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Strategies for Implementing Self-service Technologies in Supermarket Retail Operations

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This is to certify that the doctoral study by

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Abstract

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MS, Kaplan University, 2016

BS, Warner University, 2007

Doctoral Study Submitted in Partial Fulfillment

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Abstract

Organization leaders who do not adopt self-service technology (SST) are at risk of failure. The adaptation of SST can aid leaders in the supermarket industry improve checkout operations, increase efficiency, and minimize customers' waiting experiences, reducing the customers' shopping satisfaction. Grounded in the disruptive innovation theory, the purpose of this multiple case study was to explore strategies supermarket managers use to adapt SST practices. The participants included six supermarket managers in Jackson County of Southern Illinois. Data were collected from face-to-face interviews with managers, company documentation, and observations. Thematic analysis was used to analyze the data. Four themes emerged: cultural changes and technology, environmental dynamics, company capital and technical knowledge, and company policy and structures. Through effective and continuous training, managers and employees should ascertain how SST affects the store to benefit customers' trust, loyalty, and sustainability. The implications for positive social change include overall customer satisfaction through speed, ease-of-use, control, reliability, and enjoyment of the service quality delivered by SST checkout. Other positive social change includes creating opportunities to adapt to SST practices and performance and increase both supermarkets' profitability and tax revenues for surrounding communities.

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Dedication

To my mother, Deborah, you have supported me through this long journey to complete my doctoral degree. You have experienced my stress through the continuous process, providing me with the consolation, comfort, and support I needed to make it possible to finish my study. Your endless love made it endurable for me to reach my goal to finish my doctoral study and achieve the degree needed to become a professor. I hope to fulfill my ambitions to share the education I have gained through this phenomenal experience. Thank you, Mom, for being my biggest supporter.

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I am thankful for the loyalty and encouragement of family members and friends who believed in me. I especially would like to acknowledge my son, Ethan, who supported me through this challenging journey. Your confidence gave me hope to continue to finish for our family. My hopes for you are to take each new season in your life with hope knowing you can do anything. I know you will remain focused to finish each journey with determination and assurance of success.

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Section 1: Foundation of the Study

Supermarket managers' use of Self-service Technology (SST) affects supermarkets innovation and employees' ability to achieve practical training to assist the customers with the new technology. Incorporating SST provides a unique opportunity for retailers to improve customer service capabilities by supplementing traditional service contact personnel (Lee & Lyu, 2016). Considine and Cormican (2016) noted that self-service technology is widely accepted and has led to businesses' enhanced business practices as a critical element in controlling costs and improving customer experience. Torrichelli and Pozo (2018) noted the use of SSTs by consumers creates opportunities for supermarket businesses to up-sell by making more products and services available without increasing labor costs. Consumers use mobile devices (e.g., smartphones, tablet computers, and smartwatches) to monitor, document, and interact in social networking (Immonen & Koivuniemi, 2018). Wang (2017) stated the owner must examine the customers' attitudes towards the new technology to ensure they will accept and utilize the SST. Lariviere et al. (2017) noted how new technology, implemented by the supermarket, impacts human actors' service encounters. Wang (2017) stated that the development of user-friendly SSTs increases customer interaction for secure checkout with the support of employees reduces anxiety with the new technology experience.

Stanton (2018) noted that the supermarket industry might dramatically change with the acceptance of their customer attitude towards the new technology's uses. Wang (2017) stated the use of increased mobile devices by customers facilitates the acceptance of SST. Smirnova and Kochnova (2019) noted in-house employee training

through the development and implementation of electronic educational programs to improve service workers' skills. The competitiveness of the organization achieves benefits for both parties to increase the intensification of the organization's activities and improve the creation and provision of various services to the population (Smirnova & Kochnova, 2019).

Background of the Problem

Nijssen, Schepers, and Belanche (2016) noted self-service technology offers opportunities by providing services that promote productivity and efficiency. Morimura and Nishioka (2016) stated retailers install self-checkout to improve checkout operations' efficiency and minimize customers' waiting experiences, which reduces the customers' shopping satisfaction. As a result, supermarkets like Kroger, Costco, and Wal-Mart utilize SST technology in their supermarkets. Bulmer et al., Elms, and Moore (2018) noted that SST concerns emerged, staff allocated to assist in self-service check-out zones and viewed as being too few, too busy, and not in a position to explain the errors to the system patiently. Wang, Harris, and Patterson (2017) stated the owner should understand what factors facilitate developing a habit of SST usage. Supermarket managers can assist customers in accepting the new technology by understanding how to utilize the new technology.

New information technologies will result in various SST sectors in supermarkets. Mukerjee et al. (2019) noted customers might extend their assistance to communicate benefits and instructions to use self-checkout services (SCS). A better understanding of SST will enable supermarket managers to provide strategies to implement SSTs in

supermarket settings. Wang (2017) stated developing user-friendly SST increases perceived ease of use and includes employee support to overcome technology anxiety and satisfy the need for human interaction. Wang continued to say that there are implications for managers in promoting different SST for different focuses. Managerial strategies used to adapt SST practice in supermarket industries might offer profit and sustainability to the industry.

Problem Statement

Supermarket managers need to be alert to new trends for opportunities to streamline processes and lower costs (Dallabona, Nardelli, & Venzon Fernandes, 2019). Bulmer et al. (2018) noted that self-service checkouts became popularized by retailers in the 1990s, with estimates of the technology available in 325,000 stores worldwide by 2021. Managers need to be aware of new strategies to adapt to technological trends like self-checkouts. The general business problem is some supermarket managers do not have adequate information to adjust to new technologies successfully, which affects revenues. The specific business problem is some supermarket managers lack strategies to adapt SST practices such as self-checkout kiosks, barcode scanners, or touchscreen devices in their supermarkets.

Purpose Statement

The purpose of this qualitative multicase study is to explore the strategies supermarket managers use to adapt SST practices like self-checkout kiosks, barcode scanners, or touchscreen devices in their supermarkets. The target population includes store managers from six Southern Illinois supermarkets who have demonstrated success

in adapting SST practices. The human resources manager/director from the six supermarkets guided and assisted in choosing manager participants who use successful strategies to adjust to SSTs in their supermarket. Management's use of various strategies may include innovative solutions in supermarket operations from this study's results. Application of these strategies may result in better business practices resulting in tax revenues increases to support the local communities' economies.

Nature of the Study

Qualitative researchers focus on data to understand subjective meanings and motivating actions (Bansal et al., 2018). Konecki, K. T. (2019) shared the development of procedures, techniques, and research methods to analyze qualitative data, focusing on the details of the situation, subjective meanings, and motivating actions. Qualitative research is often associated with an interpretive philosophy because researchers need to discern subjective and socially constructed meanings expressed by participants for exploring the phenomenon studied (Saunders et al., 2015). Bansal et al. (2018) noted that research-based qualitative data offers insights of challenge assumed ideas to expose new theoretical directions by building theory inductively.

Qualitative and quantitative research both include methods to foster a sense of data and expand understanding (Morgan, 2018). The quantitative research method is more applicable to examining variables' relationships or group differences through hypothesis testing with numerical data. Morgan (2018) shared one of the oldest and most frequently discussed means of differentiating qualitative and quantitative research are the data they produce, words in the case of qualitative and numbers in the case of

quantitative. The quantitative method is not appropriate for this study because no hypotheses, relationships, or group data does not apply to the studied. The mixed methods research utilizes both quantitative and qualitative research, which is not suitable for the study. Wilson (2016) noted that mixed research methodology involves combining qualitative and quantitative data collection methods and data analysis in one research project. Taguchi (2018) indicated mixed-methods combine two methods that follow different philosophical and methodological orientations. This study is not a combination of data collection and data analysis approaches, and mixed methods not chosen for this study. Therefore, qualitative research addressed the best method for data collection of the study.

Quality design for qualitative research includes removing bias, expands valid data, and verifying the findings' reliability (Morgan, 2018). Four qualitative research designs that might be applicable to use in this qualitative study on self-service technology in supermarkets are: (a) narrative, (b) ethnography, (c) phenomenology, and (d) case study. Saunders et al. (2015) shared narrative research is the personal accounts, which rely on the interpretation of an event or series of events, focusing on individuals' lives. Narrative design is not the optimal choice for this case study because the narrative involves written, spoken, and visual representation of specific individuals' personal life stories. Hancock et al. (2018) noted ethnography design is social or cultural anthropology and defined as the comparative science of culture and society. Ethnography is not an appropriate choice for this study's purpose because it is a design to observe and document data to communicate details of social interactions and practices from cultural

populations of individuals over time. Kaivo-oja (2017) described phenomenology research as a study that forms a careful and systematic reflection on the meanings of the participants' personal lived experience with a phenomenon. Phenomenology is a design to describe the subjective importance of individuals' experiences with a specific phenomenon through procedures and techniques focusing on immediate experiences, which is not optimal for this study.

The choice of design for this case study focuses is on multiple data gathering methods in management to develop a deeper understanding to assist with an in-depth exploration of individual participants' explanation of the experiences. In this study, the multiple case design is the optimal choice over a single-case design. There are numerous supermarket brands used for the research with six managers from the different supermarkets to interview, instead of six managers from one supermarket brand. The multiple-case design selected for the study explored participants' experiences to identify new concepts, theories, and products potentially.

Research Question

The central research question to guide this study is: What successful managerial strategies do supermarket managers use to adapt SST practices in supermarkets?

Interview Questions

1. What strategies have you utilized to adapt to the use of SST?
2. How did you implement these strategies?
3. How do you assess the effectiveness of strategies used to implement SST in the supermarket (e.g., in terms of increased revenues)?

4. What key challenges have you experienced using SST strategies in your supermarket with management, employees, or customers?
5. How did you address the critical challenges for implementing your strategies to adapt SST practice in your supermarket?
6. What additional information can you provide of strategies used to adapt SST?

Conceptual Framework

The theory of disruptive innovation is the conceptual framework for this study. In 1997, Christensen pioneered the idea of disruptive innovation (Christensen, 2013). According to Christensen, using the disruptive innovation model effectively means developing technology strategies to introduce new and changing business processes, cutting-edge technologies, and replacing inadequate performing products and services in established markets. Gui et al. (2018) noted disruptive technologies are not entirely isolated from the existing technologies but can combine with current technologies by transforming existing products and creating entirely new products. Operational leaders in emerging supermarkets should develop strategies to increase the success rate of new product innovation projects. Christensen (2011) developed the theory of disruptive innovation for business leaders to use when creating designs for improving performance. The strategies managers include creating an understanding between the customers' expectations and their service experience.

Operational Definitions

Adaptation: Adaptation is defined as developing new solutions for the mainstream markets in real-life settings serving the development of technological capabilities,

necessary policies and regulation, and user and market needs, as well as adaptation of and to infrastructure and maintenance systems (Soyrinki et al., 2018).

Disruptive innovation: Disruptive innovation is an innovation creating a new market, which disrupts an existing market and establishes new market-leading firms, products, and alliances (Norris & Ciesielska, 2019).

Disruptive technology: Disruptive technology is defined as an innovation leveraging product and service improvement geared at obtaining unanticipated market returns and achieving potential trailblazing innovation (Christensen, 2013).

Innovation: Innovation is defined as implementing significant improvement of a product, service, or process using new marketing methods or a new organization strategy in business practices, workplace organization, or external relations (Keller et al., 2018).

Innovative technology: Innovative technology is defined as the process of transforming technology to utilize new ways of products or services to improve value for the business (Smith, 2017).

Self-scanning: Self-scanning is defined as a stand-alone system solution used in multiple stores consisting of full reporting and security systems integrated with the existing non-self-scanning systems (Gelderman et al., 2011).

Self-service Technology: Self-service technology is defined as revolutionizing customer service through technological interfaces enabling customers to serve themselves, transforming the ways customers interact with the service supplier (Gummerus et al., 2019).

Strategy Process: The strategy process is defined as the full range of commitments, decisions, and actions required by a company to achieve a competitive advantage that includes strategic inputs derived from internal and internal analysis and strategic action (Wahyono, 2018).

Supermarket Operations: Supermarket operations is defined as demanding forecasting, store logistics, inventory management, assortment and display, product promotion, checkout operations, and employee management (Anticzak & Weron, 2019).

Sustainable Development: Sustainable development is defined as implementing new actions to sustain the present needs without compromising future generations' adaptation of the latest changes to meet their needs (Jaksic et al., 2018).

Assumptions, Limitations, and Delimitations

Assumptions

A study's assumptions depend on gathering data to illustrate facts to prove and verify the study's information (Brinkmann, 2016). Schoenung and Dikova (2016) stated an assumption is understood to refer to the act of taking something for granted, which is theoretically not proven. Assumptions might consist of statements alleged to be accurate but frequently are only temporary (Brinkmann, 2016).

There were two assumptions the researcher may make in conducting this qualitative case study. First, supermarket managers signify successful strategies for success. Second, supermarket managers understand how SSTs contribute to the supermarket's profitability. Pan et al. (2019) noted managers often take for granted the firm has the integrative capability to acquire superior performance. The managerial

strategies of supermarket industries include specific abilities of managers to gain profitability and revenue. In a qualitative study approach, some assumptions may consist of analyzing information and documentation (i.e., interviews, data, and literature). The importance of consideration of the findings can lead to the possible adaptation of strategies for supermarket operations.

Limitations

Marshall and Rossman (2016) stated limitations of a study include influences that could affect results but cannot be controlled by the researcher. A qualitative case study's limitations reflect the data's method and analysis (Taguchi, 2018). Taguchi (2018) suggested that to promote validity and reliability, the researcher must understand the study's shortcomings and conditions and cannot influence control.

One limitation is that many businesses do not distribute classified information about SST implementation due to stakeholders' interests. The participants' information should include full disclosure of the interviews and undergo a complete examination to remove bias in their selection (Marshall & Rossman, 2016). Bias may have occurred in this study due to managers' experiences with only smaller supermarkets rather than selecting participants from supermarkets of varying sizes. A final limitation is the supermarket managers may not have had the appropriate knowledge and expertise of SST practices to make informed responses about SST innovations.

Delimitations

Taguchi (2018) stated delimitations include properties the researcher may impose from the limitations in the study. The characteristics include exclusionary and

inclusionary decisions created in the study's development. Yin (2018) noted delimitations refer to the limits or scope of the researcher's research controlled. Delimitations of a qualitative case study include (a) awareness of data and information, (b) interview setting, (c) sample size, and (d) geographical location (Yin, 2018). Yin (2018) stated while conducting an interview, the interviewer may find nondisclosure of information by the interviewee's body language. Third, delimitation might include the pressure of the sample size of only six supermarket managers. Finally, Southern Illinois is the chosen location for the convenience and size of the population.

Significance of the Study

Contribution to Business Practice

This study's findings may be significant because supermarket managers might utilize or adapt improved supermarket operations results. Supermarket managers face the challenges of adapting SST practices to engage staff and customers. In this study, I attempted to identify and understand what strategies supermarkets use to improve their innovative SST technology knowledge. As supermarket managers utilize in-store SST experiences, revenue growth is possible. The interviewed managers provided their respective experiences in adapting the SST practices with strategies for successful implementation. Using SST transactions may result in enhanced operational efficiencies within the supermarkets under study. Although this study's focus is on supermarkets in the Southern Illinois region of the United States, the study's findings may benefit supermarkets in different locations by promoting innovative technology solutions to improve supermarket processes, procedures, and productivity.

Implications for Social Change

The implications for social change include the potential to create change opportunities to adapt to SST practices performance and increase both supermarkets' profitability and tax revenues for surrounding communities. Managements' use of strategies to implement SST practices may enable supermarket managers to adapt to social change. SST practices may lead to new workplace ideas, improve staff and customers' lives, and improve operational performance, representing a promising avenue of social change through technology innovation. The study results can have implications for positive social change by sharing knowledge of innovative strategies, increasing SST opportunities, and increasing the standard of living in communities. The results can increase operations' understanding of the challenges supermarkets face in Southern Illinois and find ways to offer support to increase supermarkets' survival rates with derivative benefits, such as tax revenues, for benefiting communities' citizens.

A Review of the Professional and Academic Literature

SST continues to touch every aspect of people's lives (Considine & Cormican, 2016). The food retail industry continuously evolves in developing and developed countries in the local traditional stores and supermarkets to e-commerce (Lu & Reardon, 2018). Stanton (2018) noted the supermarket industry continues to change its technology to accommodate the growth in population and customers' demands for speedy service. Lee (2017) reported Internet shopping, self-checkouts, and interactive kiosks, known as SST, have replaced human interaction and accelerated this phenomenon. Innovation is

understood as not just a necessity for commercial success and profitability in the sector but is also critical for survival and long-term sustainability (Bulmer et al., 2018).

To develop this qualitative study and examine the concepts of technology innovations, I conducted an acritical analysis of the literature on the topic. By investigating traditional supermarkets, brick-and-mortar or chain stores, hypermarket or big-box markets, and online services, this review's findings may provide supermarket industries with practical strategies to adapt SST. The multicase qualitative research goal were to study six supermarkets in Southern Illinois in the Midwest region of the United States. Andrews (2018) noted supermarkets are an excellent site to examine because they employ workers most likely to be affected by the technology. With the recruitment of six supermarket managers, the study may provide an insight into the managerial strategies used to adapt SST technology. The purpose of this qualitative multicase study were to explore the successful managerial strategies of supermarket industries to adapt SST practices for an increase in revenues, profitability, and sustainability.

Search Strategy

For the literature review, I used the following databases: Google Scholar, EBSCOhost, Emerald Management Journals, ProQuest Central, SAGE Premier, Science Direct, ABI/INFORM, Academic Search Complete/Premier, Business Source Complete, IBIS World, and Ulrich. The following keyword search terms were used: *innovation, supermarket industry, management strategies, operations, training programs, self-service technology, embeddedness, decision-making, kiosks, sustainability, technological*

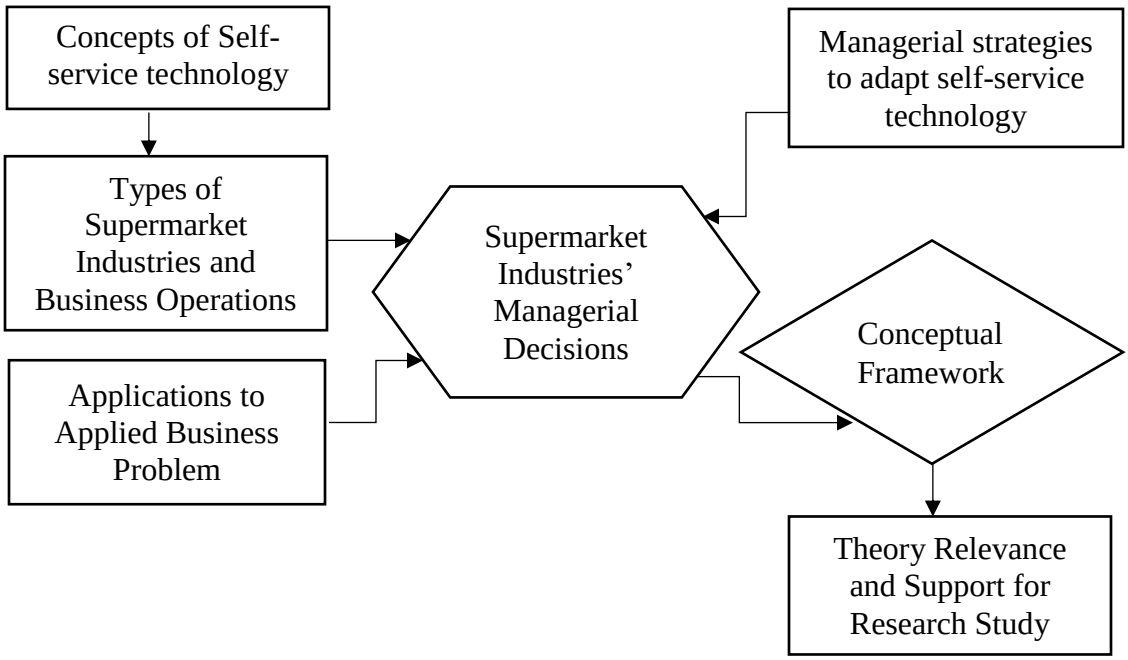
innovation strategies, industry change, process improvement, and disruptive innovation theory.

The total number of references for the study includes nine books and 237 peer-reviewed journal articles. Of the 246 study references, 232 (94%) met the publication requirements within 5 years of the study's estimated approval date by the chief academic officer. Of the 237 literature review references, 229 (97%) are peer reviewed and published within 5 years of the study's estimated approval date by the chief academic officer.

I developed a conceptual research model for the literature review (Figure 1), illustrating the supermarket industries' various daily self-service technology concepts. The supermarket industries should secure successful managerial strategies to adapt self-service technology.

Figure 1

Conceptual research model of the literature review



Types of Supermarket Industries and Business Operations

Types of supermarket industries and business operations include traditional, brick-and-mortar, and online supermarkets. Lu and Reardon (2018) noted food retail continues to evolve from the past century of local traditional stores to supermarkets to e-commerce. Supermarkets came into existence during the depression period in the United States (Murugan, 2017). Cebeci et al. (2020) stated rapid developments in technology dramatically changed how retailers offer customers services. Supermarkets from traditional to SST should include ease of use to profit and survive. Stanton (2018) noted food retailers should continue to follow customer and technology changes if they want to grow and prosper. Innovation is crucial for a firm to sustain development and competitiveness and boost its profits (Wang et al., 2019). Khan and Brouwer (2016) noted with the emergence of the Internet, the face of retail has irreversibly changed. Consumers have massively turned to Internet e-shops for better deals, providing more variety while spending less time and energy (Khan & Brouwer, 2016). Lu and Reardon (2018) noted retail traditionally had been composed of small local shops and market stalls selling dry goods and perishable products where consumers frequently shopped in all types of regions. Consumers shopped locally at these outlets for lower costs and to store smaller amounts of products to meet their needs for several days.

Traditional Supermarkets

Traditional supermarkets or general stores include long-established habits or ways the retailer uses a method. Lu and Reardon (2018) expressed in the 1920s to 1940s in the United States and Western Europe. In the 1980s and 1990s in developing areas,

supermarkets emerged and after several decades in each region diffused rapidly. Supermarkets initially offered dry goods of food and non-food. By selling at lower costs, supermarkets drove small mom-and-pop stores or general stores out of business. Slowly, supermarkets and supermarket chains overpowered, obtained, and penetrated other food markets, developing traditional supermarkets. The conventional supermarket checkout system consists of a cashier using a cash register to tally goods purchased by the customer. Emerging checkout systems with cash registers include bar codes and handheld scanners. Keller et al. (2018) noted innovation is implementing a new or good or service through a new process or marketing method in the business practices, workplace, or external relations. de Waal et al. (2017) stated that new sources could help supermarket companies increase their competitive capability in the supermarket industry. Vetter et al. (2019) noted the rapid expansion of modern food retail encapsulated in the so-called supermarket revolution, often portrayed as a pivotal driving force in the modernization of supermarkets adaptive and resilient to its modern competitors. Supermarket operations continue to evolve from traditional stores to brick and mortar stores.

Brick-and-Mortar Chain Stores

Brick and mortar refer to a traditional street-side business, offering products and services to its customers face-to-face. Taylor (2016) stated retailers begin to utilize the SST in larger stores and provide self-service checkout (SCO), first launched in the United States in 1992. Domansky and Labenda (2020) noted that customers operating today in many sales channels pose new challenges to suppliers' distribution systems. Otekhile and Zeleny (2016) shared the emergence of self-service technologies has replaced the

traditional way of conducting business at an increasing rate worldwide. The use of touch screens, wireless adapters to an Internet connection, communication systems, and self-service checkouts are inclusive in the different platforms of SST. Cebeci et al. (2020) noted self-scan checkouts are an example of innovative self-service technology. Other SST platforms include kiosks, self-checkout scanners, and e-commerce use for customers. Collier et al. (2017) noted some SSTs require a degree of employee participation or supervision in airports and theater ticketing kiosks, grocery checkouts, and automated bank tellers (ATMs).

Wensing et al. (2018) noted brick-and-mortar grocery retail companies are operating in an ever more competitive environment due to consumers increasingly expecting higher standards and continued market consolidation in the grocery sector. Redd and Vickerie (2017) stated American retailers need to reach their customers in innovative ways to maintain their contribution to American job growth and retention. Stulec et al. (2018) noted brick and mortar came first, followed by the Internet, which enabled retail stores to utilize online functions. Red and Vickerie further stated managers who take advantage of technological innovations and significant data metrics could keep up with the evolving retail landscape.

Hypermarket or Big-Box Market

The development of hypermarkets or big-box markets followed chain stores as large stores with more goods and varieties of products to sell. Yee et al. (2018) stated that emerging hypermarkets affect the small local retail and small local suppliers. Bailey and Alexander (2019) noted economies of scale achieved by self-service enabled larger

supermarkets to stock a wide range of products, allowing them to sell the goods at discounted rates to customers. Wal-Mart Supercenters and Fred Meyer are examples of hypermarkets. Norton and Elberg (2018) stated since the rise of big-box retailers, the public outcry from suppliers is the balance of power has shifted towards large retailers. Yee et al. further noted hypermarkets should provide a trouble-free and effortless process for customers.

De-Juan-Vigaray (2019) noted customers in 2015 experience an interaction between companies and customers. Yee et al. (2018) expressed that the customer is perceived as one of the essential stakeholders in the hypermarket context. Customers contribute to their revenue and profit-making, and essential for hypermarkets to meet customers' requirements and needs. The customers' businesses with the firm include the interaction with the staff, self-service technologies, and the service environment (de-Juan-Vigaray, 2019). Marques et al. (2016) noted that each store's service and environmental experience provide a unique combination by offering a specific service formula, not expected to be found elsewhere. Shamaeva (2020) noted designing a supermarket is similar to creating a production building, where technology comes first and determines the whole process. Hypermarkets include a variety of services to provide online services for customers.

Online Supermarket

Online services include numerous ways for customers to utilize technology in supermarkets. Patterson et al. (2017) noted the past year had brought many reminders of an increasingly digital world. Redd and Vickerie (2018) stated that the retail industry

innovations seek to combine a cooperated approach integrating multiple data sources, products, store types, and customer experiences with technology. Self-service Checkout (SCO), e-commerce, and online shopping emerge to allow customers to use various technological innovations to include grocery pick-up and delivery to car and home. Larson (2019) stated self-checkouts might help shoppers' complete purchases faster.

Online supermarkets must constantly alert the companies' role and impact of customers' needs and profit margins. Frasquet et al. (2020) expressed an increasing number of companies are asking themselves questions related to the impact of the new online channel on their bottom line and their customers. Companies need to assess how customers continue to use the online channel months into adoption to evaluate and support investment decisions (Frasquet et al., 2020). McWilliams et al. (2016) noted SSTs are the newest additions to many public service venues, most commonly with banks, retailers, and grocery stores, within the past two decades. Pan et al. (2017) stated the development of e-grocery allows people to purchase food online and benefit from home delivery service. He et al. (2018) noted social media is becoming an essential source of information reflecting customers purchasing decisions and can influence other customers' decisions.

Applications to Applied Business Problems

Any new technology can create negative attitudes and frustration by customers trying to use it for the first time. Cebeci et al. (2020) noted corporations, managers, and employees should implement goals to make SST work for customers. Managers should use strategies to adapt and implement the goals and visions of the

corporation. When the goals and visions of the organization become a reality, employees follow the manager's lead. The organization's responsibility to set the entire operation goals and visions becomes an effective strategy in advancing the new technology. Efimochkina (2018) noted that the development of new business models involves transforming technological infrastructure and restructuring activities. These transformations express how customers, managers, employees, and corporations view the adaptation of an applied business problem.

Customer Attitude to New Technology

Iqbal et al. (2018) noted SST has developed into a vital aspect in customers' day-to-day lives. Rapid developments in technology have changed how retailers offer services to customers. Lee and Lyu (2016) noted that customer traits contribute to explaining how personal values lead to SST usage intentions. Customers might have mixed feelings toward the use of SST. Customers might dislike change and be apprehensive about using SST. Feng et al. (2019) noted facing restrictions on their accessibility to alternative service options, users may perceive themselves as having limited freedom to choose. Oh, Jeong, Lee, and Wamick (2016) stated voluntary use of new technologies demands knowledge, skills, and liking. Feng et al. (2019) noted that replacing complete services with SST sometimes fails to deliver the benefits companies have hoped for because they may feel forced to use SST and show resistance to the new technologies.

Sometimes customers become agitated with the self-service lanes and leave the products and store with a disgruntled attitude. Kazancoglu and Kursunluoglu-Yarimoglu (2018) stated retailers should install a sufficient number of user-friendly and

straightforward interfaced self-checkouts with well-trained employees to encourage usage and reduce the perceived risk and anxiety. Cebeci et al. (2020) noted corporations, managers, and employees should implement goals to make SST work for customers. The goals and visions of SST usage should implement positive and trustworthy solutions to business problems for customers.

Managers Implementation of Goals and Visions

Consumer trust occurs when managers focus on adapting and implementing positive goals and visions of an applied business problem. Managers should focus on communication strategies and demographics of SST in the workplace. Wei et al. (2017) noted business managers and supervisors understand and describe technological innovations to create effective strategies to match customers' needs better and to deliver a more customized self-service experience. Managers involved in introducing strategic management strategies to make an effective change with products and services offer operational choices. Management requires the examination of budgeting their resources to implement new technological advancements effectively. Picolo and Tontini (2018) noted managers need to be aware of the company's innovative attributes effect already used. Kaushik and Rahman (2016) communicated the impact in the services arena through the development of SST. Yashkova et al. (2016) stated management requires developing new improvements to keep up with social and economic changes. Management recognizes the need to balance between business analytics, face-to-face interactions, and SST to benefit employees to generate growth. Managers' adaptation of SST practices may help businesses remain resilient in retail operations. Managers rely on

goals and visions to share with employees to implement sustainable advances in technology.

Employees Follow the Managers Lead

Employees' role in adapting and implementing SST usage supports the managers' development of new technology innovations. Chiu et al. (2017) noted followers also benefit when they perceive their managers as leaders. Zizek et al. (2017) stated that everything is continuously changing global markets, national/local markets, organizations, and workplaces where employees face multiple challenges. Employees' mindset should adapt to the ever-changing technological world. Schaubroeck et al. (2016) noted employees engage in a specific set of customer service behaviors, endorsing their organization's guidelines. Employees today should explore adaptive strategies to gain knowledge in the operations of SST. Kazancoglu and Kursunluoglu Yarimoglu (2018) noted retailers should provide personalized training and support employees. Supermarket operations and service providers should include flexibility in presenting positive outcomes with employees' input and ideas. Managers may implement training sessions to adopt new technology to devise ways to work in any industry. The focus on employee training benefits the business to promote future success.

Corporations Goals and Visions

Corporations should include decision processes connected with higher-order capabilities as sensing change, seizing opportunities, and transforming organizations. Kogabeyev and Maziliauskas (2017) stated that innovation is the core action for economic activity development and productivity. Filipe et al. (2017) noted retailers seek

to strengthen the relationships with customers to maintain long-term relationships through higher levels of satisfaction, trust, and loyalty. Zizek et al. (2017) noted every activity results from the demand for efficacy, efficiency, and success. The corporation's goals should be aware of the positive and negative impacts of technology. Xin et al. (2019) noted technological innovation could be classified into major and minor innovations, enabling firms to gain a competitive and sustainable advantage in the changing environment. Stojanovic (2017) noted experience significantly increases operations efficiency by introducing business innovations in the digital economy era. Corporations' goals and visions should focus on applied business problems with SST to bring autonomy and success.

Conceptual Framework

The purpose of this qualitative multiple case study is to explore successful managerial strategies of supermarket managers to adapt SST practices in supermarkets. Radnejad and Vredenburg (2019) noted a need to understand whether the barriers and challenges associated with developing a disruptive process innovation and the capabilities the firms should develop to overcome the disruptive product innovations. Small to large organizations experience disruptive innovation, including self-checkouts, kiosks, ATMs, and e-commerce. Disruptive innovation affects organizations with systematic approaches to be sustainable and succeed.

The initial explanation of the conceptual framework indicates the disruptive innovation theory's change from the dynamic capabilities view, the innovation orientation, the viewpoint of the connection to organizations, management strategies, and

adapting to new practices using disruptive innovations in supermarket industries. The disruptive innovations theory incorporates creating a new product or market, ultimately disrupts an existing market. The approach is known as one of the most influential business ideas of the early 21st century. Mahto et al. (2017) noted disruptive innovation refers to a new product, idea, process, or business model introducing significant change or disruption in the market and, to some extent, the industry serving the market.

Dynamic Capabilities Theory

Kikuchi and Iwao (2016) noted Teece, Pisano, and Shuen in 1997 developed the idea of dynamic capabilities. Lee and Yoo (2019) acknowledged the dynamic capability view could be explained as the ability to consolidate, structure, and reconstitute capabilities existing inside and outside a company to adapt to environmental changes. Kikuchi and Iwao (2016) noted that the theory's development is a part of the organizational processes, including fixed concepts, such as integration and coordination. Dynamic capability is an organization's ability to recognize potential technology changes and to adapt to changes through innovation to prepare for a changing business environment (Lee & Yoo, 2019). The power grants firms determine opportunities and threats, search for skills and awareness, and take an active role in finding new market connections. Linden and Teece (2018) expressed dynamic capabilities framework needs to incorporate criteria to help select among capabilities for development, augmentation, or divestment. Gruchmann et al. (2019) noted dynamic capabilities, informed by an empirical investigation of local food distribution, allowing for a refinement of the

theory's sensing, sizing, and transformation capabilities and theoretically deducing potential pathways for a sustainable transformation.

Gupta et al. (2019) stated the insights for practice in business organizations for improving the firm's competencies and competitiveness in a dynamically changing environment. Furnival et al. (2019) noted improved organizational routines, bundled together, to adapt and react to organizational circumstances. Therefore, understanding the contribution of innovation orientation and openness of the organizations allows exploring new ideas. Organizations should be proactive in exploring new opportunities and not only build on strengths. The innovation efforts should have an impact on the necessity and capable of satisfying customer expectations.

Innovation Orientation Theory

Cakir and Adiguezel (2019) stated innovation orientation has been providing innovation behavior to improve quality and significant benefits over many years. Cakir and Adiguezel further noted innovation orientation is a philosophy that promotes openness to new ideas and reflects an organization's willingness to change. The change includes the acceptance and practice of new technologies, supplies, skills, and organizational systems. Norris and Ciesielska (2019) stated innovation orientation gained interest in the past 11 years as strategic orientation, impacting business performance. Ardito et al. (2021) noted the performance outcomes of a firm's strategic commitment to digitalization and environmental sustainability. Li and Huang (2019) noted service firms and service employees make a more significant effort to facilitate customers' in-lobby

self-service processes as a proactive recommendation, personal assistance, and user-manual and user-friendly approaches.

Leyer et al. (2017) stated that market competition requires that organizations excel at operational performance and innovations. Coccia (2020) noted that disruptive technologies compete with other technologies to achieve dominance in markets, generating industrial and corporate change. Cheong et al. (2017) stated the advancement of information and communication technology, which offers compelling computing and communicating capabilities, has radically changed the service delivery industries towards SSTs to supplement or replace the conventional ways of service delivery. Norris and Ciesielska (2019) acknowledged the need for a particular focus to develop internal capabilities or organizational, internal processes, and customer-oriented approaches. Norris and Ciesielska noted the practical approach to innovation orientation targets managers, who require more specific advice on making their organizations sustainably innovative in the long term. Leyer et al. stated that though process orientation is intended to benefit operations in general, specific elements' impact remains unclear. Innovation orientation should include a work environment for the organization to encourage and promote continual creativity and change. Varadarajan (2017) noted that successful innovations did not exist yesterday, but the world cannot live without today and in the future. Innovation orientation should include a work environment for the organization to encourage and promote continual creativity and change.

Disruptive Innovation Theory

According to Mahto et al. (2017), disruptive innovation is defined as the attempts to commercialize an invention. Tabbah and Maritz (2019) noted disruptive innovation is rooted in economic evidence through the technological waves of Kondratieff in 1925 and the "Creative Destruction Technologies" of Schumpeter in 1942. Radnejad and Vredenburg (2019) noted Schumpeter's creative destruction theory provided the basis for Christensen's concept, disruptive innovation Christensen (2013) noted, he pioneered the theory of disruptive innovation in 1997. Riesmeier (2020) stated that disruptive technology initially underperforms compared to previous solutions, which does not immediately threaten the incumbent. The focus begins to change to introduce new and sustaining innovations to meet the industry and customers' demands. Montoya and Kita (2018) noted that disruptive technology offers a much lower performance than the prevailing technology but improves overtime to develop from low-end use to high-end use in the market.

Norris and Ciesielska (2019) noted the four pillars of innovation orientation indicate the areas in need of development include (a) innovation culture, (b) flexible structures, (c) capital and knowledge capabilities, and (d) understanding environmental dynamics. The use of the disruptive innovation model is an effective means for developing technology strategies. The theory includes new and changing business processes, cutting-edge technologies, and replaces faulty performing products and services in established markets. Vecchiato (2017) stated Christensen's work was cited extensively by scholars in diverse disciplines and research fields, including marketing,

strategy, technology, and innovation management. McDowall (2018) noted disruptive innovation is better describes one specific mechanism of technological and industrial change that contributes to a broader framework of understanding transitions. McDowall further stated that disruptive innovation should be a warning and reminder for businesses, policy analysts, and energy modelers who are prone to overlook potential shifts in user demands and the technological changes that chase and enable them.

The disruptive innovation theory pertains to supermarket industries using SSTs to provide a helpful tool for the customers and strategic choices to promote sustainability. Considine and Cormican (2016) shared SST has become everywhere in modern life. Almost every supermarket industry in the United States is using SST practices. Chang et al. (2016) noted launching SST should involve the continual development of the purchasing process and functional relationship for marketing strategies. Demoulin and Djelassi (2016) stated retailers extended their range of SST to include self-scanning of SCO, whereby customers scan their purchases themselves and then make payment. Demoulin and Djelassi (2016) stated by using SST, customers perform the service, or part of the service, traditionally performed by the service provider.

Wang et al. (2017) noted the long-term viability and success of SST depend on regular and frequent usage. Wang (2017) noted customers are more willing to choose SST service when they believe it is a better option and provides more benefits than personal service. Demoulin and Djelassi further noted SSTs should be more compatible with customers' actual habits. According to Chang et al. (2016), retailers who are willing to launch SST continually should tie such efforts to their relationship

marketing strategies. Considine and Cormican (2016) noted SST adoption by businesses as a critical element in controlling costs and improving customer experience. SST use is a presence in supermarkets today and in the future.

McDowall (2018) stated disruptive innovation, often used to refer to any radical or far-reaching technological change. Disruptive innovation leads users to be willing or able to demand higher quality technologies and innovations. The users can strongly influence priorities to innovate new technologies. Supermarket operations listen to the users to meet demands and needs effectively. Khan (2020) stated the velocity of technological advancements has noticeably affected the business world, affecting the traditional ways of manufacturing products and providing services. Within the supermarket industry, there is a race to benefit from technology because the competition is extensive. Khan (2020) noted service providers and customers are both taking advantage of the availability and accessibility of emerging platforms in delivered services.

Coccia (2020) expressed that disruptive technology has a series of major and minor technological advances that pave the way for dominance on other established technologies in markets. With disruptive technology, supermarket operations impact disruptive innovations in markets and are associated with their evolution compared to other innovations (Coccia, 2020). The patterns of disruptive innovations can generate structural change. Disruptive innovations are strategic and analyzed to service existing products and services but extend to present and future services for success.

SST and Disruptive Innovation Theory

SST is a part of the disruptive innovation theory that creates a thriving environment to support organizations, management, employees, and customers. Wagner (2016) stated innovation activities in high-technology industries pose considerable challenges for technology and innovation management. Gui et al. (2018) noted disruptive technologies are not entirely isolated from the existing technologies but can combine with current technologies by transforming existing products and creating new products. The transformation should include today's demand for the supermarket industry and develop new business practices.

Dobni and Sand (2018) expressed innovations can impact ecosystems, business models, technologies, and practices. Every organization needs to consider where and in what configuration innovation can significantly impact them. Once industries adopt different SST approaches, questions arise as to the outcomes of the decisions. The questions will eliminate old practices that yield marginal returns and new drivers that create differential value (Dobni & Sand, 2018). The new values occur due to changes in the operation of SST. Dobni and Sand noted the new approaches do not signal the abandonment of long-standing approaches. However, it employs a different lens by simply shifting focus, and innovation becomes the foundation for strategy and not simply an incidental outcome.

Organizations require understanding SST practices due to usage in many supermarkets. Innovations infiltrate the supermarket industry with advanced technologies and competitive responses. Denning (2016) stated Christensen defines disruption as a

theory of competitive response. According to Skog et al. (2018), digital disruption, from the firm's perspective, heavily invest in old conditions to plan a course of development is interrupted. Christensen developed the theory of disruptive innovation for business leaders to use when creating strategies for competitive response and increasing performance. Christensen's theory includes offering new value recommendations. Tabbah and Maritz (2019) noted that the offering continues to improve with time until it reaches a level of quality and performance acceptable and fit for most mainstream customers. As such, it disrupts the incumbent firms. Skog et al. further stated that digital disruption, generally perceived from a firm's perspective, is heavily invested in old conditions and whose typical or planned development course is interrupted. Checkers, older than more traditional ways for shoppers to checkout, the SST is the innovative digital world today. Skog et al. further noted digital innovation, viewed as a process or outcome, enables a digital driving transformation of society.

SST Strategies and Disruptive Innovation Theory

Technological innovations remain a constant interest in supermarket operations with the practice of SST transactions in present-day society. The disruptive innovation theory contains impacts on organizational practices. O'Reilly and Binns (2019) noted imminent facing disruption, many large, established firms, have embraced innovation to develop new growth businesses. Zizek et al. (2017) noted everything is continuously changing, such as the global market, national or local markets, organizations, and workplaces. Li and Huang (2019) stated service firms should be aware of their role in SST encounters as a value facilitator rather than a bystander. By monitoring the SST

innovations, operational leaders can focus on the various strategies to implement SST practice. Managers can become students of technology to adapt SST strategies to create new business practices with positive impact. The primary concern of SST innovation includes employees' and customers' awareness. If innovations are unknown, managerial skills should demonstrate successful SST practices to make individuals aware of these new practices. Filipe et al. (2017) noted that retailers seek to strengthen relationships with their customers to maintain long-term relationships through higher satisfaction, trust, and loyalty.

The SST phenomenon, not new but are relevant to industries to increase and advance the use of the technology. Being able to connect customers with the SST offers direct interaction with the devices instead of employees. The use of SST consistently relates to SST adoption with service use and operations' performance. Gummerus et al. (2019) noted SSTs revolutionized customer service in that these technological interfaces enable customers' to serve themselves, transforming the ways customers interact with the service supplier.

Supermarket leadership decides on the types of methods and strategies to adapt to engage staff and customers to accept technology changes. The types of strategies should include the initiation of successful supermarket SST practice. Tadao Kawamoto and Giovinazzo Spers (2019) stated Christensen's theory noted some innovations bring new customers to the market, previously untapped due to lack of ability to consume or enjoy the excellent service or insufficient resources. Managers' use of the methods includes strategic alignment, market penetration, change management, website initiatives, system

integration, technology life cycle, and collaboration to offer advancement opportunities. Mazana et al. (2016) noted SST is a source of competitive advantage and has become a real game-changer in the industries. Tadao Kawamoto and Giovinazzo Spers further remarked by making products and services more efficient and cheaper; firms enable the emergence of customers requesting attributes different from those demanded by the conventional market Christensen theory. Tadao Kawamoto and Giovinazzo Spers further stated Christensen's theory noted firms who practice such strategies are called new-market disruptive innovators.

Strategic Alignment

Managers can use strategic alignment as a method to align SST technology. Gummerus et al. (2019) noted from a practical point-of-view, and when reviewing more recent research, it becomes apparent that SSTs have evolved. Mazana et al. (2016) stated SST methods strategic alignment could align information technology with its corporate and business unit strategies. The disruptive innovation theory is a process to streamline improvements in businesses as with SST use in supermarkets. Christensen (2013) noted being able to foresee how particular emerging technology might change the competitive landscape within an industry can help an organization protect its competitive advantage from threats or use the technology to strengthen its position in the market.

Camara et al. (2018) stated streamlining the conversation competencies produces an improvement in the business and its strategic alignment. Gummerus et al. (2019) noted that due to the rapid advancements in technology, service researchers have a clear challenge to provide sufficiently unique and applicable classifications of SSTs. The

strategic alignment enables communications of the decision-making positions to achieve the organizational objectives (Camara et al., 2018). Tadao Kawamoto and Giovinazzo Spers (2019) noted understanding the different types of innovation is relevant to the advancement of theoretical constructs and applications within the organizations. Management utilizing strategic alignment makes choices dependable, adapted, and integrated within the entire business operation. Christensen et al. (2009) noted disruption rarely happens piecemeal. Stand-alone disruptions are plugged into the existing value network of industry, adds new value networks, and disrupt the old. Gummerus et al. stated the relevance and applicability of classification schemes developed for traditional service contexts to identify further issues to consider when characterizing SSTs.

Market Penetration

A market penetration method includes introducing a product to recognize and accept the product to increase the market as with self-service technology. Huang (2017) stated market penetration is not a linear and straightforward process. Mostafizi et al. (2017) noted that technology evolves rapidly over time, opening windows to new opportunities, challenges, and how technology advancement affects the application outcomes. According to Biber et al. (2017), history is full of technological and management advances that fundamentally disrupted business models. Bower and Christensen (1995) described disruptive innovation as occurring outside the existing firm's value network. Palacios and Tellis (2016) stated technological breakthroughs in one market enable growth in the same technology market and stimulate progress in other

related technologies and other related markets. Managements use of SST will allow present market penetration in supermarket operations to grow for future opportunities.

Sedmak (2016) noted Christensen examines innovation theory and how organizations can build a structure to sustain yesterday's successes and design new technologies that result in the next disruptive innovation. Christensen's theory can include new structures and technologies to build upon for managers in supermarket industries. Bower and Christensen further noted disruptive innovation introduces a different package of attributes offered to and valued by customers who eventually transform a product or service to the extent of overthrowing incumbent dominant firms in the industry. Dobni and Sand (2018) noted an effective marketing action from value chain agents requires an increased consumers' knowledge and consumption of goods. Market penetration is essential to recognize and increase growth, profit, and revenue.

Change Management

Change management is a method management utilizes to create change. Tadao Kawamoto and Giovinazzo Spers (2019) noted the theory of disruptive innovation was developed in the 1990s by Clayton Christensen as an attempt to shed light on why companies failed to identify some innovations with less embedded technology that threatened their dominant positions. Vlados (2019) noted change management processes are the forms and ways to design, implement, control, evaluate, and assimilate changes. Mazana et al. (2016) stated change management in technology adoption is usually slow due to attention paid to technical aspects rather than the business process and social issues. O'Reilly and Binns (2019) noted imminent facing disruption, many large,

established firms had embraced innovation to develop new growth businesses as Christensen suggested. Managerial strategies in supermarket industries should include ways to develop SST practices to see success. Vlados further stated from the everyday organizational experience, it is clear the process of change is always varied and multifaceted, and in turn, touches and interconnects, to a greater or lesser extent, all the different subsystems of each organization-actor. Kennett- Hensel and Payne further noted the almost unbelievable rapid changes surrounding us and the rapid change in our personal and business lives. Managers can create positive benefits with enormous effects, but the changes can be complex. Kennett-Hensel and Payne (2018) stated that today organization out pressure is formidable with the competitive landscape to adapt the technological change to its culture through a positive, effective change. It is eminent for businesses to consider implementing and adapting policies to train managers on SST innovations and practices to prevent supermarket organization's SST failure. Blal et al. (2018) noted a new business model invades a current market by highlighting different qualities and features offered by current firms, thus attracting a different customer base and enlarging the existing economic pie. Blal et al. further noted scholars' debate between disruptive innovation types, but Christensen's theory discussed a business model innovation with attributes that straddle technological or radical innovation.

Website Initiatives

Managers can use a different method by designing operability websites, leading to potential repeated visits for supermarket marketing plans' successful practice. Singh et al. (2016) noted an organization's success in e-business is significantly affected by its

website quality. Bower and Christensen (1995) stated companies who understand this process can create new businesses to replace the ones that should inevitably die. Furthermore, companies should give managers of disruptive innovation free rein to realize the technology's full potential-even (Bower & Christensen, 1995). Supermarket industries should rely on managerial skills to introduce SST practices to replace traditional ways of doing business. Advertising on websites can add SST services to benefit the supermarket services. McDowell et al. (2016) noted retailers commit substantial resources to develop online brands and e-commerce sales channels. Mazana et al. (2016) noted the lack of proper functionality, excessive use of graphics, or similar factors could also deter customers from coming back to the site. Mazana et al. further stated poor website design could result in decreased trust in using the business because they look and feel often creates a lasting impression. Lamberz et al. (2018) noted a website's success depends on its customers' requirements. Lamberz et al. further remarked already in the 1990s, Nielsen realized the significant prominence of usability for website development. Supermarket managers should utilize an industry website and usability to affect future initiatives success for positive purchases online or supermarket operations. Denning (2016) noted Christensen pointed out that in the last twenty years, little by little, the realization of new theories to account for changes in society and disruptive innovation theory. Bower and Christensen noted no matter the industry, a corporation consists of business units with finite life spans, and disruptive technologies are part of the cycle.

System Integration and Technology Life Cycle

Managements use system integration, and the technology life cycle is one-way supermarket operations that can adopt new technologies to provide varied opportunities. Bower and Christensen (1995) noted established companies should create and nurture independent organizations to develop innovative products of no immediate interest to current customers. Sweet et al. (2016) stated Christensen's theory primarily describes products and services eventually aimed at a new customer group. Christensen's theory can assist managers in supermarket industries. Manager strategies can include descriptions of new SST services to help customers become comfortable with technological innovation in the supermarket. Vecchiato (2017) stated that disruptive technologies only service niche segments in Christensen's early stage, providing a value of new attributes. Mierasm et al. (2019) noted early adopters are open to ideas and actively adopt new ideas to decrease innovation uncertainty. According to Hassan et al. (2019), Internet of Things (IoT) systems pave the path for a revolutionized world. The majority of the objects used every day will be interconnected. Xu et al. (2016) stated that information technology applications require significant investment and often bring dramatic changes to organizations.

Mazana et al. (2016) stated to improve customer service, providing information on a timely basis could prevent fraud from supporting new and agile business models. Industries need to deal with all problematic issues associated with systems. Mieras et al. further noted that making new technologies a success necessitates making sure people move into the implementation and confirmation phase as soon as possible. Mieras et al.

stated it is crucial to make it simple and easy for users to adopt the new technologies. It can become their new behavior. Zalan and Toufaily (2017) noted once the disruptive technology gains a foothold in these markets, the improvement cycle begins. Zalan and Toufaily further stated the pace of technological progress eventually outstrips customers' ability to use technology. The previously not-so-good- technology improves enough to intersect with the needs of more demanding customers in the mainstream. Bower and Christensen's theory pertains to this study because top leaders should guide management to develop new products or processes. Bower and Christensen noted managing new technology is tightly linked to a company's investment processes.

Collaboration

Supermarket managers should focus on having proactive cooperation and collaboration with employees to develop a strong SST innovation plan. Bower and Christensen (1995) stated that they should train managers to fulfill those reliable customers' requirements to increase profitably by staying close to lead customers. Dunning (2016) noted an established framework links collaboration to trust, mutual commitment, and mutual dependency between influential communication members. Kurowska-Pysz et al. (2018) stated sustainable planning approaches and policies are an increasing reality. Branska et al. (2017) noted building functional collaboration requires a change in the management and relationships between the cooperating links a change in processes with all the cooperating members of an organization. Wang et al. (2017) indicated satisfaction and self-efficacy positively contribute to the development of

cooperation. Managers should focus on planning for employee cooperation to enable customers to learn SST practices.

Wang et al. (2017) noted implications for service providers planning technology upgrades to prevent habit disruption with gradual improvement for cooperative strategies to introduce new disruptive technology. Wang stated that when customers are not confident, they are less willing to cooperate and use the technology because the benefits of using it become less apparent. Wang explained a technology perceived as more comfortable to use might be accepted by users cooperatively. Dos et al. (2017) stated cooperation as the combination of acts involving social interaction, coordination in goal setting and achievement, and communication. Supermarket industries need to recognize the importance of SST practices and maintain proactive innovation measures by implementing managerial strategies. Krotov (2019) noted Christensen's theory addresses collaboration and predictability of future technological trends to strengthen the position of a field of inquiry or professional practice as scientific and producing fundamental knowledge.

Added Value of Disruptive Innovation Theory

The manager's focus should include communication strategies to assist employees' and customers' expectations with real SST experiences. Christensen's theory is relevant because of the transformation from using checkout lanes with traditional cashiers to SST checkout kiosks, barcode scanners, or touchscreen devices in the supermarkets. Christensen and Raynor (2013) noted it seems easier to devise a communication strategy and choose the most cost-effective marketing media to facilitate

communication with customers. Customers often feel more comfortable with human-to-human interaction as a checker. Leadership and managers should focus on communication strategies, demographics of the SST in the workplace, and environmental cues surrounding SST practices. Managers should focus on new trends to adapt processes and lower costs. Shimizu (2017) noted continuous adjustment and modification in strategies remain essential when dealing with environmental changes and the uncertainty of future endeavors with the implementation of the new strategies. In this study, the managers' focus is to adapt SST strategies to lead a creative and positive supermarket operation implementation. McDowall (2018) noted the fundamental factors involved in the organization, the environment, and real-world actions include the following conditions:

- Lead Users: Lead users are willing and able to pay more, and they are demanding high quality.
- Low Margins: Low margins and lower profits mean competing options of little interest to incumbents. Technological learning within the low-market foothold may lead to disruptive entrants becoming dominant.
- New Market Footholds: Newmarket footholds (i.e., self-checkouts and barcode scanners) are new technologies to disrupt existing markets.
- Strategic Attention: Christensen's analysis focuses on strategic and analytical attention on users currently not served by existing products and services.

Lead users need to possess skills and knowledge that advance and contribute to engaging, successful SST innovations. Hallikainen et al. (2019) noted innovativeness and

the perceived importance of mobile applications and social media also serve as positive predictors. The lead users must enable industries to grow short and long-term profits that impact the operations. The development of the innovations is a strategic improvement for industries to integrate and innovate with SST. Marzouki and Belkahla (2020) noted lead users are users at a leading-edge concerning relevant attributes of needs and requirements encountered. Ebrahim and Yordanova (2018) stated that such an innovation network would serve different purposes that are currently qualified for innovation management in business organizations and easy access to lead-user innovators. Industries need to involve all areas with innovative strategies to handle any challenges or successes in the real-world.

Low margins in businesses make smaller profit amounts. Supermarkets are low-end retailers. A margin consists of the difference between the seller's cost for the products and the selling price. The financial health of a business must keep overhead costs under control to build a successful profit. Koch et al. (2019) noted leaders and business unit managers working in resource-constrained, profit-focused environments could work together to implement emerging technologies that benefit the business. With a low margin for supermarkets, the amount of profit per product sold, compared to high-margin businesses. Supermarkets are lower cost and easily accessible to customers with lower gross margins than their associates. Once they have served the low-end markets, the expansion occurs to more significant markets due to the accessibility of the supermarkets.

The new market footholds with SST devices continue to evolve in businesses creating disruptive innovations. Innovations constantly occur in businesses. The change, perceived in the way consumers interact with businesses, adopting different communication channels besides the traditional telephone and face-to-face communication (da Costa et al., 2019). Society is often excited with overnight successes of businesses, products, or services that arise quickly to change the way individuals think about the businesses. Disruptive innovations are more low-grade or straightforward solutions to affordable and attainable to more significant populations of people. The innovation is available to new markets and improves established businesses. Examples of new market footholds might be video streaming, Zoom, 3D printing, smartphones, robotics, and medical innovations, which are only a few new technology innovations today. Businesses and schools utilize Zoom to meet the needs of leaders, consumers, teachers, and students. Education, medical industries, and business communications are just a few examples of how new market footholds can overtake the way people do things in everyday life. Shapiro (2020) stated whether out of necessity or the fear of becoming irrelevant in a rapidly changing high-tech environment, most businesses have realized that they need to be more receptive to new ideas and novel ways of serving patrons. The new market disruptions occur when products conform to new or emerging markets not being met by existing occupants in businesses or industries.

Strategic attention strategically pays attention to ideas to focus on supermarkets existing services and the products offered. Aloulou (2019) noted the importance of strategic orientations in enhancing firms' performance and entrepreneurial orientation in

the relationships of market orientation and technology orientation to new product development performance and firm performance. Consumers pay attention to their lives' reality and how experiences differ in quality to make life easier. The attention paid to consumers is selective when innovations are introduced for positive effects. Businesses might try to achieve goals when strategically needing to gain consumers' attention positively. Being proactive with top leaders' decisions allows the attention to gathered and set goals (Aloulou, 2019). The goals become more appealing to competitors and consumers. These innovations begin to move forward at a high rate offering consumers innovations of disruptive technologies and innovations. The products and services offer new technologies and innovations, intending to create consumers' attention to the markets.

Today demand in supermarket industries is to create new business practices for profit and revenue, as explained in the disruptive theory. Christensen and Raynor (2013) stated building successful growth businesses is a vast and vital decision all managers should make in creating growth. These decisions represent vital actions that drive success inside of innovation. The environment of supermarket industries and social aspects, and innovative technology touches everyone around the world. Technology continues to change at an increasingly rapid rate with new devices to make our lives more convenient. Supermarket industries, society, and policies might struggle with SST practices. These factors might create adverse effects on managers to adapt and implement successful managerial strategies. D'Alfonso et al. (2018) noted an added value of Christensen's theory illustrates successful innovations ultimately measured outcomes but starts by

seeing the problems differently. In this proposed study, I explored successful managerial strategies to adapt SST practices in supermarkets producing positive results.

Managers' focus should include strategies to assist with employees' and customers' expectations with real SST experiences. Christensen's theory is relevant to this study because of the transformation from using checkout lanes with traditional cashiers to SST checkout kiosks, barcode scanners, or touchscreen devices in the supermarkets. Customers often feel more comfortable with human-to-human interaction as a checker. The anxiety of not knowing how to work the SST checkout kiosks or touchscreen devices is sometimes why customers choose a traditional checker over SST. Leadership and managers should focus on communication strategies, demographics of the SST in the workplace, and environmental cues surrounding the SST. Managers should focus on alerts to new trends to adapt processes and lower costs. Managers focus on adapting SST strategies leads to creative and positive implementation in supermarket operations. Today demands in supermarket industries are to create new business practices for profit and revenue.

The disruptive innovation theory might improve product performance to access the market from an opening to regular use. Cakir and Adiguezel (2019) stated that uncertainty requires the adoption of more radical innovations to meet the needs of changing customers and strengthen its competitive position in the market. The supermarket industry and all supermarkets work together to support unity and adaptation to any internal or external changes. According to Christensen's theory, Kawamoto and

Spers (2019) noted that to improve their overall quality of products further, firms require to pursue all attributes of dominant design radically.

Sedmak (2016) stated that Christensen presents a methodology that can increase the organization's ability to identify, develop, and successfully apply it to their business. Sedmak noted Christensen proposes organizations engage in discovery-driven planning, which operates on learning by doing. The development of strategies with the current innovations provides a framework for the organization's goals and visions. Biber et al. (2017) noted Christensen's disruptive innovation criteria, the common thread in business theory. Meaningful business innovation often involves combining a novel form of a business organization leveraging a breakthrough technology.

Transition

The common application of SST requires supermarket industries to adopt self-checkout kiosks, barcode scanners, and touchscreen devices. Managers should utilize successful strategies to adapt SST practices in their stores. It enables managers to initiate training for employees and then customers. Because of the necessary training, supermarket industries require specific strategies to show how to use the devices. While supermarkets benefit from SST advancements, managers should find new ways to implement the device's positive use. Through learning from other supermarket operations, many managers include new strategy tools for their supermarket. The new strategies build confidence in the use of SST by employees and customers.

Leaders influence decisions to adapt and add the value of SST innovations with a focus on different resources. Supermarket operations use of various SST devices can

improve operational efficiency, resulting in positive factors when building the organization. SST can add value to organizations in market gains with the initiative to increase revenue. The importance of implementing successful managerial strategies is an asset for the organization. If supermarkets fail to implement SST devices, the consequences could be drastic for the organization. Strategic strategies to adapt SST implementation ensure stability and perseverance for success. As the refinement of SST increases, the need to continually update and advance strategies is a primary concern. In this study, I explored the successful managerial strategies to adapt SST practices in supermarkets.

Section 2 includes the following topics: role of the researcher, participants, research methods, research design, population and sampling, data collection instruments, data collection and organization technique, data analysis, the reliability and validation of the study procedures, and reporting.

In Section 3 of the study, I present the findings, applications to professional practice, implications for social change, recommendations for action, recommendations for further research, reflections, summary, and conclusion. The data I collected in Section 3 pertains to supermarket's successful managerial strategies to adapt SST practices in their business.

Section 2: The Project

In this qualitative case study, I explored the effectiveness of managerial strategies to adapt SST of supermarket industries in Southern Illinois of the United States Midwestern region. I collected data from six supermarkets via interviews using open-ended questions. Understanding supermarket operations experiences to adopt SST practices can help create effective managerial strategies for their operations. Section 2 restates the study purpose and discusses the researcher's role; research participants; research method and design; population and sampling; ethical research; data collection instruments, techniques, organization, and analysis; and reliability and validity.

Purpose Statement

The purpose of this qualitative multicase study is to explore the strategies supermarket managers use to adapt SST practices like self-checkout kiosks, barcode scanners, or touchscreen devices in their supermarkets. The target population includes store managers from six Southern Illinois supermarkets who have demonstrated success in adapting SST practices. The Human resource manager/director from the six supermarkets will guide and assist in choosing manager participants who use successful strategies to adapt to SSTs in their supermarket. Management use of various strategies may include innovative solutions in supermarket operations from this study results. Application of these strategies may result in better business practices resulting in tax revenues increases to support the local communities' economies.

Role of the Researcher

The qualitative researcher explores and explains the value of issues to provide an in-depth understanding of concerns related to people and organizations and recognize the significance of the social phenomena (van den Berg, & Struwig, 2017). Yin (2018) stated understanding the concerns can enhance the reliability and validity of the study. Karagiozis (2018) noted qualitative researchers should acknowledge the research phenomenon and shape the methodology, the analysis, and the treatment of the data gathered. To eliminate bias, I understood the phenomenon through open-ended questions and observations during the interview. As a marketing director in an assisted living facility, I explored managerial strategies to assist staff and residents with SST practices in-house and in the community daily. I worked with staff and residents to adapt to SST practices of smartphones, hand-held devices, and barcode scanners in the facility and retail businesses in the area.

The U. S. Department of Health and Human Services (HHS; 1979) noted three basic principles in *The Belmont Report*: respect of persons, beneficence, and justice. First, the researcher should respect each participant and provide them with the understanding of voluntary consent and truthful information about the study. Second, the researcher should apply beneficence principles toward participants to not harm, maximize practical benefits, and minimize potential harm. Lastly, the researcher should secure reasonable justice to require no bias to each participant. Yin (2018) stated the researcher should provide reasonable, non-bias behavior while collecting data. The HHS (2017) stated that the researcher should protect people who volunteer to participate in research by ensuring

notice of (a) the purpose of the research, (b) the risks and benefits, (c) the appropriate alternative treatments, (d) the benefits to the subject, and (e) how the research keeps up with today dynamic research environment.

According to HHS (1979), the qualitative researcher should provide participants with an informed consent form containing (a) information and disclosure agreement, (b) comprehension of the research subject and participation, and (c) valid consent of voluntary participation in the study. I asked participants to reply to an email with the words "I consent" to assure each participant understands confidentiality as a contributing participant (see Appendix B). Corneli and Sugarman (2017) noted the current consent form of the Common Rule of the Federal Policy for the Protection of Human Subjects includes critical information that is most likely to assist a prospective subject or legally authorized representative in understanding the reasons to participate. All collected data will be stored in a fireproof filing cabinet for five years until eliminating data.

The researcher's responsibility includes striving for the highest research standards by avoiding deception, falsifying information, and producing their work (Yin, 2018). Fusch et al. (2018) stated the researcher might often mitigate bias through the data collection process. Fusch et al. further noted the better a researcher can recognize his/her personal view of the world, effectively can interpret the behavior and reflections of others. Dushnik and Sabar (2016) noted the qualitative researcher looks for principles, commitments, and values that should guide the scholar and characterize the ethical behavior of all integral parts of the research process. I focused on the interview questions as indicated in Appendix B by exploring managerial strategies to adapt SST practices in

supermarkets to understand my cultural values, expectations, and beliefs that might cause bias in the study. Yin (2018) stated the researcher should ensure accuracy, credibility and follow the protocol when interviewing to reduce bias while collecting data. After reviewing and deciphering the interview transcripts, I utilized member checking to ensure the collected data accuracy and credibility.

The interview process is a multicase study to require the use of an audiotaped recording. Yin (2018) noted the protocol includes a set of open-ended questions for analysis to support or not support the study's primary research question. I followed the interview protocol to provide each participant with an analysis of the case study, the data collection process, the data collection questions, and follow the same guidelines in checking and reporting my findings (see Appendix D). Yin stated the importance of following the same protocol increases the reliability of the case study research. The same protocol provides the researcher with guidelines to maintain each participant's same data in a multicase study.

Participants

The multicase study participants included six supermarket managers of supermarket operations in the Midwestern region of the United States in Southern Illinois who use SST practices. For the study, a supermarket definition consists of engaging in retailing food products and employing one to 500 employees. Due to the supermarket industry's extensive range of employees, I interviewed six supermarket managers who utilize SST practices. The participants, supermarket managers, will experience the

supermarket's day-to-day operations and provide a definitive account of managerial strategies used to adapt SST practices.

I obtained permission from the Human resource manager (see Appendix D) to gather the Human resource managers' names, emails, location addresses, and supermarket locations in Southern Illinois. I provided Appendix A, Appendix B, and Appendix D to each assigned manager. Yin (2018) noted gaining access to vital organizational leaders for recruitment and documentation to collect pertinent information on the potential participants is essential for the study validity. Marshall and Rossman (2016) noted that the data collection decisions rely on the researcher's inquiry level in a qualitative study. The Human resource managers will receive an invitation via email (see Appendix A and B) to participate in a face-to-face interview. I provided a clear understanding of the study subject matter, the interview process, and the data collection to prepare the participant to understand the study focus and the study phenomenon.

Yin (2018) stated establishing a working relationship with the participants is essential from the initial contact, all written communications, and the interview time duration. Tsai et al. (2016) shared the movement for research transparency has gained irresistible momentum over the past decade. The relationship goal explored supermarket managers' essential managerial strategies to adapt SST practices in supermarkets for profit and revenue. To establish a positive working relationship, I provided a copy of the informed consent form via email (see Appendix B) to the potential participants I choose to participate in the study. The informed consent form will provide all the information about the study. Once I confirm the study participants, I scheduled a face-to-face

interview with each participant at an available time in a comfortable setting chosen by the participants. Yin (2018) noted to promote the trustworthiness of the participant; the researcher should maintain a comfortable atmosphere during the interview. I established a collaborative working relationship with each participant through experienced interaction and will conduct each interview in a complementary manner by showing mutual respect.

Research Method and Design

The participants for this multicase study will include six supermarket managers in Southern Illinois supermarkets in the Midwest region of the United States. The latter has experienced managerial strategies to adopt SST practices. The participants, supermarket managers, can provide a definitive account of the day-to-day SST practices in supermarkets.

Research Method

I chose the qualitative research method to align supermarket managers' exploration of successful managerial strategies to adapt SST practices in their supermarkets. Marshall and Rossman (2016) noted that the qualitative method differs from quantitative because qualitative researchers design questions to explore a specific problem or phenomenon. The basis of qualitative research is an interpretation of the experiences through inductive data analysis, focusing on the details or themes with a lens to explore the motives and actions of a problem in its real-world context (Lewis, 2015; Yin, 2018). Hays et al. (2016) stated the qualitative methodology approach uses multiple data collection sources and enables a better understanding of the phenomenon, presenting a more convincing and accurate portrayal of the situation and analysis of the business

problem. Bloomfield and Fisher (2019) noted quantitative research tests a hypothesis, usually the null hypothesis, the assumption about the relationships between dependent and independent variables, by drawing a representative sample of participants from a known population, measuring the variables, and testing them using statistical analyses.

On the other hand, quantitative research tests a hypothesis, usually the null hypothesis or the assumption about the relationships between dependent and independent variables, by drawing a representative sample of participants from a known population, measuring the variables, and testing them using statistical analyses (Bloomfield & Fisher, 2019). Rutberg and Bouikidis (2018) noted the quantitative approach determines the relationships between variables and outcomes limit the understanding of a phenomenon. Hjalmarson and Moskal (2018) noted the fundamental goal of quantitative research is to make a convincing argument based on numerical data in response to a research question. In this study, I intended to understand successful managerial strategies in supermarket operations to adapt SST practices in supermarkets. A quantitative analysis would not have answered the research question, so the quantitative method was not employed.

Piccioli (2019) defined the mixed methods approach as a systematic integration of quantitative and qualitative methods in a single study to obtain a fuller picture and a more in-depth understanding of a phenomenon. Mixed methods depend on similar core ideas of qualitative and quantitative methods to fully explore a research question; however, some variations in the content and critical points lack qualitative and quantitative skills (Piccioli, 2019). A mixed-methods approach was not appropriate for this study because quantitative data could not explain the phenomenon. To thoroughly explore the research

question and the supermarket operations response to successful managerial strategies to adapt SST practices in supermarkets, I chose a qualitative research method to explore social aspects. Marshall and Rossman (2016) noted the qualitative researcher's design questions seeking a broader view of a problem or phenomenon. Bansal et al. (2018) stated by qualitative research, we mean scholarship, which primarily relies on qualitative data and inductive theorizing. Successful managerial strategies in supermarket operations to adapt SST practices include business, social, and economic resources and explore scenarios and activities involving the procedures to continuously adapt to changes in the strategies.

Research Design

Qualitative research includes constructivist, grounded theory, ethnography narrative, lived experience, and case studies (Marshall & Rossma, 2016). Saunders et al. (2015) noted the narrative design is a personal account that interprets an event or series of events, which is significant for the narrator and conveys meaning to the researcher. Price et al. (2018) noted the narrative framework explores subject matter in terms of user-centered preoccupations, company exploration and exploitation, and new technologies. Therefore, narrative research is not appropriate for this study due to examining the industries and their functioning parts and not studying an individual view of their life experiences.

Phenomenology includes insight to determine a participant's experience. Errastti-Ibarrondo et al. (2018) noted the research is problematic when considering a method or author in finding an accessible guide or concrete, easy-to-understand guideline, which

might help shape and take the research forward. The phenomenological design might contribute insight into the study if the focus relies on supermarket managers' lived experiences. I contemplated a phenomenological research design. However, Mohajan (2018) noted phenomenology does not attempt to understand the meaning of the phenomenon but conceptualize an individual awareness. The study goal was to explore supermarket manager's successful managerial strategies who adapt SST practices in supermarkets. Therefore, the phenomenological design is not ideal for this study.

The grounded theory includes one goal to explain the truth of the empirical data collected without speculation or preconceived attitudes (Johannson, 2019). Konecki, K. (2019) stated if the methodology is more flexible, as the methodology of grounded theory, the researcher can get to the phenomena explored in a field of expertise. Polacsek et al. (2018) noted grounded theory goes beyond simple description and exploration to develop a theory explaining the social processes, structures, and interactions. Grounded theory is not an appropriate design for the study because it involves managing personal connections with supermarket operations managers and the managerial strategies adapted to SST practices or creating a theory.

Ethnographic researchers focus on practices of long periods of living within a cultural group(s) to study patterns and systems of everyday life (Parker-Jenkins, 2018). Knobloch et al. (2017) noted that origins in social anthropology and ethnography described the study of groups or communities of people as they go about their everyday lives by studying them for an extended time. The ethnography research method is not a

choice design for this study because it will not focus on shared cultures of specific groups or study the participant's cultural behaviors.

The case studies method explores an in-depth understanding of several entities experiencing the same phenomenon within a real-life setting (Yin, 2018). Yin noted that qualitative case studies are an interpretation of individuals' experiences regarding a particular event bounded by time and place. The qualitative case study design is the appropriate form of research for the study due to exploring successful supermarket operations strategies to adapt SST practices in supermarkets. Yin stated the researcher in a case study explores the multiple units within the case, such as an entire business organization. Ridder (2017) noted the researcher in a case study correlates present findings to a specific theory. Roberts et al. (2019) noted that the process involves identifying themes with relevance specific to the research focus, the research question, the research context, and the theoretical framework. The qualitative case study design is the appropriate method for the study due to exploring successful managerial strategies to adapt SST practices in supermarket operations. I explored real-life circumstances by collecting supermarket operations managers' data to provide successful managerial strategies to adapt SST practices in their supermarkets.

I collected data through semistructured face-to-face interviews and the review of managerial strategy documentation. Lowe et al. (2018) noted an aspect common to qualitative research quality is the need to gauge the data set saturation, signifying the data contain all information necessary to answer the research questions. I discontinued interviewing participants because the sixth participant aided in meeting saturation. In this

study, the participants may include up to nine supermarket managers who contributed data through a face-to-face interview containing open-ended questions. Hays et al. (2016) stated that member checking provides verification of the data collected and any other information the participant may provide for the study validity. Hays et al. noted that member checking ensures the interview process data is accurate and credible. Fusch et al. (2018) noted the importance of triangulation ensures data reliability and validity.

Population and Sampling

This study population is six front-line supermarket managers in the region of Southern Illinois. To understand the population, the definition of front-line managers in supermarket industries is managers who sit at the first level of the managerial hierarchy (Hadjisolomou, 2019). Managers engage in general management roles to interact with employees and consumers. Managers' roles include managing departments, including checkouts, shelves, stocking, and supervising. Managers in supermarket chains in Illinois lead large grocery chains. Ahn (2019) noted the Illinois supermarket chains are the largest grocery market in total sales in Illinois, with three supermarket chains of 240 stores in total. Ibisworld (2019) noted the industry revenue had increased its annualized 2.4% to reach $52.1 billion. Chain (2019) stated the top two supermarket industries, Walmart and Kroger, made considerable strides in e-commerce and technology in 2018. Rijnsoever (2017) noted that the information sources enable sampling as part of an iterative process, including data collection, analysis, and interpretation.

The population is coordinated with the overall research question because the study participants have knowledgeable experiences to adapt SST practices in

supermarkets. Within qualitative research, Thurairajah (2019) noted within the population and sample size, the researchers may expect to engage in reflexivity, considering the impact of their social locations and biases on the research process. Islim and Sevim Cirak (2017) noted purposeful sampling might identify as selecting participants based on their prior knowledge who can provide necessary data for the study. I recruited participants by obtaining names, phone numbers, email addresses, and locations of stores from the Small Business Bureau (SBA) in Southern Illinois. The human resource manager will receive an invitation via email to allow managers to participate in a face-to-face interview (see Appendix A). The email will include the informed consent form (see Appendix B) to provide all the pertinent study information. The participant's responses may aid in the implementation of successful managerial strategies to promote SST in supermarkets.

Purposeful sampling for the qualitative case study is appropriate to identify knowledgeable participants about the phenomenon and topic of SST in supermarkets. Palinkas et al. (2015) stated purposeful sampling in qualitative research utilizes identifying and selecting information-rich cases related to the phenomenon. Palinkas et al. further noted purposeful sampling involves identifying and selecting individuals or groups of individuals who exhibit the phenomenon knowledge or experience. I selected a purposeful sample of six supermarket managers from Southern Illinois. The selection of potential participants may provide information to meet the criteria for the study. Each participant eligibility for the study includes successful managerial strategies of supermarket managers who adapt SST practices in their stores to increase revenue. The

participants should be willing to share in-depth knowledge, which correlates to the study business problem.

Saturation is a core guiding principle to determine sample sizes in qualitative research (Hennink et al., 2017). Boddy (2016) noted the determination of sample size is contextual and partially dependent upon the scientific paradigm under which investigation is taking place. Lowe et al. (2018) noted an aspect common to qualitative research quality is the need to gauge the data set saturation, signifying the data contain all information necessary to answer the research questions. Blaikie (2018) noted the context of the research problem investigated, includes the purpose of the research, the nature of the research question, the characteristics of who or what is studied and, the knowledge of a researcher in handling this process, remain critical factors which have a bearing on required sample size. Malterud et al. (2016) noted initial approximation of sample size is necessary for planning, while the final sample size adequacy should be evaluated continuously during the research process. Yin (2018) stated the sample size depends on the study topic complexity and the depth of the data collected. Likewise, Pradhan et al. (2017) stated using a sample size includes managers who had experience using organizational strategies for businesses. I interviewed six supermarket managers with open-ended questions and perform member checking to reach data saturation. Member checking includes my supervision of participants to review and confirm my interview notes. To reach data saturation, I asked all participants probing questions until there were no new responses. Eligible participants will include supermarket managers who have

used successful strategies to adapt SST in their supermarkets and willing to participate in a face-to-face interview to supply information for this study.

Failure to reach data saturation can impact research, reliability, and validity. Moser and Korstjens (2018) noted to reach saturation, no new analytical information arises, and the study provides complete information on the phenomenon. Lowe et al. (2018) stated a systematic qualitative data analysis requirement is the collection of relevant material and its organization into themes that reveal emerging patterns and lead to a theoretical understanding of the phenomenon under study. Yin (2018) noted that researchers need to reach saturation to maintain the study validity. Lowe et al. remarked apparent deficiency in approaches to saturation require an observation that does not contribute new themes does not preclude a future observation from contributing new themes, so the stopping point does not necessarily equate with saturation. Hancock et al. (2016) stated employing different methods of data analysis to confirm saturation and transparency provides qualitative researchers with different approaches to data analysis for saturation and enhancement of trustworthiness. Tran et al. (2017) noted that researchers' judgment and experience solely dictate the decision to stop data collection. To reach saturation, I interviewed six participants. I met the saturation goal when the apparent patterns and themes become noticeable after a specific number of interviews.

Interviewing is one of the most common methods used to gather information about a given topic as a natural process of inquiry used in everyday communication (Van de Wiel, 2017). Sandvik and McCormack (2018) noted the interview process consists of a mutual dialogue with participants to understand their experiences, striving to explore the

meaning and develop new knowledge. Miller (2019) noted that the researcher must collect data about valued activities, current practices, and satisfaction with existing services or activities as the primary data collection instrument. Croix et al. (2018) noted the interview quality is heavily dependent on how comfortable the interviewee feels. Croix et al. further stated the most common interview is the one-to-one structured interview with the questions being the same and posed in the same order for each interviewee. A natural setting for interviews is comfortable for interviewees. Goodman-Delahunty et al. (2014) noted through promoting comfortable, natural surroundings is necessary to gain the participant's confidence and support, encouraging the interviewee to contribute knowledgeable and substantial data. Kallio et al. (2016) stated themes covered in the research subject encourages participants to speak freely about their perceptions and experiences. Van de Wiel (2017) noted that interviews provide insights into the tasks performed, the knowledge and skills underlying their performance, and the conditions shaping their performance. Miller further stated the participant relationship begins with the recruitment, following the interview arrangements, and the initial contact.

Traditional qualitative study advocates for a small number of interviews; samples usually are smaller than in quantitative research (Manzano, 2016). I interviewed six supermarket managers with employees who use technology. The reasoning behind supermarket managers' selection illustrates how the managerial strategies used to adapt SST practices are successful in supermarket operations. The interview process will follow the protocol (see Appendix D) to provide the study validity and dependability.

Ethical Research

The process of designing and researching a qualitative multicase study demands ethical standards during several phases of research, including ethical issues of sensitive information of participants (Yin, 2018). Through the IRB process, I received approval number 08-19-20-0726340 before collecting data. The consent forms representing the project documents institutional support should reflect the researchers' best practice (Curran et al., 2019). Walden University (2019) states the IRB is responsible for ensuring all research complies with the university's ethical standards and U.S. federal regulations. After the IRB grants permission to begin collecting data, I emailed the human resource manager (see Appendix A, Appendix B, and Appendix D), inviting them to allow managers to participate in the study.

The interviews with participants should require information stating the purpose of the interview, the subject matter of the study, the process of collecting the data, and information found in the informed consent form. The informed consent form (see Appendix B) includes information about the purpose of the interviews, the study subject matter, the data collection process, and instructions in the informed consent form. The informed consent form includes the study specifics, participant rights, and directions to demonstrate acceptance to engage in the research. Petrova et al. (2016) noted values associated with confidentiality include autonomy, privacy, and keeping a commitment. The ethical guidelines are specific when asking permission of participants (See Appendix B). The participant guidelines for this study include: (a) ask participants for willingness to participate in the study; (b) reassure participants of confidentiality; (c) inform

participants the interview is voluntary, and they can withdraw at any time; (d) each participant will receive no incentives or monetary payments for participating in the study.

Participants will be notified via email to voluntarily agree to participate and contribute to the study by replying to the email informed consent form with the words, "I consent." Each participant may withdraw from the study without discipline by contacting me by email or telephone to promise the elimination of all documentation as outlined in the informed consent form. The participants will not receive incentives or monetary payments for their participation in the study. I addressed all ethical standards of the Walden University IRB, following the process to secure meeting the ethical standards before, during, and after conducting the research. I received an approval number and expiration date upon completion through the IRB process and before I collect data.

I ensured privacy, anonymity, credibility, and validity by using a pseudonym to identify participants. Allen and Wiles (2016) noted that beneficence rules and research practices include informed consent protocols and ethical guidelines. HHS (1979) noted in the Belmont Report and the researcher requires the following three core ethical principles: (a) respect for persons, (b) beneficence, and (c) justice for every participant. The reference codes for the six participants include "M" for Manager. Each participant will receive a code to secure their anonymity with identification codes of M-1, M-2, M-3, M-4, M-5, and M-6. The researcher requires to follow the same procedures to collect the data that meets the study requirements. Das and Sil (2017) explained that after participants consent to a clinical research study, the researcher should uphold the fundamental ethical principle of autonomy in human research. I entered and saved the

digital data into a password-protected flash drive. All documented forms, field notes, transcripts, and collected data will be securely locked in a storage cabinet for five years, with access restricted only to me. The destruction of the electronic files after 5 years consists of shredding documents, either manually or through a certified professional shredding business, and burning the password-protected flash drive and any other information in a secure burning area, such as a fire pit or specific trash can.

Data Collection Instruments

I am the primary data collection instrument in this qualitative multicase study. The primary data collection instrument consists of a semistructured interview. Moser and Korstjens (2018) noted the most commonly used data collection methods are participant observation, face-to-face in-depth interviews, and focus group discussions. Tran et al. (2016) stated open-ended questions allow the participants to share their experiences, providing a more in-depth understanding of everyday experiences, nature, or meaning. Each participant will share the specific experiences and managerial strategies they use to adapt SST practices in their supermarket. Weinbaum and Onwuegbuzie (2016) noted that individual interviews represent the most common form of data collected in qualitative research studies. Rosenthal (2016) stated before undertaking the informal interview or focus group. The researcher must have carefully considered which data collection approach would provide the best information to answer the research question under investigation. Yin (2018) noted the information obtained from participants could generate focused information on the research questions to enable a convincing account of the phenomenon.

The face-to-face semistructured interview and observations with participants will provide data regarding successful managerial strategies to adapt SST practices for their supermarket. Yin (2018) noted that data collection in case study research requires the researcher to follow the data collection plan with each participant to promote the collected data validity. The interview protocol instrument guides the interviews (see Appendix D). The interviewer will make appropriate adjustments to any questions to validate the instrument is appropriate for the study. Sandvik and McCormack (2018) noted interviews relate to the researcher's ability to facilitate an engagement promoting authenticity, self-determination, and reciprocity. After the interview process, I requested documentation of the managerial strategies used to adapt SST practices (See Appendix D).

The researcher analyzes data through the use of data collection instruments, semistructured interviews, documents, and observation; they reveal a deeper understanding of the phenomenon, ensuring greater methodological rigor in a field of study (Costa et al., 2018). Yin (2018) stated that through methodological triangulation, the examination of company documents helps strengthen the collected data validity. Haseski and Ilic (2019) noted that data collection instruments' objective is significant considerations for each participant's validity and reliability. The participant's interview responses, managerial strategy documentation, and observations will provide important information concerning successful strategies to adapt SST practices in their supermarket.

I conducted each interview simultaneously to provide reliability and validity by following the interview protocol (see Appendix D). Yin (2018) noted in a case study. The

researcher should utilize the same data collection methods to achieve reliability and validity. Satalkar and Shaw (2019) noted research integrity, research ethics, and responsible conduct of research is one strategy to reduce research misconduct and strengthen the reliability of and trust in the evidence. I followed the interview protocol (see Appendix D) to keep practical note taking and observation during the interview process.

Member checking is a critical component of qualitative research to assess the participant data's accuracy and validity and help eliminate bias (Yin, 2018). Brear (2019) noted that member checking, a long-standing qualitative research technique for establishing validity, provides participants with opportunities to check the results' accuracy. I gave each participant a full transcript of their responses to ensure accuracy. Thomas (2017) noted that member checking provides accuracy for the researcher and represents participant subjectivity. Hays et al. (2016) explained member checking enables the researcher to understand the participant's responses. The process ensures the credibility, dependability, confirmability, and transferability of the study (Hays et al., 2016). I used member checking to substantiate the participant answers and assure the accuracy of the collected data. I managed member checking by sending a copy of the data analysis via email 1 week after the initial interview. I set up a follow-up phone interview or face-to-face meeting to verify the information to ask for feedback on the reported data.

Data Collection Technique

This qualitative multicase study's data collection techniques include collecting data through six interviews with managers in supermarket operations, observations

during the interviews, and documentation to clarify supermarket managers' managerial strategies to adapt SST practices in their supermarkets. Weller et al. (2018) noted open-ended questions and other interviewing techniques explore the topic in-depth, understand the processes, and identify potential causes of the phenomenon. Weller et al. further stated in general, probing and prompting during an interview seem to matter more than the number of interviews. Tasker and Cisneroz (2019) noted qualitative researchers must keep an open mind while asking open-ended questions. Rasipuram and Dinesh (2018) stated communication with participants requires conveying verbal and nonverbal communication. Rasipuram and Dinesh further noted verbal communication conveys the exact message, including nonverbal communication, to understand the underlying emotions, attitudes, and feelings.

Yin (2018) stated following the same protocol; the interview process facilitates consistency, reliability, and unity. Dash and Verma (2019) noted that the researcher should acknowledge the degree of influence on the findings to legitimate the research. Yin (2018) noted a disadvantage of the semistructured face-to-face interview could occur if the researcher presents the questions using bias. Fusch et al. (2018) noted that hearing and understanding other's perspectives may be one of the researcher's dilemmas, causing bias. Fusch et al. stated the better a researcher can recognize his/her personal view of the world and discern the presence of personal lenses. The better one can hear and interpret the behavior and reflections of others. Yin noted one disadvantage for participants might consist of declining to answer a question due to feeling uncomfortable with a recording

device. Oltmann (2016) noted another disadvantage might include the social pressures of the participants.

The researcher must ask each participant to select the date, time, and location of their choice (Yin, 2018). I contacted each participant for an interview with an agreed date, time, and location to conduct the interview (see Appendix B). I provided each participant with a copy of the up-to-date consent form for their records. I explained the background information, agenda, voluntary nature of the study, risks, and interest to participate, guaranteeing no promise of payment or gift, confidentiality issues, and contact information. I followed the same protocol for each participant interview (see Appendix D).

I assembled my evidence through the use of methodological triangulation. I included semistructured, open-ended interview transcripts, operational documentation regarding successful managerial strategies adapted, and field notes of observations during the interview process. Hays et al. (2016) explained to promote the study's validity; triangulation uses more than one method of data collection. Yin (2018) noted through triangulation, the researcher strengthens the validity of the study. Hays et al. further stated methodological triangulation in a multicase study support reliability, validity, and rigor through discoveries of data collection techniques. After transcribing the interview documentation, I conducted member checking with each participant to affirm the interview process's data. Roberts et al. (2019) noted the research aims to determine the relationship between knowledge and practice by demonstrating rigor, validity, and reliability. Birt et al. (2016) stated member checking, also known as participant or

respondent validation, is a technique for exploring the credibility of data results for participants to check for accuracy and resonance with their experiences. Brear further noted that member checking is a form of participation that influences both the participant's empowerment and the research process and results. Naidu and Prose (2018) stated member checking returns results and dissemination not merely as a validity check but as accountability practices. I conducted member checking by contacting each participant via email to set up a phone interview or face-to-face meeting. I asked each participant to decide based on their schedule. In the email, I asked each participant to verify the data collected is accurate and verify the one-to-two-page summary is correct by responding, "It is correct." Or "Needs review."

Data Organization Technique

This qualitative multicase study data collection is from six supermarket managers' responses through a face-to-face interview with open-ended questions. I used a handheld recorder with a USB flash drive, allowing my computer connection for transcription. I prepared for the face-to-face interviews by understanding how the handheld recorder works to enable each participant's successful recordings. I utilized a different USB flash drive to save each participant interview with the corresponding identification code. Wolderslund et al. (2020) noted that approved consultations recorded, enabling subsequent replay of the consultations with the digital audio recordings to transcribed verbatim. I utilized transcription software (i.e., Dragon Naturally Speaking) to conserve time and review the transcription to ensure all transcriptions accuracy. I preserved all

information on a removable hard drive to avoid losing the collected data or technical problems.

Representation is important for qualitative researchers to reflexively collect, analyze, and interpret interview data (Weinbaum & Onwuegbuzie, 2016). Iivari (2018) noted that member checking is a widely used qualitative research technique to check the researcher's data or interpretations. I conducted member checking by sending a copy of one to a two-page summary by email a week after the initial interview. I set up a follow-up interview by telephone, if necessary, to verify the collected data is correct unless I received an email from the participant confirming the summary is accurate.

After finishing the follow-up member checking interview (i.e., scheduled phone interview), I imported all documentation into Nvivo software. Yin (2018) stated that computerized assisted tools, such as Nvivo, enable the researcher to categorize vast amounts of data. Swygart-Hobaugh (2019) noted Nvivo software allows the researcher to quickly move through their data and see similarities of concepts across different data files. Woods et al. (2016) noted the software offers the process of two outputs: (a) a coded data set and (b) a node system, providing an index of the significant and subsidiary categories of coded data. Hays et al. (2016) stated the software locates and ensures any issue described in the findings, and not the perception of just one person, but confirms the participants had the same opinion. Woods et al. further noted Nvivo helps a researcher manage and organize data, including interview transcripts, documents, and survey responses. Dias do Nascimento (2016) noted that Nvivo is a technological tool utilized to organize, visualize, and access research data, representing saving time and work. I

secured all written documents, field notes, transcripts, USB flash drives, collected data in a locked storage cabinet for 5 years, then destroyed by burning the papers and deleting all electronic files.

Data Analysis

Case study research is a way to explain, describe, or explore phenomena (Alpi & Evans, 2019). Yin (2018) noted case study research could serve exploratory, descriptive, and explanatory purposes but often goes beyond exploring, describing, or explaining phenomena. According to Yin (2018), analytical techniques enable patterns to emerge and strengthen the study's validity. Fusch et al. (2018) noted triangulation is an essential concept regarding data analysis for an empirical study and ensures the reliability and validity of the data and results. I used methodological triangulation to collect data from open-ended semistructured interviews. I collected operational documentation and field notes of successful managerial strategies to adapt SST practices in their supermarkets during the interview processes. Farquhar et al. (2010) noted triangulation is recommended as good practice in conducting case study research and offers validity through the convergence of findings, sources, or methods.

Data analysis and interpretations of the information are key factors in case study research to attain enough data to reach saturation. Saunders et al. (2018) noted data saturation attains an acceptable method in qualitative research. Vasileiou et al. (2018) stated satuation enables the researcher to evaluate a sufficient number of participants. Vasileiou et al. further noted sampling describes an iterative process of data collection, data analysis, and theory development. Data collection governs the emerging theory

rather than predefined characteristics of the population. I selected participants who have successfully adapted the managerial strategies of SST practices in their supermarkets. Lowe et al. (2018) stated an aspect common to the assessment of qualitative research quality is the need to gauge the saturation of a data set, signifying the data contain all information necessary to answer the research questions. I interviewed six participants to reach data saturation until no new themes, no new data, and no new coding.

The study data collection method includes six open-ended questions in a face-to-face interview with six supermarket operations managers to gather the data (see Appendix B). After completing each face-to-face interview using a handheld digital recording device, I transferred the data to my computer by a USB flash drive. I transcribed the recorded interview data by utilizing Nuance Dragon Speech Recognition Software. The objective of the methodological triangulation analysis of the face-to-face interviews, the strategic operation records, and interview observations I collected all the data to answer the research question.

Member checking in qualitative research is the validation of the participant responses and explores the credibility of results (Birt et al., 2016). Yin (2018) noted that member checking is a critical component of qualitative research to assess the participant data's accuracy, reliability, and validity and help eliminate bias. To provide validity and creditability of the information gained during the interview process, I sent the transcripts to each participant for member checking purposes.

I used Nvivo computer-assisted software to evaluate the data. Yin (2018) noted the software tool helps the researcher to code data into themes. Maher, Hadfield,

Hutchings, and de Eyto (2018) stated excellent data management and retrieval facilities support accurate analysis of complex questions and provide a digital copy for quick retrieval. Woods et al. (2016) noted that Nvivo offers a coding comparison function to check the coding process's consistency and reliability. After I coded all the data, I explored the data to identify existing themes.

I correlated the key themes from the data corresponding to Christenson's disruptive innovation theory to understand how theme influences one another. Organizations include managers, management, employees, consumers, technology, and procedures to work together to build operations, minimize risk, and improve continuous growth. Shavkun and Dybchinska (2019) noted to manage the organization's potential requires analyzing, planning activities for the implementation and development, monitoring, and evaluating the company's efficiency. Denning (2016) stated organizational systems should change and adopt an innovation. The most demanding factors of operations systems within the supermarket industry include successful managerial strategies, the adaptation of new technologies (i.e., SST practices) to produce revenue and profit. While researching the data of the study and the disruptive innovation theory, I recommend examining three themes: (a) market-creating innovations, (b) sustaining innovations, and (c) efficiency innovations.

The potential themes correspond to Christensen's disruptive innovation theory, and the connection to the research question allows me to locate the key themes. Disruptive innovation theory offers an understanding of the concept of disruption and the effects on the entire supermarket industry. Benazzouz (2018) noted innovation theory

thinking and action creates business managers, executives, and academics to describe an innovation or a technology with high economic impact or potential to satisfy and retain consumers or invest in innovative products aiming at consumers' future expectations. Benazzouz further stated, according to Christensen, the company could choose to implement minor and continuous improvements to its product(s) and service(s) to secure and gradually enhance its mainstream market share. The basis of innovation theory allows the participants to share experiences concerning successful managerial strategies to adapt SST practices in their supermarkets to increase revenue and profit.

When examining the data within disruptive innovation theory, among the developed themes, I found the following three themes: (a) market-creating innovations, (b) sustaining innovations, and (c) efficiency innovations. McDowall (2018) noted while innovation theory dictates the concept of innovation, economy, and technology acceptance model, the intentions to adopt new technology may reflect the user's behavioral intention to adopt new technology. The use of new technology may provide insight into the usefulness and ease of using the new technology type. Yoon (2017) stated the world currently faces the Fourth Industrial Revolution. Howells (2020) stated many benefits would enhance the consumer's experience from developing the new computer-driven innovation. Howells further remarked the world would have new products, services, and new ways of supplying goods and services. Digitalization affects the consumer market in ways that could not have been imagined a generation ago (Howells, 2020).

McDowall (2018) noted technology today occurs when consumers are ultimately the driving force behind the latest technology trends. (Howells, 2020) stated if something makes customers' lives easier, more fun, or more interesting, the customers will adopt it and prompt similar technology. Aaltola and Taitto (2019) noted experiential learning theory, broadly defined as learning from experience or learning by doing, promotes an understanding of the experience through the participants' involvement. The experience correlates with the SST practices in supermarket operations.

Reliability and Validity

Reliability

Reliability signifies the test results replication, and validity indicates the data accuracy (Yin, 2018). Reliability in qualitative research is rooted in the idea of data adequacy, which makes it possible to show consistent support for one analysis across participants (Spiers et al., 2018). Yin (2018) noted validity involves tests of the construct, internal and external validity. Cypress (2017) noted reliability and validity are fundamental concepts and require continual operations to meet the conditions of a qualitative inquiry. Together reliability and validity are imperative for the qualitative study to establish the data is factual and accurate.

Dependability is the stability of findings to involve participants' evaluation of the findings, interpretation, recommendations, and support by the data received from the study participants (Korstjens & Moser, 2018). Thomas (2017) noted the interaction between the researcher, the research, collected data, and a high level of accuracy enables the dependability of the data presented. Member checking is a secure method to assure

dependability. Hays et al. (2016) noted the researcher seeks to establish dependability through trustworthiness by reporting the process of content analysis accurately through the data collection method, sampling strategy, and the selection of data analysis techniques. I followed the same research protocol (see Appendix D), field notes, and reflexive journaling to explore each participant's reoccurring themes. Birt et al. (2016) stated the trustworthiness of results is the bedrock of high-quality qualitative research. Amankwaa (2016) noted trustworthiness is a vital component within the research process with activities of reliability and adds to the comprehensiveness and the quality of the research product.

Member checking in qualitative research, also known as participant or respondent validation, is a technique for exploring the credibility of results (Birt et al., 2016). Yin (2018) noted member checking as a critical component of qualitative research to ensure the participant data is dependable and eliminates bias. Birt et al. further stated data or results are returned to participants to check for accuracy and resonance with their experiences listed as a validation technique. I conducted member checking by sending a copy of the analyzed data by email a week after the initial interview. I set up a follow-up telephone interview to authenticate the information to ask for feedback on the data.

Validity

Validity is related to data appropriateness, making it possible to provide an accurate account of participants' experiences within and beyond the immediate context (Spiers et al., 2018). Hays et al. (2016) noted triangulation confirms the data to enhance credibility and ensure the participant's data is complete. Yin (2018) stated triangulation

compares data from multiple sources to explore the extent of verification of the findings. I used methodological triangulation analysis of the face-to-face interviews, the operation managerial procedures, strategic documentation, and interview observations to answer the research question. Spiers et al. (2018) noted it is imperative to adhere to qualitative inquiry to achieve quality and not dilute by applying external, irrelevant, and damaging standards. I recruited participants who successfully adapted managerial strategies to SST practices in their supermarket operations.

Along with triangulation, I conducted member checking with each participant. Hays et al. (2016) stated that member checking ensures the interview process data requires accurately recorded and transcribed information. To achieve validity, I utilized six open-ended questions to encourage supermarket managers' feedback in correlation with successful managerial strategies used to adapt SST practices in their supermarkets (see Appendix B). I confirmed the collected data's credibility by checking and triangulating the data to enhance confidence in the findings' credibility.

Qualitative studies refer to transferability as the findings transfer to other similar settings (Hays et al., 2016). Hays et al. further noted a thick description of the setting, context, people, actions, and events studied is needed to ensure transferability in qualitative studies. Kaivo-oja (2017) stated in qualitative research that following a well-planned logical research process is a critical issue because new theory-based needs to collect data can emerge. Yin (2018) noted that methodological triangulation is necessary to support the data collection process findings. Kaivo-Oja further stated the readiness to collect new data to validate the research conclusions and gain reliability. I used the

interview, observations, and member checking to enhance the study's validity and transferability to assure the findings relate to my research question and encourage future research about SST practices in supermarkets.

Transferability is to assure findings are interchangeable to different similar settings. Daniel (2019) noted transferability is crucial to articulate the delimitation of the research clearly. The context includes the choices researchers make during data collection and analysis and possible challenges they might have faced during the research. Through the study's findings, I provided supermarket operations with information from the study to promote successful managerial strategies to adapt SST practices in supermarkets and provide future research information.

Confirmability in the context of qualitative research, validity is equitable to ensuring the appropriateness of the tools, processes, and data used in the study (Daniel, 2019). Before initiating thematic coding, I managed member checking by sending a copy of the analyzed data by email a week after the initial interview. I set up a follow-up telephone interview for authentication of exactness and validity. Yin (2018) noted confirmability distinguishes how the findings relate to the phenomenon of the research question. Hays et al. (2016) stated to achieve confirmability, member checking of each interview ensures the validity of the research process. Brear (2019) noted member checking is assumed to establish transactional validity in numerous ways. Weller et al. (2018) stated to use open-ended questions alone or other interviewing techniques to explore topics in-depth, understand processes, and identify potential causes of observed correlations.

Member checking the transcribed data is an investigation of the primary thematic analysis for the research process and results (Brear, 2019). Iivari (2019) noted member checking serves different purposes to increase the validity or credibility of research, invite informants to participate more fully in the research process, and co-construct the research outcomes together with researchers. After documentation of the original interview, I scheduled a phone interview with each participant to check the interpreted data accuracy and any other related information for analysis.

The validation of the qualitative study is to assure data saturation and validity of the study. Hancock et al. (2016) noted that the data has no emerging themes to reach thematic data saturation. Yin (2018) stated in a qualitative case study, and the researcher asks *how* and *what* questions. Fusch et al. (2018) noted triangulation helps reach data saturation and ensure data reliability and validity. Nascimento et al. (2018) noted the saturation occurs when no more new information or new themes arise from data collection. Yin further stated if data saturation does not occur, a negative impact occurs on the research's validity. Vasileiou et al. (2018) noted the most widely used principle for determining sample size and evaluating its sufficiency of saturation with data collection and analysis. Moser and Korstiesn (2018) stated that facilitating analysis relies on checking the transcripts accurately, making sense of qualitative data through immersion in the data through a personal lens, searching for meaning and basic patterns, and collecting legitimate and insightful findings for a deeper understanding of the phenomena.

Purposeful sampling for the qualitative researcher requires research to be a powerful tool for social and organizational change to collect and embrace new ideas and approaches to answer research questions and promote saturation (Shaw & Hoeber, 2016). Shaw and Hoeber (2016) noted that it helps move research forward, embrace new ideas, and develop alternative approaches. Researchers need to develop new and thought-provoking research questions to help the process. I recruited supermarket managers in the supermarket operations who experienced successful managerial strategies to adapt SST practices in their supermarkets. The factors and the participant compliance to provide information and valuable data will promote data saturation.

Another method to reach data saturation for the qualitative researcher is to conduct semistructured interviews to collect data and the number of interviews (Koohestani et al., 2018). Koohestani et al. (2018) noted in qualitative research, the researcher is the main instrument with guided questions, utilizing the same questions for each participant until it meets data saturation. As listed in Appendix B, I used six open-ended interview questions to ask each participant. Furthermore, I developed an interview protocol (see Appendix C) to administer each interview in the same process.

Finally, the triangulation methodology uses multiple data sources within an investigation to enhance understanding (Amankwaa, 2016). Various triangulation methods are interviews (i.e., face-to-face or via telephone), observations, reflexive journaling, and operational documentation. Kaivo-oja (2017) noted triangulation is considered a critical element of credibility in qualitative research methods and relates to the convergence of data obtained using two or more data sources. Daniel (2019) noted

with the use of data verification, description of the researcher's approach to the data analysis, engaging with participants during data analysis to verify the preliminary outcome of the analysis, and the use of direct quotations achieves triangulation. I evaluated the data from face-to-face interviews, observations, reflexive journaling, and the organizational strategy documents to answer the research question.

Transition and Summary

This qualitative case study focuses on exploring the influence of six supermarket operations managers' successful managerial strategies in Southern Illinois located in the Midwestern region of the United States to adapt SST practices in their supermarkets. I collected data from supermarket managers by conducting interviews incorporating open-ended questions of six participating supermarkets. Understanding supermarket managers' experiences with SST practices may encourage effective managerial strategies to enhance their supermarket's SST innovations. Before data collection, I finalized my oral defense and obtained permission from the IRB to begin the research.

Section 2 of the study provides the case study research information to include (a) the role of the researcher, (b) participants, (c) research method and design, (d) population and sampling, ethical research, (f) data collection instruments, (g) data collection technique, (h) data organization technique, (i) data analysis, and (j) the reliability and validity of the study.

Section 3 of the study will consist of presenting findings, applications to professional practice, implications for social change, recommendations for action, recommendations for further research, reflections, and conclusions. The data I collected

in Section 3 of the study may apply to successful managerial strategies to adapt SST practices for supermarkets to encourage supermarket operations profitability and sustainability.

Section 3: Application to Professional Practice and Implications for Change

Introduction

The purpose of this qualitative multicase study were to explore the strategies supermarket managers use to adapt SST practices like self-checkout kiosks, barcode scanners, or touchscreen devices in their supermarkets. The population for this study included six supermarket managers who successfully demonstrate success with SST practices in Southern Illinois. The six managers provided the findings through interviews, followed by member checking of all data, transcripts, and strategic documentation. The methodological triangulation includes the interviews, organizational documents, and participant observation during the interview.

I utilized data analysis software to visualize the data through visualization outputs such as tables and diagrams related to Christensen's disruptive innovation theory. Through the interview data, literature review, and conceptual framework, I discovered the participants' managerial strategies to adapt SST practices in their supermarkets. Four themes emerged from the research: (a) cultural changes and technology, (b) environmental dynamics, (c) company capital and technical knowledge, and (d) company policy and structures.

In Section 3, the study's findings explored supermarket managers' managerial strategies to adapt SST practices in supermarkets. Section 3 also includes applying professional practice, implications for social change, recommendations for action, recommendations for further study, reflections, and conclusions.

Presentation of the Findings

This study's presentation addresses the overarching research question: What successful managerial strategies do supermarket managers use to adapt SST practices in supermarkets? Four themes emerged: (a) cultural changes and technology, (b) environmental dynamics, (c) company capital and technical knowledge, and (d) company policy and structures.

The findings confirm, disprove, or expand knowledge. I connected the findings to new literature and the disruptive innovation theory used for this study. I used the case study interview protocol (see Appendix C) and analyzed the recorded interviews and transcription using data analysis software to establish emerging themes. Table 1 illustrates the demographic information of the six participating supermarket managers. The table provides the number of employees of each participant in their supermarkets.

Table 1

Demographic Information About the Supermarket

Participant	Participant's Comment					
	Case 1	Case 2	Case 3	Case 4	Case 5	Case 6
Code Name	M-1	M-2	M-3	M-4	M-5	M-6
Number of Employees	122	75	125	150	65	60

Theme 1: Cultural Changes and Technology

The cultural changes and technology defined by management determine the new strategies for employees and customers. Kostis et al. (2018) noted good ideas might exist within society. To ensure that the opportunities arising from such ideas, a system is

needed to seek out, identify, assess, classify, and focus on the most promising ideas and then implement these ideas. Many stores change cultural climates to implement guidelines like on-the-job training, defining each business procedure with self-service technology. Lau et al. (2017) noted as part of the organizational policies, an organization climate is shaped by its founders and modified by management as the organization grows, and most importantly, by the leaders who decide alteration to its policies. Olson et al. (2018) noted characteristics of market strategy implementations include the marketing organization structure, culture, processes, influence, and leadership. Lau et al. (2017) explained employees are more committed to the organizations when they follow the values presented by their leaders.

Technological environments lead to cultural changes for employees and customers who must change with the new innovative technologies. Alsharo et al. (2017) noted organizations must recognize the significance of knowledgeable employees as valuable assets to influence prosperity, maximize economic value, and improve its effectiveness. Alsharo et al. (2017) stated team effectiveness towards employee achievement in the organization enables a collaborative effort by all employees to grow and prosper through the commitment of providing a positive work environment. Cao and Hamori (2016) noted highly skilled managers who can adapt to changing situations, manage multiple lateral relationships, and implement agendas to enable a competitive advantage. Ford et al. (2017) stated organizations recognize their responsibility in providing clearly defined policies and the business mission to instill trust among the

employees. Steadfast and affective commitment is an exemplary response to provide a positive work environment and to meet challenges.

Cultural changes make it challenging due to day-to-day communications. In disruptive innovation theory, developments rapidly change from traditional technology to operating SST. Yoon and Choi (2020) expressed technology-based self-service with the interaction between customer and technologies is gradually increasing because of the advances in technologies.

The participants included store managers from Southern Illinois supermarkets that demonstrated success in adapting various SST practices. Through the adaptation and progression of self-service systems, management must inform employees how to adjust to meet the supermarket and customers' needs. Kostis et al. (2018) stated that specific cultural values on innovation stemmed from the positive effect of trust, control, work ethic, and honesty. Management use of various strategies may include innovative solutions in supermarket operations. Application of strategies may result in better business practices resulting in tax revenues increases to support the local communities' economies.

The six participants adapted new technological strategies enabling employees and customers to implement cultural change to accept SST. Demoulin and Djelassi (2016) noted by using SSTs, customers perform the service, or part of the service, traditionally performed by the service provider. The practical implications of accepting SST in stores assist employees and customers with the ease of use and attitudes of using the devices. Retailers have extended their range of SSTs to include self-scanning or self-checkout,

whereby customers scan their purchases themselves and then make payment (Demoulin & Djelassi, 2016). The most crucial feature between stores, management, and employees is to connect relationships among knowledge sharing, trust, and capability in a store's strategic success.

By adapting and evolving newer SST systems, managers need to inform employees and customers how to succeed with innovative technologies. Managers must model the use of SST devices to enhance customer usage and percentage of use. Lee and Cranage (2018) noted the key to overcoming employee failures is relying heavily on hiring and training because it is hard to fix and change people. Due to possible errors in the system problem-solving techniques to promote excellent and reliable service. Da Costa (2019) stated due to the understanding that, through technology, it is possible to deliver a higher quality service more efficiently and speedily. Employees and customers can adjust more positively when interacting with the new technology. The importance of positive interaction between the customer and the employee allows a positive experience for the customer. Da Costa further stated the positive experience promotes continuous use of SST devices by the customer, even though minor issues may occur. The positive interaction employees can satisfy their feelings or behavior to use the SST on their next visit to the store. The most important aspect of collaboration between the management team and the employee bonds a relationship between knowledge sharing, training, and effectiveness in an organization's success with the new technology.

Table 2 contains the participant's statements about their cultural changes and technology between the management and employees and their business practices.

Table 2

Theme 1: Cultural Changes and Technology

Participant	Participant's Comments
M-1	We had to encourage customers to use the self-checkouts because they were unsure of the new technology. By assisting them with the self-checkout lanes, it helped them get used to it. But then the industry was pushing it too far. Customers would not use it and gave pushback against the technology. We make sure to place dependable employees, who are friendly and engaging at the self-checkout lanes. This allows the customers to feel more at ease using the devices. I have seen the current configuration of self-service technology, and I think it is going to be successful due to different groups of people that cannot or will not use it. It is mostly the older generation that does not accept the new technology. However, the Millennials, X, Y, and Z, like it.
M-2	We have implemented self-checkout lanes for about a year now. Originally, the overall response was not as welcoming. First, we were a well-established store with a lot of elderly customers, and it is hard to change the culture. But over a period of time, we have increased transactions through the self-checkout registers. So now management considers this a success because it went over extremely well. Being a seasoned store, we also had to make attitude adjustments. Questions from employees came about as to why we have to do more work for the same amount of money. Management had to break those barriers. When customers are on timed lunch hours or after work. They are ready to get home. The u-scans brought customers into the store that did not want to wait in line for a longer period-of-time. Some labor hours were taken away from employees because of the u-scans but overall, the payoff has been more cost-effective. There are more customer transactions which increases revenue. We found our elderly customers did not like self-service. They felt self-service was being forced on them and did not like it. Per conversations with our older customers, our competitors were forcing older individuals to use the self-service lanes. This culture change was not accepted at first, but the elderly population realized this store did have regular lanes open if they chose to utilize them. Many elderly customers said they would never go through a u-scan. Eventually, I see are older populations going through the u-scans because they want to see what they are all about. Older customers do not want to feel uncomfortable using self-service technology.

Participant	Participant's Comments
M-3	Customers and employees have similar attitudes when it comes to changes in culture. Many Individuals do not want to use self-service technology thinking it will take away someone's job. Our customers come in our store for face-to-face interaction with employees. Some customers like to be waited on. Technology is not going away. I try to help by walking the customer through a single transaction of self-service. I encourage my employees to help customers with self-checkout transactions. I suggest for customers to come with me to self-checkout lanes. When the transaction is completed, you can pay at the end. Our goal is to take the customer through the transaction and introduce these new changes in technology. Customers never like to wait. Employees want to make sure we are getting the customers in and out in a timely manner. When the lines get backed up, customers look for a faster way to checkout. We have employees guiding customers through self-checkout lanes. That way, the customer is not waiting for a longer period-of-time at a regular checkout lane. We typically only have one register open. Management calls for backup when the lanes start to get more than three customers in line. This is a critical time with the holiday season and COVID. Some customers now only want to use the self-checkout lanes.
M-4	I follow daily records, and the reports show, on average, 56% of our guests use self-checkouts which I thought was intensely high. But after watching the reports, we see that 56% of the transactions go through self-checkouts. Right now, in the age of COVID, customers prefer to use self-checkout and not have other people touch their merchandise. The number one challenge to self-checkouts is the preconceived notion that self-checkout is taking away jobs. This challenge is best faced by explaining that we have had to add jobs without security. I personally refer to this store at a theme park for adults and moms. It is a place to get away, where everything is tidy, and everything is neat. We take a lot of pride in our store here in Southern Illinois. We, as managers and employees, encourage not just the self-service sales but the culture of our customers to come in and shop like they always have. Creating this environment, which is first touch-free during COVID, is a big selling point for many people. Touch-free is convenient and easy. Clearly, in the last few years, technology like door dash or grocery delivery to homes is a big selling point. People are looking for convenience with technology.

Participant	Participant's Comments
M-5	I would say that the biggest challenge is customers who have an aversion to the self-checkout mode of shopping. There are many people who do not like the idea of self-service. They are under the impression that self-service eliminates jobs which is true to some degree. Some customers are of the mentality that they are coming to the store, spending their money, and checkout is a service that should be provided to them, which is their personal opinion. At my store we have older demographics. These individuals feel like they are using those services and encouraging the store to eliminate jobs. They also feel they are encouraging this store to cut other services. If you look at things like Scan and Go, you show customers how easy it is no matter how big the order. Whether customers are buying 500 things or just a couple of items, customers can check them out as they put them in the cart. Customers now have the means to pay digitally. Customers then just walk out the door without having to wait in line. People really like this because it is easy and convenient. Customers buy into that even if they are initially hesitant to listen to you talk about it. We have the best success getting customers to sign up by simply showing them how easy it is. Customers are immediately sold because they visually see how quickly to check out items. Customers know they are going to pay digitally and walk out the door. I think everyone's least favorite part of shopping is probably at the end of when you have to wait in line and pay for it. This change in technology is genuinely saving people time and making the process easier.
M-6	I definitely think that we are getting a larger than expected crowd of customers due to implementing the self-checkout technology. This change has given us more options for customers to use the technology for themselves. Customers have a little more peace-of-mind. They see us wipe everything down due to Covid-19. I think that keeps them coming back knowing that we care about them first.

Theme 2: Environmental Dynamics

Environmental dynamics is taking regular routines that have ordinary capabilities and allows the ability to evolve internally. Schriber and Lowstedt (2020) stated dynamic capabilities identify product development as one key for adapting to dynamic environments. Killic and Karaosmanoglu (2019) expressed that self-service technologies,

which have changed interactions and communication between customers and service providers, are widely used in different industries. Giovanis et al. (2019) noted a significant difference in the effects of social influence and perceived trust on adoption intention between potential users with a high and limited self-service experience. The participants in this study understand the importance of the use of self-service technology and environmental dynamics.

Disruptive innovation makes many companies realize the importance of SST and understand how they process the industry modifications. Mikalef (2019) noted capabilities represent the potential of a business to achieve specific objectives through focused deployment and represent the building blocks on which firms compete in the market. The participants' stores have self-service devices such as self-service checkouts, handheld devices, kiosks, and scanners in their stores. Shin and Perdue (2019) stated the effects of new technologies on performance and competitiveness and new products and services created by technological innovation disrupt traditional service industries. Ju et al. (2020) stated while agile project management has become increasingly crucial for high-tech small and medium-sized enterprises, firm performance varies significantly due to companies' different degrees of innovation capability and internal and external environmental dynamics. Environmental dynamics must meet the criteria of management to express how to adapt SST practices in stores.

The primary approaches to SST must demand robust system thinking to approach all goals with success. Lee and Cranage (2018) expressed that adopting SST might attract organizations seeking to do more with less, but it may reduce customer perceived value

and increase blame on firms. One key factor in achieving success is communication in the industries with management, employees, and customers. Cao and Hamori (2016) noted highly skilled managers who can adapt to changing situations, manage multiple lateral relationships, and set and implement agendas are a crucial source of firms' competitive advantage. Managers with SST capabilities should expect strong links between all persons involved with the technology for sustainability. It is crucial to ensure SST systems are up-to-date, available, and implemented with ease when changing a store's environmental dynamics. Yoon and Choi (2020) noted technology-based self-service with the interaction between customer and technologies is gradually increasing because of the advances in technologies. A critical component of SST in supermarkets is the strategic measures of how the organization implements the technology. The types of self-service and use will be a compelling way to develop technology strategies, thus introducing new and changing self-service processes. Van Tonder et al. (2020) stated customers informally sharing knowledge with other potential users about self-services may contribute to greater service adoption. The primary approaches with environmental dynamics are organizing and communicating. SST must continue to develop strong relationships to secure positive outcomes for everyone.

All six participants utilize the SST systems daily and apply new ideas to help potential customers use environmental dynamics devices. One of the most critical components of SST systems is within the business to utilize various strategic measures to implement the technology to create success within the store. Featherman and Laili (2016) noted theories of social influence, technology acceptance, and consumer decision-making

provide various constructs that are potentially useful for understanding how individuals evaluate systems for adoption. By adopting self-service systems, management needs to respond to managing and controlling the devices for their most effective use. Melian-Gonzalez and Bulchand-Gidumal (2020) stated the latest advances had generated systems through self-service technologies, online and mobile applications, and robots. Singh et al. (2019) noted that environmental training should not be a one-off event but a continuous process to beat competitions and improve its environmental performance. Understanding the developing factors of potential SST use, supermarkets should investigate the system from various environmental dynamics views, including the subsystems to protect the organization, store, management, employees, and customers.

While SST has become more organized in supermarkets, the stores depend on the reliability of the devices. It is essential to choose the best software and ensure that everyone in the organization uses current releases and fixing discovered problems (McGraw, 2018). Xu et al. (2020) expressed advanced technologies, increasingly used today, engage customers through innovative service experiences. Adaption of SST and environmental dynamics creates various possibilities to initiate change. Audrin (2019) noted adaptation helps identify the main actors of change, the discourses they are employing, and the role technology plays in the change process. Chen et al. (2020) stated optimizing technology has the advantages of enhancing system stability, improving user experience, reducing hardware costs, and improving operation and maintenance support capabilities. Shin and Perdue (2019) noted SST focuses on critical issues as the effects of new technologies on firm performance and competitiveness and new products and

services created by technological innovation, and the potential of such technologies to disrupt traditional service industries. Haarhaus and Liening (2020) stated environmental uncertainty is a core challenge of today's business world. SST's importance in supermarkets is to continue to explore new options for self-service use, as with kiosks, self-checkout scanners, and innovations as robots. For all six participants, the importance of implementing and updating the software and devices is crucial for success.

Table 3 contains the participant's statements about their environmental dynamics using SST and their business practices.

Table 3

Theme 2: Environmental Dynamics

Participant	Participant's Comments
M-1	Management encouraged associates to stand at the end of the self-checkout lanes to assist customers. Customers like the assistance and it snowballed from there getting customers to use technology. The store associates tried to show SST does have benefits such as shorter wait lines. Management has metrics that measure customer usage and percentage of use. Management sets goals for the percentage and use. We share the information with the teams. There are a large number of self-checkout scans open at prime times or times when there may be less option besides the self-scan. Customers are encouraged to use self-checkouts. At the beginning it was difficult for employees and customers to get used to the technology because it was new. I observed in other stores, SST was being accepted. The customers accepted SST. But then the industry was pushing SST too far. Customers then would not use it and gave pushback against the technology. I now have seen the entire industry pull back a little bit and have more manned check lanes open. We place dependable employees at the self-checkout lanes that are friendly and engaging. This allows customers to feel more at ease using the devices. All our associates are encouraged to be friendly with more engaging associates on self-checkouts. One challenge at the store level is to have placed the right associate at the self-checkout. We

Participant	Participant's Comment

	also, meet the criteria of the percentage of our customers coming through specific self-criteria of the percentage of our customers coming through specific self-service areas. A crucial element for success is to make sure employees engage with customers. This comes from the top down to make it successful.
M-2	Management has implemented prepared meals that customers walk in and Grab and Go. The meals are ready to take home, throw in the microwave, and ready to eat. We also changed our salad bar. There are steamed vegetables pre-seasoned and ready to go. Also, we have meats such as pork chops, salmon, cod, and shrimp at the salad bar. The technology is available for customers to Grab and Go for easier meals, especially the Millennials. The scanners are working extremely well with the younger generation. Before COVID-19, we were doing sampling of cheeses and all different salads. But with COVID, we could no longer do the sampling. Since we already had the steam-a-bowls and prepared meals by the u-scans, the company told us to try them on the salad bar. We are never bringing the salad bar back. The store could not risk everyone's safety. The meals have been a success. There has been revenue growth each week since implementing them on the salad bar. Management finds ourselves busier but finds it easier to manage the front-end than in the past. We find it easier because customers are checking themselves out. We still have two or three registers open in the regular lanes, with cashiers on call to open more registers if necessary. I also support my regular checkers in regular lanes. Having both types of lanes open is important for customers. One challenge was a complaint from the customer that the u-scanners were slower than our competitors. Naturally, there were bugs to work out, but those issues have been resolved. Employees, at first, were intimidated by the u-scans and the multi-tasking that was required to watch four scanners at the same time. Some associates like doing this, and others do not. Many employees like the fact they are not bagging the groceries along with ringing them up. We trained two employees at another one which was an hour away. They trained for two days because their store had self-service devices in operation. Then that store sent over an employee from their front-end to support our new u-scans. Our two store employees trained other teammates to learn how to operate the u-scans. All of our employees are cross-trained to do other jobs in the store for multi-tasking purposes. The overall store thought it was a huge win. We knew it was a win because everywhere you go now, there are service devices. As far as management, I love it

Participant	Participant's Comment

	and support the efforts. Management does a roll call each day to address and discuss the problems. Management gives positive talks with daily reminders of being a good teammate helping out wherever needed. Employees are well-trained and available throughout the store for customer needs and care. Also, we make sure our lanes are available, whether self-serve or regular. I would like to see our last two checkout lanes at the other end of the store changed to self-service u-scans. That way, we could have u-scans on both ends of the store. I think it would be a win to stay ahead of technology. Also, I would like to see a kiosk in the deli where you call in or place an order. Then the deli will prepare the items and place them in a number in the kiosk. They will let you know what slot it is in when you pick it up. This store also has Instacart. A third party comes in and pulls the items and delivers them representing this company. We were not able to get curbside yet due to COVID guidelines. I want to see curbside soon due to many customers needing it on this side of town. But the overall goal is to take care of customers, no matter what.
M-3	Honestly, self-service is teaching and training the customers on how to use the devices and not to be afraid of change. Management relays the information appropriately. There has been resistance with employees since some employees do not know how to use self-service. Obviously, self-service usage is not going anywhere. I personally try to walk customers through the self-checkout lanes. I suggest to my employees that they can assist and teach customers how to learn self-service. Or I suggest for employees to do the transaction for the customer. The customer stands back and pays at the end of the transaction. Management encourages employees to talk to customers through self-service lanes. That way, they are not waiting for long periods of time, especially with upcoming holiday seasons and the season of COVID. We have seen challenges. Some customers only want to use self-checkouts and are frustrated now that there are lines at self-checkouts. Then we have the people who do not. So, trying to keep that six-foot distance and everything wiped down in-between customers is a challenge. The customers are either frustrated because they are waiting in line for a customer or frustrated because they are waiting in line for a self-checkout or trying to keep the six-foot distance. Sometimes this is a battle; however, customers are now utilizing self-service checkouts.

Participant	Participant’s Comments

M-4	Self-service technologies in this store have self-service lanes or self-checkout. I, personally, have adapted to saying things like assisted self-checkout rather than just self-checkout. Guest tends to have a very negative idea of what self-checkout is. For guests who are not very savvy and do not want to use self-checkouts, I use the term assisted checkout or assisted self-checkout. Another term I use is traditional check lanes. When I use the term assisted, the guests tend to be more approachable to the use of self-service checkouts. They know that they are not alone in the process. Management makes it friendlier and less intimidating to the guest. I find using different terminology is a better way to relate to our guests. The title of the machine seems to make a big difference. The records show 56% of our guests use a self-checkout lane, which I thought was intensely high. After observing self-checkout lanes, 56% of the transactions do go through self-checkouts. Guests give feedback, especially now in the age of COVID, that they prefer to use self-checkout and not have other people touch their merchandise. The store had to add extra tech personnel with people manning the devices. There are no jobs lost but actually, jobs created. One challenge is having people steal in the self-checkout lanes. If guests do not see an employee standing nearby, they are more apt to steal. So that leads back to having more employees watching the guests at self-checkouts. Management has the teams focus on the interaction, not the transaction. So yes, that does not mean employees do not speak to others. Employees must observe to make sure guests find everything they need. That is still an interaction among employees. There is still human contact even though they are using a machine. I, personally, refer to this store as a theme park for adults. Moms love this store. This store is a place to get away and shop, where everything is tidy, and everything is neat.
M-5	In more recent years, this store has taken a more modern approach through our app. We offer a service call Scan and Go. This service allows customers to checkout on their phone, ringing up their own items as they shop. This certainly is a self-service category. This has been wildly successful, incredibly convenient. I would say undisputedly there is a success for this operation. This operation has excellent profit tracking. We receive many reports available at our disposal. I daily review how much we did as a store, how much sales we had, and other factors. For instance, if customers use “Scan and Go,” they get double percent cash back. It is not just self-service sales

Participant	Participant’s Comments

	but encouraging people to come in and shop. Creating an environment that is touch-free during COVID is a big selling point for many customers. Scan and Go is free, convenient, and easy to use. Clearly, in the last few years, technologies like Door Dash and grocery delivery to homes are big sellers. People are looking for convenient ways to shop. At the store level, management has discussions with members. The discussions help employees better understand what they are doing and convince them and the store is not taking someone else's job away. It streamlines the whole process making it easier for everyone. The conversations with the customers and employees build rapport or camaraderie with most people you see in the store. Customers become more receptive to conversations from employees that they recognize versus someone they have barely talked to. Customers use self-check registers for smaller orders to checkout faster and keep lines down. The option for the Scan and Go app allows customers to checkout with orders no matter how big or how small an order. Whether you are buying 500 items or just a couple, you can check the item out as you put them in the cart and pay for them digitally. Customers then walk out the door without waiting in line, and customers like this type of shopping environment. Customers are initially hesitant to listen to you talk about it. This store has success getting people to sign up by simply showing them how easy it is. They are immediately sold because they visually see it takes three seconds to check items out. I think everyone's least favorite part of shopping is probably at the end when you have to wait in line and pay. Management focuses on positive self-service, genuinely saving people time and making the process easier.
M-6	This store has a lot more self-checkout options. Customers do not have to come in contact with many checkers touching their items. As for the employees, we did not short-staff them. We are giving everyone the option to be able to interact or not interact with customers. Management and employees deep clean everything between customers, even on the self-checkout due to Covid-19. I definitely think the store is getting larger than the average crowd of customers due to implementing the self-service checkout technology. I also think it just has given customers options to use the technology themselves. They have a little more peace-of-mind. Customers see employees wipe everything down due to Covid-19. I think this is what keeps customers coming back, knowing that we care about their safety.

Theme 3: Company Capital and Technical Knowledge

Company capital is anything that enriches the ability to produce value and to increase that value across a vast range of categories. The categories can be financial, technical, physical, or social. Xu et al. (2020) stated capital pertains to resources to obtain income and determine an enterprise's comprehensive advantages. Management's primary concern with technical knowledge is to develop strategies that include employees and customers to acknowledge the devices are here to stay in the present and future times. Tabesh et al. (2019) noted the implementing changes could influence demand and trigger additional changes in customers purchasing behavior that creates new data points collected and stored for future analysis, such as the transformation of actions into new data. The primary focus includes developing actions to include new self-service technologies that will enhance existing ways of business. Therefore, supermarkets must recognize how to implement self-service technology through the capital building.

Taillon and Huhmann (2019) stated SST expansion throughout many retail and service industries had been a significant development for marketers. Audrin (2019) noted from a managerial perspective that the flow of technological change from discourse to material needs to be understood and nurtured to foster change and guarantee continuity throughout the change process. Taillon and Huhmann further expressed support to managers in their strategic decision-making by better understanding and predicting SST service encounters outcomes. Strategic management involves managerial consideration of available resources and assessing the goals to implement technical knowledge.

Company capital is financial dealing with equity and debt. Stores develop capital gain by assessing the business to create products and perform services. These services generate growth and revenue for the supermarket. Debt is an obligation to repay the amount in the future, while equity is ownership of some part in a company like supermarket stores. Nini et al. (2020) expressed the capital structure is a balance between debt and equity as a source of funding used for its operations. Management must develop technical knowledge to enhance how the business operates to create revenue growth. Knowledge builds ideas to create products that perform services for businesses.

Supermarket stores should enlist managerial techniques to process how to adapt SST practices. Hult et al. (2020) noted the service sector checkouts sustained and rapid growth made innovations in service provision relevant to practitioners. Chang et al. (2016) stated launching SSTs should involve the continual development of a sound purchasing process and functional relationship marketing strategies to help managers organize relationship maintenance mechanisms to develop user value to obtain improved relationship performance. Supermarkets should highlight employee and customer participation checkout's importance to eliminate thoughtless, indifferent, or inaccurate occurrences. Kazancoglu and Kursunluoglu (2018) noted the SCS, a specific type of SST, is a technological innovation with the potential to improve productivity and efficiency through an automated checkout process. Managers examine strategies to develop technical knowledge, and continuous and trustworthy SST implementation qualities rely on the knowledge to engage employees and customers.

The supermarket checkouts' technical knowledge and the company capital is a daunting task for any manager. The technical knowledge of supermarket managers must focus on guiding innovation activities. Madra-Sawicka (2020) noted a critical way to alleviate the principal-agent issue; the executive incentive guides the innovation activities and affects enterprises check out the financial performance. Ko and Kirsch (2017) stated adapting to uncertainties amid IT project managers requires a shift in the requisite knowledge set. The need for trained technical managers leads management to expand and include more responsibilities and knowledge base to others with technological knowledge. Wang (2017) expressed how innovation indicated the adaptation of an organization checkouts structure to the new and led in time and significantly impacted society's progress and evolution. The reinvention of new products as SST in stores helps to restructure the supermarket. Wang further noted the innovation consists of discovering methods and strategies that could lead the organizations towards alignment with modern society checkout needs.

Therefore, supermarkets must recognize how the company capital and technical knowledge work together to create alignment to meet modern society checkout needs. All six participants use interacting layers to secure access with all departments within the store. Each department must work with technical knowledge and company capital to produce revenue growth. Two of the participants use an IT consultant to assist and monitor technical issues in the supermarket. Supermarket stores now focus on how to better the capital of the business while initiating technological innovations. Having proactive management strategies helps to create positive solutions for the supermarket.

Table 4 contains the participant's checkout statements about their company capital and technical knowledge practices.

Table 4

Theme 3: Company Capital and Technical Knowledge

Participant	Participant's Comments
M-1	I think that self-service, in its current configuration, is probably played out. I also think we are going to see some of the bigger markets checkout customers go through and scan their own groceries. Then employees check the receipt after they scan and walk out the door. SST is going to go in that direction.
M-2	Another strategy just implemented in the store is a self-service new robot machine that will clean the store. The robot is programmed for a specific department in the store, and the Manager on Duty (MOD) comes in the morning and turns the robot on. This allows employees to do other work while the robot goes up and down aisles to clean. Even though it was a lot of money, it is worth the investment. This store had a floor crew third-party contract. This way, the robot cleans, and we do not have to hire third-party contracts for the cleaning crew. Sometimes the third-party contract did not do that good of a job. Some of the labor hours were taken away because of the u-scans. Overall, the payoff has been more cost-effective. There are more customer transactions increasing revenue.
M-3	Honestly, it is just teaching and training. Coaching the customers on how to use self-service technology and not be afraid of it is a key factor for success.
M-4	We teach our employees how to use the technology. Then, the employee and managers assist the customers on how to use self-service technology and assist them when there are errors.
M-5	In terms of increasing our revenue, the store sees customers signing up for store rewards. The store rewards have access to give double percent cashback, and obviously, purchases are great. Two percent cash back on all your purchases adds up very quickly. Then the store has other incentives like being a plus member. A plus member earns two percent cash back. Then the initial two percent becomes four percent. The idea is that the store giving this incredible value to its

Participant	Participant's Comments
	members are what entices customers to continue shopping at this store.
M-6	The new technology has increased our revenues, especially with younger customers, who do not want to wait in long lines in other checkout lanes.

Theme 4: Company Policy and Structure

Company policy and structures create rules of conduct in the management, stating employers and employees checkout responsibilities. Store policies intend to protect the business goals of employers and the rights of workers. Supermarket stores conduct business every day using policies and structures to manage competition and economics for sustainability. Supermarkets now depend on SST practices to ensure the systems are successful without failure. Individuals who oversee SST with company policies and structures are appointed to meet the store checkouts' policies and structures checkout demands and needs. Taran (2019) stated representatives are appointed to supervise the management, manage company assets, and promote sustainable growth. Kuc and Kalicanin (2020) noted the company checkouts size reflects its strength, stability, and security.

The importance of sustainability of the store demands constant assessment and process of the supermarket stores practices. Key factors require new implementations to involve the supermarket checkouts emergent system, adaptation demands, and real-world operations. Colombelli (2020) noted labor policy measures are related to formal protection mechanisms in emergent systems. Silvia and Nagian (2020) stated systems aim

to analyze the effect of profitability and capital structure on the company. Supermarkets must analyze the revenue and profits to ensure that the store sustains the store checkout adapted demands. Agliardi and Krupin (2020) expressed the vast field of businesses' demands to checkout economic implications and financial strategies applicable to the economy checkouts companies or sectors. Policies and structures give frameworks and restraints within the store so everyone can aim for collective success. The impact of policies and structures calls for rapid appraisal and action to maintain the supermarket checkouts sustainability.

Supermarket stores realize the importance of expanding SST potentials through improvements in monitoring the SST devices. Through investments in technological services, stores implement different technology devices to gain revenue and growth to provide sustainability. However, supermarket stores realize the problem with budgeting for SST investments due to the costs. Weishaupl et al. (2018) noted with the changing economic environment, the consideration of planning and budgeting leads small businesses to re-examine the issues of additional investments in their technology protection. Kuc and Kalicanin (2020) stated financial strategy is responsible for the capital structure, which supports the value achieved primarily by business strategy and investment strategy. Madra-Sawicka and Ulrichs (2020) noted the company checkouts productivity refers to the balance between all production factors. Developed financial markets with productivity like the United States offer the world varying successful financial strategies about SST practices in their stores.

Supermarkets need to understand how to survive in the SST environment with the changes, productivity, and financial markets to function as a profitable entity. Each area needs constant monitoring of the systems to confront changes in its environment to take immediate actions to protect the SST systems. Three of the six participants shared concerns about the costs of budgeting SST systems but understood the importance of expanding budgets to meet the store and customers' checkout needs. One strategy store managers must implement to survive SST practices is training employees about the devices. Training programs for employees can reduce anxiety about using the devices and presenting quality information for employees to use with customers. Nawawi and Salin (2018) noted with good budgeting, and the human resources department and IT department should ensure implementing awareness and educational training for all employees. These managerial strategies should help establish budgeting issues, adaptation, evolution, and survival of the supermarket's checkout SST systems.

Company policies and capital structures are primary motivations and flexibility to account for SST practices in supermarket environments. The extent of how supermarket stores respond to SST systems checkout importance offers store-wide assurance and instills positive opportunities to succeed. All six of the participants recognize the importance of SST in their stores. SST is here to stay in stores that decide to utilize devices like self-checkout lanes, scanners, and kiosks. Educating employees and customers in company policy and structure is crucial for supermarkets' revenue growth SST sustainability. With the rise in digital and self-service technology, traditional structures disrupted their old business models. The importance of company policies and

structures for stores is to adapt successful management strategies of SST practices in supermarkets to offer sustainable security and revenue growth now and for the future.

Table 5 contains the participant's checkout statements about their company policy and structures of SST practices in their supermarkets.

Table 5

Theme 4: Company Policy and Structures

Participant	Participant's Comments
M-1	SST was foreign and new to everyone when it first came out in stores. Management had to encourage customers to use self-service because of being unsure of how it worked. Management placed associates at the end of the traffic flow, offering self-checkout with assistance. SST grew from there, getting customers to use the SST. Management showed SST has benefits such as not as long wait lines. The store policies use metrics that measure customer usage and percentage of use. The store sets goals for the percentage and use. Management shares the information with the teams. The store uses numerous scans at prime times. The scans are open at all times now to meet the customer's checkout demands. Policy information comes from the store reports. Information is communicated to management about a certain number of self-checkout lanes and regular checkout lanes being open at all times. Management makes sure to place dependable employees at any type of register. This is especially true for self-checkout lanes, which allow customers to feel more at ease using the devices. One challenge at the store level is to make sure the correct associate is placed in the correct position. Also, the store is meeting the criteria of the percentages of our customers coming through specific self-service areas. Making sure the correct employee is there to engage the customer is a crucial element for success. After the customer self-scans the item, an employee checks the receipt, and the customer walks out the door. However, online ordering has exploded. The Click List department has doubled or at least doubled my staff in that department. There are challenges there too. Some younger employees have never shopped before and have to be trained properly how to shop for customers. If there is an increase in COVID or winter is bad, I think people will continue to order with more growth in this department. I also think the industry will move on to something else and new.

Participant	Participant's Comments
M-2	The store has also implemented prepared meals for customers to walk-in and Grab and Go. The meals are ready to take home, throw in the microwave, and are ready to eat. The store also changed the salad bar access. There are steam-able vegetables pre-seasoned and ready to go. Also, the deli has meats as pork chops, salmon, cod, and shrimp. The technology is available for customers to Grab and Go for easier meals, especially the Millennials. The scanners are working extremely well with the younger generation. Before COVID-19, the store was doing sampling of cheeses and all different salads. But with COVID, the store could no longer do the sampling. Since we already had the steam-a-bowls and prepared meals by the u-scans, management decided to try them on the salad bar. Management knew we were never bringing the salad bar back like it was since COVID. The store could not risk everyone's checkouts' safety. The Grab and Go meals have been a success. There has been revenue growth each week since implementing them on the salad bar. Another strategy just implemented in the store is a self-service new robot machine that will clean the store. The robot is programmed for a specific department in the store, and the Manager on Duty (MOD) comes in the morning and turns the robot on. This allows employees to do other work while the robot goes up and down aisles to clean. Even though it was a lot of money, it is worth the investment. This store had a floor crew third-party contract. This way, the robot cleans, and we do not have to hire third-party contracts for the cleaning crew. Sometimes the third-party contract did not do that good of a job. Some of the labor hours were taken away because of the u-scans. Overall, the payoff has been more cost-effective. There are more customer transactions increasing revenue. Employees, at first, were intimidated by the u-scans and the multi-tasking that was required to watch four scanners at the same time. Some associates like doing this, and others do not. Many employees like the fact they are not bagging the groceries along with ringing them up. We trained two employees at another store which was an hour away. They trained for two days because their store had self-service devices in operation. Then that store sent over an employee from their front-end to support our new u-scans. Our two store employees trained other teammates to learn how to operate the u-scans. All of our employees are cross-trained to do other jobs in the store for multi-tasking purposes. The overall store thought it was a huge win. We knew it was a win because everywhere you go now, there are self-service devices. As far as management, I love it and support the efforts. Management does a roll call each day to address and discuss the problems. Management gives positive talks with daily

Participant	Participant's Comments
	reminders of being a good teammate and helping out wherever needed. Employees are well-trained and available throughout the store for Employees are well-trained and available throughout the store for customer's needs and care. Also, we make sure our lanes are available, whether self-serve or regular. I would like to see our last two checkout lanes at the other end of the store changed to self-service u-scans. That way, we could have u-scans on both ends of the store. I think it would be a win to stay ahead of technology. Also, I would like to see a kiosk in the deli where you call in or place an order. Then the deli will prepare the items and place them in a number in the kiosk. They will let you know what slot it is in when you pick it up. This store also has Instacart. A third party comes in and pulls the items and delivers them representing this company. We were not able to get curbside yet due to COVID guidelines. I want to see curbside soon due to many customers needing it on this side of town. But the overall goal is to take care of customers, no matter what.
M-3	There is not a lot of follow-through on self-service training. The information is given, and then management has to train employees with not a lot of directions. These new rules and protocols have to be experienced and then trained to employees. The store uses the reports of what resisters are being used and how often. Management relays the information that is necessary for employees to do that job using the self-service registers. One challenge is that employees who manage self-checkout lanes show resistance. The employees complain they do not always understand, and sometimes there is pushback. That is when management has a discussion about self-service technology. Unfortunately, this is when conversations about the store policies on self-service checkout policies lead to creating a positive attitude and store environment.
M-4	Management had to add extra tech personnel. Management still have employees handling self-service lanes. There are no losses of jobs, and actually, jobs are created.
M-5	In more recent years, the store has taken a more modern approach through our app. We offer a service called Scan and Go. This app allows customers to checkout and scans their items as they shop. This is a self-service category that is wildly successful and incredibly convenient. I would say undisputedly there is a success for this operation. The store is trying to get customers to adapt and use Scan and Go. The dollars the store has earned through Scan and Go versus

Participant	Participant's Comments
	traditional registers is a success. The store has regular incentives to encourage members to try Scan and Go. We have a policy in place to give them a free item for first-time users. Scan and Go is very convenient. There are policy structures and setups on the front end. With the incentives to get customers started, the app rests on its own merits. Scan and Go has excellent profit tracking. Management has access to numerous reports. I can daily review how much we did as a store and how many sales we had. Scan and Go rewards customers with double percent cashback. In terms of increasing our revenue, management sees customers signing up for the store rewards to access that double percent cashback, and obviously, cashback is great
M-6	As for the employees, management did not short-staff them. The store kept employees working. Management gives the employees the option to interact with customers in the self-checkout lanes, which is a positive structure between employees and customers. Management has meetings every quarter to go over policies and procedures to make sure they are taken care of in the store.

Applications to Professional Practice

The study checkouts findings may contribute to the examination and options for supermarket managers to implement successful managerial strategies to adapt SST practices in their stores. The findings were significant for the managers to achieve and enhance their existing SST practices. The study findings include four underlying themes: (a) cultural changes and technology, (b) environmental dynamics, (c) company capital and technical knowledge, and (d) company policy and structures.

The research checkouts first significant contribution encompassed professional practices of the business checkouts cultural changes and the technology utilized with employees and customers in the stores. Glaister et al. (2018) noted the business checkouts added value includes its focuses on the people, positions, or practices. Kostis et al. (2018)

stated that civic culture affects innovation. The effect of specific cultural values on innovation has stemmed from the positive effect of trust, control, work ethic, and honesty.

With the onset of SST, the importance of managerial strategies to adapt to SST devices requires effective cultural changes. SST environments make it challenging due to daily interactions and communication. Ford et al. (2017) noted the store recognizes its responsibility in providing clearly defined policies and the business checkouts mission to instill trust among the employees. Store managers should consult with their employees on how to implement a successful SST strategy. Employees are the organization checkouts in direct line with customers and their concerns about the technology. SST should be successful in the supermarket if the managers provide the beneficial aspects to the store and the employees.

The second contribution to enhance the reliability of SST is environmental dynamics. All supermarkets rely on some technology to conduct their business. A positive experience at the store is crucial for SST to succeed. Schriber and Lowstedt (2020) stated the challenge for dynamic capabilities is to bring about change to build and renew resources to reconfigure the SST to the store environment. Mikalef et al. (2019) noted the idea that firms must be stable enough to continue to deliver value through restructuring their value proposition when circumstances demand it. There is a well-documented distinction between ordinary and dynamic capabilities. Ordinary capabilities rely on everyday routines to run efficiently and effectively. Dynamic capabilities rely on the store checkout's ability to build and reconfigure changes in the store checkouts

environment. While the store checkouts existing SST systems work, businesses worldwide are using technology to provide services to customers in a matter of seconds or minutes. Wadin and Ode (2019) stated organizations should avoid outliers, which results after contingencies change. McGraw (2018) stated it is essential to choose the best software and ensure that everyone in the organization uses current releases and discovered problems. Singh et al. (2019) noted that environmental training should not be a one-time event but a continuous process to improve its performance.

The third contribution to adapt SST practices of successful managerial strategies in stores is the company capital and technical knowledge required to combat potential negative aspects. Xu (2020) stated that senior managers' checkout attitude plays a leading role in implementing new technology. Managers must lead by positive example to implement and include SST practices for their store. Padayachee (2016) noted stores should demand employees to participate in a non-risk policy, aiding in eliminating carelessness, negligence, or mishaps. SST affects stores, economic avenues, and society. Stores need to implement effective SST practices with a plan-of-action. Stores must screen employees' checkout technical knowledge to discover how to assign responsibilities to particular individuals. BaMaung et al. (2018) expressed businesses need to screen new employees and monitor their systems.

Along with screening employees, stores must ensure that all employees follow how their capital affects SST practices. The mix of assets and resources a store draws from is their debt and equity. Conteh and Schmick (2016) noted the primary concern of internal technological protection strategies includes the employees, monitoring system,

raising employee awareness, and employing strict processes. The knowledge to connect technological knowledge and company capital leads to a mix of assets the store can draw from when financing SST practices. The course of action taken when using technical knowledge and company capital offers essential sustainability from the beginning of the SST process.

The fourth contribution to adapt SST practices of successful managerial strategies in stores includes company policy and structures. The response to adapt the practices through company policy and structures is to become a helpful store with reliability and sustainability. Hawkins (2018) stated the stages of an effective response plan include assessing the situation, locate the impact, action to attack, and analyze ways to improve the system. Florina (2020) noted adopting a specific financial structure represents an essential aspect of any company checkouts financing policy that aims to maximize its market value in a competitive economy. The analysis and fair assessment of options available to a company require the resources needed for optimal business conduct (Florina, 2020). Each decision made depends on the store, its goals for growth, and risks for revenue growth. Taran (2019) stated managers seek the trade-off among the companies checkout financing needs, available financing sources, costs of capital, indebtedness risk, and profit maximization.

Many stores realize the importance of expanding their SST services to reflect a contribution of the capital structure. Through SST investments, stores implement assets that complement the store checkouts capital structure and plan for future endeavors. Kuc and Kalicanin (2020) noted that a company checkouts size reflects its strength, stability,

security, and negotiating power. The capital structure is a primary motivation of the store checkouts flexibility to respond to revenue growth and sustainability opportunities. Hult et al. (2020) stated implementing the new technology could present challenges for many supermarkets. The importance of the store's sustainability demands continuous evaluations of company policy and the structure of the store checkouts business practices.

Implications for Social Change

The implications for social change include the potential to create change opportunities to adapt to SST practices performance and increase both supermarkets' profitability and tax revenues for surrounding communities. Public sectors utilizing SST at an accelerating rate tend to provide the potential for improving work efficiency and user experience, reduce service costs, and relieve human workloads (Chen et al., 2020). Wang (2017) noted ability is also a particularly relevant and vital dimension of SST acceptance, which often requires skills and confidence. Audrin (2019) stated from a managerial perspective that specific practices could facilitate technological change. Change unfolds and helps highlight the mutual reinforcing mechanism of technology and companies (Audrin, 2019). The challenge for stores encompasses the concepts of employee and customer acceptance and use of SST. The mitigated risks with SST usage in stores include the ability to adapt SST practices, increase profitability and tax revenues, improve employees' checkout and customers' lives, and improve operational performance through technology innovation. Willems (2017) stated in the present digital era, technological developments allow for augmenting the shopping experience and capturing moments-of-truth along with the shopper's checkout path-to-purchase.

Wang (2017) expressed consumers may intend to try a new SST but will probably not use it if they believe they lack the skill. Roy et al. (2017) noted when shoppers have to deal with new technological retail services; they become concerned with changes in the new intelligent retail technologies. Wang further stated consumers' checkout beliefs about their ability to use technology would influence their actual adoption of the technology, independent of their willingness to try. Roy et al. (2017) stated retailers could provide smooth customer experiences. By using tablets in installations and interactive screens, the customers can gather more information about the products. Retailers can also connect, communicate, and track their customers using the in-store Wi-Fi (Roy et al., 2017).

The implications for social change include reducing technology anxiety, perceived situational factors, and usefulness, the need for well-trained employees to encourage the use of SST self-checkouts. Kazancoglu and Kursunluoglu Yarimoglu (2018) noted customers' checkout intentions to use self-checkouts could formulate marketing strategies and consider future research directions. Ul Hassan et al. (2020) stated SSTs fervently impact customer checkouts interaction with service firms to foster positive outcomes. The increased use of SST affects service quality with the behavioral intention of loyalty and trust from customers. Nili et al. (2019) noted from a customer perspective; SSTs have become increasingly ubiquitous and increasingly essential for many aspects of our daily life. From an organizational perspective, in a competitive or severely resource-constrained environment, encouraging users to solve their problems represents opportunities for considerable cost savings in customer support (Nili et al.,

2019). It is critical to secure customer support to gain employees' checkout and customers' checkout trust with SST usage.

Suppose stores provide the support necessary for SST. In that case, individuals may be guided to the devices, thereby protecting their interests to reduce economic strain and achieve sustainability through society checkouts confidence. Berawi et al. (2020) stated the social and economic dimensions of this crisis. Management checkouts concerns about enhancing societies checkout resilience and making society safe in the wake of COVID-19 concerns all businesses. Berawi et al. further remarked the future well-being depends on how we react to the pandemic through the use of SSTs to provide a climate, health, social equity, and stability. The new technology improves project, product, and service performance for our benefit (Berawi et al., 2020). Boghosian (2020) noted in the midst of all this, exponential technologies supported by disruptive digitization allow companies to create their innovation processes allowing cross industries and break down barriers. The results can increase operations' understanding of the challenges supermarkets face in Southern Illinois and find ways to offer support to increase supermarkets' survival rates with derivative benefits, such as tax revenues, for benefiting communities' citizens.

Recommendations for Action

Stores should implement SST policies to prevent breaches in their devices and systems. Ford et al. (2017) noted organizations recognize their responsibility in providing clearly defined policies, and the business checkouts mission should instill trust among the employees. The biggest concern for stores is the ability to protect their SST systems from

potential risks, including the use of self-checkouts, kiosks, and scanners. Stores should create a policy for managers and employees to follow to allow for training of SST devices. The company would instill proper skills training for the employees to assist the customers. Furthermore, managers and employees should ascertain how SST affects the store to benefit customers for trust, loyalty, and sustainability.

Stores should train employees continually to recognize areas of concern with SST usage. Li and Huang (2019) stated service providers should understand service practices to reflect service climate. It is essential to the customer's checkout perceived ability, benefit, and continuance intention of use toward SSTs. Moreover, service firms must be aware of their role in SSTs encounters as a value facilitator rather than a bystander (Li & Huang, 2019). Proper training programs can reduce the anxiety of managers and employees. The programs must be committed to the store's checkout goals with perceived ability, benefits, and continuance intention toward SST use. The store's checkout commitment to implement and sustain SST begins with store policies and managers' checkout and employees' education throughout the store.

Most stores may not employ extra security for the SST checkouts, nor do they budget the funds necessary to adopt new security plans. The challenge with new security employees is between selecting the proper SST system and implementing SST usage devices. However, stores can design a simple system. As the store grows in SST usage, they can expand their security network from the basics. Employees should watch the devices providing security measures as SST increases in the day-to-day transactions. Stores should implement the following procedures to protect their network.

- Security of SST use: The stores should create a security policy for all SST devices checkout daily activities. Security risks may arise with many employees and customers having access to the devices. Featherman and Hajli (2016) noted consumer evaluations of the risks in a purchasing situation are subjective and often vary among the consumer and purchasing context. The SST data should be reviewed and stored in a secure location to enhance future business endeavors with SST. Stores should protect self-checkout stations and data to ensure accurate monitoring of the devices for customers. Managers and employees must know how to retrieve information and correct any problems with the devices. I recommend a backup system or a different network system to keep all data secure for the store checkouts review.
- Customization and design of SST in stores: Stores should customize and design the SST devices checkout set-up, such as self-checkout scanners. The position of these devices in the stores for maximum foot traffic is essential for the successful use of the devices. The foundation to optimize the design helps serve the customers better if the design complements the customer's checkout point-of-view. Management must listen to employees and customers to map out the store checkouts self-checkout scanners checkout reality. The design must be available to decide whether customers consistently use the self-checkout stations for convenience.
- Have a practical SST functionality: The operationalization of SST devices must serve a purpose with practical and usable service for managers, employees, and

customers. The functional usefulness of how well the devices work is crucial for customers to operate with minimum problems. SST quality must be suited to serve the self-checkout purpose well in the device's checkout operation. Management must develop a plan where customers prefer to use the self-checkout lanes instead of waiting in long lines of a regular checkout lane. The physical and valuable function of self-checkout lanes can offer customers a more positive experience when shopping.

- The convenience of SST devices: Convenience is the perceived time and effort customers require to find and utilize self-checkout devices in the stores. During and after a transaction, the time and effort used before, during, and after a transaction should address the customer's checkout convenience. The importance of convenience when customers analyze devices is essential for sustainable use. The convenience and benefits of SST affect customer's checkout perception of the accuracy and speed of checking out their products. Customers focus on speed and accuracy to make the experience positive for convenience and accuracy.
- Assurance of managers and employees training: With more stores utilizing new technology to maximize the customer's checkout experiences, the assurance of proper training is a must for positive experiences. There can be pitfalls with the use of SST in stores. Inadequate training is a chance of producing errors when stores do not provide proper training in using the devices. The practical training of managers and employees enables them to solve problems with SST. The training can affect managers and employees to create a community of trust with customers

and enrich revenue growth opportunities. Customers will feel comfortable and trust managers and employees to assist with SST, resulting in a boost in self-checkout lanes traffic.

- Take advantage of new SST systems and devices: Stores should mandate a policy for each self-checkout device used in the store. Each device must be updated to instill proper usage and eliminate possible threats for the store. Affective SST devices must value the consumers' checkout perceptions toward the technology and the intent of use. Guidelines for SST managers must incorporate devices in the stores to boost customer experiences and increase operational efficiency for efficiency in the present and future.

Finally, stores should continue to monitor their systems through evaluations and actions to prevent threats to their systems. SST is, first and foremost, a business process to assist business processes. The internal and external factors of SST must focus on assisting customers at checkouts with little or no problems. Tang et al. (2019) stated technology development had ignited many business management innovations, especially in the electronic commerce area. The stores must maintain a performance level to mandate evaluation and action to continue with sustainability to prevent customer loss and revenue. Gummerus et al. (2019) noted SSTs revolutionized customer service. These technological interfaces enable customers to serve themselves, transforming the ways customers interact with the service supplier. The importance of SST sustainability in stores demands continuous action of business practices as they apply to their SST network system for managers, employees, and customers.

Recommendations for Further Research

The advancement of technology affects small and large stores. This study examines the contributions provided by information stores to provide SST measures to assist managers, employees, and customers for growth and revenue. Regardless of the store's checkouts size, managerial strategies to adapt SST practices are essential for potential success. Wei et al. (2017) noted managers create effective strategies to match consumers' checkout needs and deliver a customized self-service experience.

While I reached saturation with six participants, one limitation of this study exists on the number of employees (i.e., 50 to 200) of the stores. The results of the study may provide managerial strategies to adapt SST practices in stores of all sizes. The supermarkets and grocery store industry makes up the most significant food retail channel in the United States (Industry, 2019). The region of Southern Illinois consists of a large number of retail food stores. The information is significant since supermarkets number over 100 in Southern Illinois. Stores incorporate many specialized departments, including fresh and prepared meats, poultry and seafood, canned and frozen foods, fresh fruits and vegetables, dairy products, and delicatessens.

With the global crisis of COVID-19, many customers have shifted to online shopping and SST checkouts. Iivari (2020) noted the recent COVID-19 pandemic had made this incredibly relevant and visible in society. Van Rensburg et al. (2019) stated the developmental activities for customers from various perspectives, including (a) mobile platforms, (b) technology-oriented architecture, (c) the technological platform for data gathers, (d) test instrument platform, and (e) research and communication skills, to

change society for growth and development. Cox (2020) stated the COVID-19 pandemic had brought immense challenges to almost every country as it spreads throughout their populations. Boghosian (2020) noted COVID 19 has also shaped business commercialization and consumer behavior, allowing faster response and new infrastructure for technology and business development.

Suppose the study's information gathered by organizing a statewide online survey to obtain potential participants, possibly may provide a different outcome. However, conducting an open-ended questionnaire may result in a significant number of participants. Interviewing participants in open-ended interviews creates more information-rich data by observing body language or reluctance to provide further information. The process of conducting interviews provides visual clues where surveys do not. Future researchers could obtain a database or examine supermarkets around the entire state of Illinois that have SST in their stores. The information provided by various stores could offer a statewide view of the managerial strategies used to adapt SST practices. The importance of the data may provide other managerial strategies for the increased use of SST practices.

The final assumption is managers may have limited knowledge of SST practices and strategies to prevent use in their stores. In this study, the manager's checkout responses provided future action recommendations to adapt SST devices and practices. Extending the study to interviewing the IT supervisor may assist with more information and additional insight.

Reflections

I conducted the interviews in a natural setting chosen by the managers, which provided an environment in which they were comfortable to share information. The open-ended questions encourage the participants to provide depth and vitality, which increases the study's validity by collecting rich data for analysis. The face-to-face interview provides visual observations and providing information about the ease or uneasiness of the interview. As the discussions continued, I recorded these observations due to specific topics of the conversation.

I obtained 12 store managers' checkout names, email addresses, locations, and employees from the Illinois Business Administration. My search method to gather managers' checkout names provided 12 potential participants. However, six participants were not willing to participate in a face-to-face interview. I determined that an online survey would not yield the same results. However, I feel the face-to-face interview contributed a better avenue to obtain well-informed and substantial information and data.

This study checkouts participants provided important information, explaining effective strategies to adapt SST practices in their stores. However, the stores must also instill effective training programs for managers and employees to adapt SST practices in their stores. Additionally, the stores need to regularly update the SST systems to withstand threats to the programs and devices. I feel SST updates protect the store, managers, employees, and customers, which is necessary for the sustainability of SST practices.

Conclusion

The managerial strategies to adapt SST practices in stores help employees and customers utilize quicker and more accessible checking out methods. SST practices and strategies may help with sustainability and growth in revenue. Even though there are set-up costs for SST devices, the outcome of growth outweighs the set-up fees. For stores, successful strategies are crucial due to the store's checkout ability to develop the new techniques developed by managers to influence employees and customers to try the innovative technology. The role of SST must be to expand beyond simple factors to satisfy customers' checkout curiosity about the devices and relate to customers with interactions of personal experience. Stores should recognize the importance of SST practices and never underestimate employees' checkout and customers' abilities to experience success with SST use through personal interactions.

The societal changes of technological innovations may produce technologies to help our climate, social fairness, and sustainability. For example, technology helps global challenges, especially with the COVID-19 pandemic. The virtual activities that occur with innovations improve products and performance for society's checkout benefit. All areas of the pandemic must be managed in everyone's checkouts business to increase different societies checkout flexibility. The innovations of barcodes, kiosks, ATMs, SSTs for customers increase technological possibilities to improve in-store experiences and will continue to increase. The customer experiences can provide more information about products such as McDonald's checkouts fast-food restaurants. Digital and physical ways with technology produced societal changes for customers. Van Rensburg et al. (2019)

stated that customers check developmental activities from various perspectives as mobile platforms and new technological advancements change society.

The estimated worldwide gains due to SST practices in stores are in the billions of dollars annually, affecting the supermarkets, individual stores, employees, customers, and the public. The social impact of SST can cause economic growth, customer acceptance, and productivity in the store checkout business. The challenge for stores, local towns, regions, and counties is securing SST devices to meet the needs of everyone involved with the practices. With the increase of self-checkout scanners, kiosks, online shopping, and social media, SST mandates a secure environment to protect personal information from possible theft. By exploring risk factors, stores can implement new strategies. To enhance the store checkouts SST devices and practices, the company should examine its policies, including (a) IT structure, (b) managerial strategies, and (c) evaluation and action to reduce susceptibility.

Stores should recognize their responsibility to provide clearly defined policies and store checkout goals to maintain their sustainability. Stores should instill policies to train managers and employees to provide awareness of the SST systems to help prevent problems and recognize the device's checkout details. Many stores lack effective training initiatives for all employees. SST training enables all employees to understand SST devices and how to assist customers for success. Through budgeting, the stores could provide training of SST with the assistance of human resources and IT. All employees should understand the SST systems checkout procedures to create an atmosphere of

support for the customers. By exploring all SST factors in the store, managers can implement new strategies to reduce the SST process's failure.

Stores must develop new safety measures for employees and customers due to the COVID-19 pandemic. Garcia and Monteagudo (2020) noted the year 2020 surprised the world with COVID-19, a highly contagious virus. New social development prioritized the economy instead of other aspects of social life. Bhargava et al. (2020) noted that COVID-19 had required safety measures in our country, enabling SST to sanitize these devices thoroughly, especially for socializing and shopping. Pantano et al. (2020) stated the current situation presents enormous, unprecedented challenges to retail managers with the retail landscapes from the crisis much changed. Store managers must be aware of how they respond to the COVID emergency and how this will dramatically impact their stores. Utaru and Han (2021) noted to minimize the risk of spread of the virus and to safeguard the health of their consumers and themselves; retailers worldwide have implemented protective measures. The stores provide free hand sanitizer for the customers, installed protective visors to protect the cashiers, and implemented social distancing. Using cashless or other payment methods minimizes the spread of the virus. Managers are now scrambling to adapt these strategies as they have minimum time to act. COVID-19 is a new threat for retailers in society.

The primary threats to stores with SST practices include customer refusal to use the devices. Therefore, managers must recognize and implement successful managerial strategies to navigate proper usage to reduce failure through assessment and action to protect the SST system. It is crucial to check and conduct system checks daily or at least

weekly for stores. The most critical activities of stores must require the IT employees or checkout lane employees to monitor all traffic in and out of the self-checkout lanes. Due to IT employees' limited budgets, stores often lack funding to expand their checkout SST systems. The managers must demand constant monitoring to defend the policies, procedures, and protocols of the store's checkout priority. By analyzing SST factors and procedures, stores should adopt successful strategies to reduce failure through each evaluation and action to protect the systems. Stores should have backup plans for effective data recovery, updating all systems, checking for new system processes, and continually educating employees and customers.

With SST on the rise, stores can conduct transactions quickly through the use of self-checkout scanners, kiosks, handheld devices, and self-cleaning robots. Bogicevic et al. (2017) noted society changes with SSTs had reached widespread utilization in various service environments such as banks, retail stores, cinemas, lodging, and restaurant facilities. Managers require creative, managerial strategies for strategic management to strengthen the store's checkout SST systems. Increased successful strategies are necessary to protect the store's checkout financial assets and revenue growth. Maintaining a level of high performance directs adapting the store's checkout needs to maintain resilience and sustainability. Managerial strategies for the store's checkout success are to engage the entire set of employees concerning SST practice. The resilience to endure new strategies is a win-win for everyone connected with the stores. Maintaining a high SST performance level requires measuring the store's checkout SST resilience to maintain its successful adaption and growth. The stores must implement effective

strategies to create success for the store's checkout managers, employees, customers, and society to maintain their sustainability.

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Appendix A: Email Invitation for Potential Participants

RE: [RSVP] Are you willing to participate in a doctoral research project…

Salutation:

My name is Ryan Gurley, and I am a doctoral candidate at Walden University. I am preparing my doctoral study on the topic of determining successful managerial strategies to adapt to the use of self-service technology SST practices in supermarkets. As a part of the doctoral study, I plan to conduct the research necessary to answer my study research question of "What successful managerial strategies do supermarket managers use to adapt SST practices in supermarkets?" The purpose of this study is to explore the managerial strategies of supermarket operations managers to adapt SST practices in their supermarkets to increase revenue and profit. I plan to explore the managerial strategies implemented by 6 supermarket operations who successfully adapt SST practices in their supermarkets in Southern Illinois of the Midwestern region of the United States.

SST use affects supermarket operations, society, and the economy. By 2021, self-service checkouts like self-checkout kiosks, barcode scanners, or touchscreen devices will be available in 325,000 stores worldwide. The current researchers have found the use of SST usage relies on successful adaption strategies of its managers , employees, and consumers. This study can provide other supermarkets with information to improve their managerial strategies and adapt SST practices in their supermarkets.

Can you please help?

I have attached the Informed Consent Form to provide all the information pertaining to the study. Please indicate your consent by replying to the Informed Consent Form via email by providing the words, "I consent."
Many thanks in advance for your consideration.

Kind regards,

Ryan Gurley
Walden University Doctoral Candidate

Appendix B: The Six Open-ended Interview Questions

The method of data collection of this study includes 6 open-ended questions in a face-to-face interview with 6 supermarket owners to gather the data:

1) What strategies have you utilized to adapt to the use of SST?
2) How did you implement the strategies?
3) How do you assess the effectiveness of the strategies to implement SST in the supermarket (e.g., in terms of increased revenues)?
4) What key challenges have you experienced using strategies with SST in your supermarket with management, employees, or customers?
5) How did you address the key challenges for implementing your strategies to adapt SST practice in your supermarket?
6) What additional information related to strategies your supermarket used to adapt SST would you like to share?

Please note: The researcher plans to take notes and observations during the interview.

Appendix C: The Interview Process Protocol

The semistructured face-to-face interview includes the following process:

1) Introduce myself and introduce the research topic as stated in the Interview letter.
2) Presentation of the audio recording device.
3) Assure participant of confidentiality.
4) Confirm the interview process will take no longer than 30-45 minutes.
5) Encourage the participant to reply to questions to the best of their ability.
6) Note extra questions for future interviews to maintain reliability and validity in data collection field notes.
7) Note observations during the interview
8) Thank each participant for their time at the end of the interview.
9) After the interview process, I will request documentation of the managerial strategies to adapt SST practices, if available.
10) I will inform the participant that I will transcribe the interview from the audio recording and email them a one to two-page summary of the interview in a process call member checking, where they approve the data collected for analysis.
11) I will schedule a follow-up interview via telephone call, if necessary, to verify the data collected is accurate unless I receive an email from you verifying the summary is correct. The follow-up interview, via telephone call will take approximately 10-15 minutes.

Appendix D: Letter of Cooperation

Name of Supermarket:

Name of Authorized Personnel:

Supermarket Address:

Supermarket Phone number:

Date:

Dear Mr. Ryan Gurley,

Based on my review of your research proposal, I give permission for you to conduct the study entitled Strategies for Implementing Self-service Technologies in Supermarket Retail Operations. As part of this study, I authorize you to select and interview six participants based on the criteria of the research proposal. Interviews may be audio recorded as long as all parties remain confidential in the research study and research data is used only for research purposes. I further authorize you to communicate with selected participants throughout the duration of the research study for research purposes only. The results of the research study must be provided at the completion of the research study for our benefit. Individual participation will be voluntary and at their own discretion.

We understand that our supermarket responsibilities include: a safe and suitable teleconference interview room. We reserve the right to withdraw from the study at any time if our circumstances change. I confirm that I am authorized to approve research in this setting. The data collected will remain entirely confidential.

Sincerely,

Name of Authorized Personnel: _____

Signature of Authorized Personnel: _____

Title of Authorized Personnel: _____

Contact Information/Phone number: _____