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Strategies to Manage Reduced Demand Among Mattress Manufacturers in Puerto Rico

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Walden University

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Abstract

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MBA, Universidad Interamericana de Puerto Rico, 2006

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Doctoral Study Submitted in Partial Fulfillment

of the Requirements for the Degree of

Doctor of Business Administration

Walden University

September, 2022

Abstract

The COVID-19 pandemic reduced consumer demand in Puerto Rico, resulting in manufacturing jobs decreasing from 76,000 in March 2020, to 72,600 in August 2020, and the PMI decreasing from 50.5 to 48.1 in the same period. Owners of mattress manufacturing firms in Puerto Rico who lack strategies to increase consumer demand risk financial losses. Grounded in the strategic management theory, the purpose of this qualitative multiple case study was to explore strategies owners of mattress manufacturing firms in Puerto Rico use to increase demand for mattresses. The participants included three owners of mattress manufacturing firms in Puerto Rico who successfully increased demand for mattresses. Data were collected from semistructured interviews and company documents related to mattress sales and demand. Thematic analysis of the data resulted in four themes: having inventory for immediate sales increased the demand for mattresses, marketing in social networks increased the demand for mattresses, establishing good prices increased the demand for mattresses, and delivering excellent customer service increased the demand for mattresses. A key recommendation is for owners of mattress manufacturing firms to post the amount of inventory available at their manufacturing facilities on their websites, in response to the importance the buyers place on buying products at the manufacturing facilities. The implications for positive social change include the potential of improved health benefits of more frequent mattress replacement and increased revenue that could translate into a larger tax base local governments could use to implement community-based projects.

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Dedication

I dedicate this study to those who encouraged me to always keep myself in the right track and continuing studying, my father Don Marcos Rivera, in Heaven, and my high school Spanish teacher, Dr. Angelita Cordero. My father always told me to study and to push myself further; my teacher guided me to keep the faith on myself and to look to the future no matter what. I can also distinguish here my professor, chair and mentor, Dr. Gaytan, who since 2016 guided my study and encouraged me until the end. Without those persons, among others, this doctoral journey could not be possible. To them, my heart is always grateful and the best for all.

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I have many persons to acknowledge. Since 1993, my beginnings at the mattress industry, Mr. Alberto Morales, in Heaven; Mr. Rafael Ivan Vidal, in Heaven; and Mr. Roberto Olivo. Those gentlemen taught me, encourage me, supported me, and lift me when most needed. Special acknowledgment to my daughter Jessica, she was the person who brought me here, because of her, I wanted to be a Doctor in Business Administration, as I want the best for her. To best friends Jeannette Nieves, knowing her since 8th grade, who always was there to listen and tell me the good, bad, and ugly. And to my daughter's Godmother, Maribel Torres, knowing her since I was starting the business on my own, as she always was there to support me. No matter what, these persons were always there. I thank you all from the bottom of my heart.

Table of Contents

Section 1: Foundation of the Study

The reduction in the demand for a product results in higher cost of supplies, lost productivity, loss of goodwill, and damage to facilities (Zhang et al., 2020). The study of a price strategy to enable the retention of customers leads managers to make adjustments in the production to cause demand for the product, including a strategy used to lower the price of the product (Zhang et al., 2020). The supply and demand uncertainty in the supply chain has translated into several strategies, such as holding inventory or using multiple suppliers, that owners of mattress manufacturing firms have used to protect against supply and demand uncertainty (Nag et al., 2014). One of the most difficult challenges in manufacturing is to sale the finished product as soon as possible to recover the funds invested in the manufacturing of the product (Li et al., 2019). Given that the decline in demand affects the available inventory for sale and the frequency in distribution, the inventory holding costs remarkably affect the distribution structure (Agnetis et al., 2017). The purpose of this research study was to explore strategies owners of mattress manufacturing firms in Puerto Rico use to increase the demand for mattresses.

Background of the Problem

The mattress manufacturing industry belongs to North American Industry Classification System (NAICS) from the Executive Office of the President Office of Management and Budget (U.S. Census Bureau, 2017). This industry is about establishments primarily engaged in manufacturing innersprings, box spring, and noninnerspring mattresses, including mattresses for waterbeds. Business people in Puerto Rico classify mattress-manufacturing firms as small- to medium-sized enterprises, which are companies with fewer than 50 employees (Oronoz, 2014). The mattress manufacturers fall into the category of furniture and articles for the home.

Matrix manufacturing firms in Puerto Rico have reduced production (Instituto de Estadísticas de Puerto Rico, 2020a) and, consequently, there is a need to explore strategies managers could use to increase the demand for mattresses in Puerto Rico. According to the Puerto Rico Department of State's Corporation Division (2020), mattress manufacturers registered in Puerto Rico amount to approximately 20, which most of them are the major recognized U.S. brands that established their factories in Puerto Rico. Mattress manufacturing firms in Puerto Rico may use the findings from this research to identify strategies that they may use to increase the demand for mattress effectively.

Problem Statement

The COVID-19 pandemic has caused millions of dollars in losses in the manufacturing sector in Puerto Rico, as a result of reduction in the suppliers' deliveries by 50%, demand by 63%, staff by 31%, and inventory by 38% (Instituto de Estadísticas de Puerto Rico, 2020a). Puerto Rico's manufacturing jobs decreased to 72,600 (U.S. Bureau of Labor Statistics, 2020) and the PMI decreased to 48.1 in August of 2020 (Instituto de Estadísticas de Puerto Rico, 2020b). The general business problem is that Puerto Rican manufacturers are confronting a reduction in the manufacturing of products. The specific business problem is some owners of mattress manufacturing firms in Puerto Rico lack strategies to increase the demand for mattresses.

Purpose Statement

The purpose of this qualitative multiple case study was to explore strategies owners of mattress manufacturing firms in Puerto Rico use to increase the demand for mattresses. The target population consisted of three owners of mattress manufacturing firms in Puerto Rico with successful experience in increasing the demand for mattresses. The implications for social change include increased revenue that could translate into a larger tax base that local governments could use to implement community-based projects. Additional implications for positive social change include reducing unemployment, creating new jobs, and developing an awareness of the importance of replacing an old mattress with a new one to obtain the key health benefits a new mattress may offer.

Nature of the Study

Three research methodologies exist, which are qualitative, quantitative, and mixed (Yin, 2018). A qualitative study is interpretive because researchers explore a phenomenon through subjectivity and socially constructed meanings (Saunders et al., 2018). A qualitative study is naturalistic in nature since there is a need to operate within a natural setting (Saunders et al., 2018). Yin (2018) described the qualitative research method as being used for exploring the *what, why,* and *how* of a phenomenon in its real-life setting. I used the qualitative research method because I explored the *what, why,* and *how* of strategies used to increase the demand for mattresses.

In a quantitative study, researchers examine variables' characteristics or relationships among variables, using measuring techniques to analyze the data while incorporating controls to ensure validity (Saunders et al., 2018). Quantitative researchers establish clear and concise questions and hypotheses (Marshall & Rossman, 2016). I did not select the quantitative method for the study because I did not examine variables' characteristics or relationships using statistical analyses through hypotheses testing. Mixed-method researchers use a combination of qualitative and quantitative methods (Yin, 2018). Researchers use the mixed method to employ both inductive and deductive reasoning (Marshall & Rossman, 2016). Because there were no hypotheses to test in the study, I did not select the mixed method for the study.

I considered several qualitative research designs, including narrative, phenomenological, ethnographic, and case study. The focus of the narrative research is on participants' experiences through their personal life stories, which is typically sequential and nonstructured (Yin, 2018). I did not use the narrative research design because I did not focus on participants' personal life stories that are sequential and nonstructured. The phenomenological design is a form of interpretivism where the researcher focuses on the participants' lived experiences to identify and understand meanings and gain insights (Marshall & Rossman, 2016). The phenomenological design was not the most appropriate research approach for this study because I did not focus on studying the personal meanings of participants' lived experiences. I did not use the ethnographic research design approach because, according to Yin (2018), researchers use the ethnographic research design to conduct an in-depth exploration of the social and cultural characteristics of groups, which was not the purpose of this study. Researchers use the case study design to explore the *what, why,* and *how* of a phenomenon in its natural setting (Yin, 2018). Researchers also use the case study design to investigate a phenomenon in-depth within the participants' environmental context and conduct methodological triangulation as part of the strategy for validating findings (Ridder, 2017). Researchers use a multiple case study design to investigate a phenomenon using multiple cases or units, as opposed to the single case study that involves only one unit or case (Yin, 2018). Researchers often select a multiple case study design because of the production of more robust data, as researchers are able to compare data collected from several case organizations (Yin, 2018). I used the qualitative multiple case study research design because I was able to compare data collected from various case organizations that led to the production of more robust data. I explored the *what*, *how,* and *why* of a particular phenomenon which, for this case study, was exploring strategies for increasing the demand for mattresses.

Research Question

What strategies do owners of mattress manufacturing firms in Puerto Rico use to increase the demand for mattresses?

Interview Questions

1. What strategies did you use to increase the demand for mattresses?
2. How did your employees respond to those strategies?
3. How, if at all, were the strategies used to increase the demand for mattresses communicated throughout the organizational ranks and among stakeholders?
4. What, if any, modifications did you apply to any strategy used to improve its effectiveness in increasing the demand for mattresses?
6. What were the key barriers to implementing strategies used to increase the demand for mattresses?

7. How did you overcome the key barriers to implementing strategies used to increase the demand for mattresses?

8. What else would you like to add about strategies used to increase the demand for mattresses?

Conceptual Framework

The conceptual framework for this study was the strategic management theory. Ansoff (1965) developed the strategic management theory as a result of individuals desiring long-range planning in their organizations. The next development phase in strategic management was the concept of positioning, developed by Porter (1985). To assess the goals of strategic management, Porter suggested defining a firm’s position in the industry as the goal of strategic management, which allows the firm to gain specific advantages and to increase profit. Strategic management theory includes the following principal activities: organization of strategic works, creation of mission and vision, analysis of strategies, and implementation and control of strategies (Ansoff, 1965).

The strategic management theory has factors that include environment, regulation, funding, technology, organizational structure, and strategy. These important factors improve the organizations’ ability to adapt to changing circumstances, services, create value, and sustain support (Esmaeili, 2015). I selected the strategic management theory because, according to Esmaeili (2015), individuals using strategic management are able to formulate efficient solutions to organizational problems through dynamic, provident, holistic, and contingent principles to develop strategies for the survival of their organizations. Owners of the participating mattress manufacturing firms in Puerto Rico may use strategic management theory to develop and implement effective strategies for the survival of their organizations.

Operational Definitions

Instituto de Estadísticas de Puerto Rico: Instituto de Estadísticas de Puerto Rico was created in 2003 by the Puerto Rico Institute of Statistics Act to promote changes in the systems for gathering and analyzing information to achieve more complete, reliable, and easy-to-access information. The Puerto Rico Institute of Statistics' purpose is to develop policy for the public statistical function, coordinate the production of statistics of all government entities, and require information from both the public and the private sectors (Instituto de Estadísticas de Puerto Rico, 2020a).

North American Industry Classification System (NAICS): North American Industry Classification System was developed in 1997 by the governments of the United States, Canada, and Mexico to provide a standard scheme for classification of companies. This classification allows individuals to define the industries of information technology in a category composed of four subcategories: industries of hardware, software industries/services, communications and computer industries, service industries communications (U.S. Census Bureau, 2017).

Puerto Rico Department of State's Corporation Division: Puerto Rico Department of State's Corporation Division is a division of Puerto Rico Department of State which is responsible for promoting the cultural, political, and economic relations between Puerto Rico and foreign countries, and other jurisdictions of the United States. People in this corporate division carries out other administrative functions, such as publishing, certifying, and selling copies of the laws and rules of the government of Puerto Rico (Puerto Rico Department of State's Corporate Division, 2020).

Assumptions, Limitations, and Delimitations

Assumptions

Assumptions are statements presumed to be true, often only temporarily or for a specific purpose, such as building a theory (Leedy & Ormrod, 2010). I assumed that data collected during interviews would accurately reflect participants' experiences. I assumed that the use of the concept of strategies owners of mattress manufacturing firms in Puerto Rico use to increase the demand for mattresses was universal across industries, cultures, and organizations. I also assumed that data collected from participants would assist in answering the overarching research question. Additionally, I assumed that owners of mattress manufacturing firms were willing to participate in the study and that documents for review would be accessible.

Limitations

Limitations are areas over which the researcher has no control (Roberts, 2010). A limitation of this study was that only a few owners of mattress manufacturing firms participated in this study. Conducting a study at a few organizations prevents the application of findings across the mattress manufacturing industry. Furthermore, the time limit for interviews was another limitation of the study.

Delimitations

Delimitations are set by the researcher to refine the scope of research by identifying the exclusions from the study (Yang & Kenagy, 2011). In this study, I conducted in-depth semistructured interviews with only three owners of mattress manufacturing firms in Puerto Rico. I interviewed only participants meeting the established participant eligibility criteria. The three owners of mattress manufacturing firms had successful experience in increasing the demand for mattresses.

Significance of the Study

In this study, I intended to address one of the most significant challenges facing Puerto Rican mattress business owners today, which was the reduction in the demand of mattresses. This study contributes to improving productivity and organizational performance in Puerto Rico’s mattress manufacturing sector by identifying and exploring strategies owners of mattress manufacturing firms in Puerto Rico used to increase the demand for mattresses and for enabling beneficial social change.

Contribution to Business Practice

The contribution of this study to mattress manufacturing owners in Puerto Rico is to acquire sustainable business practices. This study’s findings may be used by Puerto Rican owners of mattress manufacturing businesses to gain a better understanding of the current market to increase the demand for mattresses. The contribution to business practice is that this study’s findings may result in owners of mattress manufacturing businesses increasing their skill set regarding mattress manufacturing in Puerto Rico.

Owners of mattress manufacturing firms may use the findings from this study to develop strategies for transferring knowledge and skills to new and future mattress manufacturing owners. The mattress-manufacturing decision makers may use the findings from this study to create strategic plans that lead to an increase in the demand for their product. Owners of mattress manufacturing firms could provide improved labor and preparation strategies and processes improving performance for business growth and survival.

Implications for Social Change

The implications for social change may include enabling owners of mattress manufacturing firms in Puerto Rico to include the use of environmentally friendly raw materials to manufacture mattresses, which can reduce the mattress manufacturing costs, allowing community members to financially afford mattresses. Owners of mattress manufacturing firms may use this study's findings to gain a better understanding of the utilization of existing human resources and planning for the transfer of knowledge and skills to a new generation. The findings from this research study could be used by individuals to engage in proper planning for industrial maintenance to avoid sudden operational closing that would negatively affect communities and surrounding neighborhoods. Additional implications for positive social change may include increasing revenues that can translate into a larger tax base that local governments might use to implement community-based projects, reducing unemployment, creating new jobs, and developing an awareness of the importance of replacing an old mattress with a new one to obtain the key health benefits of a new mattress.

A Review of the Professional and Academic Literature

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

The strategy for searching through existing literature entailed the use of keywords and phrases in the various databases listed above. I applied filters to database searches to narrow down the search results. These filters included specific keywords, a specified period, and specific databases. When using Google Scholar, I gave preference to articles published in or after 2018, ensuring the literature is topical and relevant. Secondly, I gave preference to articles that were available in the Walden University Library. The keywords and phrases I used in my search were *demand, sales strategies, management, changes in raw material, sustainability, management* *crisis,* and *production-inventory system*. Crossref and Ulrich's Periodicals Directory are tools to verify that literature is peer-reviewed. There are 290 references in this study; 276 of the references are scholarly peer-reviewed articles representing 96% of the total. In addition, there are seven books representing 2% and five government website representing 2% of the total. Of the total number of references in this study, 185 (64%) were published within the 2018-2022 period. The literature review includes 63 references. The publication date for 41 (65%) of these references is within the 2018 to 2022 period. In addition, 63 (100%) of the sources cited in the literature review are peer-reviewed journal articles and exclude websites and nonscholarly articles.

Literature Review Organization

The literature review section has several subsections. It begins with an introduction, which includes information about the strategy for searching the literature, the frequencies, and percentages of peer-reviewed articles as well as publication dates. In the next section, I focus on the application of the literature to the research question and include a brief description of the purpose of the study. Throughout the literature review, I realized I have a topic that was never studied before and that there are no previous studies to compare and contrast different points of view and relationships between previous research and findings with this study.

The first topic, strategic analysis, includes a critical analysis and synthesis of the conceptual framework I selected for my study, which is the strategic management theory, using supporting and contrasting theories from relevant literature on the topic of strategies owners of mattress manufacturing firms in Puerto Rico use to increase the demand for mattresses. Some of the supporting and contrasting/rival theories are contingency theory, transaction cost, and agency theory.

The second topic, Puerto Rico’s mattress manufacturing market, starts with a brief overview of the development of strategies owners of mattress manufacturing firms in Puerto Rico use to increase the demand for mattresses. I discuss the market demand, various definitions, antecedents, and strategies used to increase the demand. The third and final topic for discussion is strategic implementation. The topic includes a general discussion about managing the supply chain.

Application to the Applied Business Problem

The purpose of this qualitative multiple case study was to explore the strategies that owners of mattress manufacturing firms in Puerto Rico use to increase the demand for mattresses. Developing an understanding of such strategies required a qualitative approach, more specifically an exploratory multiple case study. The findings from this study might reveal the strategies owners of mattress manufacturing firms in Puerto Rico use to increase the demand for mattresses from a group of owners’ perspectives.

The findings of the study may be used to develop appropriate strategies for owners of mattress manufacturing firms in Puerto Rico to identify strategies that they may use to increase the demand for mattress effectively. Once an understanding of the underlying meaning emerges, appropriate strategies might equip leaders with the skills to improve strategies owners of mattress manufacturing firms in Puerto Rico use to increase the demand for mattresses. Individuals could use the findings from the study to improve business practice by identifying appropriate strategies, leading to increased productivity and organizational competitiveness.

The potential for social change rests in the development of strategies owners of mattress manufacturing firms in Puerto Rico use to increase the demand for mattresses and personal well-being.

Strategic Management Theory

In this subsection, I present a critical analysis of strategic management theory, which was the conceptual framework for this study. Strategic management characteristics include the process, which involves strategic perspective; that is, managers following strategic management are able to recognize and analyze the strategic topics of the organization and know the objectives of the organization to choose the most suitable strategy (Pan, 2021). Leaders use strategic management to have a leadership improvement with the features of visionary imagination and integrity, systems thinking, adaptability, creativeness, and entrepreneurship (Valmohammadi & Shahrashoob, 2022).

El-Haddadeh et al. (2021) examined the association among three contingency factors, including perceived environmental uncertainty, advanced manufacturing technology, and CEO characteristics and their impact on strategic management accounting techniques and performance. El-Haddadeh et al. presented strategic management accounting as an endogenous construct in the model. The dependent factor in this model is firm performance. The fundamental principle of contingency theory holds that firm performance depends on the proper fit between the structure, which is the use of strategic management accounting, and context, which includes the contingency variables.

El-Haddadeh et al. (2021) noted there is a positive relationship between the extent of adoption of strategic management accounting techniques and firm performance. With its focus on strategic management accounting, El-Haddadeh et al. contributed to broadening the literature on improving organizational effectiveness. To improve performance, leaders of small-medium enterprises (SMEs) should devote attention to their use of strategic management accounting, adopting different practices that best tailored to their specific circumstances. The framework includes three factors that have a significant effect on the use of advanced management accounting principles in SMEs: perceived environmental uncertainty, advanced manufacturing technology, and CEO characteristics.

MacLennan and Markides (2021) described the applicability of strategic management resource-based theories (RBTs) to the five project management process groups. Mapping the fundamental concepts of each theory to the process groups is the first step in the development of a framework that synthesizes the strategic management and project-based management literature. Researchers conducting project management research studies have recognized the problem of resource allocation across a portfolio of projects in a dynamic environment where there is competition amongst other internal projects. Organizational leaders attempt to manage the resource requirement according to the level of priority attached to the project. In managing resources, the organizational leaders must evaluate the value of a particular set of resource capabilities based on the market context within which a firm is operating.

Constraints exist in all stages of a project and include time, cost, scope, quality, risks, and resource availability. Project managers need to monitor critical constraints continually and to identify opportunities where project managers can remove or mitigate constraints. The success of a strategy occurs when the strategy and operational tactics are in alignment (MacLennan & Markides, 2021).

Tran and Herzig (2022) presented the resource base view (RBV) that reflects the emergence of strategic management as an independent discipline and represents the principal contribution of the strategic management discipline, which is the explanation of the existence, performance, and strategic decisions of firms' leaders. Leaders use the RBV theory to shift attention to the firm and suggest that competitive advantage achieved when idiosyncratic and difficult-to-replicate resources allow firms to offer better quality or reduce costs, beating the competition. The values, managerial and technical systems that triggered innovation are embedded in the organization and may turn into core rigidities, which hamper future innovation. These capabilities are difficult to change, as they include a pervasive dimension of values; however, organizations must constantly and actively seek to redefine their core capabilities in dynamic environments (Tran & Herzig, 2022).

Tran and Herzig (2022) identified further challenges related to finding the critical constructs for measurement in the new competitive landscape. The current economic crisis raises questions about the fundamental approaches of strategy research, methods, and major issues researchers addressed to date. The research strategy is fundamentally about explaining sustained differences in firm performance over time. The most important dependent variable in most strategy studies to date has some dimension of performance, typically financial performance (Tran & Herzig, 2022).

Ada et al. (2022) stated that leaders could use certain models of strategic management in different types of public organizations. To consider the model of strategic management to use is the conditions under which generic strategic management models become more applicable to specific types of public organizations. Ada examined two influential strategic management theories found in business organizations. The first one is Porter's (1985) strategic positioning model, which focuses on the choice of strategy and position in the market to exploit market imperfections. The second one is the RBV strategy, which focuses on developing and exploiting the organization's resources. Ada et al. explained that the possibility of using strategic management models in public organizations depends on the models' core features. To help understand the core features, Ada suggested a classification scheme that has three dimensions: the degree of administrative autonomy, performance-based budgeting, and market-like competition. Ada proposed that the use of different strategic management theories depend on the type of public organization and that organizations might also conceivably be open to alternative forms of strategy such as cooperative strategy.

Trigos and López (2020) noted that, in the public sector, individuals extensively use strategic planning, bundled with certain other schools of thought, despite tendencies to downplay formal, mechanistic planning in contemporary strategic management theory. Policy formulation, planning, and budgeting have for a long time been important activities in the public sector. By the early 1980s, public sector organizations also started to use strategic management concepts and techniques. Today, strategic management is common in the public sector in many countries and across different tiers of government.

Trigos and López (2020) postulated that strategic management is important for organizational improvement because of its effects on organizational adaptability, performance, and legitimacy. Many factors are important to an organization's ability to adapt to changing circumstances, improve services, create value, and sustain support. These factors include environment, regulation, funding, technology, organizational structure, and strategy. Strategic management tools, such as the balanced scorecard and strategy mapping, are especially important in public management because such tools can operationalize public value for different stakeholders (Trigos & López, 2020).

Vukile and Portia (2022) studied the strategic management field, using meta-analysis to synthesize prior work on many topics, including the performance implications of strategic resources, configuration membership, and strategic leaders. However, researchers used meta-analysis to assess one element of a theoretical model at a time, typically through a bivariate correlation coefficient. The insights derived from such analyses can help inform the boundaries, structure, and shortcomings of theoretical models while also enabling Vukile and Portia to determine the explanatory and predictive adequacy of theories in advancing knowledge in the field.

Globocnik et al. (2020) determined the following central question in strategic management that centers on the value added of the strategic leadership of the firm: Are strategic leaders, which generally include board of directors, chief executive officer (CEO), and top management team, responsible for the differences in a firm's performance? The association between strategic leaders and firm performance has become one of the most studied relationships in strategic management. Globocnik et al. found an additional reason to consider expanding the structure of the leadership model to include the more complex mediating relationships specified in the conceptual frameworks.

Bokhari et al. (2020) conducted research in strategic management focusing on finding strategies and attributes that enable an organization to outperform its competitors. A common challenge facing strategic management researchers is to identify the leading competitors objectively and assess the reasons for competitors' superiority. Bokhari et al. found that the strategic management literature includes a diverse array of objectives and actions regarding the creation of a competitive advantage. As a consequence, Bokhari et al. claimed that researchers face a range of performance measures that relate to various aspects of corporate activities, including accounting, finance, operations, marketing, and corporate social responsibility, lacking clear guidelines to select valid measures for corporate performance. Bokhari et al. introduced the two most prevalent frontier methodologies, which are Stochastic Frontier Analysis and Data Envelopment Analysis, and offered a comparative discussion regarding the strengths and limitations of these two approaches. Bokhari et al. encouraged strategic management researchers to explore the use of frontier methodologies in a variety of areas of study.

Bokhari et al. (2020) postulated the degree to which statistics in research on strategic management allow researchers to provide meaningful evidence for decision making. Bokhari et al. addressed the need for empirical evidence for decision making by exploring the extent to which researchers use the term scientific *apophenia* in research on strategic management to provide meaningful evidence for decision making. Bokhari et al. defined apophenia as the assigning of inferential meaning when limited statistical power should have prevented such a conclusion or when the data are random. Bokhari et al. concluded that scientific apophenia is a serious problem in the literature on strategic management. Bokhari et al. recommended replication of empirical studies to ensure that they provide evidence for scientific apophenia in empirical research.

Colvin and Carmona (2020) described that building theory in strategic management research involves representing real phenomena in *stylized* or *idealized* ways by suppressing some potentially relevant real phenomena while highlighting other real phenomena. In fact, critical discussions in strategic management include assumptions, which have been a driver of theoretical advancement in strategic management by modifying existing assumptions and introducing new ones. Modified or new assumptions typically imply that the scope of a theory changes and new predictions derive. If such new predictions survive empirical testing, theoretical advancement occurs (Colvin & Carmona, 2020).

Colvin and Carmona (2020) noted that building of new theory is an important determinant of success in strategic management research. Successfully building a new theory usually involves introducing new and different assumptions typically because adequately addressing a hitherto unexplained phenomenon makes building a new theory necessary. Hence, it is not surprising that discussion and controversy in strategic management often concern what is good, bad, useful, less useful, realistic, and unrealistic (Colvin & Carmona, 2020).

Agyapong et al. (2021) focused on wicked problems as the decision environment for strategic management. Wicked problems cover such diverse topics as climate change, low cost-healthcare, terrorism, security, extreme income disparity in a world of trade liberalization, inner city poverty, white collar crime, and cyber-crime. Other management problems are numerous, the hidden and real cost of waste management, volatile global supply chains, moral hazards in financial markets, and the organizational ecosystems to provide social justice in an era of ethnic nationalism. These issues are challenging but rarely inflict high risks for corporate misdemeanors (Agyapong et al., 2021).

Agyapong et al. (2021) concluded that conventional strategy management models presume reasonable stability in the task environment, the feedback mechanisms, information and social relations, and the organizational design features that weaken the direct participation of those decision makers who make strategic choices. Wicked problems fact of life in a global world, changing the nature of strategic management, which faces a deep paradox that define an environment of unprecedented interdependence, yet unpredictable forces of chaos and volatility. Strategic management now faces the prospect of a dramatic shift away from reasonable deterministic models to address uncertainty (Agyapong et al., 2021).

Knott and Thnarudee (2022) postulated marketing as a part of strategic management. The basis of strategic management of consulting companies is a creation of vision, mission, and goals that altogether with the analysis of the external and internal area shall allow the selection of an appropriate strategy and its implementation, supported by the control process. The most important activity of the managers of the consulting company is making decisions, often understood as the body of strategic management. Knott and Thnarudee demonstrated that marketing is one of the most important functional areas in business in terms of strategic planning and organizational performance. This is an important topic to examine because criticisms emerged regarding the usefulness of business schools and business education. Knott and Thnarudee examined the extent to which the popular capstone strategic management course today provides business students with a practical, multidisciplinary, integrative understanding of business strategy. Knott and Thnarudee found a need for the capstone course to emphasize business practice strategic planning and strategic-management theory.

Bromiley and Rau (2022) studied the fundamental determinants for the strategic management of manufacturing network. Network configuration management comprises decisions on the potential competitive advantage. Bromiley and Rau found that it is insufficient to understand only the strategic role of each plant within a network for its strategic management. Bromiley and Rau noted it is important to understand the extent that key plant managers’ decisions are centralized as different strategic plant roles and may require different degrees of local management autonomy. Thaher and Jaaron (2022) explored the basic principles and introduction of the Hoshin Kanri strategic management system, as it relates to the management practices in manufacturing SMEs. Thaher and Jaaron described an important part of such formalization is the introduction of a strategic management system, such as the validation of strategy development and implementation. Both the formalization inherent in the strategic management system and the way the system is introduced infers severe disruptions from traditional management practices in the company. Consequently, the choice of strategic management system and the design of the introduction phase are crucial for future success. Thaher and Jaaron suggested that the successful introduction of a strategic management system in manufacturing SMEs has to balance the inherent level of formalization therein with the individual company’s management practices. Based on the Hoshin Kanri strategic management system, Thaher and Jaaron proposed an iterative and cumulative experience-based process as an alternative approach to the introduction of the strategic management system, matching differences in management practices.

Chin et al. (2021) noted that the generic search for value shaped the evolution of both the theory and practice of strategic management. Chin et al. presented making value as one of the most complex and dynamic determinants and metrics of the strategic competitiveness of the firm. Chin et al. described the concept of value as a common but complex presence in almost any approach regarding businesses, as well as their processes and performances. Chin et al. stated that the process of strategic management and, particularly the strategic decisions, is responsible for the long run of a firm. Chin et al. concluded that researchers need to continuously search for the best answers to lead firms to competitive advantage and strategic competitiveness. Chin et al. found connections among the meaning of strategic management, development of enterprise, and balanced development.

Akeke et al. (2021) described that manager develop their business organizations only when managers are able to gain and retain a competitive advantage. Akeke et al. noted managers must balance the functions of all subsystems within the business organization, including the business organization's environmental factors, to achieve strategic development. In this development, Akeke et al. suggested that the strategic positions for development of strategic plans, projects and programs represent directions of development of the enterprise provided by strategic management. Taking into consideration the continuous process of dynamic environment changes, Akeke et al. recommended individuals to determine the new factors of influence on the development of enterprise, develop the effective mechanisms of adaptation of enterprise development to the changes of environment, and apply recommendations of modern scientific researchers.

Petrou et al. (2020) presented new dimensions of strategic management renewal orientation. Petrou et al. defined strategic management renewal orientation as the ability of a firm to refresh or replace the qualities of the firm. Petrou et al. noted that strategic management renewal orientation is an important strategy that the leaders of the firms may use to respond to change in business operations in many competitive environments. Petrou et al. concluded that firms with strategic management renewal orientation tend to achieve competitive advantage over rivals. Murphy and Seriki (2021) postulated approaches to the theory of the firm developed within the framework of strategic management. Murphy and Seriki stated that management consists of different branches connected to their own economic theory and focused on solving different problems, including general, strategic, production, and personnel management. Strategic management, according to Murphy and Seriki, involves solving key problems in a firm's activity, the choice of business in which the firm will engage, and the choice of competitive strategy that will allow the firm to profit. These problems relate to fundamental issues of scope and structure of the economic theory of the firm. Murphy and Seriki concluded that the structure of the economic theory of the firm includes the management approach.

Nahum and Carmeli (2020) examined current strategic management textbooks used in Universities and noted that strategic management now places an increasing emphasis on cooperative strategies, including strategic alliances and tacit collusion, as avenues toward the goal of a sustainable competitive advantage. Nahum and Carmeli described that modern strategic management textbooks do not focus much on antitrust. Nahum and Carmeli stated that authors of strategic management textbooks have begun to pull away from teaching students that maximizing the wealth of the firm's shareholders should be the sole objective, thereby challenging a fundamental assumption of antitrust analysis. Nahum and Carmeli concluded that strategic management continues to play an important role in all accredited business schools. Lembinen (2018) described strategic management accounting as a relatively new concept on the crossroads of strategy, accounting, and marketing. Lembinen defined strategic management accounting as an approach that lies at the interface between strategic management and accounting. Lembinen noted that the concept of strategic management accounting requires management to focus on performance measurement using strategic rather than tactical indicators. Lembinen concluded that strategic management accounting is unique because of its focus on providing information relevant to evaluating a firm's competitive position in an industry, with an emphasis on customers and competitors as externally located objects of management accounting analysis.

Esmaeili (2015) described that managers using strategic management obtain efficient solutions to solve the problems of their organizations through dynamic, provident, holistic, and contingent principles. Esmaeili noted that managers use strategic management to develop better strategies for the survival of organizations by taking advantage of more regular and logical methods. Esmaeili postulated that managers use strategic management to improve the socioeconomic status of organizations by collecting data about the status of the rival companies, market, prices, distributors, government, and all people related to the organization. Esmaeili concluded that strategic management developed in environmental challenges and competitions, thus it can perform in other fields of management since it involves strong principles and criteria. Munck and Tomiotto (2019) stated that strategic management and organization theory are about how firms strategically manage competing pressures, similarities, and differentiations from their organizational peers. Munck and Tomiotto described strategic management as the way managers cope with the contingent disparities associated with creating and maintaining a distinctive yet legitimate strategic position that maximizes firm performance. Munck and Tomiotto stated that managers use strategic management in organizations to evaluate the organizations' strengths and weaknesses. Munck and Tomiotto concluded organizational leaders use strategic management to drive a renewed strategy where the result is a richer understanding of a firm's performance.

Westphal et al. (2021) defined the strategic demand management as the process of matching the supply with the demand requirements. Westphal et al. noted that managers using demand management strategies take the customer requirements and synchronize the sourcing, manufacturing, and distribution activities of the organization. Westphal et al. described that the managers using demand management strategies translate the customer's value into product offerings aligned with supply chain capabilities. Westphal et al. concluded that the objectives of the demand management are to reduce demand variability and increase flexibility to respond rapidly to demand variability.

Other Supporting and Contrasting Theories

Liu et al. (2022) defined the purpose of strategic planning as those decisions that will lead to an increase in the value of the company by using different mechanisms for creating a competitive advantage that will ensure the realization of economic benefits not available to other companies in the industry. Liu et al. mentioned that strategic planning has the following stages: analysis of internal and external environment; SWOT analysis; creation, selection, and evaluation of strategic alternatives; selection of strategic alternatives; and implementation of the strategy in practice. Liu et al. noted that strategic management planning is a continuous process involving business unit. This is the process of developing and implementing strategies based on continuous analysis, monitoring and evaluating changes in the organization to maintain its survival.

Liu et al. (2022) concluded that strategic planning involves analyzing, collaborating, and overcoming the problems faced by the organization due to changes in the environment. Cengiz Toklu et al. (2016) described that strategic planning is a vital management tool for projecting the long-range business goals and is suitable for small and big businesses. Cengiz Toklu et al. noted that to perform the strategic planning effectively, organizations should determine their strengths and weaknesses. Cengiz Toklu et al. claimed that organizations need to produce appropriate action plans to overcome these weaknesses and prioritize the action plans using limited resources. Cengiz Toklu et al. concluded that to help organizations in the strategic planning process, a planning model is available that includes four steps, which are determining opportunities to improvement areas, determining the root cause, developing action plans for each root cause, and determining priority of open-to-improvement areas.

Colla and Santos (2019) described that a firm needs a strategic thinking leader with the ability to understand the overall organization and the complexity of relationships that occur between subsystems and interactions with the outside world. Colla and Santos noted that managers with strategic thinking through creativity and innovation build a vision of the future of the organization. Colla and Santos referred to strategic thinking as a different management activity. Colla and Santos reported that business leaders think strategically to discover unique, imaginative strategies. Colla and Santos concluded that strategic thinking involves three different activities: collecting information, formulating ideas, and planning actions. Each activity requires different thinking skills. Johnson (2022) stated that strategic thinking is a managerial strategic capability that allows managers to understand their ability in predicting and controlling future events and distinguishing them. Johnson described that managers focus on strategic thinking to have the appropriate capacity to deal with future problems. Johnson claimed that managers promote strategic thinking to pay more attention to a series of items, review the organization's situation, andgain a competitive advantage in the future market. Managers revise the way they use resources. Johnson postulated that managers using strategic thinking achieve the desired model of strategic planning in a logical and systematic manner. Johnson concluded that in strategic thinking, intuition and creativity help administrators to achieve a combination of patterns and different strategies.

Wolf and Floyd (2017) stated that strategic planning has a major role in strategy development, including the manner which organizational leaders formulate major problems, set objectives, analyze alternatives, and choose a strategy. Wolf and Floyd noted that managers use strategic planning as an essential mechanism for the integration and coordination of organizational decision-making processes. Wolf and Floyd described strategic planning as a series of logical steps that includes the definition of the mission statement; long-term goals; environmental analyses; and strategy formulation, implementation, and control. Wolf and Floyd concluded that strategic planning involves a periodic process that provides a structured approach to strategy formulation, implementation, and control.

Market Demand

Jabbarzadeh et al. (2017) presented the demand variation as a primary source of operational uncertainty in supply chains. Jabbarzadeh et al. stated that unaddressed demand fluctuations in supply chain planning results in reduced service level and loss of market share. Jabbarzadeh et al. stated that another source of complexity in real world production and distribution is the availability of actual supply chain and demand data. Jabbarzadeh et al.

focused on tackle upstream and downstream supply-chain uncertainties, including demand fluctuations and supply variations. Jabbarzadeh et al. examined that, in most markets, demand can be erratic with several peaks and troughs throughout the year. Jabbarzadeh et al. noted that such variations are amplified upstream supply chain due to bullwhip effect. Jabbarzadeh et al. claimed that the immediate drawbacks include the dramatic increase in inventory levels, delayed deliveries, and subsequent effects on supply cost and service level. Salem and Haouari (2017) postulated that individuals involved in supply chain network design deal with strategic decisions, such as deciding on the number, location, capacities, and technologies of future facilities, changes to existing facilities, and supplier selection. Salem and Haouari examined the uncertain demand management that includes strategies, such as shifting demand across time, changing demand across markets, and shifting demand across products. Salem and Haouari defined supply chain uncertainty as decision-making situations in the supply chain in which the decision-maker does not know what to decide as is indistinct about the objectives. Salem and Haouari noted that supply chain uncertainty results in a lack of information about the supply chain or its environment and the processing capacities, requiring more effective control actions.

Allhidan (2021) noted that demand-supply mismatches damage a company's financial performance. Allhidan explained that managers need to evaluate the demand and supply risks as an increasingly important objective for sourcing. Allhidan found that the first sourcing decisions in demand uncertainty expose a company to severe risks, such as the delay of a critical new product launch or large excess inventory, which may lead to bankruptcy. Allhidan recommended the restructure of possible dependence between demand and supply uncertainty. Qiu and Wang (2016) presented that a manager's design and implementation of a supply chain system is crucial to an organization's success because of the increasing market competition. Qiu and Wang found that when managers design and implement an efficient supply chain network, managers quickly respond to the customers' demands and achieve the success of the supply chain. Qiu and Wang stated that supply chain network design incorporates both strategic and tactical decisions on the number, location, capacity, and mission of the supply, production, and distribution facilities required to provide goods to a customer base. Qiu and Wang suggested that various sources of uncertainty, such as demand and supply interruptions, affect strategic and tactical decisions.

Guseinov (2021) claimed that demand uncertainty affects the manager's resource commitments that influence the mix of fixed and variable costs in the short-run cost structure of the firm. Guseinov studied whether firms that face greater demand uncertainty tend to have a less rigid cost structure with lower fixed and higher variable costs or a more rigid cost structure with higher fixed and lower variable costs. Guseinov concluded that leaders of firms choose a higher capacity of fixed inputs when uncertainty increases to reduce congestion costs and that higher capacity levels imply a more rigid short-run cost structure with higher fixed and lower variable costs. Hançerlioğulları et al. (2016) postulated the inventory theory and explained that demand uncertainty is a major reason for carrying inventory. Hançerlioğulları et al. noted demand uncertainty increased in recent years due to lengthening supply chains, global recession, and macroeconomic events. Hançerlioğullari et al. identified the demand uncertainty as one of the key sources of variability in any supply chain; therefore, failure to account for major demand fluctuations may either lead to unsatisfied customer demand and loss of market share or excessively high costs. Hançerlioğulları et al. concluded that the demand uncertainty has a significant negative effect on the inventory turnover rate.

Mykola and Inna (2020) studied the supply and demand uncertainties in the determination of the production-sales policy. Mykola and Inna proposed that developing an appropriate production-sales plan requires a deep understanding of the diffusion dynamics and necessitates a joint analysis of the impact of supply and demand uncertainties on future sales. Mykola and Inna noted that manufacturing systems include significant uncertainties that affect the production and supply levels for the new product. Mykola and Inna defined the lack of historical sales data as a high level of uncertainty associated with demand forecasts. Mykola and Inna established that the demand for new products depends on the randomness due to disturbances in the market caused by economic and financial conditions, technological improvement, and competition. Guo and Lyu (2021) stated that demand uncertainty arises from demand volatility, inaccurate demand forecasting, processes, production uncertainty that may result from the unreliability of the production process. Guo and Lyu noted that the poor supplier performance associated with late deliveries or faulty parts is the cause of machine breakdowns and supply uncertainty. Guo and Lyu concluded that demand uncertainty is important because it directly affects production planning and supply schedules over time.

Ali et al. (2018) defined demand as the key driver for the proper functioning of the supply chain. Therefore, demand disruption significantly influences all agents in the chain. Ali et al. stated that demand disruption could occur due to loss of major customers, innovative competitors, and inaccurate forecasting. Ali et al. described that the disruptions caused by natural and human-made actions introduced shocks into the supply chain systems and could paralyze the supply chain. Ali et al. recommended managers to revise the original production, purchase, price, and market plans to respond to, or compensate for, the demand disruption. Troise et al. (2022) described that the production cost and demand disruptions are the difference between the estimated and real values used to make the original plan. Troise et al. noted the production cost has a close relationship with demand and, because the production cost disruption drastically affects retail prices, production cost disruption causes demand disruption. Troise et al. concluded that when the demand and production costs disrupt simultaneously, minor changes occur in optimal prices and the total supply chain's profit.

Leyesa et al. (2020) described that costs and demand disruptions impact consumers, retailers, wholesalers, and manufacturers in an entire supply chain. Leyesa et al. postulated that managers need effective models and coordination mechanisms for the supply chain to handle cost and demand disruptions. Leyesa et al. claimed that the manufacturer's original production plan could tolerate a certain degree of disruptions in cost and demand and still retain a certain degree of robustness. Leyesa et al. established that when the cost and demand change within certain thresholds, it is acceptable for the supply chain leaders to keep the original production plan and for adjustments in prices alone to compensate the deviation costs. Leyesa et al. stated the disruptions might have a significant effect on the revenue-sharing contract, including the order quantities, wholesale prices, and revenue share. Lampaki and Papadakis (2018) described that demand disruptions greatly affect the participants of a supply chain, negatively affecting the performance of a supply chain significantly and causing irreversible losses. Lampaki and Papadakis declared that retail price and non-price marketing effort from manufacturers and retailers affect the demand simultaneously. Lampaki and Papadakis proposed that when the demand changes substantially, the manufacturer reduces the wholesale price and bears more the non-price marketing effort as incentives to get revenue sharing from the retailer. Lampaki and Papadakis concluded that the manufacturer and retailers have to choose the appropriate revenue parameters to ensure an incentive to supply the product in adequate quantities and in a timely manner.

Kopylchak (2019) described a supply chain resilient to supply or demand interruptions and facility disruptions whose risk of occurrence and magnitude of impact mitigated through fortification investments. Kopylchak defined two types of risks facing supply chains: operational risks and disruption interruptions cause operational risks, such as uncertain customer demand, uncertain supply capacity, and uncertain procurement costs. Kopylchak presented a hybrid robust optimization model for designing a supply chain resilient to supply or demand variations and major disruptions whose risk of occurrence and magnitude of impact can mitigated through facility fortification investments. Kopylchak concluded that the objective of the proposed model is to minimize the total cost of establishing the network while maximizing the supply chain resilience.

Syahchari et al. (2020) studied risk and disruption management that become an important topic in supply chain research. Syahchari et al. noted the risk factors involved in supply chain systems are disruption in production, supply and transportation, and uncertainty in demand and supply. Syahchari et al. categorized disruption management strategies into three main groups, which are mitigation strategies, recovery strategies, and passive acceptance. Syahchari et al. noted that disruption is a concern in production and supply chain environments because companies may face financial and reputation losses from such events. Syahchari et al.

concluded that, due to disruption, the entire plan of an organization can distort causing shortage of goods and unfulfilled customer demand. Samimi et al. (2022) presented that many events can disrupt the supply chain, including natural disasters, bankruptcy, strikes by workers, terrorist attacks, and policy failures. Samimi et al. noted that demand disruptions affect all participants of a supply chain, affecting the performance of a supply chain significantly and causing irreversible losses to the supply chain. Samimi et al. considered the impact of a dominant retailer on the market retail price and its sales promotion opportunity and examined how the manufacturer can coordinate such a supply chain by revenue-sharing contract after demand disruption. Samimi et al. concluded that the changing demand may contribute to the shift of market scale.

Strategic Implementation

Alhamad (2021) investigated the management strategies that contribute to mitigating operational and disruption demand. Alhamad described that the system’s stability, recovery time, and demand shock amplification are performance metrics when the supply chain is under a demand disruption. Alhamad noted that when individuals assess operational risks, individuals take the magnitude of the bullwhip effect the metric. Alhamad defined bullwhip effect as the phenomenon in which the customer’s orders exhibit an increase in variability when moving up the supply chain, even when the actual demands of customers are stable over time. Schaedler et al. (2022) studied the competition between two supply chains that are subject to supply uncertainty. Each supply chain consists of a retailer and an exclusive supplier. Schaedler et al. examined the manner in which the levels of supply uncertainty and competition intensity affect the equilibrium decisions of ordering quantity, contract offer, and centralization choice. Schaedler et al. noted that a supply chain with a reliable supply could take advantage of the high supply risk of its competing chain. Schaedler et al. concluded that supply chain centralization is a dominant strategy, resulting in better customers. Yu et al. (2022) studied the way managers create more value from better managing their upstream supply chain sourcing via empirical studies and analytical models. Yu et al. noted that a firm's active management of raw material sourcing could result in a more efficient supply chain. Yu et al. defined raw material sourcing as a new concept leaders of firms could use to create value from upstream sourcing and recapture some of the value lost in the race to become a lean manufacturer. Yu et al. concluded that managers need to change its supply chain structure to initiate raw material sourcing for all its supplies and to build closer relationships with its raw material suppliers.

Teece (2021) defined supply chain management as an integrated approach to solving business problems and achieving inter-organizational cooperation. Teece noted that a supply chain involves collaboration and partnership with network partners, including suppliers, third-party service providers, mediators, or customers. Teece described that the supply chain managers focus not only on the basic criteria for evaluating components and materials but with the solutions for reducing environmental and social impacts. Teece noted that managers encourage sustainable supply chain practices, as the eco-friendly way of handling returns, recycling, remanufacturing, and adequate waste disposal. Teece presented the sustainable supply chain elements as crucial for business performance. Ali (2021) studied the role of demand management in achieving supply chain agility through a multi-disciplinary review. Ali recognized that organizational leaders need to align their firms with the suppliers and customers to streamline operations and, together, achieve a level of agility beyond individual companies. Ali defined agility as helping firms to respond in a timely and effective manner to market volatility and other uncertainties, allowing firms to establish a competitive position. Ali recommended to consider the constantly changing environment and the shift of competition to a supply chain level. Ivanov et al. (2017) described the supply chain design as the strategy for the selection of the suppliers and the allocation of customers to distribution centers. Ivanov et al. claimed that uncertainty and risks play a crucial role in both supply chain design and supply chain planning decisions. Ivanov et al. studied streams on supply chain design and planning with both disruptions and recovery considerations with the aim of relating the existing quantitative methods to empirical research. Ivanov et al. concluded that the operations and supply chain managers use quantitative tools to determine the performance impact and to redesign supply chain policies within rigorous analytical solutions.

Vann (2016) stated the importance of supply chain management that increased over time as result of more intense global competition, shorter product life, and rapidly changing technologies. Vann studied the design of supply chain and the benefits of incorporating strategic cost management. Vann claimed that by establishing partnerships with the members of the supply chain from the initial supplier of materials and services through the final consumer leads to timely product development, efficiency, and quality improvements. Vann concluded that leaders use the supply chain integration to achieve their strategic goals of improving their organization’s operational and financial performance; reducing costs; increasing customer value and satisfaction; and maintaining a competitive advantage in the marketplace. Hammami and Frein (2014) postulated that in the redesign of the supply chain, managers have to consider new potential locations and suppliers for their production sites. Hammami and Frein revealed supply chain redesign processes triggered by offshoring, expansion opportunities to new markets, mergers, acquisitions, and strategic alliances.

Hammami and Frein (2014) developed a mathematical optimization model for the redesign of supply chains in the global context. Hammami and Frein recommended that managers use the proposed supply chain model to undertake different logistics decisions, such as the opening and closing of sites, location of production activities, capacity acquisition and relocation, and selection of external suppliers. Signori et al. (2015) presented the concept of sustainable supply chain orientation. Signori et al. stated that the purpose of the sustainable supply chain is to maintain economic viability with no harm to social or environmental systems. Signori et al. suggested that an executive-oriented supply chain could develop capacity and become a sustainability-oriented supply chain, if partnered with executives holding that orientation, resulting in enhanced capabilities. Signori et al. concluded that the firms' managers that leverage their sustainability and supply chain expertise in the marketplace are likely to follow a variety of paths depending on their current and changing perspectives.

Hartwig et al. (2015) explained that the organizational leaders acquire a strategic superiority in the organization's supply chain to develop new methods in areas such as manufacturing, flexibility, transportation, and information technologies. Hartwig et al. noted that managers are key factors in the organizational performance and in the success of the supply chain. Hartwig et al. described that managers need to consider the strategic management approach and that supply chain management has two dimensions, which are the operational supply chain and the strategic supply chain. Hartwig et al. defined the operational supply chain as the series of primary and support supply chains designed to provide the inputs and outputs that deliver products and services to the customers of any company. Xiao and Qi (2016) considered a supply chain where the supplier determines the lead time and the retailer determines the retail price. Xiao and Qui described that under demand uncertainty, individuals using vendor-managed inventory provide positive benefits to supply chain participants by reducing inventory cost. Xiao and Qui studied the methods to coordinate the manufacturer's decisions and to determine the robustness of coordination mechanisms under various scenarios. Xiao and Qui concluded that managers focus on some insights of the distribution channel that will help both the supplier and the manufacturer make the optimal operations and marketing decisions.

Ucenic and Ratiu (2017) postulated that the capacity of the managers on the supply chain to deliver the right product at the correct time and location with minimum logistic cost is the definition of supply chain. Ucenic and Ratiu postulated that managers delivering products with the required quality in the specified quantities from customers' orders constitutes supply chain success. Ucenic and Ratiu noted that the final customer receives the products and services at the minimum cost. Ucenic and Ratiu established that the supply chain includes the overall performance of the processes, which are part of the companies' supply chain and that each product has its unique supply chain. Ucenic and Ratiu recommended upstream and downstream relationships between its activities and processes to provide the design of the supply chain and to consider the changes in the components of a supply chain that will impact its performance level.

Skippari et al. (2017) found that managerial cognitions that emerge from private experiences and social interactions are unique to individuals or teams. Skippari et al. studied the cognitive basis of relationships between the supply chain members and their impact on the lack of collaborative innovation. Skippari et al. described that the supply chain’s failure to generate collaboration innovation that results from self-interested, profit-maximization thinking, prevents realizing the benefits of supply chain collaboration. Skippari et al. claimed that when managers, responding to their supply chain members' innovation activity firms act based on perceptions, the result is not an objective reality. Skippari et al. concluded that organizational leaders faced significant difficulties in generating innovations that would involve cooperation among supply chain members. Roh et al. (2014) stated the effective implementation of a responsive supply chain. Roh et al. noted that the responsive supply chain requires a careful definition of a strategy regarding the product range, frequency, and innovativeness of the product offerings. Roh et al. described that organizational leader need to provide key implementation practices of sharing information with customers and collaborating with suppliers. Roh et al. postulated that to achieve success and proper implementation of a responsive supply chain strategy, managers rely on the size of firms, industry characteristics, and customer and supplier bases, rather than the location of manufacturing firms.

Oelze et al. (2016) found that failure to manage supply chains responsibly can have significant effects on firms’ reputation and financial performance. Oelze et al. suggested that organizational learning is an important factor for a successful implementation of sustainable supply chain management. Oelze et al. found that the appropriate context of sustainable supply chains for knowledge acquisition can take place through some channels, including communicating with trade associations, consultants, and public agencies and tracking of changes in the marketplace. Oelze et al. suggested that knowledge acquisition is an important element of organizational learning that can assist organizations in successfully implementing sustainable supply chain management processes.

Transition and Summary

Section 1 of this qualitative case study included the background of the problem; problem statement; purpose statement; nature of the study; research and interview questions; conceptual framework; definitions; assumptions, limitations, and delimitations; significance of study; and literature review. The literature review section included an analysis and a synthesis of existing literature used to support the research topic. The literature review included a literature-based description of strategic management theory that included strategic implementation, market demand, and supply chain management. The literature review section also included other contrasting theories to strategic management theory. In Section 2, I give an in-depth description of the research project. Section 2 includes the purpose statement, role of the researcher, participants, research method and design, population and sampling, ethical research, data collection instruments, data collection techniques, data organization technique, data analysis, reliability and validity, and transition and summary. In Section 3, I present the research findings, applications to professional practice, implications for social change, recommendations for action, recommendations for for future research, reflections, conclusions, and a summary.

Section 2: The Project

The decrease in demand for mattresses in Puerto Rico has led to a decrease in the manufacturing of mattresses, costing mattress manufacturers millions in losses (Instituto de Estadísticas de Puerto Rico, 2020a). The purpose of this qualitative case study was to explore strategies owners of mattress manufacturing firms in Puerto Rico use to increase the demand for mattresses. Section 2 has several subsections, including the purpose statement, role of the researcher, participant selection criteria, research method and design, population and sampling, ethical research, data collection instruments, data collection techniques, data organization techniques, data analysis reliability and validity, and a transition into Section 3.

Purpose Statement

The purpose of this qualitative multiple case study was to explore strategies owners of mattress manufacturing firms in Puerto Rico used to increase the demand for mattresses. The target population consisted of three owners of mattress manufacturing firms in Puerto Rico with successful experience in increasing the demand for mattresses. The implications for social change may include increased revenue that could translate into a larger tax base that local governments could use to implement community-based projects. Additional implications for positive social change may include reducing unemployment, creating new jobs, and developing an awareness of the importance of replacing an old mattress with a new one to obtain the key health benefits a new mattress may offer.

Role of the Researcher

Yin (2018) claimed that researchers have a primary role in the data collection, which is to gain access to potential participants, establish a relationship with participants, organize the entire research study process, conduct the research study, collect data, analyze the data, and report the findings. I collected data from interviewing participants and reviewing organizational documents obtained an improved understanding of strategies owners of mattress manufacturing firms in Puerto Rico used to increase the demand for mattresses. I used additional sources of data as suggested by Yin (2018), included company documentation and semistructured interviews. Kull et al. (2018) stated that researchers become the primary research instrument in their studies by controlling all aspects of the research study, including data collection, data analyses, theme identification, and findings. I became the primary research instrument in this study by managing all aspects of this study, including data collection and analyzes, theme identification, and study findings.

My previous experience as mattress manufacturer for 23 years allowed me to obtain accrual information of strategies owners of mattress manufacturing firms in Puerto Rico use to increase the demand for mattresses. I have 28 years of experience working in the mattress industry, which allowed me to better understand mattress manufacturers’ perceptions. I was able to design the questions that could express and explain the message the participants would like to share. The business experience within the mattress manufacturing industry helped me in selecting the best suited participants. I asked mattress manufacturing leaders to help me develop a list of qualified candidates from which I selected three and offer an invitation to participate in my study.

Researchers use ethical guidelines when conducting research with human subjects and have a moral obligation to conduct their research studies following *The Belmont Report's* ethical guidelines (U.S. Department of Health & Human Services, 1979). Researchers must follow three important principles of research when using humans subjects in their studies (U.S. Department of Health & Human Services, 1979). The first principle is the respect for persons principle that consists of recognizing the participants' autonomy (U.S. Department of Health & Human Services, 1979). Regarding the beneficence principle, researchers must ensure that they do not cause any harm to participants (U.S. Department of Health & Human Services, 1979). Researchers follow the justice principle by treating participants fairly regarding potential disadvantages and advantages associated with the research study (U.S. Department of Health & Human Services, 1979).

Researchers follow ethical principles that relate to the confidentiality of informed consent, limitations on risks and benefits, and topics selection, as described in *The Belmont Report* (U.S. Department of Health & Human Services, 1979). As the researcher, I conformed to the ethical guidelines contained in *The Belmont Report* and met all requirements from the Institutional Review Board (IRB) and the participating organizations. I obtained approval from the IRB, explained the informed consent process to participants, and obtained participants signed informed consent forms before starting data collection to ensure my actions are ethical. I gave fair, equal, and respectful treatment to all participants, reminded participants about the voluntary nature of their participation, allowed participants to withdraw from the study at any time without a reason, and ensured participants' confidentiality.

Researchers experience difficulties trying to avoid bias (Rosenthal, 2017) because researchers may favor their own biased ideas to support their convictions (Certo et al., 2016). Researchers engage in confirmation bias when they use their own ideas to support their contentions (Cipriano & Gruca, 2014). Some other researchers (Payne et al., 2017) recommended that researchers must be careful not to introduce a different bias to eliminate an existing bias.

Researchers use the member checking method to avoid bias (Birt et al., 2016). Member checking is method researchers use to give study participants the researchers' interpretation of participants' responses to interview questions to ensure that researchers' interpretation is an accurate representation of the participants' responses (Yin, 2018). I gave study participants my interpretation of participants' responses to interview questions to ensure that my interpretation was an accurate representation of the participants' responses. I completed the assumptions and limitations subsections to give the reader an opportunity to assess the reliability and validity of the study.

The interview protocol contains procedures for the interview, including the interview questions and prompts for obtaining consent from participants and a script of the introduction and the conclusion (Yin, 2018). The interview protocol is a procedural guide that researchers use in their studies (Birt et al., 2016). I used an interview protocol (see appendix) to share the same information with all study participants, guiding me through the entire interview process.

Participants

To start with data collection, researchers need to identify suitable participants (Draper et al., 2018). Researchers define the eligibility criteria for participants to ensure alignment with the overarching research question. Researchers faced some challenges that can include finding an open organization that allow access to the participants (Van Heerden et al., 2016). In the study, other challenges faced by researchers are to obtain a deal from participants to take part in the research. Eligibility criteria for participation in the research are the set-up parameters that ensure the participants qualify to participate in a study (Diller et al., 2016). In a research study, the participants are eligible if they have experience and knowledge relating to the phenomenon under investigation (Yin, 2018).

I established the participant eligibility criteria based on participants' experiences with strategies to increase the demand for mattresses. Eligible participants had at least 5 years of successful experience increasing the demand of mattresses in Puerto Rico. I purposively identified owners of mattress manufacturing firms in Puerto Rico. These participants were appropriate for this study because of their collective range of experience and expertise working in mattress manufacturing firms in Puerto Rico.

According to Draper et al. (2018), obtaining access to participants and organizations for a research study is difficult. Choi et al. (2019) recommended researchers to collaborate with specific personnel at the organization, allowing researchers to understand the potential participants and use other participant recruitment methods. Brink et al. (2019) found that gaining access to participants reveals the researcher's assumptions and the setting the researcher chooses to direct the research study. Dealing with specific personnel at the organization was an effective strategy because I discussed my intention to perform the research at the mattress manufacturers with a team of the organization's executive members.

Researchers need to earn the confidence and trust of research participants (Celestina, 2018). Bansal et al. (2017) found that establishing rapport with study participants allows researchers to collect rich data. Researchers obtain participants' confidence and trust and establish rapport with participants by keeping regular contact with participants (Gang & Ravichandran, 2015). I invested time with study participants in a regular basis to build rapport and earn participants' confidence and trust that allowed me to collect rich data.

Ridder (2017) recommended the selection of an appropriate research design to ensure that study participants align with the overarching research question. Researchers answer the overarching research question for their studies by using the participant eligibility criteria they established to select suitable participants possessing successful experience regarding the phenomenon under scrutiny (Mojtahed et al., 2014). I selected an appropriate research design to ensure alignment between the overarching research question and the participants. I attempted to answer the overarching research question for the study by establishing participant eligibility criteria to select participants possessing successful experience in using strategies to increase the demand for mattresses in Puerto Rico.

Research Method and Design

There are three types of research methods available to researchers, which are qualitative, quantitative, and mixed methods (David et al., 2018). Schoonenboom (2018) described that the researcher must select the most appropriate research methodology to answer to the overarching research question. In this section, I explain the research method and design I selected for the study.

Research Method

David et al. (2018) described that to conduct research studies, researchers use the qualitative, quantitative, and mixed methods research methodologies. Palacio et al. (2018) found that the purpose of the study determines the method selected. The qualitative research methodology is appropriate when researchers investigate phenomena by collecting and analyzing nonnumeric data, including pictures, observations, text, and narratives, to answer the study’s overarching research question (Giboney et al., 2016; Shi & Dow, 2019; Venkatesh et al., 2016). Qualitative researchers collect data using in-depth semistructured interviews with open-ended questions, reviewing company documentation, and making observations of nonverbal cues when interviewing study participants (Yin, 2018).

Mukhopadhyay and Gupta (2014) described that researchers use the qualitative research method to interpret comprehensive narrative and visual data to gain insights into a phenomenon of interest. To understand the meaning of human behavior, researchers employ the qualitative research method (Melkas et al., 2016). A qualitative research method is appropriate to collect, analyze, and interpret narrative and visual data to explore a phenomenon of interest, as opposed to quantitative research in which researchers use experimental variables that limits the ability to provide an in-depth exploration of the study's phenomena (Alstete & Beutell, 2018). The characteristics of the qualitative research methodology are consistent with the nature of this study because its purpose was to explore strategies owners of mattress manufacturing firms in Puerto Rico use to increase the demand for mattresses. I selected the qualitative research methodology for the study because I collected, analyzed, and interpreted narrative and visual data to explore a phenomenon, which is low demand for mattresses in Puerto Rico.

The quantitative research method, compared to qualitative research method, involves collecting numerical data to conduct inferential statistical analyses to test the hypotheses (Kopf et al., 2016). Researchers use the quantitative research method to establish general principles, but the use of few variables does not allow a broad understanding of the phenomenon under investigation (Barnham, 2015). Researchers using the quantitative method focus on relationships, rates, and cause-and-effect by examining and testing confirmatory methods (Gray & Milne, 2015). I did not select the quantitative method because I did not collect numerical data to conduct inferential statistical analyses to test hypotheses.

Mixed-methods research consists of a combination of qualitative and quantitative research methods and researchers use it to collect and analyze data and report findings (Shannon-Baker & Edwards, 2018). Mixed-methods research involves both qualitative and quantitative research methods to expand the validation and understanding of the problem under investigation (Ivankova & Wingo, 2018). Researchers use the mixed-methods research methodology to balance the strength of both methods without overlying weaknesses (Schoonenboom, 2018). I did not select the mixed-methods research methodology for this study because the quantitative design is not suitable in research studies that have exploratory research questions. The mixed-method research methodology includes both qualitative and quantitative methods in a single study and, as Sweeney and Goldblatt (2016) described, researchers use quantitative methods to test theories related to the overarching research question.

Research Design

Mukherjee (2018) highlighted the value of aligning the research question, method, and design of the research. Alavi et al. (2018) stated that among the research designs available to researchers include the phenomenological, ethnography, narrative, and case study. Creamer (2018) described that implementing a case study research design is suitable for gaining a better understanding of the underlying meaning of the research phenomena and answer the overarching research question. Ridder (2017) and Yin (2018) noted that researchers can use case studies to conduct an in-depth investigation of a case. Researchers use an appropriate research method to explore difficult issues (Alavi et al., 2018). Researchers use a case study to engage in exploratory, in-depth, real-life information about the phenomenon under investigation (Skalidou & Oya, 2018). Sligo et al. (2018) noted that researchers use the case study design to explore a phenomenon in its natural setting by asking *what, why, and how* questions.

Case study research design involves an in-depth investigation of a phenomenon in its real-life context, using study participants' firsthand perceptions of the phenomenon under investigation (Fox & Alldred, 2018). In addition, Hesse-Biber (2015) and Molina-Azorin et al. (2017) described that case study research leads to contributions individuals could use to achieve business and social goals. Tunarosa and Glynn (2017) and Sweeney and Goldblatt (2016) described that researchers use the case study design to reduce the distance between theory and practice and to provide practitioners with needed information. I selected the multiple case study design to explore strategies owners of mattress manufacturing firms in Puerto Rico use to increase the demand for mattresses. I selected the multiple case study design to improve my exploration of the phenomenon under investigation, which was to increase the demand for mattresses, and to make contributions that other individuals could use to achieve business and social goals.

By reviewing and eliminating other research designs, I was able to confirm that case study design was the most suitable to explore the phenomenon at hand. The multicase study research design involves researchers collecting data from multiple sources (Tsai & Chen, 2017). The purpose of the narrative research design is to study the lives of participants through their individual stories and present these stories in chronological order (Hancock et al., 2018). Researchers use different strategies to describe the participants' stories, including a detailed description of the events and an interpretation of participants' experiences (Bjarnason et al., 2016). I did not select the narrative design for the study because I did not study participants' lives through their individual stories.

Ethnographic researchers study a cultural group by obtaining information through in-depth observations (Walle, 2016). Researchers use the ethnographic design to study the culture of a unique group in its natural environment by making observations, interpreting what they observed, and reading about the culture (Woermann, 2018). According to Bass and Milosevic (2018), the main purpose of the ethnographers is to focus on the entire population and not on the specific experiences of a participant. I did not select the ethnographic research design because I did not study the culture of a group in its natural setting.

Phenomenological researchers explore the underlying meaning of the participants' lived experiences (Pitt, 2018) and their meaning to explore participants' personal thoughts and perspectives (Seaton, 2017). Researchers use the phenomenological research design to understand and discover individuals' in-depth experiences and point of view (Rolfe et al., 2017). The phenomenological design is suitable to explore participants' lived experiences and personal stories (Bass & Milosevic, 2018). I did not select the phenomenological design because I did not explore participants' lived experiences.

In a case study, establishing the proper sample size is difficult (Apia et al., 2018). However, Boddy (2016) and Yin (2018) stated that 3-5 participants are sufficient to reach data saturation in a case study. I did conduct semistructured interviews using open-ended questions to obtain rich and thick data to reach data saturation.

Population and Sampling

The selection of the most suitable sampling method determines the research study's trustworthiness (Ochoa & Porcar, 2018). Researchers use criterion sampling to obtain an in-depth insight into a phenomenon and to narrow the pool of participants by ensuring all research study participants meet the same established criteria for participation (Alonso et al., 2016; Shao et al., 2016). According to Lück and Nyga, (2018), researchers use criterion sampling to identify and select participants meeting the established criteria for participation. I selected criterion sampling to identify and select participants meeting the same established criteria for participation to explore a phenomenon, which in this case is the strategies used to increase the demand for mattresses.

I selected three owners of mattress manufacturing firms located in San Juan, Puerto Rico, with a minimum of 5 years of successful experience in using strategies to increase the demand for mattresses. To determine sample size, the researcher must recognize the exploratory nature of the study, richness, and thickness of data (Kern et al., 2020; Sim et al., 2018), and generalizability to a broader population (van Rijnsoever, 2017). Blaikie (2018) noted that a suitable number of participants could range from three to five. Lui (2018) claimed that potential participants of a research study must possess knowledge related to the phenomenon under investigation. In a case study, establishing the proper sample size is difficult (Apia et al., 2018). However, Boddy (2016) and Yin (2018) stated that 3-5 participants are sufficient to reach data saturation in a case study. In the event that I would not have reached data saturation with the three participants, I would have continued interviewing participants until reaching data saturation.

Researchers acquire data saturation when any new data from the participants is redundant (Nowak & Haynes, 2018). Researchers could reach data saturation (Kenno et al., 2017) by conducting 4-5 semistructured interviews (Windsong, 2018) and obtaining rich and thick data on a given topic (Peesker et al., 2019; Saunders & Townsend, 2016). I conducted semistructured interviews using open-ended questions obtained rich and thick data to reach data saturation. To the qualified candidates, I requested their participation by sending emails or by calling them.

The critical part in this study was to achieve an appropriate interview setting conducive to open dialogue. The selection of the interview setting has an effect in reducing participant anxiety (Jones & Daniel, 2018), and fosters the development of an environment filled with dynamic interaction to build rapport with participants (Njegovan et al., 2017). The interviewing process should take place in a private, accessible, and comfortable setting (Dawson et al., 2017). I selected an interview setting that fosters a productive dialogue with participants. I secured interview settings suitable for the reduction of participants' anxiety and the development of dynamic communication to build rapport with participants. I notified each study participant that the interview would take approximately 60 minutes.

Ethical Research

An important part of any study is to obtain an informed consent (Eisnecker & Kroh, 2017). Prior to participating in the study, every participant will be required to sign the informed consent form. The informed consent form contains the expectations from participants, nature of the study, possible risks, benefits, and my contact information. Identifying the main purpose of this research study, I informed all participants that their participation is voluntary. I did not provide study participants any tangible or in-tangible benefits during or after the research study.

Researchers must inform study participants that their participation is voluntary and that they could withdraw from participation at any time during the research study without experiencing any negative consequences and having to give any reason for their withdrawal (Jordan, 2018). I did notify study participants of the volunteer nature of their participation and that they could withdraw at any time from the research study without experiencing negative consequences and giving any reason for withdrawal. In addition, I did notify participants that the informed consent form includes clear text related to participants' right to withdraw from participation in the research study without experiencing any negative consequences and giving any reason for such withdrawal. Researchers must protect the privacy and confidentiality of research study participants (Celestina, 2018). I did protect the privacy and confidentiality of the participants of the study.

As the researcher, I ensure that the study's participants meet the criteria I established for participating, including that the participants must be at least 18 years of age. Walden University's IRB gave me the permission to start the interview process. In accordance with Walden University's IRB guidelines, I explained to each participant the informed consent and ensure participant safety while interviewing participants. The Walden University's IRB approval number for the study is07-07-21-0593180.

Several researchers (Aaltonen, 2017; Yin, 2018) recommended to divide the informed consent into two sections that include the development of the consent form and the delivery and explanation of the consent form to participants. The informed consent form will contain simple English to ensure that participants with different levels of education are able to understand the interview questions (Quevedo et al., 2018). At the time I selected a participant meeting the established criteria for participation in the study, I gave the participant a copy of the informed consent form and explain its contents. Stewart et al. (2017) noted that researchers must discuss the contents of the informed consent form with each participant to ensure that each participant understand the informed consent process.

I did ensure participants' confidentiality by using codes for participants' names and their business organizations. I did not provide any descriptions of participants to ensure others do not discover participants and their organizations. Researchers should present trustworthy, meaningful, and ethical results to the research community, ensuring the protection of participants from any risks (Eisnecker & Kroh, 2017). All documents related to the research study will be stored in a password-protected external flash-drive file in my personal computer. Any hard copy of a document related to this research study will be locked on my personal desk for 5 years. After this 5-year period elapses, I will destroy the electronic external flash drive and hard copy documents related to the study, following Walden University's IRB guidelines (Stewart et al., 2017).

Data Collection Instruments

Lincoln and Guba (1985) first discussed the concept of the researcher as the primary research instrument. Researchers conducting qualitative studies accept that the researcher becomes the research instrument (Speklé & Widener, 2018; Shaw et al., 2017; Shen, 2016). As the primary research instrument, researchers conduct case study research to collect data by conducting interviews, making observations, and document analysis (Gould et al., 2017; Nielsen & Raswant, 2018).

Qualitative researchers prefer to use semistructured interviews with open-ended questions (Ceross, 2018). Researchers conduct interview with participants to obtain an understanding of participants' experiences with the phenomenon under investigation (Pauleen, 2017). There are several types of interviews researchers use to collect data, which are structured, semistructured, and unstructured interview (Pauleen, 2017). The use of semistructured interviews could lead to researchers asking follow-up questions that allow the discovery of new interpretive context (Arsel, 2017; Highhouse et al., 2017). Researchers conduct semistructured interviews to collect data from experts related to the phenomenon under study (Vogl et al., 2018).

I collected data from conducting semistructured interviews with leaders of mattress manufacturing firms that I purposively selected. Researchers collect rich and detailed data related to the phenomenon under study (Carcone et al., 2015). Case study researchers collect and analyze data to generate themes (Silva et al., 2019). Researchers use semistructured interviews with open-ended questions and have the option to ask study participants clarifying questions (Kim & Chung, 2019; Lin et al., 2019). I conducted semistructured interviews with open-ended questions with participants of the study and asked clarifying questions necessary to collect rich and thick data.

I was the main research instrument in the study. I used an interview protocol (see appendix) that guided me in conducting semistructured interviews to collect, record, and transcribe data, asking the same interview questions. As established in the interview protocol (see appendix), participants answered all the interview questions. At the completion of the interviews, some information may not have emerged and, therefore, I gave study participants an opportunity to contribute additional information related to strategies owners of mattress manufacturing firms in Puerto Rico use to increase the demand for mattresses. Researchers recommend asking participants to share any experiences related to the phenomenon under study that may not have emerged when conducting the semistructured interviews (Aichner & Shaltoni, 2019).

Researchers are the primary research instrument and should obtain interviewing skills to ask clarifying questions during the interview process that leads to the collection of rich data (Ashraf & Merunka, 2017; Stieglitz et al., 2018). However, researchers bring bias to their studies (Garavan et al., 2018). As suggested by Boyle et al. (2018), researchers practice reflexivity to address their biases.

Organizational documentation and artifacts are another data collection technique that researchers often use (Navasaitienė & Bahanik, 2016; Wilden et al., 2017). According to Gepp et al. (2018) and Romaniuk and Nguyen (2017), researchers use organizational documentation and artifacts in conjunction with semistructured interviews to conduct methodological triangulation, increasing the rigor of a given research study. Researchers analyze organizational documents and artifacts containing information directly related to the phenomenon under investigation (Yin, 2018). For instance, organizational documents could contain specific information pertaining to the case study, such as the correct spelling of names or details of processes and procedures (Shen, 2016; Yin, 2018). I collected data from reviewing organizational documentation and artifacts that contains information directly related to strategies owners of mattress manufacturing firms in Puerto Rico use to increase the demand for mattresses.

Member checking is a technique researchers use to establish the tenet of credibility in trustworthiness by giving study participants an opportunity to verify the accuracy of researchers' interpretations of participants' answers to interview questions (Yin, 2018). I used member checking to establish the tenet of credibility in trustworthiness by gave participants for the study my interpretations of their answers to interview questions and asking participants to verify the accuracy of such interpretations.

Researchers engage in reflexivity when conducting research studies. Reflexivity is the process of reflecting on important steps of the research process to ensure that the researchers make the correct decisions, avoid biases, and give transparency to the study (Boyle et al., 2018). I engaged in reflexivity exercises to reflect upon the various steps I took in the research process to ensure that I made the most appropriate decisions, avoid biases, and enhance the transparency of the study.

Data Collection Technique

Researchers use semistructured interviews to collect participants' experiences about the phenomenon under investigation (Navasaitienė & Bahanik, 2016). Participants answer open-ended interview questions to provide a description of their experiences with the phenomenon (Wilden et al., 2017). Researchers use the study's overarching reseach question to steer the direction of the semistructured interviews and use supporting questions to obtain additional information related to the phenomenon under investigation (Gepp et al., 2018). I conducted semistructured interviews with owners of mattress manufacturing firms in Puerto Rico to obtain the strategies they used to increase the demand for mattresses. In addition to conducting semistructured interviews, researchers review organizational documentation and artifacts related to the phenomenon under investigation (Romaniuk & Nguyen, 2017). Researchers gain an enhanced understanding of the phenomenon under scrutiny and increase the rigor of their studies when they use several data collection methods because they are able to conduct methodological triangulation (Shen, 2016). I reviewed organizational documentation and artifacts related to strategies owners of mattress manufacturing firms in Puerto Rico use to increase the demand for mattresses.

Collecting data by conducting semistructured interviews and reviewing organizational documentation and artifacts has advantages and disadvantages (Speklé & Widener, 2018). In terms of advantages of semistructured interviews, researchers conducting semistructured interviews could ask participants clarifying questions, allowing participants to elaborate on their answers (Bojic et al., 2017). Researchers could also observe participants' nonverbal cues when responding to interview questions (Massimino, 2016). Among the advantages of reviewing organizational documentation and artifacts are that researchers could conduct methodological triangulation by collecting data from various sources and comparing the data to see if data alignment exists (Chen, 2018). Another advantage is that researchers could discover new themes or areas that require additional exploration to arrive at possible themes (Greenland et al., 2016). Organization documents contain the correct spelling of employees' names and detailed descriptions of events related to the phenomenon under investigation (Ertug et al., 2018). I collected data by conducting semistructured interviews and asked participants clarify questions, allowing participants to elaborate on their answers. I conducted methodological triangulation by collected data from conducted semistructured interviews and reviewing organizational documents and artifacts. I compared those data collected to see if data alignment exists.

However, conducting semistructured interviews and reviewing organization documentation and artifacts have disadvantages (Chabowski et al., 2018). Conducting semistructured interviews may lead participants to become nervous or uncomfortable about researchers recording participants' answers to interview questions (Gillespie et al., 2018). Novice researchers could experience challenges associated with the lack of experience conducting semistructured interviews (Kelli et al., 2018). Finally, participants may introduce bias into the research study in an attempt to please the researchers by providing what participants think researchers would like to hear (Malthouse & Li, 2017). Researchers' could also introduce bias into their studies by expressing their views about the phenomenon under investigation and by exhibiting nonverbal cues (Liu-Thompkins & Malthouse, 2017). Regarding the disadvantages of reviewing organizational documentation and artifacts, an employee of the participating organization could have developed organizational documents with biases, depending on the employee's interests (Spanaki et al., 2018). Organizational documentation could contain an inaccurate account of events and numbers because the employee developing the documentation could have integrated own bias into the documents (Saiewitz, 2018). Researcher may also experience difficulties gaining access to certain organizational documents and artifacts (Zhou et al., 2018).

Researchers conduct a pilot study when appropriate. For instance, researchers become interested in conducting a pilot study to confirm the coverage and relevance of the content of the study (Aichner & Shaltoni, 2019). However, a pilot study is a time-consuming activity and not essential in case of using a variety of qualitative data collection techniques, such as semistructured interviews and organizational documentation (Chi et al., 2018). I did not conduct a pilot study because it is a time-consuming activity and not essential when using semistructured interviews and organizational documentation.

Researchers use member checking to allow participants an opportunity to review the researchers' interpretation of participants' answers to interview questions to verify the accuracy of such interpretations (Guo & Yang, 2018). In addition, researchers use member checking to improve the credibility of the data collected (Stieglitz et al., 2018). Member checking also has disadvantages. For instance, researchers may assume that no comments from study participants signify that participants agree with researchers' interpretations of participants' answers; however, the participants might not have read these interpretations at all (Shome, 2019). In addition, participants could have reservations about expressing disagreement with the researchers' interpretation of participants' answers and may accept these interpretations as accurate (Rife et al., 2016). I conducted member checking by giving study participants my interpretation of their answers to interview questions and asking participants to verify the accuracy of my interpretations. I used member checking to increase the trustworthiness of this study.

Data Organization Techniques

Researchers adopting a system to organize data collected are more likely to conduct rigorous research (Yin, 2018). Qualitative researchers use a database to organize the information to conduct data analysis (Yin, 2018). After researchers organize the data, the data analysis process begins (Belotto, 2018). I conducted semistructured interviews with three leaders using open-ended interview questions. To ensure confidentiality, each participant will have a unique code, as suggested by Madhavan et al. (2017). I assigned participant leaders a code with the letter P and numbers from 1 to 3. To ensure confidentiality, I removed all identifying information from the transcripts. Shome (2019) recommended the removal of any names for participants, organizations, and places to ensure confidentiality. To organize data collected more effectively, I used a masked code to protect the confidentiality and privacy of each participant and organization. I transcribed each interview, removed any participant identifying information, assigned a code to each participant and organization, and wrote this code on the interview transcript.

Yin (2018) noted that to improve data organization, indexing, and retrieval, scanned documents should contain annotated bibliographies. I included annotated bibliographies in all scanned documents to improve data organization, indexing, and retrieval. To improve data organization, I used a computer-assisted qualitative data analysis software (CAQDAS) program, DeDoose, to import raw data from the external flash drive. Researchers use a CAQDAS program to organize data collected more efficiently (Olson, 2016; Winker, 2016).

Researchers often use a reflective journal to achieve transparency and data organization in the research and bracketing processes (Vicary et al., 2017). For instance, researchers use a reflective journal to record processes and capture thick and rich descriptions, which often includes participants' reactions to interview questions and setting (Zulfah & Aznam, 2018). To ensure transparency and data organization, I used an electronic reflective journal to document rich and thick descriptions of the interview and bracketing process, such as participants' reactions to interview questions and setting, information related to organizational documentation, and decisions about coding and identifying themes.

Researchers must store data in a secured place for as long as required by the research data protection legislation (Babaeinesami et al., 2020; De Capitani di Vimercati et al., 2015; Sauerwein et al., 2019). Researchers must adhere to ethical standards during the entire research process, including data collection, as researchers must store hard copies in a locked place and electronic documents in password-protected devices (Samuel & Derrick, 2020). Following Walden University's requirements, I stored all electronic data in a password-protected, external flash drive and any physical documents in a locked safe for 5 years. I will destroy the data by shredding any hard copies and destroying the external flash drive after the 5 years.

Data Analysis

Researchers use triangulation to increase the validity of their studies (Farquhar et al., 2020). Among the various types of triangulation, researchers use methodological triangulation to collect and confirm their research data and findings (Abdalla et al., 2018). Researchers use methodological triangulation to ensure the validity and credibility of the data collected, obtaining an improved insight into the phenomenon under investigation (Kotus & Rzeszewski, 2015). For instance, researchers achieve convergent evidence when triangulating data collected from reviewing organizational documentation and artifacts and conducting semistructured interviews. Yin (2018) proposed that convergent evidence allows researchers to increase construct validity in case studies. I conducted methodological triangulation to compare data that collected from multiple data sources, such as semistructured interviews and organizational documentation and artifacts. I used methodological triangulation to confirm the credibility and validity of the data collected and to validate my interpretations and analyses of the data.

Content, thematic, and discourse analysis are the three methods for qualitative data analysis (Kaufmann & Riehle, 2019; Turpin et al., 2015). In thematic analysis, researchers read the interview transcripts several times to completely understand the text (Mackieson et al., 2019). CAQDAS, such as DeDoose, is a software tool that researchers use to analyze, categorize, and order the data collected (Renfro, 2017). Researchers also use CAQDAS to identify the themes that emerge from the data and determine the relationships among these themes (Prabowo, 2020).

Yin (2018) developed five sequential steps that researchers could take to analyze data collected: (1) compile, (2) disassemble, (3) reassemble, (4) clarify, and (5) conclude. Step 1 entails looking for patterns and themes in various interview transcripts by collecting and organizing data. Researchers should analyze and code data collected using qualitative data analysis software, such as NVivo (Hughes et al., 2020). Researchers are able to quickly classify, code, and organize data when using NVivo (Oliveira et al., 2016). I will use NVivo to organize data by emerging themes, interpret, and code the raw data collected from reviewing organizational documentation and artifacts and conducting semistructured interviews.

Step 2 has a focus on a process, referred to as disassembling the data, to assign codes to the data collected. I will also use NVivo to organize codes, determine themes, and identify relationships among the themes. In Step 3, researchers reassemble and reorganize the data by themes. In Step 4, researchers use thematic analysis to compare member-checked data with the interview transcripts to validate the data collected. Qualitative researchers find the answer to the central research question using thematic analysis because they are able to recognize themes and patterns in the data (Lehmann et al., 2019). Researchers use thematic analysis to validate the member-checked data with the participants (Caretta & Pérez, 2019). I confirmed the accuracy of the interpreted data with the research participants by using member checking. I provided my interpretation of participants' responses to interview questions and ask them to verify the accuracy of such interpretations. I used thematic analysis to compare member-checked data with the interview transcripts to validate the data collected.

Using content analysis, I analyzed organizational documentation and artifacts relevant to the study. Case study researchers use several data collection techniques (Cláudia de Souza et al., 2019). Yin (2018) stated that researchers conducting methodological triangulation with date collected from several sources increase the richness of the data collected. Researchers conduct methodological triangulation to increase the validity of the research process by comparing data collected from several sources, including semistructured interviews and organizational documentation and artifacts (Walton et al., 2020). Organizational documentation and artifacts are other sources of data researchers use to conduct methodological triangulation. Researchers use data analysis methods to analyze organizational documentation and artifacts, including thematic analysis and content analysis (Drouin et al., 2015). Researchers using content analysis to analyze data systematically classify codes and identify themes (Beck & Glock, 2020). Document analysis consists of three phases, which are preparation, organization, and reporting (Binmakhashen & Mahmoud, 2020). I used methodological triangulation to compare data collected using several techniques, such as semistructured interviews and organizational documentation and artifacts.

In Step 5, researchers attempt to answer the study's central research question by formulating conclusions and making recommendations from the study findings (Yin, 2018). I generated conclusions from the results of the study. Researchers analyze data collected to generate themes and determine the relationships among these themes with the goal of answering the study's central research question (Yin, 2018). Researchers correlate key themes with the conceptual framework and the literature (Rojas & Rauch, 2019). Researchers are able to correlate key themes with data categories when coding data with labels (Lauer et al., 2018). Researchers conduct a frequency analysis to determine the statistical occurrence of theme codes in each data category (Hamel & Kang, 2019). I used the data-coding feature of NVivo 12 to place key themes into data categories to increase the trustworthiness of the study. As a way to connect the methodology, prior literature, and the results of a research study, researchers use the conceptual framework (Yin, 2018). I correlated the key themes emerging from the study with the conceptual framework and current literature.

Reliability and Validity

Lincoln and Guba (1985) proposed four criteria, widely accepted since the 1990s, that qualitative researchers use to establish reliability and validity in their studies. These four criteria are dependability, credibility, transferability, and confirmability (Lincoln & Guba, 1985). While quantitative researchers establish reliability and validity in their research studies, qualitative researchers use dependability, credibility, transferability, and confirmability to establish trustworthiness in their studies (Yin, 2018).

Reliability

Researchers conducting a case study must establish reliability (Yin, 2018). Researchers using reliable data collection instruments generate reliable and convincing results (Thomas et al., 2018). As suggested by Merder-Coskun et al. (2016), I used several data collection instruments in the study, which were semistructured interviews and organizational documentation and artifacts. All data collection instruments are of equal rigor and, therefore, researchers should not consider one data collection instrument as better than the rest (Yin, 2018). Upon understanding that data collection instruments are complementary, researchers should use as many instruments as possible in a case study (Yin, 2018).

Dependability is the consistency of findings over time (Olaru et al., 2019). Researchers should use the same interview questions to ensure dependability in a case study (Vijayalakshmi, 2015). I used the same interview questions to establish dependability in the study. Researchers also establish data dependability when conducting member checking (Aizpurua et al., 2017). I used member checking to establish data dependability. Researchers conduct member checking by giving study participants researchers’ interpretations of participants’ answers to interview questions and asking participants to verify the accuracy of such interpretations (Naidu & Prose, 2018). When conducting member checking, researchers do not taint the fact with their biases, increasing data dependability (Brear, 2019).

Researchers generate more reliable transcripts and themes when audio-recording the interviews to later review and reflect on their content (Reysen et al., 2019). If study participants' answers to interview questions lack depth and breadth, researchers ask study participants to give richer descriptions to avoid tainting participants answers with researchers' biases (Johnson-Migalski et al., 2020). To avoid integrating my biases into the study, I asked the participants of the study to provide depth and breadth when answering the interview questions, particularly when participants' answers lack depth. I did not discuss with study participants anything related to the research study before the actual interviews occur to avoid tainting participants' perceptions. As recommended by several scholars (Brosy et al., 2020), I maintained consistency and increase reliability by using the same interview questions, not introducing any new interview questions, and following the interview protocol.

Validity

Researchers establish credibility, transferability, and confirmability to validate their studies, following the research validation framework (Kostadinov et al., 2015). Case study researchers ensure credibility by using several data collection techniques and comparing the data collected to determine if data alignment has occurred (Shabi et al., 2017). Reading all interview transcripts meticulously allows researchers to establish credibility (Hartman et al., 2017). To establish credibility, I meticulously read and reviewed all interview transcripts to ensure capturing participants' perspectives accurately and completely. When reviewing the interview transcripts, I looked for similarities and differences among the study participants. To increase the validity of the interview data, I used member checking between the transcription of interviews and the analysis of data collected processes, as Yin (2018) recommended. I used member checking by giving participants my interpretations of their answers to interview questions and asking them to verify the accuracy of my interpretations.

Transferability is also part of the research validation framework and refers to researchers applying the findings from one study to another (Mahmood et al., 2015). Researchers conducting a case study and trying to generate high-quality results should select appropriate study participants, give detail-oriented demographic information of participants, conduct extensive data analysis, and present findings in an easy-to-understand format to increase their study's transferability (Yin, 2018). To provide high-quality results, I selected suitable participants, gave detail-oriented participant demographic information, conducted in-depth data analysis, and presented findings in an easy-to-understand format to increase the transferability of the study.

Confirmability is the researchers' ability to demonstrate that the data collected represent an accurate representation of the participants' answers to interview questions without researchers' biases (Glaw et al., 2017). Researchers establish confirmability after they establish dependability, credibility, and transferability (Nyirenda et al., 2020). During the semistructured interviews, I recorded my thoughts, insights, and biases and transcribed meticulously participants' answers, identified connections between data and results, and used existing literature to increase the confirmability of the results of the study.

Researchers use methodological triangulation to strengthen the validity of a case study (Walton et al., 2020). Researchers conduct methodological triangulation by first collecting data using multiple data collection techniques and comparing that data to determine if data alignment exists (Miksza et al., 2018). I conducted methodological triangulation by comparing data collected using various data collection techniques, such as conducting semistructured interviews and reviewing organizational documentation and artifacts, to determine if data alignment had occurred. Case study research validation most likely has methodological triangulation as its foundation because of the use of multiple data collection techniques to collect data (Battaglio & Hall, 2018).

I reached data saturation with the three participants. Researchers reach data saturation when additional data collection does not lead to any new meaningful information that would add to the study (Lowe et al., 2018). To obtain meaningful findings, researchers must achieve data saturation (Yang et al., 2019). I collected and analyze data until further data collection resulted in no new meaningful information that could have added value to this study, allowing me to achieve data saturation.

Transition and Summary

Section 1 included the problem statement, purpose statement, and the nature of the study to support the selection of a qualitative methodology and a case study design for the study. In Section 1, I also presented the interview questions; operational definitions; and assumptions, limitations, and delimitations for the study. The last two components of Section 1 are the significance of the study and a review of the professional academic literature. In the literature review, I presented a comprehensive analysis of research relevant to strategies used to increase the demand for mattresses, behavioral theories researchers use to understand the demand for mattresses, and other themes researchers use to gain an exhaustive understanding of strategies used to increase the demand of mattresses in Puerto Rico.

In Section 2, I provided a restatement of the purpose of the study, an explanation of the role of the researcher, a description of the participants, the population and sampling methods, and ethical concerns related to this study. I also provided a justification of the research method and design and discussed my plans for data collection, organization, and analysis. I concluded Section 2 with a description of the study’s reliability and validity. Section 3 includes an introduction, followed by the following subsections: (a) presentation of the findings, (b) applications to professional practice, (c) implications for social change, (d) recommendations for action, (e) recommendations for further study, (f) reflections, and (g) conclusions.

Section 3: Application to Professional Practice and Implications for Change

Introduction

The purpose of this qualitative multiple case study was to explore the strategies owners of mattress manufacturing firms in Puerto Rico use to increase the demand for mattresses. Using Zoom, I interviewed three Puerto Rico business leaders with a minimum of 5 successful years using strategies to increase the demand for mattresses. I also reviewed organizational documentation and artifacts, such as internal reports and Facebook and Instagram pages. The following four themes emerged as a result of data analyses: Having inventory for immediate sales increased the demand for mattresses, marketing in social networks increased the demand for mattresses, establishing good prices increased the demand for mattresses, and delivering excellent customer service increased the demand for mattresses.

Presentation of the Findings

The central research question for this qualitative multiple case study was: What strategies do owners of mattress manufacturing firms in Puerto Rico use to increase the demand for mattresses? Answering this study's central research question required conducting semistructured interviews and reviewing organizational documentation and artifacts. After analyzing all data collected and conducting methodological triangulation, four themes emerged.

Theme 1: Having Inventory for Immediate Sales Increased the Demand for Mattresses

The first theme that emerged from data analyses was that having inventory for immediate sales increased the demand for mattresses. All three participants agreed that having inventory of mattresses for immediate sale is important to increase the demand for mattresses. The three participants noted the lack of inventory in their facilities was the main problem when the demand of mattresses would increase. Leaders described one strategy that helped on managing inventory was to implement a computerized inventory system that may allow the sales personnel to know the immediate availability of the product that intent to sell. The three participants shared that importing finished goods and mattresses is the solution when there is a lack of inventory, including raw materials to manufacture the mattresses. However, P1 explained that “having a warehouse filled with mattresses and raw materials was key to success because customers would learn of the high inventory on hand and would come to the warehouse to buy mattresses.” These customers would share the news with potential customers, enticing them to come to the warehouse as well to make a purchase.

Customers make purchase decisions based on their belief that the product is available (Song et al., 2021). P2 expressed the importance of buying from local manufacturers, instead of importing mattresses, he described “this practice allows owners of mattress manufacturing firms to have inventory for immediate sale.” According to the three participants, customers become very satisfied when buying mattresses and receiving them immediately. Manufacturers and retailers need to have inventory stock to prevent disruptions in the supply chain and manage the demand (Dong et al., 2018).

P3 described the importance of “having sufficient inventory and better prices than competitors.” P3 stated that “the competitors will notice us as competence in this market, once the customers decided for our product.” P1 noted that “having a rich variety of mattress models and prices is key to the organization’s success, resulting from giving customers different choices.” P1 noted that “when increased the warehouse space, the customers started to respond more enthusiastically to spend more money when buying mattresses.” Saputro et al. (2021) described that managing the supply is not a straightforward process, which becomes even more complex as uncertainty and disruptions occur. P1 noted “some barriers in having inventory for immediate sale when the delivery of raw materials is very slow, and the only way to overcome this challenge is to order raw materials more frequently.” Effective inventory management is recognized as a key factor for retail and manufacturing companies to maximize profit (Sano & Yamada, 2021). The three participants agreed on the importance of receiving raw materials and inventory on a timely manner to meet immediate demand, purchasing from local suppliers to stimulate the local economy, and placing more frequent orders to avoid having no inventory. According to Karim et al. (2018), inventory control and management is crucial to a manufacturing company to ensure smooth production, achieve a sustainable sales performance, and prevent stock out that could result in customers switching to competitors. Leaders share the necessity manufacturers has to include on their strategies the new vision of establish on their manufacturer's plants with energy efficient machinery and solar panels. Leaders could use these strategies to implement a better view on where to direct some efforts given the positive results.

After reviewing company web pages, titled *photos and description*, I gained a better understanding of the significance participants attached to having inventory available to immediate sales. On the pictures, the customer can see the inventory and can obtain price details and product specifications. All three participants believe that leaders must show on their webpages all the pictures with price and description of all mattresses available for sale. Some of the inventory tracking system can be revised in person every week given the possibility of human error in updating the system every day. P1 noted that:

> to increase the demand for mattresses, the leaders must have inventory in stock, as opposed to inventory that will be produced, because customers know that current problems with the supply chain results in raw materials being unavailable and mattresses not being produced right way.

I reviewed an archived organizational document related to having inventory for immediate sales and gained an improved understanding of the organization's leadership approach, strategy, and views on the importance of having inventory for immediate sales to increase the demand for mattresses. Relying on leadership experience, the three participants agreed the increased the inventory by purchasing raw materials more frequently and securing larger warehouse space to showcase the mattresses, resulting in an increase in the demand for mattresses because customers learned of the vast inventory on hand.

Correlation to the Literature

The findings noted in Theme 1 aligned with the findings of Su et al., (2020) in that maintaining market competitiveness requires manufacturers to plan an innovative production that ensures a vast quantity of mattresses on hand and use sale strategies to achieve maximum benefits. Azoury and Miyaoka (2020) noted that the demand of a product is satisfied by a production facility, which may be in production or idle. Other researchers found that the factors influencing decision-making processes fluctuate constantly over time, and the effect of volatility on supply chain parameters, such as cost, revenue, and working capital, must be evaluated periodically (Moheb-Alizadeh & Handfield, 2018). Hong et al. (2019) asserted that demand-based production becomes a crucial mediating variable for impacting comprehensive performance outcomes.

Correlation to the Conceptual Framework

Theme 1 relates to strategic management theory, which has been redefined because of the necessity to acquire strong organizational capabilities of agility and resilience, simultaneously with a prominent orientation toward adoption of measures destined to meet climate change and social challenges (Paun & Pinzaru, 2021). In the context of this study, product design thinking is now beginning to influence the way corporate managers bring customer data into their day-to-day strategic planning (Knight et al. 2020). Maldaner and Kreling (2019) noted that when the demand becomes inferior to the supply, the market approach is required. The market approach is a method of determining the value of an asset based on the selling price of similar assets. Because the market approach relies on comparisons to similar assets, this approach is most useful when there is substantial data available regarding recent sales of comparable assets. The market approach raises the companies' necessity to consider, simultaneously, different dimensions in the elaboration of their strategies and in the configuration of their production system, comprised of cost, quality, flexibility, delivery/service, and lead time. All participants agreed that, as the requirement of building a robust production system emerges, owners of mattress manufacturing firms must be able to respond to the market in an effective and efficient way, according to the different demand and competition.

Theme 2: Marketing in Social Networks Increased the Demand for Mattresses

The second theme that emerged from data analyses was that marketing in social networks increased the demand for mattresses. P2 stated that "using marketing strategies in media, such as newspapers and social networks, were crucial for their strategy to increase the demand for mattresses." By reviewing the web pages and document information given by the participants, I could determine the strategy for increasing the demand for mattress in terms of model and price, but not too much detailed information, causing the customer to make calls or send messages directly to the web page. Customers and prospects may encounter on the marketing in social media the facility to know the new launches in products, the new raw materials used in new or established products and the prices that comes with the global inflation that occurs given COVID-19 and wars. Customers are increasingly empowered by social media and taking control of the marketing communication process, and they are becoming creators, collaborators, and commentators of message (Li et al., 2021). P1 described as an "added strategy to open a social network marketing page." Lashgari et al. (2018) noted marketers can align social media with their firms' goals through the strategic selection of platforms to reach the targeted audience and communicate their message.

P3 encouraged existing and potential customers to "enter on all social network and give good prices and services." By revising the Facebook page, P3 noted the reviews customers gave to them and how customers interacted with them by giving a *thank you* note. In their drive for customer orientation and improved organizational performance, marketing, sales, and service, managers view the concept of understanding the customer as the most important sales process attribute (Enyinda et al., 2021). Xu et al. (2017) explained that social media provides opportunities for firms to receive customer feedback and improve corresponding attributes of products and services, generating critical business value. P2 noted, "having an advertising agency that runs the media does have to give offers created to attract customers." All three participants described that a strategy they used for improving marketing in social media is to open a social media page, such as Facebook, and place the links to their photos with prices and inventory available, encouraging existing and potential customers to make the right decision. Some of the procedures that leaders of mattress manufacturers that may increase their demand is to develop a paying social page marketing campaign that includes the inventory available for immediate buying, the selling price including delivery and taxes, the specifications of the products and available hours. Society, employees, and stockholders have a better picture of the company through the social media page. Another recommendation that business leaders may consider is establishing writing procedures in support of the marketing managers.

Correlation to the Literature

The findings noted in Theme 2 aligned with the findings of Lupo and Stroman (2020) in that social media marketing is a useful tool to maintain competitiveness in the larger marketplace and increase product demand. Ihejirika et al. (2021) described that social media has dramatically changed the way people interact. Academic libraries have recognized that engaging with the customer on social media is a key element of their public relations strategy. Chirumalla et al. (2020) found that some benefits associated with social media are related to improving collaborative knowledge creation and exchange between functions and organizations, identifying new business opportunities, creating, and sharing customer information and knowledge, and collaboratively developing ideas and concepts. According to Zhuo et al. (2020), to obtain maximum profit, not only should manufacturers consider investing in modern production technology, open innovation platforms, communication technology, and other innovative factors, but they should also comprehensively consider the influencing factor of customer demand, such as product preference, market demand information, and personalized customization. From a retail point of view, it is also necessary to expand the product diversity according to the characteristics of customer demand and customer preference, in addition to grouping and selling products according to customer buying habits (Zhuo et al., 2020). These factors indicate that the development of product production and sales is driven by customer demand.

Correlation to the Conceptual Framework

Theme 2 relates to strategic management theory in that organizations need to use marketing in social networks as managerial strategies to expose their product beyond the traditional boundaries. Adams et al. (2019) noted the important role marketing departments play in enabling firms to respond more effectively to both customer and technology intelligence to achieve superior performance. Social media has enabled companies to communicate with their customers directly in a timely, low-cost, and high-performing way in comparison to traditional communication tools (Pour et al., 2021). Ihejirika et al. (2021) described that management decisions revolve around personnel, training, and marketing departmentalization. The entire organization needs to be aware that its products and reputation can be greatly affected by the way current and potential customers perceive the quality of such products on social media (Kongar & Adebayo, 2021). Lepkowska-White et al. (2019) noted that effectively implementing social media requires the development of policies to guide employees. From the study, the participants determined that decisions regarding the effective use of social marketing are crucial to financially sustaining the business extend the possibility that the demand for mattresses may increase.

Theme 3: Establishing Good Prices Increased the Demand for Mattresses

The third theme that emerged from data analyses was that establishing good price increased the demand for mattresses. Katsifou et al. (2014) stated that customers primarily attracted by special products will also buy some standard products. P1 shared that "the strategy of having different prices and different models on mattress helped to increase the demand." P2 explained that "the variety in the product will affect the price." P3 articulated that "the price will determine the final decision in sales." P1 stated that "the better the product the more accessible the price for customers." I received an acknowledgment from three of the participants that price, given the challenging economic environment that Puerto Rico is facing, is the first key element that customers use to evaluate the decision to purchase a mattress. However, customer behavior towards price is not the only variable that determines the final sale on the product. Price is based on strategies the leaders should practice in managing the fixed and variable cost the manufacturing process have. Knowing the entire manufacturing process in establishing a price is important to maintaining profits and benefits. Rounaghi et al. (2021) noted that due to the growing competition among companies in providing high-quality products with reasonable prices, a precise system of measurement of the cost of the product is necessary. I was able to review a precise system of product cost measurement that P1 shared with me. This document, named *Price List and Brand Names*, was a supplier guide that can be obtained with the International Sleep Product Association. Upon review of the *Price List and Brand Names* document, I gained a better understanding of the significance participants give to establishing good prices because it leads to an increase in the demand for mattresses. All three participants shared with me the importance that the cost of raw materials has when establishing prices for mattresses. All three participants agreed that securing raw materials at the lowest possible costs is key to the success of their mattress organizations. Purchasing low-cost materials is essential to establishing attractive prices for mattresses, which leads to an increase in the demand for mattresses. P1 shared the importance of combining the attractive price with presentation. Some customers are attracted by price; however, when they catalogue the product with the price, these customers do not always buy the mattress. P3, as both a manufacturer and a retailer, established some special prices on specific products that are only available by visiting P3's organizational website. This strategy has increased the demand for mattresses because, as P3 stated, customers "hurry to obtain the product exhibited on the web[site] at an affordable price."

Correlation to the Literature

The findings noted in Theme 3 aligned with the findings of Aastha et al. (2020) in that the demand of products in the market depends upon effectively advertising their attractive and competitive prices. Kianfar (2019) described that the final demand for a product depends on its price and advertising expenditures. When durable-goods firms use price promotion strategies and advertise simultaneously, these firms gain customers eager to purchase their products (Miller et al., 2021). Zhong and Moon (2020) described the importance the perceived attractiveness of the price has on customers' judgement of the product quality dimensions.

Correlation to the Conceptual Framework

Theme 3 relates to strategic management theory in that organizations need to make tactical decisions including establishing products' prices and making strategic redesign decisions

(Fattahi et al., 2018). Vasile and Simion (2019) noted that achieving good economic efficiency by businesses is conditional on the existence of leadership based on good knowledge of economic laws, the operative and accurate knowledge of supply and demand on the internal and external market, the dynamics of commodity prices, technological trends, and the use of the resources available. Juzer and Darma (2019) discussed that a well-set price will make the supply chain works well. Setting up the price determines the success of a company in selling its goods. This is due to the big demand that creates free competition among the sellers. Brych et al. (2020) explained that if a manufacturer sets a higher price for products of standardized characteristics, all buyers will move to competitors and the expected increase in profits will be reversed. Brych et al. noted that lowering prices relative to competitors' prices will lead to an increase in demand, which may exceed the capacity to produce the required quantity of products leading to negative consequences (Brych et al., 2020).

Theme 4: Delivering Excellent Customer Service Increased the Demand for Mattresses

The fourth theme that emerged from data analyses was that delivering excellent customer service increased the demand for mattresses. Arifin et al. (2020) described that there is a significant positive relationship between service quality and loyalty, which shows that the higher the service quality, the higher the customer loyalty. Having the personnel well trained in customer service makes the difference. P1 described the way sales improved when P1 decided to pay close attention to customer satisfaction after the sales. On the other hand, P2 and P3 agreed that customer service is their “no cost publicity,” given that all satisfied customers will tell other potential customers about their positive experiences with the service received.

All three participants agreed on the importance of explaining the warranty to customers. P3 noted that “in every purchase, I invest half hour in explaining to the customer what is guaranteed [warranty] because of manufacturing damages and what is guaranteed because of non-well managed product; for example, flipping the mattress every three months.” Doing this, P3 described some “word of mouth marketing helped on increase the demand.” Upon review of the written guaranteed product that can be found on their web pages, all three participants have a structured written policy to deal with customers’ problems and issues related to product warranties. The written product warranty and service policy, which describes the specific information about product and service coverage, includes verbiage related to the lack of coverage for failures and damage not caused by the product’s defects. The document I revised has two sections.

The first section includes the appropriate handling of the mattress and box, required time for flipping the mattress, amount of support the bed frame needs, do’s and don’ts such as avoiding ironing on the mattress, proper care for transporting the mattress to avoid damage, and number of years the product is covered by the warranty. The second section contains information regarding the process required to file a claim, the prorated cost to replace or repair the product once the warranty expires, and the fact that the product warranty does not cover the cost of transporting the product. The product warranty and service policy is available on the participants’ websites and inside the salesrooms. All three participants agreed that providing customers with the written product warranty and service policy on the website and salesrooms enhanced customer service and increased the demand of their products, as customers reported that they were very satisfied with the availability of such information and transparency of the product warranty and claim process.

Correlation to the Literature

The findings noted in Theme 4 aligned with the findings of Zhou et al. (2019) in that customer satisfaction emerged as the strongest predictor of customer loyalty. Yang et al. (2019) stated that customer service has emerged as an important factor for the success of service firms. Nindiani et al. (2018) explained the priority of improvement is the taste indicator for product quality. Yeniaras and Kaya (2022) recommended that small and medium-sized enterprise managers and owners should be cautious in resource allocation to establish informal, personal ties with suppliers, competitors, customers, and other market collaborators. Janssen (2021) explained that service and product offerings, customer segmentation, location, forecast demand, and the competitive environment remain the strongest influences in pricing decisions, with price sensitivity/elasticity, online presence strength, cost of hygiene practices, and technological advancements becoming more relevant.

Correlation to the Conceptual Framework

Theme 4 relates to strategic management theory in that interacting with clients daily to resolve their queries represents excellent customer service that must be present at all levels of the organization (Chetty et al., 2021). Shaping of the customer service policy is an important direction to reach a competitive advantage of an industrial enterprise (Kuziak et al., 2019). Motivating employees to deliver high quality customer service to customers should be built into the culture of business organizations (Kuziak et al., 2019). Competitor orientation, customer orientation, process innovation, and service innovation have a significant effect on organizational performance (Kaliappen et al., 2019).

Applications to Professional Practice

Owners of mattress manufacturing firms may apply the findings of this study to establish strategies that can help to increase the demand for mattress. Successful owners of mattress manufacturing firms using effective strategies offered suggestions for professional practice to achieve the goal of increasing the demand for mattresses. In this study, I learned that getting a reliable source of inventory is vital. Prior to choosing the strategy to use, it is essential to understand the advantages and disadvantages of each social media channel used to advertise the mattresses.

Other than the owners of mattress manufacturing firms, the results of this study may also be relevant to other professions, such as mattress retailers. Understanding the current strategies owners of mattress manufacturing firms use to increase the demand for mattresses is important. Owners of mattress manufacturing firms must reevaluate their strategies to understand areas for improvement. Owners of mattress manufacturing firms should integrate the strategies found in this study into their organizations' culture.

Owners of mattress manufacturing firms could train all employees to understand the strategies found in this study to increase the demand of mattresses. In addition, owners of mattress manufacturing firms could write an employee manual that can be revisited regularly to revise it. The professional advisors that this study's participants have on their boards might use the strategies found in this study to increase the demand for other products. Owners of mattress manufacturing firms struggling to survive could use the results of this study to increase the demand for mattresses.

Implications for Social Change

The findings from this study may prompt positive social change, including increased revenue that could translate into a larger tax base that local governments could use to implement community-based projects. Additional implications for positive social change include reducing unemployment, creating new jobs, and developing an awareness of the importance of replacing an old mattress with a new one to obtain the key health benefits a new mattress may offer. Buying mattresses that include raw material that the earth can absorb once the mattresses have been disposed of in the garbage is crucial to contribute to the earth’s ecology. A major benefit society may experience is the increase in comfort and rest from buying a product manufactured with plant-based fabrics and isolators, reducing the number of used mattresses that are trashed, which produce gas emissions from the dumpsters.

Recommendations for Action

Leaders of business organizations should pay attention to the findings of this study and consider assessing the strategies owners of mattress manufacturing firms in Puerto Rico use to increase the demand for mattresses. Based on the results of this study, I propose the following recommendations for action to become more successful in increasing the demand for their product.

A. Having inventory for immediate sales increased the demand for mattresses. Implementing a computerized inventory system that may allow the sales personnel to immediately know the availability of the products customers are seeking is an excellent strategy. Owners of mattress manufacturing firms should post on their websites the amount of inventory available at their manufacturing facilities, responding to the importance the buyers place on buying the products at the manufacturing facility. Some of the inventory tracking systems should be revised in person every week given the possibility of human error in updating the system every day. All level managers should use this strategy to ensure they have accurate data regarding inventory sold, inventory available to sell, and inventory being manufactured.

B. Marketing in social networks increased the demand for mattresses. Owners of mattress manufacturing firms should use social media to market their products and increase their demand. Potential customers visiting mattress manufacturing firms' websites would be exposed to new launches in products, new raw materials used, prices reflecting the global inflation that exists because of price wars and the COVID-19 pandemic's aftermath, and an overall picture of the firm. Having social media presence is a strategy that owners of mattress manufacturing firms should implement to survive. Another recommendation that owners of mattress manufacturing firms may consider is establishing written policies and procedures and publishing them on their websites to support marketing managers. Owners of mattress manufacturing firms should also hold their employees accountable for following the policy and procedures published on their websites.

C. Establishing good prices increased the demand for mattresses. Owners of mattress manufacturing firms should establish a competitive price for their products to increase the demand for mattresses. An increase in the demand of mattresses also allows employees of mattress manufacturing firms to have a sense of job security, which keeps employees motivated. Owners of mattress manufacturing firms should manage fixed and variable costs to set the price for mattresses. Knowing the entire manufacturing process is important to establishing mattress price and maintaining profits and benefits.

D. Delivering excellent customer service increased the demand for mattresses. Owners of mattress manufacturing firms should create a customer service department that would respond to customers' questions, concerns, and complaints to ensure the customers feel that their needs are met. Written policy related to the delivery of excellent customer service should be developed and published on their websites. Training customer service representatives in the delivery of excellent customer service is essential to keep customers satisfied, resulting in an increase in the demand of mattresses.

Recommendations for Further Research

The purpose of this qualitative multicase study was to explore the strategies owners of mattress manufacturing firms in Puerto Rico use to increase the demand for mattresses. The findings of this study are limited and, consequently, further research is needed to explore other strategies that business leaders could use to increase the demand for mattresses. Based upon the findings from this study, I offer the following recommendations for future research:

A. The target population of this study consisted of three leaders from three mattress manufacturing organizations, located in the Puerto Rico metropolitan area, with successful strategies used to increase the demand for mattress. Future research should be expanded outside of the Puerto Rico metropolitan area as well.

B. Recommendations for future research should address some of the limitations of this study. The limitations of this study include using a small sample size, consisting of three leaders of mattress manufacturing organizations. I conducted the study at three mattress manufacturing organizations located in the Puerto Rico metropolitan area, which limited the generalizability of the study findings. Future researchers conducting similar research studies should consider increasing the sample size.

C. Future researchers should conduct similar research studies using other types of business leaders to collect rich data related to strategies used to increase the demand for mattresses.

D. Future researchers should also consider including employees working under the supervision of business leaders to obtain different perspectives related to strategies used to increase the demand for mattresses.

E. Conducting research across different industries with other business leaders should reveal valuable information.

F. Future researchers should consider using the quantitative or mixed-methods research methodologies to examine the relationship between the strategies owners of mattress manufacturing firms in Puerto Rico use to increase the demand for mattresses and other variables, such as (a) having inventory for immediate sales increased the demand for mattresses, (b) marketing in social networks increased the demand for mattresses, (c) establishing good prices increased the demand for mattresses, (d) delivering excellent customer service increased the demand for mattresses. Future researchers conducting longitudinal studies to examine these variables could provide business leaders with new statistical data that may help increase the demand for mattresses.

Reflections

My experience in conducting this study has been great with both challenges and strengthens that led to acquiring new information about strategies owners of mattress manufacturing firms in Puerto Rico use to increase the demand for mattresses. From the study, I have learned to be more patient with my colleagues given I can see from their perspective the way things are managed on a demanding market. I understand that sometimes the fact of decreasing in demand is not always because the product is not available, sometimes is because the raw material for manufacturing a product is not available at all. The main challenge that occurred was during data collection because not all leaders were able or agreed to share their knowledge. Apart from the challenge of getting the right time to have the interviews conducted, it was challenging for me to convince participants that their participation was not really for my benefit but for the benefit of the mattress manufacturing industry in Puerto Rico. The process was challenging given not all leaders were able to demonstrate without bias how their demand increased. I presented to them the study with the purpose of having a brainstorm session or conversations instead of placing pressure to obtain an answer. The strategy to get the most information was making them feel I was doing an interview with the sole purpose of learning exactly what they have done to increase the demand for mattresses. Securing documentation in all the steps involved in this study made me confident that the study is trustworthy and reliable because I was able to conduct methodological triangulation. A doctoral study requires someone to have communication skills, research, experience, good relationship with participants, and flexibility.

Summary and Study Conclusions

This section of the study was about presentation of findings, discussing the correlation to the literature and the conceptual framework, applications to professional practice, implications for positive social change, and the recommendations for action and further research in the study. In addition, Section 3 included a discussion of the findings, personal reflections, a summary, and conclusions. Data on the strategies were collected from three participants chosen based on their experience increasing the demand for mattresses Each participant will receive a summary of the findings, consisting of 1-2 pages. The central research question for this qualitative multiple case study was, what strategies do owners of mattress manufacturing firms in Puerto Rico use to increase the demand for mattresses? Answering this study’s central research question required conducting semistructured interviews and reviewing organizational documentation and artifacts. Four themes emerged from the study to help in answering the research question. The first theme was, having inventory for immediate sales increased the demand for mattresses. The main strategy study participants used was to have the best inventory system they can afford that gives the exact amount of product available and to produce. The second theme was marketing in social networks. The main strategy study participants used was to use social media to market their product. The third theme was, establishing good prices. The main strategy study participants used was to establish a competitive price for their products. The fourth theme was, delivering excellent customer service. The main strategy study participants used was to create a customer service department that would respond to customers' questions, concerns, and complaints to ensure the customers feel that their needs are met.

I also intend to publish this study on the ProQuest database of dissertations and theses to reach a greater audience. In addition, I plan to submit a condensed version of this study to an academic journal for review and potential publication. The findings from this qualitative multiple case study revealed the success owners of mattress manufacturing firms had in increasing the demand for mattresses. These owners used their vast experience in manufacturing and management and their vision and determination to explore new strategies. Study participants continue to overcome challenges because they have a strong commitment in doing what they love to do, which is the manufacture of mattresses.

References

Aaltonen, S. (2017). Challenges in gaining and re-gaining informed consent among young people on the margins of education. *International Journal of Social Research Methodology, 20*(4), 329–341. https://doi.org/10.1080/13645579.2016.1170412

Aastha, Pareek, S., & Mittal, M. (2020). Non instantaneous deteriorating inventory model under credit financing when demand depends on promotion and selling price. *2020 8th International Conference on Reliability, Infocom Technologies and Optimization (Trends* *and Future Directions) (ICRITO), Reliability, Infocom Technologies and Optimization (Trends and Future Directions) (ICRITO), 2020 8th International Conference On*, 973–977. https://doi.org/10.1109/ICRITO48877.2020.9197990

Abdalla, M. M., Oliveira, L. G. L., Azevedo, C. E. F., & Gonzalez, R. K. (2018). Quality in qualitative organizational research: Types of triangulation as a methodological alternative. *Administration: Teaching and Research, 19*(1), 66–98. https://doi.org/10.13058/raep.2018.v19n1.578

Ada, N., Altin, H. O., & Pirnar, İ. (2022). Utilization of strategic marketing in nonprofit sector - Evidence from Turkish nonprofit organizations. *Ege Academic Review*, *22*(3), 287–294. https://doi.org/10.21121/eab.1009488

Adams, P., Bodas Freitas, I. M., & Fontana, R. (2019). Strategic orientation, innovation performance and the moderating influence of marketing management. *Journal of Business Research, 97*, 129–140. https://doi.org/10.1016/j.jbusres.2018.12.071

Agyapong, A., Essuman, D., & Afia Kesewa Yeboah, L. (2021). Performance implications of strategic planning and marketing capability in micro and small businesses in an emerging African economy: A contingent resource-based view. *Journal of Small Business & Entrepreneurship, 33*(1), 29–48. https://doi.org/10.1080/08276331.2018.1507415

Agnetis, A., Aloulou, M. A., & Kovalyov, M. Y. (2017). Integrated production scheduling and batch delivery with fixed departure times and inventory holding costs. *International Journal of Production Research, 55*(20), 6193–6206. https://doi.org/10.1080/00207543.2017.1346323

Aichner, T., & Shaltoni, A. M. (2019). Making market research work in Saudi Arabia. *International Journal of Market Research, 61*(1), 10–11. https://journals.sagepub.com/doi/10.1177/1470785318754978

Aizpurua, J. I., Catterson, V. M., Papadopoulos, Y., Chiacchio, F., & Manno, G. (2017). Improved dynamic dependability assessment through integration with prognostics. *IEEE Transactions on Reliability, 66*(3), 893–913. https://doi.org/10.1109/tr.2017.2693821

Akeke, N. I., Adetayo, H. O., Akeke, A. R., & Oyebanji, M. O. (2021). Strategic leadership and performance of small and medium enterprises: The role of strategic interventions. *Modern Management Review, 26*(3), 7–15. https://doi.org/10.7862/rz.2021.mmr.13

Alavi, M., Archibald, M., McMaster, R., Lopez, V., & Cleary, M. (2018). Aligning theory and methodology in mixed methods research: Before design theoretical placement. *International Journal of Social Research Methodology, 21*(5), 527–540. https://doi.org/10.1080/13645579.2018.1435016

Alhamad, B. (2021). Leadership and management of HEIs using strategic risk-based approach for sustainable academic excellence in higher education. 2021 *Sustainable Leadership and Academic Excellence International Conference* (SLAE), *Sustainable Leadership and Academic Excellence International Conference (SLAE)*, 2021, 1–8. https://doi.org/10.1109/SLAE54202.2021.9788096

Ali, A. A. (2021). Strategic leadership and its relationship to the quality of performance in the Iraqi sports media. *Review of International Geographical Education Online, 11*(9), 315–342. https://doi.org/10.48047/rigeo.11.09.28

Ali, S. M., Rahman, M. H., Tumpa, T. J., Moghul Rifat, A. A., & Paul, S. K. (2018). Examining price and service competition among retailers in a supply chain under potential demand disruption. *Journal of Retailing & Consumer Services*, *40*, 40–47. doi:10.1016/j.jretconser.2017.08.025

Allhidan, E. S. F. (2021). Knowledge management and its processes as a strategic instrument to reduce risks facing business organizations in the Kingdom of Saudi Arabia: A study of expert opinions. *Global Journal of Economics and Business, 11*(3), 461–470. https://doi.org/10.31559/GJEB2021.11.3.10

Alonso, F., Bueso, M., & Angulo, J. (2016). Dependence assessment based on generalized relative complexity: Application to sampling network design. *Methodology & Computing in Applied Probability, 18*(3), 921–933. https://link.springer.com/article/10.1007/s11009-016-9495-6

Alstete, J. W., & Beutell, N. J. (2018). Designing learning spaces for management education: A mixed methods research approach. *Journal of Management Development, 37*(2), 201–211. https://doi.org/10.1108/jmd-08-2017-0247

Ansoff, I. H. (1965). *Corporate strategy*. McGraw Hill.

Apia, J. A., Salvador, B., & María-Rodríguez, J. (2018). Data envelopment analysis in satisfaction survey research: Sample size problem. *Journal of the Operational Research Society, 69*(7), 1096–1104. https://www.tandfonline.com/doi/abs/10.1057/s41274-017-0290-8

Arifin, M. F., Hartoyo, H., & Yusuf, E. Z. (2020). The Importance of service quality in building customer satisfaction and loyalty in the service industry: A case study of Hunky-Dory Barbershop. *Binus Business Review, 11*(2), 79–89. https://doi.org/10.21512/bbr.v11i2.6268

Arsel, Z. (2017). Asking questions with reflexive focus: A tutorial on designing and conducting interviews. *Journal of Consumer Research, 44*(4), 939–948. https://pdfs.semanticscholar.org/5fc5/e83ae02ddff060d742fb93d4fc8a84907208.pdf?_ga=2.77335893.1581325416.1603727770-812343939.160130905

Ashraf, R., & Merunka, D. (2017). The use and misuse of student samples: An empirical investigation of European marketing research. *Journal of Consumer Behavior, 16*(4), 295–308. https://www.researchgate.net/publication/304660849_The_use_and_misuse_of_student_samples_An_empirical_investigation_of_European_marketing_research

Azoury, K. S., & Miyaoka, J. (2020). Optimal and simple approximate solutions to a production-inventory system with stochastic and deterministic demand. *European Journal of*

Operational Research, 286(1), 178–189.

https://doi.org.ezp.waldenulibrary.org/10.1016/j.ejor.2020.03.009

Babaeinesami, A., Tohidi, H., & Seyedaliakbar, S. M. (2020). A closed loop Sackelberg game in multi-product supply chain considering information security: A case study. *Advances in Production Engineering & Management, 15*(2), 223–246. https://doi.org/10.14743/apem2020.2.361

Bansal, H. S., Eldridge, J., Haider, A., Knowles, R., Murray, M., Sehmer, L., & Turner, D. (2017). Shorter interviews, longer surveys. *International Journal of Market Research, 59*(2), 221–238. https://doi.org/10.2501/ijmr-2017-016

Bass, A. E., & Milosevic, I. (2018). The ethnographic method in CSR research: The role and importance of methodological fit. *Business & Society, 57*(1), 174–215. https://doi.org/10.1177/0007650316648666

Barnham, C. (2015). Quantitative and qualitative research. *International Journal of Market Research, 57*(6), 837–854. https://doi.org/10.2501/ijmr-2015-070

Battaglio, R. P., & Hall, J. L. (2018). Trinity is still my name: Renewed appreciation for triangulation and methodological diversity in public administration. *Public Administration Review, 78*(6), 825–827. https://doi.org/10.1111/puar.13010

Beck, F. G., & Glock, C. H. (2020). The economic lot scheduling problem: A content analysis. *International Journal of Production Research, 58*(11), 3437–3454. https://doi.org/10.1080/00207543.2019.1668071

Belotto, M. J. (2018). Data analysis methods for qualitative research: Managing the challenges of coding, interrater reliability, and thematic analysis. *Qualitative Report, 23*(11), 2622–2633. https://nsuworks.nova.edu/tqr/vol23/iss11/2/

Binmakhashen, G. M., & Mahmoud, S. A. (2020). Document layout analysis: A comprehensive survey. *ACM Computing Surveys, 52*(6), 1–36. https://doi.org/10.1145/3355610

Birt, L., Walter, F., Scott, S., Cavers, D., & Campbell, C. (2016). Member checking: A tool to enhance trustworthiness or merely a nod to validation? *Qualitative Health Research, 26*(13), 1802–1811. https://journals.sagepub.com/doi/abs/10.1177/1049732316654870

Bjarnason, E., Unterkalmsteiner, M., Borg, M., & Engström, E. (2016). A multi-case study of agile requirements engineering and the use of test cases as requirements. *Information & Software Technology, 77,* 61–79. https://doi.org/10.1016/j.infsof.2016.03.008

Blaikie, N. (2018). Confounding issues related to determining sample size in qualitative research. *International Journal of Social Research Methodology, 21*(5), 635–641. https://doi.org/10.1080/13645579.2018.1454644

Boddy, C. R. (2016). Sample size for qualitative research. *Qualitative Market Research: An International Journal, 19*(4), 426–432. https://doi.org/10.1108/qmr-06-2016-0053

Bojic, I., Yoshimura, Y., & Ratti, C. (2017). Opportunities and challenges of trip generation data collection techniques using cellular networks. *IEEE Communications Magazine, 55*(3), 204–209. https://doi.org/10.1109/mcom.2017.1500181cm

Bokhari, I. H., Muhammad, A. B., & Zakaria, N. (2020). Succession planning, strategic flexibility as predictors of business sustainability in family-owned SMEs: Moderating role of organization improvisation. *Pakistan Journal of Commerce and Social Sciences, 14*(1), 368–387. http://hdl.handle.net/10419/216875

Boyle, M. A., Hoffmann, A. N., & Lambert, J. M. (2018). Behavioral contrast: Research and areas for investigation. *Journal of Applied Behavior Analysis, 51*(3), 702–718. https://doi.org/10.1002/jaba.469

Brear, M. (2019). Process and outcomes of a recursive, dialogic member checking approach: A project ethnography. *Qualitative Health Research, 29*(7), 944–957. https://doi.org/10.1177/1049732318812448

Brink, W. D., Lee, L. S., & Pyzoha, J. S. (2019). Values of participants in behavioral accounting research: A comparison of the M-Turk population to a nationally representative sample. *Behavioral Research in Accounting, 31*(1), 97–117. https://doi.org/10.2308/bria-52103

Bromiley, P., & Rau, D. (2022). Some problems in using prospect theory to explain strategic management issues. *Academy of Management Perspectives, 36*(1), 125–141. https://doi.org/10.5465/amp.2018.0072

Brosy, J., Bangerter, A., & Ribeiro, S. (2020). Encouraging the production of narrative responses to past-behaviour interview questions: Effects of probing and information. *European Journal of Work & Organizational Psychology, 29*(3), 330–343. https://doi.org/10.1080/1359432x.2019.1704265

Brych, V., Manzhula, V., Halysh, N., Zhekalo, G., Liakhovych, G., & Vakun, O. (2020). Strategy of effective pricing policy of biofuel enterprises. *2020 10th International Conference on Advanced Computer Information Technologies (ACIT), Advanced Computer Information Technologies (ACIT), 2020 10th International Conference On,* 674–677. https://doi.org/10.1109/ACIT49673.2020.9208815

Carcone, D., Tokarz, V. L., & Ruocco, A. C. (2015). A systematic review on the reliability and validity of semistructured diagnostic interviews for borderline personality disorder. *Canadian Psychology, 56*(2), 208–226. https://doi.org/10.1037/cap0000026

Caretta, M. A., & Pérez, M. A. (2019). When participants do not agree: Member checking and challenges to epistemic authority in participatory research. *Field Methods, 31*(4), 359–374. https://doi.org/10.1177/1525822x19866578

Celestina, M. (2018). Between trust and distrust in research with participants in conflict context. *International Journal of Social Research Methodology, 21*(3), 373–383. https://doi.org/10.1080/13645579.2018.1427603

Cengiz Toklu, M., Erdem, M. B., & Taşkın, H. (2016). A fuzzy sequential model for realization of strategic planning in manufacturing firms. *Computers & Industrial Engineering*, *102*, 512–519. https://doi.org/10.1016/j.cie.2016.01.002

Ceross, A. (2018). Examining data protection enforcement actions through qualitative interviews and data exploration. *International Review of Law, Computers & Technology, 32*(1), 99–117. https://doi.org/10.1080/13600869.2018.1418143

Certo, S. T., Busenbark, J. R., Woo, H., & Semadeni, M. (2016). Sample selection bias and Heckman models in strategic management research. *Strategic Management Journal, 37*(13), 2639–2657. https://doi.org/10.1002/smj.2475

Chabowski, B., Kekec, P., Morgan, N. A., Hult, G. T. M., Walkowiak, T., & Runnalls, B. (2018). An assessment of the exporting literature: Using theory and data to identify future research directions. *Journal of International Marketing, 26*(1), 118–143. https://doi.org/10.1509/jim.16.0129

Chen, X. W. (2018). Knowledge-based analytics for massively distributed networks with noisy data. *International Journal of Production Research, 56*(8), 2841–2854. https://doi.org/10.1080/00207543.2017.1408972

Chetty, R., Cecile, N., Proches, G., & Singh, N. (2021). Knowledge management as a strategic asset for customer service delivery at a contact center in South Africa. *Knowledge Management & E-Learning: An International Journal, 13*(2), 225–249. https://doi.org/10.34105/j.kmel.2021.13.013

Chi, K., Zhu, Y., & Li, Y. (2018). Efficient data collection in wireless powered communication networks with node throughput demands. *Computer Communications, 126*, 1–10. https://doi.org/10.1016/j.comcom.2018.05.003

Chin, M. K., Zhang, S. X., Jahanshahi, A. A., & Nadkarni, S. (2021). Unpacking political ideology: Ceo social and economic ideologies, strategic decision-making processes, and corporate entrepreneurship. *Academy of Management Journal, 64*(4), 1213–1235. https://doi.org/10.5465/amj.2019.1228

Chirumalla, K., Oghazi, P., & Parida, V. (2018). Social media engagement strategy: Investigation of marketing and R&D interfaces in manufacturing industry. *Industrial Marketing Management, 74*, 138–149. https://doi.org/10.1016/j.indmarman.2017.10.001

Choi, I.-S., Choi, E. Y., & Lee, I.-H. (2019). Challenges in informed consent decision-making in Korean clinical research: A participant perspective. *PLoS ONE, 14*(5), 1–14. https://doi.org/10.1371/journal.pone.0216889

Cipriano, M., & Gruca, T. S. (2014). The power of priors: How confirmation bias impacts market prices. *Journal of Prediction Markets, 8*(3), 34–56.

http://ubplj.org/index.php/jpm/article/view/974

Cláudia de Souza, A., Alexandra Franzen, B., & de Souza Schlichting, T. (2019). Método na pesquisa psicolinguística sobre leitura: Técnicas de coleta de dados. *Fórum Lingüístico, 16*(2), 3849–3860. https://doi.org/10.5007/1984-8412.2019v16n2p3849

Colla, M., & Santos, G. D. (2019). Public safety decision-making in the context of smart and sustainable cities. *Procedia Manufacturing, 39*, 1937–1945. https://doi.org/10.1016/j.promfg.2020.01.238

Colvin, R. G., & Carmona, J. (2020). Strategic planning for positioning/repositioning a business school integrating enterprise systems (SAP) in curriculum. *Journal of Education for Business, 95*(7), 483–489. https://doi.org/10.1080/08832323.2019.1693331

Creamer, E. G. (2018). Enlarging the conceptualization of mixed method approaches to grounded theory with intervention research. *American Behavioral Scientist, 62*(7), 919–934. https://doi.org/10.1177/0002764218772642

David, D., Bizo, A., Cimpean, A. I., Oltean, H., Cardos, R., Soflau, R., & Negut, A. (2018). The effect of research method type on stereotypes' content: A brief research report. *Journal of Social Psychology, 158*(3), 379–392. https://doi.org/10.1080/00224545.2017.1361375

Dawson, E., Hartwig, M., Brimbal, L., & Denisenkov, P. (2017). A room with a view: Setting influences information disclosure in investigative interviews. *Law & Human Behavior (American Psychological Association), 41*(4), 333–343. https://doi.org/10.1037/lhb0000244

De Capitani di Vimercati, S., Foresti, S., Jajodia, S., Livraga, G., Paraboschi, S., & Samarati, P. (2015). Loose associations to increase utility in data publishing. *Journal of Computer Security, 23*(1), 59–88. https://doi.org/10.14778/1920841.1921009

Diller, J. W., Barry, R. J., & Gelino, B. W. (2016). Visual analysis of data in a multielement design. *Journal of Applied Behavior Analysis, 49*(4), 980–985. https://doi.org/10.1002/jaba.325

Dong, L., Tang, S. Y., & Tomlin, B. (2018). Production chain disruptions: Inventory, preparedness, and insurance. *Production & Operations Management, 27*(7), 1251–1270. https://doi.org/10.1111/poms.12866

Draper, J., Young Thomas, L., & Fenich, G. G. (2018). Event management research over the past 12 years: What are the current trends in research methods, data collection, data analysis procedures, and event types? *Journal of Convention & Event Tourism, 19*(1), 3–24. https://doi.org/10.1080/15470148.2017.1404533

Drouin, M., Stewart, J., & Van Gorder, K. (2015). Using methodological triangulation to examine the effectiveness of a mentoring program for online instructors. *Distance Education, 36*(3), 400–418. https://doi.org/10.1080/01587919.2015.1081735

Eisnecker, P. S., & Kroh, M. (2017). The informed consent to record linkage in panel studies. *Public Opinion Quarterly, 81*(1), 131–143. https://doi.org/10.1093/poq/nfw052

El-Haddadeh, R., Osmani, M., Hindi, N., & Fadlalla, A. (2021). Value creation for realising the sustainable development goals: Fostering organisational adoption of big data analytics. *Journal of Business Research*, *131*, 402–410. https://doi.org/10.1016/j.jbusres.2020.10.066

Enyinda, C. I., Opute, A. P., Fadahunsi, A., & Mbah, C. H. (2021). Marketing-sales-service interface and social media marketing influence on B2B sales process. *Journal of Business & Industrial Marketing, 36*(6), 990–1009. https://doi-org.ezp.waldenulibrary.org/10.1108/JBIM-01-2019-0053

Esmaeili, N. (2015). Strategic management and its application in modern organizations.

International Journal of Organizational Leadership, 4(2015), 118–126. https://doi.org/10.33844/ijol.2015.60399

Ertug, G., Gruber, M., Nyberg, A., & Steensma, H. K. (2018). From the editors-a brief primer on data visualization opportunities in management research. *Academy of Management Journal, 61*(5), 1613–1625. https://doi.org/10.5465/amj.2018.4005

Farquhar, J., Michels, N., & Robson, J. (2020). Triangulation in industrial qualitative case study research: Widening the scope. *Industrial Marketing Management, 87*, 160–170. https://doi.org/10.1016/j.indmarman.2020.02.001

Fattahi, M., Govindan, K., & Keyvanshokooh, E. (2018). A multi-stage stochastic program for supply chain network redesign problem with price-dependent uncertain demands. *Computers & Operations Research, 100*, 314–332. https://doi.org/10.1016/j.cor.2017.12.016

Fox, N. J., & Alldred, P. (2018). Mixed methods, materialism and the micropolitics of the research-assemblage. *International Journal of Social Research Methodology, 21*(2), 191–204. https://doi.org/10.1080/13645579.2017.1350015

Gang, K., & Ravichandran, T. (2015). Exploring the determinants of knowledge exchange in virtual communities. *IEEE Transactions on Engineering Management, 62*(1), 89–99. https://doi.org/10.1109/tem.2014.2376521

Garavan, T., Wang, J., Matthews-Smith, G., Nagarathnam, B., & Lai, Y. (2018). Advancing national human resource development research: Suggestions for multilevel investigations. *Human Resource Development International, 21*(4), 288–318. https://doi.org/10.1080/13678868.2018.1429171

Gepp, A., Linnenluecke, M. K., O'Neill, T. J., & Smith, T. (2018). Big data techniques in auditing research and practice: Current trends and future opportunities. *Journal of Accounting Literature, 40*, 102–115. https://doi.org/10.1016/j.acclit.2017.05.003

Giboney, J. S., Briggs, R. O., & Nunamaker, J. F. (2016). Special issue: Designing tools to answer great information systems research questions. *Journal of Management Information Systems, 33*(4), 938–941. https://doi.org/10.1080/07421222.2016.1267512

Gillespie, B., Otto, C., & Young, C. (2018). Bridging the academic-practice gap through big data research. *International Journal of Market Research, 60*(1), 11–13. https://doi.org/10.1177/1470785317744670

Glaw, X., Inder, K., Kable, A., & Hazelton, M. (2017). Visual methodologies in qualitative research. *International Journal of Qualitative Methods, 16*(1), 1–8. https://journals.sagepub.com/doi/full/10.1177/1609406917748215

Globocnik, D., Faullant, R., & Parastuty, Z. (2020). Bridging strategic planning and business model management: A formal control framework to manage business model portfolios and dynamics. *European Management Journal, 38*(2), 231–243. *https://doi.org/10.1016/j.emj.2019.08.005*

Gould, R., Parker Harris, S., & Fujiura, G. (2017). Systematic review and knowledge translation: A framework for synthesizing heterogeneous research evidence.

Work, 57(4), 485–499. https://doi.org/10.3233/wor-172577

Gray, R., & Milne, M. J. (2015). It's not what you do, it's the way that you do it? Of method and madness. *Critical Perspectives on Accounting*, *32*, 51–66. https://doi.org/10.1016/j.cpa.2015.04.005

Greenland, S. J., Combe, I. A., & Farrell, A. M. (2016). Stakeholder preference and stated vs derived importance satisfaction research. *International Journal of Market Research, 58*(1), 35–55. https://doi.org/10.2501/ijmr-2016-005

Guseinov, I. (2021). Globalization and strategic management of human resources in organizations of the Republic of Moldova. *Economica, 4*(118), 55–64. https://doi.org/10.53486/econ.2021.118.055

Guo, Y., & Lyu, X. (2021). Strategic management model of network organization based on artificial intelligence and modular enterprise big data. *Mobile Information Systems, 2021*, 1–13. https://doi.org/10.1155/2021/1987430

Guo, J., & Yang, H. (2018). Three-stage optimisation method for concurrent manufacturing energy data collection. *International Journal of Computer Integrated Manufacturing, 31*(4/5), 479–489. https://doi.org/10.1080/0951192x.2017.1305508

Hamel, H., & Kang, H.-N. (2019). Quality changes to approved biotherapeutic product: Simulated case studies on reporting categories & supporting data requirements. *Biologicals, 62*, 1–7. https://doi.org/10.1016/j.biologicals.2019.10.008

Hammami, R., & Frein, Y. (2014). Redesign of global supply chains with integration of transfer pricing: Mathematical modeling and managerial insights. *International Journal of Production Economics*, *158*, 267–277. https://doi.org/10.1016/j.ijpe.2014.08.005

Hançerlioğulları, G., Şen, A., & Aktunç, E. A. (2016). Demand uncertainty and inventory turnover performance. *International Journal of Physical Distribution & Logistics Management, 46*(6/7), 681–708. https://doi.org/10.1108/ijpdlm-12-2014-0303

Hancock, B. H., Sykes, B. L., & Verma, A. (2018). The problem of "Cameo Appearances" in mixed-methods research: Implications for twenty-first-century ethnography. *Sociological Perspectives, 61*(2), 314–334. https://doi.org/10.1177/0731121418756045

Hartman, R. O., Dieckmann, N. F., Sprenger, A. M., Stastny, B. J., & DeMarree, K. G. (2017). Modeling attitudes toward science: Development and validation of the credibility of science scale. *Basic & Applied Social Psychology, 39*(6), 358–371. https://doi.org/10.1080/01973533.2017.1372284

Hartwig, R., Inderfurth, K., Sadrieh, A., & Voigt, G. (2015). Strategic inventory and supply chain behavior. *Production & Operations Management, 24*(8), 1329–1345. https://doi.org/10.1111/poms.12325

Hesse-Biber, S. (2015). The problems and prospects in the teaching of mixed methods research. *International Journal of Social Research Methodology, 18*(5), 463–477. https://doi.org/10.1080/13645579.2015.1062622

Highhouse, S., Brooks, M. E., Nesnidol, S., & Sim, S. (2017). Is a .51 validity coefficient good? Value sensitivity for interview validity. *International Journal of Selection & Assessment, 25*(4), 383–389. https://doi.org/10.1111/ijsa.12192

Hong, P., Jagani, S., Kim, J., & Youn, S. H. (2019). Managing sustainability orientation: An empirical investigation of manufacturing firms. *International Journal of Production Economics*, *211*(C), 71–81. https://doi.org/10.1016/j.ijpe.2019.01.035

Hughes, K., Hughes, J., & Tarrant, A. (2020). Re-approaching interview data through qualitative secondary analysis: Interviews with internet gamblers. *International Journal of Social Research Methodology, 23*(5), 565–579. https://doi.org/10.1080/13645579.2020.1766759

Ihejirika, K. T., Goulding, A., & Calvert, P. (2021). Rethinking academic library use of social media for marketing: Management strategies for sustainable user engagement. *Journal of Library Administration, 61*(1), 58–85. https://doi.org/10.1080/01930826.2020.1845547

Instituto de Estadísticas de Puerto Rico. (2020a). *Publicaciones de Agosto 2020.* https://estadisticas.pr/en/inventario-de-estadisticas/purchasing_managers_index

Instituto de Estadísticas de Puerto Rico. (2020b). *PMI report.* https://estadisticas.pr/en/inventario-de-estadisticas/purchasing_managers_index

Ivankova, N., & Wingo, N. (2018). Applying mixed methods in action research:

Methodological potentials and advantages. *American Behavioral Scientist, 62*(7), 978–997. https://doi.org/10.1177/0002764218772673

Ivanov, D., Dolgui, A., Sokolov, B., & Ivanova, M. (2017). Literature review on disruption recovery in the supply chain. *International Journal of Production Research, 55*(20), 6158–6174. https://doi.org/10.1080/00207543.2017.1330572

Jabbarzadeh, A., Fahimnia, B., & Sheu, J. (2017). An enhanced robustness approach for managing supply and demand uncertainties. *International Journal of Production Economics, 183*, 620–631. https://doi.org/10.1016/j.ijpe.2015.06.009

Janssen, E. (2021). Changes in pre- and post-pandemic pricing decision factors: An overview of South Africa's luxury accommodation sector. *Research in Hospitality Management, 11*(1), 37–44. https://doi.org/10.1080/22243534.2020.1867385

Johnson, J. (2022). Delegating strategic decision-making to machines: Dr. Strangelove Redux? *Journal of Strategic Studies, 45*(3), 439–477. https://doi.org/10.1080/01402390.2020.1759038

Johnson-Migalski, L., Victor, C., Velez-Giraldo, A., Chaney, M., & Moise, L. P. (2020). Adler's interview questions: Incorporating diversity and sociocultural contexts holistically. *Journal of Individual Psychology, 76*(1), 141–148. https://doi.org/10.1353/jip.2020.0024

Jones, J. A., & Daniel, D. L. (2018). A method for research and practice: Using a developmentally informed interview to increase donor engagement. *Journal of Nonprofit Education & Leadership, 8*(2), 182–195. https://js.sagamorepub.com/jnel/article/view/8723

Jordan, K. (2018). Validity, reliability, and the case for participant-centered research: Reflections on a multi-platform social media study. *International Journal of Human-Computer Interaction, 34*(10), 913–921. https://doi.org/10.1080/10447318.2018.1471570

Juzer, & Darma G. S. (2019). Strategic supply chain management of Bali textile company in industrial revolution 4.0. *Russian Journal of Agricultural and Socio-Economic Sciences, 96*(12), 101–108. https://doi.org/10.18551/rjoas.2019-12.13

Kaliappen, N. C. L., Suan, C. L., Almutairi, S. S., & Almutairi, M. A. (2019). Strategic management role in boosting hotel performance. *Polish Journal of Management Studies, 20*(1), 233–242. https://doi.org/10.17512/pjms.2019.20.1.21

Karim, N. A., Nawawi, A., & Salin, A. S. A. P. (2018). Inventory control weaknesses: A case study of lubricant manufacturing company. *Journal of Financial Crime, 25*(2), 436–449. https://doi.org/10.1108/JFC-11-2016-0077

Katsifou, A., Seifert, R. W., & Tancrez, J.-S. (2014). Joint product assortment, inventory and price optimization to attract loyal and non-loyal customers. *Omega, 46*, 36–50. http://dx.doi.org/10.1016/j.omega.2014.02.002

Kaufmann, A., & Riehle, D. (2019). The QDAcity-RE method for structural domain modeling using qualitative data analysis. *Requirements Engineering, 24*(1), 85–102. https://doi.org/10.1007/s00766-017-0284-8

Kelli, A., Mets, T., Vider, K., Värv, A., Jonsson, L., Lindén, K., & Birštonas, R. (2018). Challenges of transformation of research data into open data: The perspective of social sciences and humanities. *International Journal of Technology Management & Sustainable Development, 17*(3), 227–251. https://doi.org/10.1386/tmsd.17.3.227_1

Kenno, S. A., McCracken, S. A., & Salterio, S. E. (2017). Financial reporting interview-based research: A field research primer with an illustrative example. *Behavioral Research in Accounting, 29*(1), 77–102. https://doi.org/10.2308/bria-51648

Kern, R., Kozierkiewicz, A., & Pietranik, M. (2020). The data richness estimation framework for federated data warehouse integration. *Information Sciences*, *513*, 397–411. https://doi.org/10.1016/j.ins.2019.10.046

Kianfar, K. (2019). Maximizing profit in a supply chain by considering advertising and price elasticity of demand. *Computers & Industrial Engineering, 135*, 265–274. https://doi.org/10.1016/j.cie.2019.06.007

Kim, S., & Chung, Y. D. (2019). An anonymization protocol for continuous and dynamic privacy-preserving data collection. *Future Generation Computer Systems, 93*, 1065–1073. https://doi.org/10.1016/j.future.2017.09.009

Knight, E., Daymond, J., & Paroutis, S. (2020). Design-led strategy: How to bring design thinking into the art of strategic management. *California Management Review, 62*(2), 30–52. https://doi.org/10.1177/0008125619897594

Knott, P., & Thnarudee, C. (2022). Strategic planning as inter-unit coordination: An in-depth case study in Thailand. *Asia Pacific Journal of Management, 39*(1), 201–224. https://doi.org/10.1007/s10490-020-09726-w

Kongar, E., & Adebayo, O. (2021). Impact of social media marketing on business performance: A hybrid performance measurement approach using data analytics and machine learning. *IEEE Engineering Management Review, Engineering Management Review, IEEE, IEEE Eng. Manag. Rev, 49*(1), 133–147. https://doi.org/10.1109/EMR.2021.3055036

Kopf, D. A., Hsu, M. K., Shows, G. D., & Albinsson, P. A. (2016). Quantitative versus qualitative research methods. *Society for Marketing Advances Proceedings*, 470. Society for Marketing Advances Conference, USA. https://societyformarketingadvances.org/resources/Documents/Resources/Conference%20Proceedings/SMA2016_v11.pdf#page=472

Kopylchak, B. (2019). Implementation of the concept of strategic management in youth non-governmental organizations. *Економічний Вісник Університету, 43*, 72–79. https://doi.org/10.31470/2306-546X-2019-43-72-79

Kostadinov, I., Daniel, M., Stanley, L., & Cargo, M. (2015). Assessing community readiness online: A concurrent validation study. *BMC Public Health, 15*(1), 1–6. https://doi.org/10.1186/s12889-015-1953-5

Kotus, J., & Rzeszewski, M. (2015). Methodological triangulation in movement pattern research. *Quaestiones Geographicae, 34*(4), 25–37. https://doi.org/10.1515/quageo-2015-0034

Kull, T. J., Kotlar, J., & Spring, M. (2018). Small and medium enterprise research in supply chain management: The case for single-respondent research designs. *Journal of Supply Chain Management, 54*(1), 23–34. https://doi.org/10.1111/jscm.12157

Kuziak, V. V., Motorniuk, U. I., & Stasiuk, N. R. (2019). Strategy of customer service as an important direction for achievement of competitive advantages of an industrial enterprise. *Aktual'nì Problemi Rozvitku Ekonomìki Regìonu, 2*(15), 80–86. https://doi.org/10.15330/apred.2.15.80-86

Lampaki, A., & Papadakis, V. (2018). The impact of organisational politics and trust in the top management team on strategic decision implementation success: A middle-manager's perspective. *European Management Journal, 36*(5), 627–637. https://doi.org/10.1016/j.emj.2018.07.005

Lashgari, M., Sutton-Brady, C., Solberg Søilen, K., & Ulfvengren, P. (2018). Adoption strategies of social media in B2B firms: A multiple case study approach. *Journal of Business & Industrial Marketing, 33*(5), 730–743. https://doi.org/10.1108/JBIM-10-2016-0242

Lauer, C., Brumberger, E., & Beveridge, A. (2018). Hand collecting and coding versus data-driven methods in technical and professional communication research. *IEEE Transactions on Professional Communication, 61*(4), 389–408.

https://doi.org/10.1109/tpc.2018.2870632

Leedy, P. D., & Ormrod, J. E. (2010). *Practical research: Planning and design* (9th ed.). Merril.

Lehmann, O. V., Murakami, K., & Klempe, S. H. (2019). Developmentally oriented thematic analysis (DOTA): A qualitative research method to explore meaning-making processes in cultural psychology. *Forum: Qualitative Social Research, 20*(2), 1–21. https://www.researchgate.net/publication/333642739_Developmentally_Oriented_Thematic_Analysis_DOTA_A_Qualitative_Research_Method_to_Explore_Meaning-Making_Processes_in_Cultural_Psychology

Lembinen, L. (2018). Academic library directors' strategic decision-making process. *Liber Quarterly: The Journal of European Research Libraries, 28*(1), 1–21. https://doi.org/10.18352/lq.10224

Lepkowska-White, E., Parsons, A., & Berg, W. (2019). Social media marketing management: An application to small restaurants in the US. *International Journal of Culture, Tourism and Hospitality Research, 13*(3), 321–345. https://doi.org/10.1108/IJCTHR-06-2019-0103

Leyesa, M. C., Castro, R. C. C., Magsakay, E. dR., Geronimo, A., & Florencondia, N. T. (2020). Implementation of a strategic project integration management system using visual studio: A case study for a construction company in the Philippines. *2020 IEEE 12th International Conference On*, 1–4. doi:10.1109/HNICEM51456.2020.9400097

Li, F., Larimo, J., & Leonidou, L. C. (2021). Social media marketing strategy: Definition, conceptualization, taxonomy, validation, and future agenda. *Journal of the Academy of Marketing Science, 49*(1), 51–70. https://doi.org/10.1007/s11747-020-00733-3

Li, R., Xia, Y., & Yue, X. (2019). Scrap or sell: The decision on production yield loss. *Production and Operations Management, 28*(6), 1486–1502. https://doi.org/10.1111/poms.13000

Lin, H., Yan, Z., & Fu, Y. (2019). Adaptive security-related data collection with context awareness. *Journal of Network & Computer Applications, 126*, 88–103. https://doi.org/10.1016/j.jnca.2018.11.002

Lincoln, Y., & Guba, E. (1985). *Naturalistic inquiry*. SAGE Publications.

Liu, F., Jarrett, M., & Maitlis, S. (2022). Top management team constellations and their implications for strategic decision making. *The Leadership Quarterly, 33*(3), 1–20. https://doi.org/10.1016/j.leaqua.2021.101510

Liu-Thompkins, Y., & Malthouse, E. C. (2017). A primer on using behavioral data for testing theories in advertising research. *Journal of Advertising, 46*(1), 213–225. https://doi.org/10.1080/00913367.2016.1252289

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

Lück, A., & Nyga, I. (2018). Experiences of stakeholder participation in multi-criteria decision analysis (MCDA) processes for water infrastructure. *Urban Water Journal, 15*(6), 508–517. https://doi.org/10.1080/1573062x.2017.1364394

Lui, K.-J. (2018). Sample size determination for testing equality in frequency data under an incomplete block crossover design. *Journal of Applied Statistics, 45*(8), 1517–1529. https://doi.org/10.1080/02664763.2017.1380788

Lupo, C., & Stroman, J. R. (2020). Social media marketing adoption strategies: An exploratory multiple case study of landscape industry small businesses. *Journal of Social, Behavioral, and Health Sciences.* https://doi.org/10.5590/JSBHS.2020.14.1.15

Mackieson, P., Shlonsky, A., & Connolly, M. (2019). Increasing rigor and reducing bias in qualitative research: A document analysis of parliamentary debates using applied thematic analysis. *Qualitative Social Work, 18*(6), 965–980. https://doi.org/10.1177/1473325018786996

MacLennan, A. F., & Markides, C. C. (2021). Causal mapping for strategy execution: Pitfalls and applications. *California Management Review, 63*(4), 89–122. https://doi.org/10.1177/00081256211019799

Madhavan, S., Clark, S., Beguy, D., Kabiru, C. W., & Gross, M. (2017). Moving beyond the household: Innovations in data collection on kinship. *Population Studies, 71*(1), 117–132. https://doi.org/10.1080/00324728.2016.1262965

Mahmood, S. I., Daim, S. A., Borleffs, J. C. C., Heijne-Penninga, M., & Schönrock-Adema, J. (2015). The transferability of western concepts to other cultures: Validation of the Zuckerman-Kuhlman personality questionnaire in a Saudi Arabic context. *Medical Teacher, 37*, S67–S74.

https://doi.org/10.3109/0142159x.2015.1006606

Maldaner, L. F., & Kreling, R. (2019). Strategic management of manufacturing: Proposal of a method that recommends production techniques to leverage different competitive dimensions. *Brazilian Business Review (Portuguese Edition), 16*(2), 118–135. DOI: http://dx.doi.org/10.15728/bbr.2019.16.2.2

Malthouse, E. C., & Li, H. (2017). Opportunities for and pitfalls of using big data in advertising Research. *Journal of Advertising, 46*(2), 227–235. https://doi.org/10.1080/00913367.2017.1299653

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

Massimino, B. (2016). Accessing online data: Web-Crawling and information-scraping techniques to automate the assembly of research data. *Journal of Business Logistics, 37*(1), 34–42. https://doi.org/10.1111/jbl.12120

Melkas, H., Uotila, T., & Tura, T. (2016). Policies of related variety in practice: The case innovation session method. *European Planning Studies, 24*(3), 489–510. https://doi.org/10.1080/09654313.2015.1088515

Merder-Coskun, D., Kenis-Coskun, O., Celenlioğlu, A. E., Akman, M., Karadag-Saygi, E., & Uzuner, A. (2016). Reliability of cross-cultural adapted Turkish version of the pediatric outcomes data collection instrument (PODCI). *Journal of Pediatric Rehabilitation Medicine, 9*(2), 101–105. https://doi.org/10.3233/prm-160370

Miller, C. J., Brannon, D. C., Salas, J., & Troncoza, M. (2021). Advertising, incentives, and the upsell: How advertising differentially moderates customer- vs. retailer-directed price incentives' impact on consumers' preferences for premium products. *Journal of the Academy of Marketing Science, 49*(6), 1043–1064. https://doi.org/10.1007/s11747-021-00791-1

Miksza, P., Roseth, N. E., & Blackwell, J. (2018). Self-Regulated music practice: Microanalysis as a data collection technique and inspiration for pedagogical intervention. *Journal of Research in Music Education, 66*(3), 295–319. https://doi.org/10.1177/0022429418788557

Mkhonza, V. M., & Sifolo, P. P. (2022). Investigating small, medium and micro-scale enterprises strategic planning techniques in Johannesburg central business district post-COVID-19 lockdown. *The Southern African Journal of Entrepreneurship and Small Business Management, 14*(1), e1–e13. https://doi.org/10.4102/sajesbm.v14i1.483

Moheb-Alizadeh, H., & Handfield, R. (2018). The impact of raw materials price volatility on cost of goods sold (COGS) for product manufacturing. *IEEE Transactions on Engineering Management, 65*(3), 460–473. DOI:10.1109/TEM.2018.2796447

Mojtahed, R., Nunes, M. B., Martins, J. T., & Peng, A. (2014). Equipping the constructivist researcher: The combined use of semi-structured interviews and decision-making maps. *Electronic Journal of Business Research Methods, 12*(2), 87–95. https://www.semanticscholar.org/paper/Equipping-the-Constructivist-Researcher%3A-The-use-of-Mojtahed-Nunes/bbf736fbcac66d3c9c3b6105043a6961b404d012

Molina-Azorin, J. F., Bergh, D. D., Corley, K. G., & Ketchen, D. J. (2017). Mixed methods in the organizational sciences. *Organizational Research Methods, 20*(2), 179–192. https://doi.org/10.1177/1094428116687026

Mukherjee, J. (2018). Using new case studies for evaluation of marketing student's academic performance. *Vision (09722629), 22*(1), 61–67. https://doi.org/10.1177/1094428116687026

Mukhopadhyay, S., & Gupta, R. K. (2014). Survey of qualitative research methodology in strategy research and implication for Indian researchers. *Vision (09722629), 18*(2), 109–123. https://doi.org/10.1177/0972262914528437

Munck, L., & Tomiotto, M. F. (2019). Sustainability in organizational context: Reflections on the meanings attributed to the decision-making process and its strategic implications at Itaipu. *REGE Revista de Gestão, 26*(1), 22–38. https://doi.org/10.1108/REGE-03-2018-0040

Murphy, R., & Seriki, O. (2021). The impact of environmental turbulence on the strategic decision-making process in Irish quantity surveying (QS) professional service firms (PSFs). *Construction Management & Economics, 39*(9), 739–758. https://doi.org/10.1080/01446193.2021.1952632

Mykola, I., & Inna, I. (2020). Strategic guidelines for the development of management of sports organizations in Ukraine. *Економічний Вісник Університету, 46*, 82–88. https://doi.org/10.31470/2306-546X-2020-46-82-88

Nag, B., Han, C., & Yao, D. (2014). Mapping supply chain strategy: An industry analysis. *Journal of Manufacturing Technology Management, 25*(3), 351–370. https://doi.org/10.1108/jmtm-06-2012-0062

Nahum, N., & Carmeli, A. (2020). Leadership style in a board of directors: Implications of involvement in the strategic decision-making process. *Journal of Management & Governance, 24*(1), 199–227. https://doi.org/10.1007/s10997-019-09455-3

Naidu, T., & Prose, N. (2018). Re-envisioning member checking and communicating results as accountability practice in qualitative research: A South African community-based organization example. *Forum: Qualitative Social Research, 19*(3), 783–797. https://www.qualitativeresearch.net/index.php/fqs/article/view/3153

Navasaitienė, S., & Bahanik, M. (2016). The specific character of online investigations in the research of social entrepreneurship. *Management Theory & Studies for Rural Business & Infrastructure Development, 38*(1), 48–57. https://doi.org/10.15544/mts.2016.5

Nielsen, B. B., & Raswant, A. (2018). The selection, use, and reporting of control variables in international business research: A review and recommendations. *Journal of World Business, 53*(6), 958–968. https://doi.org/10.1016/j.jwb.2018.05.003

Nindiani, A., Hamsal, M., & Purba, H. H. (2018). Product and service quality analysis: An empirical study of customer satisfaction in a Bakery. *Binus Business Review, 9*(2), 95–103. https://doi.org/10.21512/bbr.v9i2.4257

Njegovan, B. R., Vukadinović, M. S., & Duđak, L. (2017). Contribution to the research of organizational socialization: The importance of interviews in anticipatory stage. *Journal for East European Management Studies, 22*(2), 169–198. https://doi.org/10.5771/0949-6181-2017-2-169

Nowak, R., & Haynes, J. (2018). Friendships with benefits? Examining the role of friendship in semi-structured interviews within music research. *International Journal of Social Research Methodology, 21*(4), 425–438. https://doi.org/10.1080/13645579.2018.1431192

Nyirenda, L., Kumar, M. B., Theobald, S., Sarker, M., Simwinga, M., Kumwenda, M., Johnson, C., Hatzold, K., Corbett, E. L., Sibanda, E., & Taegtmeyer, M. (2020). Using research networks to generate trustworthy qualitative public health research findings from multiple contexts. *BMC Medical Research Methodology, 20*(1), 1–10. https://doi.org/10.1186/s12874-019-0895-5

Ochoa, C., & Porcar, J. M. (2018). Modeling the effect of quota sampling on online fieldwork efficiency: An analysis of the connection between uncertainty and sample usage. *International Journal of Market Research, 60*(5), 484–501. https://doi.org/10.1177/1470785318779545

Oelze, N., Habisch, A., Hoejmose, S. U., & Millington, A. (2016). Sustainable development in supply chain management: The role of organizational learning for policy implementation. *Business Strategy and The Environment, 25*(4), 241–260. https://doi.org/10.1002/bse.1869

Olaru, G., Burrus, J., MacCann, C., Zaromb, F. M., Wilhelm, O., & Roberts, R. D. (2019). Situational judgment tests as a method for measuring personality: Development and validity evidence for a test of dependability. *PLoS ONE, 14*(2), 1–19. https://doi.org/10.1371/journal.pone.0211884

Oliveira, M., Bitencourt, C. C., Zanardo dos Santos, A. C. M., & Teixeira, E. K. (2016). Thematic content analysis: Is there a difference between the support provided by the Maxqda® and Nvivo® Software Packages? *Brazilian Journal of Management / Revista da Administração Da UFSM, 9*(1), 72–82. https://doi.org/10.5902/1983465911213

Olson, H. A. (2016). Indexing it all: The [subject] in the age of documentation, information, and data. *Journal of the Association for Information Science & Technology, 67*(7), 1784–1786. https://doi.org/10.1002/asi.23661

Oronoz, F. (2014). *Primer informe anual sobre el estado de situacion de las micro, pequeñas y medianas empresas (PYMES) en Puerto Rico.* http://www.comercioyexportacion.com/images/CCE_Primer__Informe__Anual__Pymes__2014.pdf

Palacio, T. J., Good, D. W., Stewart, G. D., McNeill, S. A., Reuben, R. L., & Chen, Y. (2018). A novel method for rapid and quantitative mechanical assessment of soft tissue for diagnostic purposes: A computational study. *International Journal for Numerical Methods in Biomedical Engineering, 34*(2), 1–12. https://doi.org/10.1002/cnm.2917

Pan, Y.-C. (2021). Sustainability, the fourth pillar of project portfolio management: A holistic approach. *Journal of Modern Project Management, 9*(2), 198–215. https://doi.org/10.19255/JMPM02714

Pauleen, D. J. (2017). Dave Snowden on KM and big data/analytics: Interview with David J. Pauleen. *Journal of Knowledge Management, 21*(1), 12–17. https://doi.org/10.1108/jkm-08-2016-0330

Paun, Z. T., & Pinzaru, F. (2021). Advancing strategic management through sustainable finance. *Management Dynamics in the Knowledge Economy, 9*(2), 279–291. https://doi-org.ezp.waldenulibrary.org/10.2478/mdke-2021-0019

Payne, B. K., Vuletich, H. A., & Lundberg, K. B. (2017). The bias of crowds: How implicit bias bridges personal and systemic prejudice. *Psychological Inquiry, 28*(4), 233–248. https://doi.org/10.1080/1047840x.2017.1335568

Peesker, K. M., Ryals, L. J., Rich, G. A., & Boehnke, S. E. (2019). A qualitative study of leader behaviors perceived to enable salesperson performance. *Journal of Personal Selling & Sales Management, 39*(4), 319–333. https://doi.org/10.1080/08853134.2019.1596816

Petrou, A. P., Hadjielias, E., Thanos, I. C., & Dimitratos, P. (2020). Strategic decision-making processes, international environmental munificence, and the accelerated internationalization of SMEs. *International Business Review, 29*(5), 1-12. https://doi.org/10.1016/j.ibusrev.2020.101735

Pitt, D. (2018). Phenomenal compositionality and context effects. *Inquiry, 61*(5/6), 494–498. https://doi.org/10.1080/0020174x.2017.1372308

Porter, M. E. (1985). *Competitive advantage: Creating and sustaining superior performance*. The Free Press.

Pour, M. J., Hosseinzadeh, M., & Mahdiraji, H. A. (2021). Exploring and evaluating success factors of social media marketing strategy: A multi-dimensional-multi-criteria framework. *Foresight, 23*(6), 655–678. https://doi.org/10.1108/FS-01-2021-0005

Prabowo, H. Y. (2020). Reinvigorating the human instrument: An exploratory study on the potential use of CAQDAS in qualitative evaluation of corruption prevention in Indonesia. *Journal of Financial Crime, 27*(2), 505–530. https://doi.org/10.1108/jfc-01-2019-0004

Puerto Rico Department of State's Corporate Division. (2020). *Registro de Corporaciones*. https://prcorpfiling.f1hst.com/CorporationSearch.aspx

Qiu, R., & Wang, Y. (2016). Supply chain network design under demand uncertainty and supply disruptions: A distributionally robust optimization approach. *Scientific Programming, 2016,* 1–15. https://doi.org/10.1155/2016/3848520

Quevedo, A., Condo, C., Valenzuela, G., Molina, L., Castillo, E., Palacio, A., & Tamariz, L. (2018). Informed consent comprehension among vulnerable populations in Ecuador: Video-delivered vs. in-person standard method. *Accountability in Research: Policies & Quality Assurance, 25*(5), 259–272.

https://doi.org/10.1080/08989621.2018.1470931

Renfro, C. (2017). The use of visual tools in the academic research process: A literature review. *Journal of Academic Librarianship, 43*(2), 95–99. https://doi.org/10.1016/j.acalib.2017.02.004

Reysen, S., Plante, C. N., Roberts, S. E., & Gerbasi, K. C. (2019). Initial validation and reliability of the single-item measure of immersion. *Creative Industries Journal, 12*(3), 272–283. https://doi.org/10.1080/17510694.2019.1621586

Rife, S. C., Cate, K. L., Kosinski, M., & Stillwell, D. (2016). Participant recruitment and data collection through Facebook: The role of personality factors. *International Journal of Social Research Methodology, 19*(1), 69–83. https://doi.org/10.1080/13645579.2014.957069

Ridder, H. (2017). The theory contribution of case study research designs*. Business Research, 10*(2), 281–305. doi:10.1007/s40685-017-0045-z

Roberts, C. M. (2010). *The dissertation journey: A practical and comprehensive guide to planning, writing, and defending your dissertation* (2nd ed.). Corwin Press. https://doi.org/10.4135/9781452219219

Roh, J., Hong, P., & Min, H. (2014). Implementation of a responsive supply chain strategy in global complexity: The case of manufacturing firms. *International Journal of Production Economics, 147*(Part B), 198–210. https://doi.org/10.1016/j.ijpe.2013.04.013

Rojas, R. A., & Rauch, E. (2019). From a literature review to a conceptual framework of enablers for smart manufacturing control. *International Journal of Advanced Manufacturing Technology, 104*(1-4), 517–533. https://doi.org/10.1007/s00170-019-03854-4

Rolfe, B., Segal, S., & Cicmil, S. (2017). The wisdom of conversations: Existential hermeneutic phenomenology (EHP) for project managers. *International Journal of Project Management, 35*(5), 739–748. https://doi.org/10.1016/j.ijproman.2017.03.002

Romaniuk, J., & Nguyen, C. (2017). Is consumer psychology research ready for today's attention economy? *Journal of Marketing Management, 33*(11/12), 909–916. https://doi.org/10.1080/0267257x.2017.1305706

Rosenthal, A. (2017). Managing the bias in enterprise risk management tools. *RMA Journal, 99*(5), 42–44.

Rounaghi, M. M., Jarrar, H., & Dana, L.-P. (2021). Implementation of strategic cost management in manufacturing companies: Overcoming costs stickiness and increasing corporate sustainability. *Future Business Journal, 7*(1), 1–8. https://doi.org/10.1186/s43093-021-00079-4

Saiewitz, A. (2018). Email versus in-person audit inquiry: Recent research and additional survey data. *Current Issues in Auditing, 12*(2), A36–A44. https://doi.org/10.2308/ciia-52267

Salem, R. W., & Haouari, M. (2017). A simulation-optimisation approach for supply chain network design under supply and demand uncertainties. *International Journal of*

Production Research, 55(7), 1845–1861. https://doi.org/10.1080/00207543.2016.1174788

Samimi, M., Cortes, A. F., Anderson, M. H., & Herrmann, P. (2022). What is strategic leadership? Developing a framework for future research. *The Leadership Quarterly, 33*(3), 1–22. https://doi.org/10.1016/j.leaqua.2019.101353

Samuel, G., & Derrick, G. (2020). Defining ethical standards for the application of digital tools to population health research. *Bulletin of the World Health Organization, 98*(4), 239–244. https://doi.org/10.2471/blt.19.237370

Sano, H., & Yamada, K. (2021). Prediction accuracy of sales surprise for inventory turnover. *International Journal of Production Research, 59*(17), 5337–5351. https://doi.org/10.1080/00207543.2020.1778205

Saputro, T. E., Figueira, G., & Almada-Lobo, B. (2021). Integrating supplier selection with inventory management under supply disruptions. *International Journal of Production Research, 59*(11), 3304–3322. https://doi.org/10.1080/00207543.2020.1866223

Sauerwein, C., Pekaric, I., Felderer, M., & Breu, R. (2019). An analysis and classification of public information security data sources used in research and practice. *Computers & Security, 82*, 140–155. https://doi.org/10.1016/j.cose.2018.12.011

Saunders, B., Sim, J., Kingstone, T., Baker, S., Waterfield, J., Bartlam, B., Burroughs, H., & Jinks, C. (2018). Saturation in qualitative research: Exploring its conceptualization and operationalization. *Quality and Quantity, 52*(4), 1893–1907.

doi:10.1007/s11133-017-0574-8

Saunders, M. N. K., & Townsend, K. (2016). Reporting and justifying the number of interview participants in organization and workplace research. *British Journal of Management, 27*(4), 836–852. https://doi.org/10.1016/j.cose.2018.12.011

Schaedler, L., Graf-Vlachy, L., & König, A. (2022). Strategic leadership in organizational crises: A review and research agenda. *Long Range Planning, 55*(2), 1–28. https://doi.org/10.1016/j.lrp.2021.102156

Schoonenboom, J. (2018). Designing mixed methods research by mixing and merging methodologies: A 13-step model. *American Behavioral Scientist, 62*(7), 998–1015. https://doi.org/10.1177/0002764218772674

Seaton, T. (2017). Qualitative approaches to the phenomenology of VFR travel: The use of literary and cultural texts as resources. *International Journal of Tourism Research, 19*(4), 455–465. https://doi.org/10.1002/jtr.2100

Shabi, J., Reich, Y., & Diamant, R. (2017). Planning the verification, validation, and testing process: A case study demonstrating a decision support model. *Journal of Engineering Design, 28*(3), 171–204. https://doi.org/10.1080/09544828.2016.1274964

Shao, H., Lam, J., & Feng, Z. (2016). Sampling-interval-dependent stability for linear sampled-data systems with non-uniform sampling. *International Journal of Systems Science, 47*(12), 2893–2900. https://doi.org/10.1080/00207721.2015.1036475

Shannon-Baker, P., & Edwards, C. (2018). The affordances and challenges to incorporating visual methods in mixed methods research. *American Behavioral Scientist, 62*(7), 935–955. https://doi.org/10.1177/0002764218772671

Shaw, J. D., Bansal, P., & Gruber, M. (2017). New ways of seeing: Elaboration on a theme. *Academy of Management Journal, 60*(2), 397–401. https://doi.org/10.5465/amj.2017.4002

Shen, J. (2016). Principles and applications of multilevel modeling in human resource management research. *Human Resource Management, 55*(6), 951–965. https://doi.org/10.1002/hrm.21666

Shi, Y., & Dow, S. (2019). International business education at the interface: The raw case study method. *Journal of Teaching in International Business, 30*(3), 246–268. https://doi.org/10.1080/08975930.2019.1698392

Shome, S. (2019). Experiences and challenges of dealing with large sample. *Productivity, 59*(4), 352–357. https://doi.org/10.32381/prod.2019.59.04.4

Signori, P., Flint, D. J., & Golicic, S. (2015). Toward sustainable supply chain orientation (SSCO): Mapping managerial perspectives. *International Journal of Physical Distribution & Logistics Management, 45*(6), 536–564. https://doi.org/10.1108/ijpdlm-07-2014-0160

Silva, A. S., Campos-Silva, W. L., Gouvea, M. A., & Farina, M. C. (2019). Vignettes: A data collection technique to handle the differential operation of items in surveys. *Brazilian*

Business Review (Portuguese Edition), 16(1), 16–31. https://doi.org/10.15728/bbr.2019.16.1.2

Sim, J., Saunders, B., Waterfield, J., & Kingstone, T. (2018). Can sample size in qualitative research be determined a priori? *International Journal of Social Research Methodology, 21*(5), 619–634. https://doi.org/10.1080/13645579.2018.1454643

Skalidou, D., & Oya, C. (2018). The challenges of screening and synthesizing qualitative research in a mixed-methods systematic review: The case of the impact of agricultural certification schemes. *Journal of Development Effectiveness, 10*(1), 39–60. https://doi.org/10.1080/19439342.2018.1438495

Skippari, M., Laukkanen, M., & Salo, J. (2017). Cognitive barriers to collaborative innovation generation in supply chain relationships. *Industrial Marketing Management*, *62*, 108–117. https://doi.org/10.1016/j.indmarman.2016.08.002

Sligo, J. L., Nairn, K. M., & McGee, R. O. (2018). Rethinking integration in mixed methods research using data from different eras: Lessons from a project about teenage vocational behaviour. *International Journal of Social Research Methodology, 21*(1), 63–75. https://doi.org/10.1080/13645579.2017.1321868

Song, J., Zhang, J., & Cheng, T. C. E. (2021). Inventory management and the value of quick response to the retailer facing boundedly rational strategic customers. *International Journal of Production Research, 59*(19), 5743–5757. https://doi.org/10.1080/00207543.2020.1789237

Spanaki, K., Gürgüç, Z., Adams, R., & Mulligan, C. (2018). Data supply chain (DSC): Research synthesis and future directions. *International Journal of Production Research, 56*(13), 4447–4466. https://doi.org/10.1080/00207543.2017.1399222

Speklé, R. F., & Widener, S. K. (2018). Challenging issues in survey research: Discussion and suggestions. *Journal of Management Accounting Research, 30*(2), 3–21. https://doi.org/10.2308/jmar-51860

Stewart, I., Fenn, P., & Aminian, E. (2017). Human research ethics: Is construction management research concerned? *Construction Management & Economics, 35*(11/12), 665–675. https://doi.org/10.1080/01446193.2017.1315151

Stieglitz, S., Mirbabaie, M., Ross, B., & Neuberger, C. (2018). Social media analytics: Challenges in topic discovery, data collection, and data preparation. *International Journal of Information Management, 39*, 156–168. https://doi.org/10.1016/j.ijinfomgt.2017.12.002

Su, R.-H., Weng, M.-W., & Huang, Y.-F. (2020). Innovative maintenance problem in a two-stage production-inventory system with imperfect processes. *Annals of Operations Research, 287*(1), 379–401. DOI: 10.1007/s10479-019-03423-8

Sweeney, M., & Goldblatt, J. (2016). An exploration of mixed research methods in planned event studies. *Journal of Convention & Event Tourism, 17*(1), 41–54. https://doi.org/10.1080/15470148.2015.1084602

Syahchari, D. H., Saroso, H., Lasmy, S. D., & Herlina, M. G. (2020). The Effect of information technology, strategic leadership and knowledge management on the competitive advantage in the chemical industry. 2020 International Conference on Information Management and Technology (ICIMTech), Information Management and Technology (ICIMTech), 2020 *International Conference On*, 120–125. https://research.binus.ac.id/publication/88E10573-64E4-4BF2-A561-9273EDCC21AF/the-effect-of-information-technology-strategic-leadership-and-knowledge-management-on-the-competitive-advantage-in-the-chemical-industry/

Teece, D. J. (2021). Technological leadership and 5G patent portfolios: Guiding strategic policy and licensing decisions. *California Management Review, 63*(3), 5–34. https://doi.org/10.1177/00081256211007584

Thaher, Y. A. Y., & Jaaron, A. A. M. (2022). The impact of sustainability strategic planning and management on the organizational sustainable performance: A developing-country perspective. *Journal of Environmental Management*, *305*, 1–14. https://doi.org/10.1016/j.jenvman.2021.114381

Thomas, D. B., Oenning, N. S. X., & de Goulart, B. N. G. (2018). Essential aspects in the design of data collection instruments in primary health research. *Revista CEFAC, 20*(5), 657–664. https://doi.org/10.1590/1982-021620182053218

Tran, T. T., & Herzig, C. (2022). Improving decision-making through material flow cost accounting: The case of VietGreen bottled mineral water company. *International Food &*

Agribusiness Management Review, 25(1), 37–48. https://doi.org/10.22434/IFAMR2020.0187

Trigos, F., & López, E. M. (2020). About tooling capacity for the vulcanising planning decision problem to improve strategic business profit. *International Journal of Production Research, 58*(18), 5738–5749. https://doi.org/10.1080/00207543.2019.1660820

Troise, C., Tani, M., Matricano, D., & Ferrara, E. (2022). Guest editorial: Digital transformation, strategic management and entrepreneurial process: dynamics, challenges and opportunities. *Journal of Strategy and Management, 15*(3), 329–334. https://doi.org/10.1108/JSMA-08-2022-363

Tsai, S. C., & Chen, S. T. (2017). A simulation-based multi-objective optimization framework: A case study on inventory management. *Omega, 70*, 148–159. https://doi.org/10.1016/j.omega.2016.09.007

Tunarosa, A., & Glynn, M. A. (2017). Strategies of integration in mixed methods research. *Organizational Research Methods, 20*(2), 224–242. https://doi.org/10.1177/1094428116637197

Turpin, M. J., Asano, M., & Finlayson, M. (2015). Combining qualitative and quantitative data collection and analysis methods in understanding multiple sclerosis fatigue management. *International Journal of Qualitative Methods, 14*(2), 53–68. https://doi.org/10.1177/160940691501400206

Ucenic, C. I., & Ratiu, C. (2017). Improving performance in supply chain.

MATEC Web of Conferences, 1–6. https://doi.org/10.1051/matecconf/201713701018

U.S. Bureau of Labor Statistics. (2020). *Economy at a glance: Puerto Rico.* https://www.bls.gov/eag/eag.pr.htm

U.S. Census Bureau. (2017). *North American industry classification system*.

https://www.census.gov/eos/www/naics/2017NAICS/2017_NAICS_Manual.pdf.

https://www.census.gov/newsroom/press-releases/2015/cb15-30.html

U.S. Department of Health & Human Services. (1979). *The Belmont Report protocol*.

https://www.hhs.gov/ohrp/regulations-and-policy/belmont-report/index.html

Valmohammadi, C., & Shahrashoob, V. (2022). Determinants of the human capital department development programs toward achieving functional strategic objectives: A fuzzy hybrid approach. *Industrial & Commercial Training, 54*(3), 377–395. https://doi.org/10.1108/ICT-02-2021-0012

van Rijnsoever, F. J. (2017). (I can't get no) Saturation: A simulation and guidelines for sample sizes in qualitative research. *PLoS ONE, 12*(7), 1–17. https://doi.org/10.5465/ambpp.2016.12040abstract

Van Heerden, M., Visagie, R., & Wessels, J. (2016). A discipline-relevant conceptual framework for research ethics review in economic sciences. *Review of Social Economy, 74*(1), 33–52. https://doi.org/10.1080/00346764.2015.1125632

Vann, C. E. (2016). Strategic benefits of integrating the managerial accounting function with supply chain management. *Journal of Corporate Accounting & Finance (Wiley), 27*(3), 21–30. https://doi.org/10.1002/jcaf.22138

Vasile, E., & Simion, D.-O. (2019). The role of information systems in economic organizations for the strategic management. *Internal Auditing & Risk Management, 14*(2), 9–24. https://doi.org/10.2139/ssrn.3433245.

Venkatesh, V., Brown, S. A., & Sullivan, Y. W. (2016). Guidelines for conducting mixed-methods research: An extension and illustration. *Journal of The Association for Information Systems, 17*(7), 435–495. https://doi.org/10.17705/1jais.00433

Vicary, S., Young, A., & Hicks, S. (2017). A reflective journal as learning process and contribution to quality and validity in interpretative phenomenological analysis. *Qualitative Social Work, 16(4)*, 550–565. https://doi.org/10.1177/1473325016635244

Vijayalakshmi, G. (2015). Dependability analysis of homogeneous distributed software/hardware systems. *International Journal of Reliability, Quality & Safety Engineering, 22*(2), 1–19. https://doi.org/10.1142/s0218539315500072

Vogl, S., Zartler, U., Schmidt, E.-M., & Rieder, I. (2018). Developing an analytical framework for multiple perspective, qualitative longitudinal interviews (MPQLI). *International Journal of Social Research Methodology, 21*(2), 177–190. https://doi.org/10.1080/13645579.2017.1345149

Walton, D. M., Mehta, S., Seo, W., & MacDermid, J. C. (2020). Creation and validation of the 4-item BriefPCS-chronic through methodological triangulation. *Health & Quality of Life Outcomes, 18*(1), 1–9.

https://doi.org/10.1186/s12955-020-01346-8

Walle, A. H. (2016). Ethnography: Naturalistic research and business anthropology.

International Journal of Business Anthropology, 6(1), 27–46. https://doi.org/10.33423/ijba.v6i1.1128

Westphal, J. D., Zhu, D. H., & Kunapuli, R. (2021). Seeking input when the train has left the station: The decoupling of participative strategic decision-making processes and the role of new technology in symbolic management. *Strategic Organization, 1*, 1–31. https://doi.org/10.1177/14761270211046870

Wilden, R., Akaka, M. A., Karpen, I. O., & Hohberger, J. (2017). The evolution and prospects of service-dominant logic: An investigation of past, present, and future research. *Journal of Service Research, 20*(4), 345–361. https://doi.org/10.1177/1094670517715121

Windsong, E. A. (2018). Incorporating intersectionality into research design: An example using qualitative interviews. *International Journal of Social Research Methodology, 21*(2), 135–147.

https://doi.org/10.1080/13645579.2016.1268361

Winker, P. (2016). Assuring the quality of survey data: Incentives, detection and documentation of deviant behavior. *Statistical Journal of the IAOS, 32*(3), 295–303. https://doi.org/10.3233/sji-161012

Woermann, N. (2018). Focusing ethnography: Theory and recommendations for effectively combining video and ethnographic research. *Journal of Marketing Management, 34*(5/6), 459–483.

https://doi.org/10.1080/0267257x.2018.1441174

Wolf, C., & Floyd, S. W. (2017). Strategic planning research: Toward a theory-driven agenda. *Journal of Management, 43*(6), 1754–1788. https://doi.org/10.1177/0149206313478185

Xiao, T., & Qi, X. (2016). A two-stage supply chain with demand sensitive to price, delivery time, and reliability of delivery. *Annals of Operations Research, 241*(1/2), 475–496. https://doi.org/10.1007/s10479-012-1085-6

Xu, X., Wang, X., Li, Y., & Haghighi, M. (2017). Business intelligence in online customer textual reviews: Understanding consumer perceptions and influential factors. *International Journal of Information Management, 37*(6), 673–683. http://dx.doi.org/10.1016/j.ijinfomgt.2017.06.004

Yang, A. J.-F., Huang, Y.-C., & Chen, Y. J. (2019). The importance of customer participation for high-contact services: Evidence from a real estate agency. *Total Quality Management & Business Excellence, 30*(7/8), 831–847. https://doi.org/10.1080/14783363.2017.1341814

Yang, D. S., & Kenagy, G. (2011). Population delimitation across contrasting evolutionary clines in deer mice (Peromyscus maniculatus). *Ecology Evolution, 1*(1), 26–36. https://doi.org/10.1002/ece3.3

Yang, H., Wang, Z., Xiao, M., Jiang, G.-P., & Huang, C. (2019). Quasi-synchronization of heterogeneous dynamical networks with sampled-data and input saturation. *Neurocomputing*, *339*, 130–138. https://doi.org/10.1016/j.neucom.2019.02.023

Yeniaras, V., & Kaya, I. (2022). Customer prioritization, product complexity and business ties: Implications for job stress and customer service performance. *Journal of Business & Industrial Marketing, 37*(2), 417–432. https://doi.org/10.1108/JBIM-08-2020-0404

Yin, R. K. (2018). *Case study research and Applications: Design and methods* (6th ed.). Sage Publications.

Yu, J., Ma, Z., & Song, W. (2022). New venture top management team's shared leadership and its indirect effect on strategic performance: Findings from SEM and fsQCA. *Leadership & Organization Development Journal, 43*(3), 435–456. https://doi.org/10.1108/LODJ-05-2021-0234

Zhang, Y., Hua, G., Cheng, T. C. E., Zhang, J., & Fernandez, V. (2020). Risk pooling through physical probabilistic selling. *International Journal of Production Economics, 219*, 295–311. https://doi.org/10.1016/j.ijpe.2019.04.014

Zhuo, Z., Chen, S., & Chau, K. Y. (2020). A new model of manufacturer's optimal product supply strategy in the context of precision marketing: Based on real demand pattern.

Mathematical Problems in Engineering, *2020,* 1–11. https://doi.org/10.1155/2020/6031563

Zhong, Y., & Moon, H. C. (2020). What drives customer satisfaction, loyalty, and happiness in fast-food restaurants in China? Perceived price, service quality, food quality, physical environment quality, and the moderating role of gender. *Foods (Basel, Switzerland), 9*(4), 1–19. https://doi.org/10.3390/foods9040460

Zhou, D., Yan, Z., Fu, Y., & Yao, Z. (2018). A survey on network data collection. *Journal of Network & Computer Applications, 116*, 9–23. https://doi.org/10.1016/j.jnca.2018.05.004

Zhou, R., Wang, X., Shi, Y., Zhang, R., Zhang, L., & Guo, H. (2019). Measuring e-service quality and its importance to customer satisfaction and loyalty: An empirical study in a telecom setting. *Electronic Commerce Research, 19*(3), 477–499. https://doi.org/10.1007/s10660-018-9301-3

Zulfah, H., & Aznam, N. (2018). Development of natural sciences module with reflective learning journal to enhance student's reporting-interpretative skills. *Biosaintifika: Journal of Biology & Biology Education, 10*(2), 362–368. https://doi.org/10.15294/biosaintifika.v10i2.14319

Appendix: Interview Protocol

Puerto Rico's Mattress Manufacturing: Strategies to Manage the Reduction in Demand

The purpose of this qualitative case study is to explore strategies owners of mattress manufacturing firms in Puerto Rico use to increase the demand for mattresses

Interviewee Code: ___________________________ Phone or Zoom interview

Date: ______________________ Time: ______________________

Notes:

1. Greet interviewee and introduce yourself.
2. Provide overview of the study and indicate the usefulness of the outcome.
3. Offer to answer any questions that interviewee may have.
4. Remind interviewee about their volunteer efforts to participate in the study.

5. Remind interviewee about recording the interview and start the recording.

6. Start the interview by recording interviewee's pre-assigned coded name, date, time by phone or Zoom.

7. Start asking interview questions. Allow enough time to answer those questions.

8. Listen carefully to interviewee. Ask probing and follow-up questions, if needed.

9. At the end of the interview, thank interviewee for their participation and time.

10. Provide participant your contact information if they have any questions.