUCAS

programme Evaluation and Program Planning, 54(1), 144–151.

<https://doi.org/10.1016/j.evalprogplan.2015.07.008>

Maheswari, B. U., Nandagopal, R., & Kavitha, D. (2018). Sustainable development practices adopted by SMEs in a developing economy: An Empirical Study. *IUP Journal of Management Research*, 17(3), 7-19.

Malesios, C., Skouloudis, A., Dey, P. K., Abdelaziz, F. B., Kantartzis, A., & Evangelinos, K. (2018). The impact of SME sustainability practices and performance on economic growth from a managerial perspective: Some modeling considerations and empirical analysis results. *Business Strategy and the Environment*, 27(7), 960-972.

Maramwidze-Merrison, E. (2016). Innovative methodologies in qualitative research: Social media window for accessing organizational elites for interviews. *Electronic Journal of Business Research Methods*, 14(1), 157–167. Retrieved from www.ejbrm.com10.1177/2378023116634709

Marshall, C., & Rossman, G. B. (2016). *Designing qualitative research* (6th ed.). Thousand Oaks, Sage.

Marshall, D., McCarthy, L., McGrath, P., & Claudy, M. (2015). Going above and beyond: How sustainability culture and entrepreneurial orientation drive social sustainability supply chain practice adoption. *Supply Chain Management*, 20(4), 434-454. <https://doi.org/10.1108/SCM-08-2014-0267>

Maxigas (2017). Hackers against technology: Critique and recuperation in technological cycles. *Social Studies of Science*, 47(6), 841-860.

<https://doi.org/10.1177/0306312717736387>

Mazerolle, S. M., & Eason, C. M. (2018). The organizational climate in collegiate athletics: An athletic trainer's perspective. *Journal of Athletic Training*, 53(1), 88–97. <https://doi.org/10.4085/1062-6050-52.12.24>

Maziriri, E. T. (2020). Green packaging and green advertising as precursors of competitive advantage and business performance among manufacturing small and medium enterprises in South Africa. *Cogent Business & Management*, 7(1), 1719586. <https://doi.org/10.1080/23311975.2020.1719586>

Mazzucato, M., & Semieniuk, G. (2017). Public financing of innovation: new questions. *Oxford Review of Economic Policy*, 33(1), 24-48. <https://doi.org/10.1093/oxrep/grw036>

McCarthy, L., & Muthuri, J. N (2018). Engaging fringe stakeholders in business and society research: Applying visual participatory research methods. *Business & Society*, 57(1), 131-173. <https://doi.org/10.1177/0007650316675610>

McTat, E. A., & Leffler, J. M. (2017). Diagnosing disruptive mood dysregulation disorder: Integrating semistructured and unstructured interviews. *Clinical Child Psychology and Psychiatry*, 22(2), 187-203. <https://doi.org/10.1177/1359104516658190>

Medved, T., Lakic, J., Zupancic, J., & Gubina, A. (2017). A review of business models for small prosumers in a post-RES subsidy and post-priority dispatch world. *International Conference on the European Energy Market (EEM)*, 14, 1–6. <https://doi.org/10.1109/EEM.2017.7981998>

- Meier, K. J., & Calderon, M. A. (2016). Goal displacement and the protection of human subjects: The view from public administration. *Political Science & Politics*, 49(2), 294-298. <https://doi.org/10.1017/S1049096516000238>
- Miller, J. L. (2010). Sustainability: Is it a good choice for small companies? *Inquiries Journal*, 2(10), 24-24.
- Minning, L. (2019). Targeted content: the Secret to gaining and keeping customers is just two words. <https://www.activecampaign.com/blog/targeted-content>
- Modimogale, L., & Kroeze, J. (2011). *The Role of ICT within Small and Medium Enterprises in Gauteng*. 2011(2011). <https://doi.org/10.5171/2011.369288>
- Molinillo, S., Go´mez-Ortiz, B., Pe´rez-Aranda, J., & Navarro-Garcia, A. (2017). Building customer loyalty: The effect of experiential state, the value of shopping, and trust and perceived value of service on online clothes shopping. *Clothing and Textiles Research Journal*, 35(3), 156-171. <https://doi.org/10.1177/0887302X17694270>
- National Institute of Health. (2020). The Belmont report (April 18, 1979). Retrieved from <https://nih.gov/>
- Nelson, J. (2017). Using conceptual depth criteria: Addressing the challenge of reaching saturation in qualitative research. *Qualitative Research*, 17(5), 554-570. <https://doi.org/10.1177/1468794116679873>
- Nidumolu, R., Prahalad, C. K., & Rangaswami, M. R. (2009). Why sustainability is now the key driver of innovation. *Harvard Business Review*, 87(9), 56-64.
- Nor-Aishah, H., Ahmad, N. H., & Thurasamy, R. (2020). Entrepreneurial leadership and

- sustainable performance of manufacturing SMEs in Malaysia: The contingent role of entrepreneurial bricolage. *Sustainability*, 12(8), 3100.
- Nordstrom, S. (2015). A Data Assemblage. *International Review of Qualitative Research*, 8(2), 166-193. <https://doi.org/10.1525/irqr.2015.8.2.166>
- Norlyk, A., Haahr, A., & Hall, E. (2016). Interviewing with or without the partner present? An underexposed dilemma between ethics and methodology in nursing research. *Journal of Advanced Nursing*, 72, 936-945. <https://doi.org/10.1111/jan.12871>
- Nowell, L. S., Norris, J. M., White, D. E., & Moules, N. J. (2017). Thematic analysis: Striving to meet the trustworthiness criteria. *International Journal of Qualitative Methods*, 16(1), 1–13. <https://doi.org/10.1177/1609406917733847>
- Nwosu, A. O. (2017). *E-Commerce adoption by small and medium enterprises in Nigeria* (Doctoral dissertation). Available from ProQuest Dissertation and Theses database. (UMI No. 10617974)
- Oliveira, E. C. B., Alencar, L. H., & Costa, A. S. (2018). Decision process of allocating projects to project managers. *Production Planning & Control*, 29, 645-654. <https://doi.org/10.1080/09537287.2018.1432086>
- Oltmann, S. (2016). Qualitative Interviews: A methodological discussion of the interviewer and respondent contexts. *Forum Qualitative Sozialforschung / Forum: Qualitative Social Research*, 17(2), 1–16. <https://doi.org/10.17169/fqs-17.2.2551>
- Pacho, C. O. (2015). Exploring participants' experiences using case study. *International Journal of Humanities and Social Science*, 5(4), 44-54. Retrieved from

www.ijhssnet.com

- Padgett, C. S., DeVincenzo, M., Munn, J., & Rajagopalan, H. K. (2016). Building forecasting models for restaurant owners and managers: A case study. *American Journal of Entrepreneurship*, 9(2), 84–109.
<http://www.americanjournalentrepreneurship.org>
- Parida, V., & Wincent, J. (2019). Why and how to compete through sustainability: a review and outline of trends influencing firm and network-level transformation. *International Entrepreneurship and Management Journal*, 15(1), 1-19. <https://doi.org/10.1007/s11365-019-00558-9>
- Pattinson, S. (2016). Strategic thinking: intelligent opportunism and emergent strategy – the case of strategic engineering services. *Entrepreneurship and Innovation*, 17(1), 65-70. <https://doi.org/10.5367/ijei.2015.0212>
- Patton, M. (2015). *Qualitative evaluation and research methods*. Sage Publications Inc.
- Pessu, N. (2015). Technological factors for the sustainability of the small business entrepreneur. *ScholarWorks*.
<https://pdfs.semanticscholar.org/3542/3d41e06316a2e6eb8a2dba1ee86b5766286f.pdf>
- Pontikes, E. G., & Barnett, W. P. (2017). The non-consensus entrepreneur: Organizational responses to vital events. *Administrative Science Quarterly*, 62(1), 140-178. <https://doi.org/10.1177/0001839216661150>
- Pooser, D. M., & Browne, M. J. (2018). The effects of customer satisfaction on company profitability: Evidence from the property and casualty insurance industry. *Risk*

Management & Insurance Review, 21(2), 289–308.

<https://doi.org/10.1111/rmir.12105>

Pope, M. T. (2017). Certified patient decision aids: Solving persistent problems with informed consent law. *Journal of Law, Medicine & Ethics*, 45, 12-40.

<https://doi.org/10.1177/1073110517703097>

Porter, M. (1980). *Competitive Strategy: Techniques for analyzing industries and competitors*. The Free Press.

Porter, M. E. (1998). *Competitive strategy: Techniques for analyzing industries and competitors: With a new introduction*. Free Press.

Porter, M. E. (2008). How competitive forces shape strategy. *Harvard Business Review*, 133-143. https://doi.org/10.1007/978-1-349-20317-8_10

Prasanna, R. P. I. R., Jayasundara, J. M. S. B., Gamage, N., Kumara, S., Ekanayake, E. M. S., Rajapakshe, P. S. K., & Abeyrathne, G. A. K. N. J. (2019). Sustainability of SMEs in the Competition: A Systemic Review on Technological Challenges and SME Performance. *Journal of Open Innovation: Technology, Market, and Complexity*, 5(4), 100. <https://doi.org/10.3390/joitmc5040100>

Rafail, P. (2018). Nonprobability sampling and Twitter; Strategies for semibounded and bounded populations. *Social Science Computer Review*, 36(2), 195-211.

<https://doi.org/10.1177/0894439317709431>

Raheim, M., Magnussen, L. H., Sekse, R. J. T., Lunde, A., Jacobsen, T., & Blystad, A. (2016). Researcher–researched relationship in qualitative research: Shifts in positions and researcher vulnerability. *International Journal of Qualitative*, 11(1),

<https://doi.org/10.3402/qhw.v11.30996>

Rahman, M., Rodriguez-Serrano, M. A., & Lambkin, M. (2017). Corporate social responsibility and marketing performance: The moderating role of advertising intensity. *Journal of Advertising Research*, 57, 368-378.

<https://doi.org/10.2501/JAR-2017-047>

Rahman, N. A., Yaacob, Z., & Radzi, R. M. (2016). An overview of technological innovation on SME survival: A conceptual paper. *Procedia-Social and Behavioral Sciences*, 224(1), 508-515.

<https://doi.org/10.1016/j.sbspro.2016.05.427>

Saunders, M., Lewis, P., & Thornhill, A. (2016). *Research methods for business students* (7th ed.). Pearson Education.

Saxena, R. (2017). Muddling through the passage of qualitative research: Experiences of a novice researcher. *Vision*, 21(3), 314-322.

<https://doi.org/10.1177/0972262917721423>

Schiavi, G. S., & Behr, A. (2018). Emerging technologies and new business models: A review on disruptive business models. *Innovation & Management Review*, 15, 338-355. <https://doi.org/10.1108/INMR-03-2018-0013>

Schmidt, H., Eisenmann, Y., Golla, H., Voltz, R., & Perrar, K.M (2018). Needs of people with advanced dementia in their final phase of life: A multiperspective qualitative study in nursing homes. *Palliative Medicine*, 32(3), 657-667. <https://doi.org/10.1177/0269216317746571>

[10.1177/0269216317746571](https://doi.org/10.1177/0269216317746571)

Setiawan, R., Wati, S., Wardana, A., & Ikhsan, R. (2019). Building trust through

customer satisfaction in the airline industry in Indonesia: Service quality and price fairness contribution. *Management Science Letters*, 5, 1095–1102.

<https://doi.org/10.5267/j.msl.2019.10.033>

Shashi, C. R., Centobelli, P., & Shabani, A. (2018). Sustainability orientation, supply chain integration, and SMEs performance: A causal analysis. *Benchmarking*, 25(9), 3679-3701. <https://doi.org/10.1108/BIJ-08-2017-0236>

Shrestha, L. S., Alsadoon, A., Prasad, P. W. C., Venkata, H. S., & Elchouemi, A. (2019). Rise of Social Media Marketing: A Perspective on Health Insurance. 2019 5th International Conference on Advanced Computing & Communication Systems (ICACCS), 905–909. <https://doi.org/10.1109/ICACCS.2019.8728510>

Sotiriadou, P., Brouwers, J., & Le, T. A. (2014). Choosing a qualitative data analysis tool: A comparison of NVivo and Leximancer. *Annals of Leisure Research*, 17(2), 218-234. <https://doi.org/10.1080/11745398.2014.902292>

Stephan, U., Patterson, M., Kelly, C., & Mair, J. (2016). Organizations driving positive social change. *Journal of Management*, 42(5), 1250-1281.

<https://doi.org/10.1177/0149206316633268>

Studies on Health and Well-being, 11,30996-31008.

<https://doi.org/10.3402/qhw.v11.30996>

Sundararajan, M., & Sundararajan, B. (2015). Immigrant capital and entrepreneurial opportunities. *Entrepreneurial Business and Economics Review*, 3(3), 39-50.

<https://doi.org/10.15678/EBER.2015.030303>

- Tadesse, A. F., & Murthy, U. S. (2018). Nonprofessional investor perceptions of the partial remediation of IT and non-IT control weaknesses: An experimental investigation. *International Journal of Accounting Information Systems*, 28, 14-30. <https://doi.org/10.1016/j.accinf.2017.12.001>
- Taneja, S., Pryor, M., & Hayek, M. (2016). Leaping innovation barriers to small business longevity. *Journal of Business Strategy*, 37(3), 44-51. <https://doi.org/10.1108/JBS-12-2014-0145>
- Thomas, D. R. (2017). Feedback from research participants: Are member checks useful in qualitative research? *Qualitative Research in Psychology*, 14(1), 23–41. <https://doi.org/10.1080/14780887.2016.1219435>
- Tran, V., Porcher, R., Tran, V., & Ravaud, P. (2017). Predicting data saturation in qualitative surveys with mathematical models from ecological research. *Journal of Clinical Epidemiology*, 82(1), 71-78. <https://doi.org/10.1016/j.jclinepi.2016.10.001>
- Turner, S., & Endres, A. (2017). Strategies for enhancing small business owners' success rates. *International Journal of Applied Management and Technology*, 16(1), 34-49. <https://doi.org/10.5590/IJAMT.2017.16.1.03>
- Ulloa, R. S., MacCawley, A. F., Santelices, G. A., & Pascual, R. (2018). Technology investment effects in performance-based maintenance contracts. *International Journal of Production Research*, 56, 2628-2645. <https://doi.org/10.1080/00207543.2017.1374573>
- U.S. Department of Commerce. (2019). Quarterly retail e-commerce sales 3rd quarter

2019. https://www.census.gov/retail/mrts/www/data/pdf/ec_current.pdf
- U.S Small Business Administration Office of Advocacy. (2019). 2019 Small Business Profile: Overall Maryland Economy.
- U.S. Small Business Administration (SBA). (2018). Firm size data. Retrieved from <https://www.sba.gov/advocacy/firm-size-data>
- U.S. Small Business Administration (SBA). (2018). *Frequently asked questions, 1*. Retrieved from: https://www.sba.gov/sites/default/files/advocacy/SB-FAQ-2016_WEB.pdf
- Van, D. B., & Struwig, M. (2017). Guidelines for researchers using an adapted consensual qualitative research approach in management research. *Electronic Journal of Business Research Methods*, 15(2), 109-119. Retrieved from <http://www.ejbrm.com>
- Vidgen, R., Shaw, S., & Grant, D. (2017). Management challenges in creating value from business analytics. *European Journal of Operational Research*, 261(2), 626-639. <https://doi.org/10.1016/j.ejor.2017.02.023>
- Wani, C. K. (2018). Strategies to Sustain Small Businesses beyond 5 Years. <https://scholarworks.waldenu.edu/dissertations/4895>
- Wang, Z., & Kim, H. G. (2017). Can social media marketing improve customer relationship capabilities and firm performance? Dynamic capability perspective. *Journal of Interactive Marketing*, 39, 15–26. <https://doi.org/10.1016/j.intmar.2017.02.004>
- Wei, Z., Lee, M. Y., Shen, H. (2018). What drives consumers in China to buy clothing

- online? Application of the technology acceptance model. *Journal of Textiles and Fibrous Materials*, 1, 1–10. <https://doi.org/10.1177/2515221118756791>
- Wilburn, K., & Wilburn, H. (2018). The Impact of Technology on Business and Society, *Global Journal of Business Research, The Institute for Business and Finance Research*, 12(1), 23-39.
- Williams, S., & Schaefer, A. (2013). Small and medium-sized enterprises and sustainability: Managers' values and engagement with environmental and climate change issues. *Business Strategy and the Environment*, 22(3), 173-186. <https://doi.org/10.1002/bse.1740>
- Wilshusen, P. R., & MacDonald, K. I. (2017). Fields of green: Corporate sustainability and the production of economistic environmental governance. *Environment and Planning*, 49(8), 1-22. <https://doi.org/10.1177/0308518X17705657>
- Wilson, A. D., Onwuegbuzie, A. J., & Manning, L. P. (2016). Using paired depth interviews to collect qualitative data. *Qualitative Report*, 21(9), 1549-1573. Retrieved from <https://nsuworks.nova.edu/tqr/vol21/iss9/1>
- Wiyatno, W., Napitupulu, A. T., & Abdurachman, E. (2017). The strategic roles of information system: A case of small medium enterprises. *Journal of Theoretical & Applied Information Technology*, 95(16), 3728-3736. <http://www.jatit.org/>
- Woods, M., Paulus, T., Atkins, D. P., & Macklin, R. (2016). Advancing qualitative research using qualitative data analysis software (QDAS)? Reviewing potential versus practice in published studies using ATLAS. and NVivo, 1994–2013. *Social Science Computer Review*, 34(5), 597–617.

<https://doi.org/10.1177/0894439315596311>

- Wu, J., Guo, S., Huang, H., Liu, W., & Xiang, Y. (2018). Information and communications technologies for sustainable development goals: state-of-the-art, needs and perspectives. *IEEE Communications Surveys & Tutorials*, 20(3), 2389-2406. <https://doi.org/10.1109/COMST.2018.2812301>
- Xiong, J., & Qureshi, S. (2015). Information technology for development in small and medium-sized enterprises. *Proceedings of SIG GlobDev Eighth Annual Workshop*.
- Yacob, P., Wong, L. S., & Saw, C. K. (2019). An empirical investigation of green initiatives and environmental sustainability for manufacturing SMEs: IMS. *Journal of Manufacturing Technology Management*, 31(1), 2-25.
- Yilmaz A, Peretz M, Aharony A, Sagi I, Benvenisty N. (2018). Defining essential genes for human pluripotent stem cells by CRISPR-Cas9 screening in haploid cells. *20(5)*, 610-619. <https://doi.org/10.1038/s41556-018-0088-1>
- Yin, R. K. (2018). *Case study research: Design and Methods* (6th ed.). Sage Publications, Inc.
- Zaefarian, G., Thiesbrummel, C., Henneberg, S. C., & Naude, P. (2017). Different recipes for success in business relationships. *Industrial Marketing Management*, 63, 69–81. <https://doi.org/10.1016/j.indmarman.2016.12.006>

Appendix A: Interview Protocol

Participant #: _____ Participant Initials: _____ Date/Time: _____

Introduction:

The purpose of this qualitative multiple case study is to explore the technology strategies SME business owners use to sustain their business beyond 5 years. My belief is that sharing successful strategies amongst small businesses may benefit organizations through improved business practices as well as positively impacting social change. The sharing of successful technology strategies may produce increased revenues, increased market share, and enhanced competitiveness. The positive social change that may occur includes increased economic stability, increased number of jobs available in the community, and additional opportunities for growth within the community.

Interview Protocol

Interview questions will be provided to all participants for their review. The participants will be made aware that the interview will be recorded, and the researcher will exclude the participants name and any other information that can be used to identify the participant. Any questions the participant does not want to answer may be skipped at the request of the participant. After the interview, the participants will be reminded that they will receive a copy of the findings and interpretation for their review.

Dear Participant,

The following questions posed by the researcher will be asked to understand the technology strategies used by small business enterprises (SMEs) to sustain their business beyond 5 years. Additional probing questions not listed may be asked depending upon the answers to the initial interview questions.

1. What technology strategies do you use to sustain your business?
2. What were the key challenges incurred while implementing your strategies to sustain your business?
3. How did you address the key challenges to ensure you sustain your business beyond 5 years?
4. What role did IT play in sustaining your business?
5. How do you measure the effectiveness of the implemented technology to sustain your business beyond 5 years?
6. In sustaining your business, what technology strategies were most effective in maintaining a good relationship with customers and employees?
7. What else can you share about the strategies your organization used to sustain your business beyond 5 years?

Appendix B: Invitation to Participate

Dear Small Business Owners,

Date: _____

My name is Eunice Colon, a doctoral student at Walden University. I am conducting a study on technology strategies SME business owners use to sustain their business beyond 5 years to complete my degree. I need your help to understand strategies you used to sustain business beyond 5 years while fulfilling your firm's social responsibility obligations in Maryland. I am requesting an interview with you. The interview will take about an hour. With your permission and consent, I will ask you questions and record your answers. Your personal information will remain confidential and will not be published nor shared with any individuals or organizations. There is no compensation for your participation in this study. However, your participation can make a difference in fostering strategies small business owners may adopt to ensure long-term profitability, social well-being of their stakeholders, and the protection of the environment in Maryland. I have enclosed a consent form and the observation protocol to provide detail ideas of expectations.

Thanks for your time and consideration,

Respectfully,

Eunice Colon

DBA Candidate Walden University