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Successful Inventory Management Strategies in the Office Supply Businesses

Arlene Annette Wilson
Walden University

Walden University

College of Management and Technology

This is to certify that the doctoral study by

Arlene Wilson

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Review Committee
Dr. Warren Lesser, Committee Chairperson, Doctor of Business Administration Faculty

Dr. Michael Campo, Committee Member, Doctor of Business Administration Faculty

Dr. Janie Hall, University Reviewer, Doctor of Business Administration Faculty

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

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Abstract

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Arlene Wilson

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Doctoral Study Submitted in Partial Fulfillment

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Abstract

Some small and medium-sized retail office supply stores (SMROSS) owners lack successful inventory management strategies. SMROSS business owners rely on successful inventory strategies to minimize costs, maintain the correct inventory level, and avoid stockouts. Grounded in the conceptual framework of contingency theory and inventory modeling, the purpose of this qualitative multiple case study was to explore strategies business owners use to manage inventory efficiently. The participants included eight business owners of seven SMROSS in Ontario, Canada, who operated their businesses for more than 5 years and successfully implemented inventory management strategies. Data were analyzed from semistructured interviews and information from participants' websites following Yin's five-step process. Four themes emerged: inventory management efficiency, nurturing supply chain partner relationships, using information technology in inventory, and responsiveness to customer demand. A key recommendation is that SMROSS business owners maintain a stock level where storage cost is lowest while maintaining inventory to satisfy demand. The implication for positive social change includes the potential for SMROSS business owners to remain competitive by maintaining customer loyalty by meeting customer demand. By remaining viable, business owners could potentially expand their businesses and create employment opportunities for individuals in the community.

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Dedication

I want to thank God for giving me strength and uplifting my spirit, especially when I felt I could not continue. I also dedicate my doctoral study to my family and friends, who offered support during the journey. I am grateful to my mother, Estella Dixon-Lowe, who always offered encouragement and prayers. I remember Pearlena Lobban, a key supporter and prayer warrior who transitioned before seeing me to the journey's end. To my daughter, Aju Sue, who kept reminding me of my inspiration, I am thankful and motivated to finish. I hope this journey will become a source of motivation for my son Lindon as he pursues his first-degree program.

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Table of Contents

Section 1: Foundation of the Study

Owners of small and medium-sized retail office supply stores (SMROSS) have practiced improper inventory management, causing financial distress. The implementation of weak inventory strategies by business owners has led to excess inventory, decreased cash flows, and lower profitability (Gołaś, 2020). Approximately 70% of firms' inventory managers reduced inventories during periods of distress to improve cash flows and profitability (Steinker et al., 2016). However, some business owners fail to use inventory management strategies to promote success and sustainability. I focused on discovering successful SMROSS business owners' inventory management strategies to optimize performance. As the researcher, I indicated the inventory management strategies successful business owners used to optimize performance as the main content of the study.

Background of the Problem

Inventory managers experience supply chain problems, inaccurate forecasting, overstocking, understocking and the ability to maintain competitiveness (Atnafu & Balda, 2018). Successful business owners and managers aim to optimize performance, manage inventory, and achieve desired goals (Li & Lim, 2018). The owners of firms experiencing financial problems can adjust inventory to the level to facilitate cash availability or important events in the business. Inaccurate demand forecasts can lead to unsold stock and increasing expenses (Yang, 2016). Maintaining proper inventory records is also critical because inaccurate records can negatively impact the firm's bottom line. Effective

inventory management significantly affects the performance and sustainability of any business (Bendig et al., 2018).

Leaders and managers could focus on implementing inventory strategies to maintain competitive and sustainable enterprises (Karki, 2020). Customer demand is necessary and is a driving factor in planning between the firm and supplier to ensure the availability of goods for sale (Kück & Freitag, 2021). Owners and managers should maintain inventory levels to increase cash flows and growth and ensure business success.

Problem Statement

Inventory mismanagement causes difficulty in satisfying customer demand and threatens business survival for some business owners of SMROSS (Akan et al., 2021). Almost 70% of firms experiencing difficulty paying creditors indicated reduced inventory levels during downturns (Farooq et al., 2020). The general business problem was that some business owners of SMROSS experience inventory mismanagement, resulting in lost profits. The specific business problem was that some owners of SMROSS lacked strategies to manage inventory efficiently.

Purpose Statement

The purpose of this qualitative multiple case study was to explore strategies successful business owners of SMROSS use to manage inventory efficiently**.** The target population was owners of five or more SMROSS located in the Greater Toronto Area (GTA), Canada, who managed inventories efficiently. The social benefits of this study are that SMROSS owners may implement inventory management strategies to increase

business sustainability, which could result in employment and the provision of necessary business and educational supplies for citizens of the local community.

Nature of the Study

A researcher may conduct a study using either a quantitative, qualitative, or mixed method approach. Qualitative researchers gather exploratory and in-depth information, and quantitative researchers collect numeric data to predict, test and analyze a phenomenon (Morse, 2015). The mixed methods approach combines qualitative and quantitative methods (Molina-Azorin et al., 2017). The quantitative method involves making deductions and predictions on an event and is not the focus of this study. The mixed method is not compatible with investigating the strategies of successful SMROSS business owners because I did not use a quantitative approach, and the focus of my study was exploratory. I conducted a qualitative study to identify and explore successful inventory management strategies small business owners develop and deploy successfully.

I used a multiple case study design for my research. Researchers use the case study design to understand and describe reasons for a social phenomenon, extract in-depth information, and explore current events and real-life experiences (Yin, 2018). Narrative design involves researching the personal stories of individuals (Höfler et al., 2017). Ethnography design is suitable for studying the shared beliefs of groups and cultures over a period (Aslan, 2017). The phenomenological model is appropriate for studying the personal meanings of the participants' lived experiences (Yaroslawitz et al., 2015). My purpose of the study was to explore strategies successful business owners of SMROSS use to manage inventory efficiently. As a researcher, I used the case study

design to gather descriptive information, analyze in-depth causation, and justify the case design. The use of narrative, ethnography, and phenomenological designs could not facilitate an exploratory and in-depth approach and, therefore, unsuitable for exploring strategies SMROSS used to manage inventory efficiently.

Research Question

What strategies do successful SMROSS business owners use to manage inventory efficiently?

Interview Questions

1. What inventory management strategies do you use to ensure sufficient, but not excessive, inventory levels?
2. Which inventory management strategy gives optimal results?
3. How does the organization assess the effectiveness of its inventory management strategies?
4. What inventory management technology did you use to manage inventory?
5. How do you organize your resources to ensure you purchase the right quantity of stock?
6. How do you use sales forecasting in combination with your inventory strategies in combination with your inventory strategies to determine required ordering points and quantity?
7. What controls did you put in place to monitor inventory inflows and outflows?
8. What are the controllable variables you must consider when dealing with suppliers to ensure effectiveness of inventory management strategies?

9. Based upon your organization’s experience, how has improving inventory management influenced inventory management of your business?
10. What other information can you share with me about your organization’s inventory management strategies?

Conceptual Framework

The conceptual frameworks I used to support this qualitative multiple case study are the contingency theory and inventory control modeling. Contingency theory includes the strategy of a control system that fits and will be ideal for helping ensure optimum performance (Hossein Nezhad Nedaei et al., 2015). Inventory control modeling is the selection of an inventory system best suited to the organization's or business's requirements (Svoboda et al., 2020). Prasad (1994) suggested mapping inventory models by classifying inventory conditions and identifying a suitable model or system based on the circumstances. Inventory managers can sort through the various classifications to select the system that aligns with their experience. In 1964, Fielder developed the contingency theory, which focused on the critical decision of managers. In contingency theory, Fielder posited that a leader's effectiveness depends on how well the leader's style matches a specific environment or situation (Debebe, 2017; Fielder, 1964). The tenets of contingency theory relative to this study are leadership styles, strategies, and effectiveness of inventory managers when faced with different, often complex situations.

In a crisis, poor management strategies and a lack of financial planning will affect inventory managers’ effectiveness and competitiveness in the global marketplace (Karadag, 2018). Houghton and Yoho (2005) discussed how investigators were adapting

the use of contingency theory for relevant and flexible applications. As Riggio (2008) posited, contingency theory is suitable for applying the most effective leadership style in urgent situations. I used the contingency theory framework to help me explore and analyze how different business leaders or managers use inventory management strategies in business. As a researcher, I have used the study's results to explain the difference in the strategy of successful inventory managers versus the strategies used by unsuccessful managers and owners.

Operational Definitions

Bullwhip effect: The bullwhip effect (BWE) is when the firm inventory manager maintains some degree of inventory no matter the demand level (Ojha et al., 2019).

Business sustainability: Business sustainability involves environmental, economic, and social factors impacting the ability to continue (Geerts et al., 2021).

Inventory management strategy: Inventory management strategy **is** the use of leadership and management skills in decision making to organize inventory activities in alignment with external factors to achieve optimal results (Friday et al., 2021).

Lean inventory technique: Lean inventory is a strategy where inventory managers in small business increase profits and eliminate waste while maintaining only the level of inventory that is necessary (Kroes et al., 2018).

SMROSS: SMROSS is an acronym for small to medium-sized retail office supply stores. Small and medium sized enterprises are critical to the growth of economies worldwide (Ndiaye et al., 2018).

Sharing Strategy: Sharing strategy is a tool inventory managers can use to reduce inventory costs by offering inventory to other business managers to sell to their customers (Tathan et al., 2017)

Assumptions, Limitations, and Delimitations

Assumptions

Assumptions are factors accepted as true without evidence to support them (Lips-Wiersma & Mills, 2014). The primary assumption was that SMROSS business owners would participate and respond accurately about operating and maintaining sustainable enterprises. I have made assumptions about information regarding the number of employees to qualify as a small and medium-sized businesses (SME). I also assumed that participants' responses were truthful.

Limitations

Limitations are factors the researcher cannot control in the study (Yin, 2018). The results may not be generalizable to all industries because the focus of the study was on firms in the office supply business in a single geographic location, and the results may not apply to more business types. Another limitation is the study of small to medium-sized office supply businesses versus more prominent firms.

Delimitations

Delimitations are the factors I have used to define the scope and boundaries of the study. Researchers can limit or narrow the study's scope and list what not to include (Leedy et al., 2019). This study involves SMROSS business owners who maintained

sustainable businesses and did not include other employees in the business. The location of the SMROSS participants was in the GTA**.**

Significance of the Study

I conducted this study to gather and analyze information about inventory management strategies SMROSS owners in the GTA use to remain successful. Mismanagement of inventory may increase adverse outcomes such as insolvency, bankruptcy, foreclosure, and interruption, affecting the continuity of SMEs (Filho et al., 2017). SMROSS owners could use study results to identify and understand effective inventory management strategies, avoid failures, ensure continued sustainability, preserve employment, and positively impact social change.

Contribution to Business Practice

The study is of potential value because business owners and managers could use the results to gain knowledge that could help them sustain their businesses. Ineffective inventory mismanagement could negatively affect cash flow. Study outcomes may help current and prospective business owners to generate valuable strategies and implementation plans to manage their inventories. Using better inventory strategies, SMROSS owners could enhance business performance and survival (Ribeiro-Soriano, 2017).

Implications for Social Change

The implication for social change may enable SMROSS business owners to use study results to improve inventory strategies promoting business sustainability and increase employment. More employment may result in lower welfare costs and more

dignity for local citizens. More successful business owners and their employees may also be able to make more charitable contributions. Economic growth and social development could be positive social outcomes enabling sustainable enterprises.

A Review of the Professional and Academic Literature

The purpose of the literature review was to analyze, compare, and contrast the work of other scholars to the contents of my study and evaluate a broader view of the research topic. The study results could assist business owners and managers develop competence to maintain adequate inventory and satisfy customer demand (Ebekozien et al., 2020; Ehrenthal et al., 2014). Creating customer loyalty is critical to an organization's sustainability (Khajeh Nobar & Rostamzadeh, 2018; Mishra & Zachery, 2015). In addition, inventory control could mitigate the probability of excess stock and obsolescence and improve profits (Feng et al., 2015).

I sourced the information for this study mainly from the Walden Library business databases. The articles are peer-reviewed and sourced from databases such as ProQuest, Science Direct, Google Scholar, and Business Source Complete. Key search words and terms such as inventory management in SMEs, inventory strategy in SMEs, contingency theory, inventory management, and financial performance and inventory management and profitability will form the databases. The literature review contained 204 sources, of which 201 or 99%, were peer-reviewed, and three or 1%, were non-peer-reviewed. The 147 sources, or 72.1%, are within the 5 years requirement and are peer-reviewed.

Conceptual Frameworks

In this study, I used the conceptual frameworks contingency theory and inventory control modeling to explain the phenomena and strategies successful inventory managers use in office supply businesses. Researchers can use theories to explain and understand various models or ideals (Kivunja, 2018). Fielder (1964) described contingency theory as involving an approach where leaders apply different procedures depending on the situation. The leader's effectiveness depends on the leadership style and situation (Popp & Hadwich, 2018). Madlock (2018) posited that leaders' leadership styles depend on the employees' responses under contingency theory. Leaders can improve strategies by employing inventory management tools to maintain optimum inventory levels.

Leaders and managers could understand how to become successful by introducing management tools such as inventory modeling. Inventory modeling involves classifying inventory to match seasonal product demand to determine the optimum inventory level (Prasad, 1994). Managers could use inventory control modeling to select and assign the model best suited to each classification set. Researchers could use the conceptual framework of inventory management to explain how managers use inventory modeling to optimize profitability (Prasad, 1994). Managers who have an in-depth understanding of how to use inventory modeling could use this knowledge to optimize profitability. The problem with inventory modeling is that many models are mathematical (Jackson et al., 2020). However, researchers have used alternative theories to explain the different phenomena.

Alternative Theories

I could use other theories, such as situational leadership theory (SLT), chaos theory, stakeholder theory, and retail conceptual framework theory, to explain successful inventory managers' strategies in office supply businesses. Business leaders could implement leadership strategies that align with objectives to manage inventory and resources for optimum results (Mahmood et al., 2020). Managers can exercise flexibility under situational leadership in changing business environments as leaders create strategies dependent on leadership style and approach.

Situational Leadership Theory

Managers can use different leadership styles to solve problems and build knowledge from experiences to satisfy organizational goals. The SLT approach involves flexible leadership, where leaders' actions vary depending on the situation (Negro & Mesia, 2020). According to Murphy (1941), leaders evolve according to environmental changes. Hersey and Blanchard (1982) defined *situational leadership* as the ability of leaders to adopt four styles to fit circumstances: telling, selling, participating, and delegating.

Each of the four styles aligns with employee-specific skill levels, and leaders who know their followers' abilities can assign tasks accordingly. Leaders' workplace techniques depend on the team's followers (Negro & Mesia, 2020). Leaders gave employees with low skill level descriptions of completing task assignments, and the employees continuously communicated with leaders for direction (Negro & Mesia, 2020). Followers at the selling level also lacked the willingness to work and required

some motivation to participate through communication (Hersey et al., 1979). At the participating stage, some followers have the required skills and are willing to work but lack the confidence to work independently. The delegation of tasks may occur where the workers have a high skill level and can work independently without much supervision (Hersey et al., 1979). Since the inception of situational leadership theory, scholars have researched other theories, such as chaos theory, to explain leadership styles.

Chaos Theory

The chaos theory is an alternative theory on inventory management study. Chaos theory refers to when leaders use different complicated factors to influence the behaviors of employees (Rimita et al., 2020). A leader's lack of knowledge and clarity can affect their ability to create strategies to avoid confusion in making decisions in business. For example, inventory managers cannot satisfy demands due to suppliers not delivering inventory on time and the lack of communication leading to disorder. Contemporary scholars such as philosophers and psychoanalysts have alternate views or discussions on the benefits and disadvantages of business complexities resulting from chaos (Lartey, 2020).

Owners and managers experience complexity and uncertainty due to changes in the market environment. However, business leaders may use chaos theory to estimate the occurrence of uncertain activities and explain the strategies to cushion the complexity and dynamics of inventory forecasting (Dumitrescu, 2019). Researchers view chaos theory as a science where a change factor catalyzes interactions or complications during exchange among simple systems (Lorenz, 1963; Rivera et al., 2005). Lorenz (1963) explained the

concept as a mathematical model that can be complex and unpredictable. Scholars seeking evidence for leadership coined the stakeholder theory.

Stakeholder Theory

Another theory used by researchers to explain inventory management was the stakeholder theory. Under stakeholder theory, business leaders are aware of external and internal situations. The stakeholders, including employees, suppliers, customers, and the general environment, are given equal consideration to maintain a balance (Paul, 2014). Therefore, owners and managers can forge relationships with stakeholders to improve the value of the business and leaders adopting the guidelines of stakeholders' theory can maximize the firm's value (Francis et al., 2019; Jones et al., 2018). By forming relationships, leaders can increase the firm's profitability and shareholders' returns (Weitzner & Deutsch, 2019). Another theory scholars used to justify market relationships was the retail conceptual theory.

Retail Conceptual Theory

Business leaders can adopt suitable strategies to meet customers' needs and maintain satisfactory inventory levels. Under the retail conceptual theory**,** business leaders offer goods in quantities ideal to customers, and inventory level varies from store to store (Ganesh et al., 2020). Retailers implement strategies to reduce inventory costs and maintain sustainability (Ganesh et al., 2020). The evolution of small retail stores to large stores is changing to online platforms as physical stores diminish in numbers (Paul & Rosenbaum, 2019). Retail owners and managers can utilize contemporary tools to

maintain sustainability in business. Business leaders can use information from sources such as contingency theory to implement successful inventory management systems.

Contingency Theory and Inventory Management Systems

As researchers describe, managers endeavor to reduce costs and operate efficiently under inventory management. Business owners should select a system to balance the inventory on hand and the cost of holding stock. Retailers can opt to operate under vendor managed inventory systems (VMI) versus retailer managed inventory systems (RMI) (Wei et al., 2019). Vendor managed inventory system is where the vendor determines when to replenish the retailers' inventory and the quantity required for replenishment (Hong et al., 2015; Taleizadeh et al., 2016).

The retailer controls inventory under RMI and is responsible for inventory costs. Under VMI, the vendor assumes the retailers' responsibility for inventory costs (Hong et al., 2015; Taleizadeh et al., 2016). Under the contingency theory, the framework used in this study, leaders who encounter new challenges can change leadership styles to adapt and ensure effectiveness (Fielder, 1964). Leaders utilizing the different inventory management systems can adapt leadership styles to fit different scenarios.

The VMI was one system leaders could use to effect adequate inventory levels by relying on business partnerships to avoid stockout (Bieniek, 2018). Walmart managers were the original users of the VMI system and partnered with leaders of companies such as Proctor & Gamble and other suppliers in the 1980s (Afshan et al., 2018). Retailers strive under VMI by allowing vendors access to electronic demand or point of sales information. However, there must be trust between retailers and vendors for success

(Groenevelt & Sainathan, 2019). Some business owners are moving from RMI to VMI systems to benefit from lower inventory costs (van den Bogaert & van Jaarsveld, 2021). However, the VMI system can fail if the relationship between the vendor and the retailer is severed. In addition, the contract should cover the required agreement (Groenevelt & Sainathan, 2019). As a result of these potential VMI issues, some business leaders choose to use the RMI inventory management system.

The retailer owns and controls all aspects of inventory management under RMI. There is no need for online access to sales information, so there is less need for partnership with external entities. Retailers may also experience routing problems when using VMI. Including incentives in VMI benefits buyers and sellers as they share the system's benefits rather than using VMI without inducement, where all profits are to the buyer (Birim & Sofyalioglu, 2017).

Contingency Theory and Inventory Modeling: Inventory and Cash Flow Performance

Cash flow shortages are critical to businesses, and owners and managers may lower this risk by shortening the days in inventory (Chih-Yang, 2017). Scholars agree that ineffective inventory management affects cash flow and may decrease firm performance (Katehakis et al., 2016). Cash flows originate from the strong buying and selling inventory, using funds on hand or on loan to purchase merchandise, and investing excess cash to earn interest (Katehakis et al., 2016). Buying stock on credit is a policy to improve business cash flows, and firms may delay payment until later to increase profitability (Seifert et al., 2017). However, managers should look at the cost-benefit

analysis and determine the length of effectiveness (Li & Arreola-Risa, 2017). Lack of cash financing can affect the firm's day-to-day operations, and smaller enterprises can increase liquidity by applying strategies that drive growth (Masudin et al., 2018; Nobanee & Abraham, 2015). Business owners may decrease inventories and benefit from an increase in cash as a strategy to improve the firm's viability. Owners may combine lower inventory strategies with other techniques to improve cash flows and performance, and the level of improvement depends on the size of the enterprise (Steinker et al., 2016).

Inventory managers face numerous challenges in managing resources effectively and achieving optimum stock levels. Business owners and managers can use the management information system (MIS) to control inventory, improve cash flow, and determine optimum stock levels and reorder points (Rumetna et al., 2020). Managers can create and implement policies and guidelines to include technology and develop effective processes to carry the required stock level to satisfy demand, resulting in increased profits. Inventory managers can also implement robust internal control systems to plan and manage resources and mitigate inventory management risks effectively. Owners and managers who maintain healthy internal controls can meet demand objectives and minimize stockout risks or overstock.

Business managers may offer various service levels to customers depending on the category. The response time may also vary, and managers may use the strategy as a tool to reduce inventory levels (Li & Lim, 2018). Owners and managers want to conduct business at the lowest cost. One challenge they face is satisfying the requirements of different customers while maintaining an economic inventory capital outlay (Gabor et al.,

2018). Inventory managers face challenges in executing a mix of strategies to control costs.

Inventory Modeling: Inventory Management Costs

The inability to effectively control inventory costs can be costly as problems such as inventory shortage can result in lost sales to retailers (Foster et al., 2019). Business owners and inventory managers can experience spikes in inventory carrying costs, costs of shortages, and replenishment costs when controls are lacking or ineffective (San-José et al., 2019). Other challenges include demand changes, and owners and managers may change inventory strategies to satisfy demand. Owners and managers can experience increased holding costs after implementing strategies such as holding more stock to mitigate demand variation (Turkul et al., 2016). Implementing inventory management controls should be one of the priorities of business owners and managers who can compete effectively by significantly reducing costs.

Retailers sometimes hold excess inventory to induce suppliers to reduce the wholesale price of future purchases. The strategy can be beneficial to both retailers and suppliers. Retailers will experience the benefits of inventory if the holding costs are high and suppliers allow more future discounts to induce retailers to hold excess stock. The supplier may not discount prices that are already minimal, so the supplier will not experience any benefits. However, the supplier may face challenges in improving the inventory process resulting from a retailer's reduced holding inventory (Mantin & Veldman, 2019). The retailer must choose the opportune time to hold excess inventory because the wholesaler may already hold prices low, significantly reducing costs.

Inventory Modeling: Inventory Turnover

Inventory is a fundamental element in the company's operations as it impacts profitability and the ability to compete effectively. Therefore, businesses should implement inventory management strategies to maximize asset utilization and turnover (Shardeo, 2015). Inventory is also a fundamental unit of working capital management, and effective working capital management increases profits (Rahman et al., 2015). Effective internal control over inventory may benefit owners and managers by improving turnover ratios and reducing excess stock and profitability (Feng et al., 2015). Managers may plan to increase inventory turnover or reduce aged inventory, and the strategy for each plan will be different (Marodin et al., 2017).

Business owners and managers can benefit from increased working capital from rapid inventory turnover. The ideal plan is to have the right amount of capital because excessive working capital can cause shareholders' stock prices to fall (Peng & Zhou, 2019). The timing of cash receipts from sales and cash payments for inventory purchases is critical to the wellbeing of the stakeholders in the supply chain (Peng & Zhou, 2019). Returning cash for sales on time and delaying payment for as long as possible is what strategy owners and managers can use to improve working capital.

Contingency Theory and Inventory Modeling: Real-time Inventory Management for Improved Sustainability

The foci of managers who use real-time inventory management are reduced costs and increased profits. Business owners and managers should implement policies to minimize waste and excess stock because poor inventory management impedes a firm's

sustainability (Civelek, 2016). Kerim et al. (2016) stated that business managers who appropriately adjust their inventories to match changes in demand would facilitate cash flow for growth. Inventory managers who use real-time models can reduce on-hand inventory but leave enough safety stock to meet small, unexpected increases in demand (Turkul et al., 2016). SMROSS owners should implement effective inventory management processes.

Using real-time inventory management systems by owners and managers of SMROSS could result in cost reduction and savings. However, some managers and store owners may be overconfident in business and fail to implement real-time inventory policies to maintain sustainability (Ancarani et al., 2016; Dbouk et al., 2020). In times of uncertainty, managers could apply the appropriate strategy to maintain the minimum stock level to meet the required demand and reduce costs (Hancerliogullari et al., 2016).

Contingency Theory: Information and Inventory Management

Managers need exact information to manage inventory and reduce costs. Having accurate information is essential as managers will purchase just enough merchandise and forego the need to hold superfluous goods. Knowledge is the tool managers use to avoid discrepancies or missing items, or excess inventory. Business owners and managers need the information to be successful because it is the thread to bind all the participants in the market (Cartwright et al., 2021a).

Inventory managers need to monitor inventory levels and collect information on the inventory level to have on hand to satisfy demand. Business owners and managers can use the inventory monitoring tool as a signal to determine when to reorder items from

suppliers (Kumar, 2017). When business owners can make accurate purchases, demand will be satisfied during regular sales periods and periods of unusual surges in demand. In addition, the satisfaction of needs during periods of unanticipated waves in market demand can reduce the BWE (May et al., 2017).

Business owners and managers rely on quality information to mitigate inventory classification errors and discrepancies. The errors result from differences in information technology (IT) system records and the inventory on hand for sale (Morenza-Cinos et al., 2019). Researchers have found that business owners and managers can use quality information to implement strategies and reduce errors and discrepancies between the system records and the inventory.

Contingency Theory and Inventory Modeling: Technology and Inventory Management

Business owners use information and communications technology (ICT) to remain sustainable and compete effectively. More business owners and managers are adopting technology to surge ahead of the competition. More business owners and managers use ICT to improve communication, customer service, and inventory management (Mathu & Tiare, 2017). IT tools such as the Internet and e-commerce allow business owners and managers to operate and grow their businesses effectively (Mathu & Tiare, 2017). Owners and managers watch customers' behavioral patterns and use technology daily.

More household occupants are starting to use the Internet for reasons such as browsing for potential purchases, recreation, and making specific purchases that are

planned (Raphaeli et al., (Katehakis et al., 2016). Business owners and managers can use online platforms to showcase their products to purchase from the comfort of their homes and mitigate the lack of space in the physical location. The two main activities of internet users are browsing and making purchases. Customers practicing internet shopping have access to a broader assortment than instore. Retailers can stock goods that go very fast instore while providing access to numerous other items online as there is no space limitation online. Consumers also give product reviews that retailers can use to determine whether it is wise to continue carrying a product.

Retailers promote products and alert customers via mobile or other technology using technology as a tool to analyze retail information (Mahar et al., 2017). Business owners and managers view the promotions in real-time, use strategies to gain a competitive edge and use limited space effectively. Retailers can use a mix of markup, customer preferences, and inventory positions to increase profit (Mahar et al., 2017). Using a single information factor may not be as effective as when retail managers combine promotion policies, retail customer information, and technology.

Business owners and managers can gain proper insight into financial standing, future trends, business opportunities, and customer preferences by employing appropriate inventory management strategies. Software technology such as Radio-Frequency Identification (RFID) consists of tools that business owners and managers can use to maintain continuous inventory visibility, manage inventory levels in various locations, and set up automatic order points (Morenza-Cinos et al., 2019). Scanners are one type of technology inventory managers can use to scan SKUs in and out and can determine

inventory balance at a point in time. In addition, business owners and managers can use software to organize product SKUs to assess the availability and location of items.

Business owners and managers have access to retail information and limited access to retail space (Mahar et al., 2017). Business performance is an indication of the strategies that managers employ. Business owners and managers can use technology to keep in line with the competition, resulting in improved business performance (Singh & Singh, 2019). In addition, business owners and managers benefit from using technology to mitigate inventory and demand uncertainties.

Contingency Theory: Inventory Management and Sustainability

Business managers aim to build sustainable businesses that could exist for a long time. Inventory management is one method used by owners and managers to maintain sustainability and growth. Inventory management is keeping costs to a minimum while holding the optimum inventory to satisfy demand (Adusei & Awunyo-Vitor, 2014; Sanchez-Ruiz et al., 2018). Managers who competently control inventory reduce related operating costs, facilitating stable earnings and profits (Adusei & Awunyo-Vitor, 2014). Managers whose strategy is to earn profits will manage inventory effectively to ensure business officers have adequate inventory and not excess inventory, which drives up costs and reduces profitability. SMROSS business owners can use inexpensive tools to assist in managing inventory effectively. RFID is one such tool that managers can use to track inventory and determine if they need more or less inventory. Owners and managers could employ strategies to reduce inventory to a practical level if there is excess inventory.

Business owners and managers can succeed because of their strategies, relationships with vendors, and product knowledge and experience. Inventory managers should implement strategies that satisfy customers' demands and drive the business's positive financial performance (Karadag, 2018). More customers may shop at stores where the staff or employees know products and make recommendations on product choices. The more customers make purchases, the more likely the business will remain sustainable. Owners and managers who establish a good relationship with suppliers can be competitive because of consistent support from suppliers (Vivaldini et al., 2017)**.** Implementing the proper strategies will result in business success and continuity.

Contingency Theory and Inventory Modeling: Radio-Frequency Identification (RFID) Technology

Shrinkage in inventory is one problem business owners, and managers encounter. Inventory shrinkage may result from voluntary activities such as theft or other factors such as damages and expiration (Zhou & Selwyn, 2017). However, inventory personnel may still record the business's inventory ledger (Tao et al., 2019). The loss of tags, detachment and switching tags on items can result in shrinkage and uncertainty (Zhou & Selwyn, 2017). However, owners and managers can use technology to mitigate the problem of shrinkage. Owners and managers can use RFID as an inventory management tool to track inventory items and determine stock balances at a point in time (Gu et al., 2017). RFID is a system that uses radio waves to identify, track, and transmit electromagnetic tag information. Inventory managers and business owners can use RFID technology consisting of three units: tag, antenna, and reader. RFID is a real-time

response tool that owners and managers in retail can use to get ahead of the competition (Zhang et al., 2018). Retailers can use RFID to mitigate inventory misplacement problems (Zhang et al., 2018).

Inventory managers can use RFID and robot technology to maintain better inventory visibility and augment competitive advantage. Using RFID with human workers, business owners, and managers may achieve less precise results than using a combination of RFID and robots (Morenza-Cinos et al., 2019). Humans are prone to errors when they perform repetitive and complex tasks. Human workers may not need to perform repetitive tasks using robots to cut time, reduce costs, and ensure greater accuracy. Inventory managers and business owners using traditional RFID systems can track items using handheld systems compared to RFID robots, where managers can view items in real-time.

RFID systems are evolving, and users can access devices that are lighter in weight and can use them effectively (Álvarez López et al., 2018). Business owners and managers can use RFID technology to count inventory faster and more accurately. RFID technology is now more economical and can support different tasks. Business owners and managers can benefit from implementing RFID systems technology to perform numerous tasks.

The use of technology is increasing because researchers have concluded that business owners can use IT to enhance firm performance (Alsurmi et al., 2020). In addition, more business owners and managers use IT to compete effectively and address

demand uncertainties (Borodin et al., 2016). Inventory managers are using IT tools such as RFID technology in managing inventory.

The leaders of stores such as Walmart have implemented the use of RFID and succeeded. Managers and owners can communicate immediately to business partners, such as suppliers, to order before inventory is at a critical level and maintain sustainability (Chudy-Laskowska, 2018). However, RFID comes at a cost and may be too costly for smaller business owners to implement, resulting in the competition's advantage in the market. Zhang et al. (2018) found that some store owners use RFID as part of their strategy. However, tagging costs can be high and barriers to some business owners who do not elect to adopt the RFID strategy. There are different levels of accepting RFID, as acceptance may vary with the competition. Owners and managers may use the strategy when the competition is intense, regardless of tagging cost. However, when tagging costs are low and competition intensity decreases, owners and managers may be reluctant to adopt RFID.

Business owners and managers sometimes employ weak strategies that cause uncertainties and errors in inventory management. Some business owners and managers of small businesses would benefit from using RFID technology to monitor and track inventory movement and mitigate uncertainty factors and inventory errors (Yan et al., 2017). Some retail owners, such as Home Depot, also use RFID and have followed Walmart's lead. Retailers experience fewer shrinkage errors and inventory inaccuracies than previously occurred when retailers used ineffective replenishment strategies (Doss et al., 2020). By implementing RFID, users can resolve such as employee theft, fraud,

spoilage, and shoplifting can be resolved. Using RFID can also reduce administrative and human errors resulting in an efficient inventory management system.

Retail business owners and inventory managers experience inventory inaccuracies resulting from uncertainties. Uncertainties occur when inventory shrinkage results in discrepancies between the physical stock and the system (Zhou & Selwyn, 2017). RFID is supportive technology that owners and managers can use to solve inventory inaccuracy problems.

Managers can use the system to identify and accurately predict inventory information regarding quality, quantity, and position (Tao et al., 2019). As a result, retail owners and managers using RFID can reduce inventory costs and eliminate problems such as running out of stock (Zhou & Selwyn, 2017).

Retailers adopt RFID to gain a competitive advantage (Zhang et al., 2018). When the competition is intense, some managers may use RFID to facilitate keeping goods on the shelves in just the right quantities. Retailers are keen to use RFID as a strategy when the tagging costs are low because tracking inventory can be expensive. Searching for lost tags can be onerous and time-consuming, and using other systems has proven inefficient (Liu et al., 2019). The RFID search includes lost tags, which makes the system more efficient. Therefore, business owners and managers use other strategies, such as supply chain management (SCM), to gain a competitive edge and remain profitable (Koc & Bozdag, 2017).

Inventory Modeling: Supply Chain Management

Business owners and managers can use SCM as a strategy to increase profitability through cost reductions and efficiency (Obeidat, 2021). Business owners and managers can benefit from the agility in the supply chain, where there is a quick response to customer demands and significant cost reductions (Tarafdar & Qrunfleh, 2017). Linking with the manufacturers in the supply chain allows for greater efficiency, timeliness, and cost minimization in inventory management.

Along with SCM, IT was an innovative strategy that business owners and managers use to increase efficiency and effectiveness in inventory management. Manufacturers and retailers can use IT to gather and communicate information and knowledge on supply chain and inventory management. RFID is a tool that business owners and managers can link to SCM to determine optimal warehouse management strategies. Retailers and manufacturers can use RFID in SCM, ensuring the inbound and outbound product process is consistent.

Contingency Theory: Environmental Impact on Inventory Management

Uncertainty and environmental changes sometimes affect purchasing decisions because of overconfidence, an individual bias in decision making that may result in inaccuracies. Managers should recognize the speedy approval of a change in business operations and demand process to avoid insolvency and optimize performance (Friday et al., 2021; Kalchschmidt, 2012). Inventory management affects inventory levels and warehouse design and impacts the environmental footprint required to hold a particular stock (Fichtinger et al., 2015). Managers should make reasonable decisions to mitigate

bias during changes and uncertainty (Ancarani et al., 2016). The aim is to maximize profits, and managers, therefore, require flexibility to adapt to varying environmental changes (Harrauer & Schnedlitz, 2016). Sustainability is critical, and SMROSS business owners could generate higher profits by quickly adapting to changes in environmentally friendly business practices (Chan et al., 2017). Changes include factors such as globalization and new market trends.

Contingency Theory and Inventory Modeling: Sales Forecasting Effects on Inventory Management

Managers use forecasts to accurately estimate demand and inventory levels (Bergman et al., 2017). Accurate forecasting and the use of different prediction models may facilitate positive performance. By using precise forecasts, owners and managers reduce bias and improve objectivity (Barrow & Kourentzess, 2016). Without accurate forecasting, erroneous purchase decisions may cause understocking or overstocking, resulting in missed sales or excess inventory carrying costs (Ancarani et al., 2016). Managers need customers and supply information to create accurate forecasts (Boone & Ganeshan, 2015). Inventory information that is reliable and correct is essential and ensures managers can mitigate inventory errors such as shrinkage, misplacement, and scanning errors (Hancerliogullari et al., 2016; Shteren & Avrahami, 2017). The lack of accurate supply information may disrupt inventory supply and impact the firm's profitability.

Some managers make decisions based on inaccurate inventory data and, as a result, experience material outages or overstock (Tao et al., 2020). Tao et al. (2020)

studied the impact of forecasting on inventory management. The inventory managers base the ability to accurately determine stock levels and prices on predictions. Inventory managers employing poor management skills can present inaccurate stock levels and pricing data. Therefore, inventory managers should implement strategies to provide accurate demand forecasting and maintain adequate inventory balances.

Inventory managers reduce excess stock and costs by accurately estimating future demand (Sagaert et al., 2018). Several tools exist that managers may use to mitigate the inventory problems, such as forecast bias and inventory disruptions. The physical Internet is a global tool that managers can use to alleviate the supply disruption problems the business may encounter (Yang et al., 2017). Vertical integration involves information that can help managers create strategies to reduce bias and facilitate practical inventory levels (Wan, & Sanders, 2017). Leaders can also engage the Internet to mitigate challenges such as forecast bias, high inventory levels, and increased costs. There are also systems that business managers can use to estimate or forecast demand.

Forecasting Systems

Managers and owners in the retail industry can use computerized merchandising control systems to estimate future product demand. The primary objective is maintaining the basic inventory level necessary to avoid stockouts or overstock problems. Business owners sometimes face challenges in forecasting customer demand accurately and optimizing inventory levels (Dai et al., 2016; Jin et al., 2017a). Inventory managers experience demand uncertainty risks and may implement a strategy of forecasting using historical data or comprehensive analysis to make inventory decisions (Feng et al., 2019).

When business owners can accurately predict demand, sales, and purchases, they can have an advantage in business. Business owners and managers can use one or more basic forecasting types, such as judgment, forecasting, or time series. Managers use judgment when historical data is unavailable. However, the problem of bias is inherent, and the result will be forecasting errors. Retail owners can also use causal forecasting to determine the best or worse scenarios. Causal forecasting is quantitative, and users tend to rely on dependent and independent variables (Tasdemir & Hiziroglu, 2019). Forecasting inaccuracies may lead to inventory levels that may exceed or be lower than demand. Using trends and seasonal patterns is a time series method managers can use to improve inventory management forecasting.

Time Series Forecasting. Time series forecasting includes using historical data analysis using computer software to determine trends over time. The time series forecasting process may also lead to inaccuracies and the inability of managers and owners to maintain inventory to match demand. When future information is unknown, business owners and managers may be unable to estimate the correct inventory level (Sagaert et al., 2018).

Accurate Forecasting. Inventory managers need accurate forecasts and data to project future demand. Business owners and managers compete when they can accurately predict changes in the market and adapt to changes (Neves-Moreira et al., 2019). Achieving accuracy can be challenging. However, managers may combine multiple forecasts with improving efficiency. Using various estimates by managers reduces bias, enhances the accuracy of the data, and results in more normal forecasting errors.

Business owners and managers need accurate forecasts to communicate with partners in the supply chain. Continuous sales forecasting and demand process management are critical as inventory managers and business owners can generate more accurate demand information (Lucie, 2017). Transmitting precise information to the supply chain partners ensures more precise inventory levels and lowers the BWE (Schoemaker & Tetlock, 2017). Ahmad and Zabri (2016) found that the forecast management system could benefit inventory managers by determining inventory levels and reorder times. Proactive managers can reduce inventory shortages or overages resulting from demand variability (Choudhury et al., 2018).

Accurate forecasting by inventory managers can result in the need for lower levels of stock on hand, more sales, and less out of stock items, less manual labor, and lower carrying costs. Business owners and managers benefit from accurate forecasting when there is a team effort or inclusion of all the stakeholders in the business (Choudhury et al., 2018). The forecasting process should include factors such as forecast period, demand trends, maximum stock level, and reorder points.

Jin et al. (2017b) analyzed quantitative study data from censuses and determined that information sharing among supply chain stakeholders can reduce the BWE and improve forecasting accuracy. Sharing the information in the chain allows each stakeholder to understand customer demand. Understanding the customers' needs will enable owners and managers to implement strategies that help mitigate stocking issues. Information sharing can decrease costs and forecast accuracy (Kulkarni et al., 2021).

Business owners and managers should expect to experience some disruptions in demand forecasting and implement strategies to reduce forecasting errors. Using a communication strategy to reduce the BWE can be helpful as constant demand monitoring and a steady flow of communication among supply chain partners (Tieman, 2017). Business partners use timely communication to reduce the BWE resulting from demand increases (Cannella et al., 2018). Managers can implement strategies such as keeping track of order demands and inventory levels to reduce the BWE. Managers can also limit the number of suppliers to facilitate consistent communication and keep prices constant instead of lowering prices and offering discounts to increase the BWE.

Contingency Theory: Market Uncertainty

Market uncertainty impacts inventory management, and profitability and demand uncertainty could result in significant losses. Uncertainties such as unreliable suppliers may result in costs such as shortages and defects (Hong et al., 2017). The negative impact of demand uncertainty is confirmed. The measurement of demand uncertainty and the expected loss using entropy as the numeric value of the effects of market risk on inventory management and expected loss confirmed the negative impact of demand uncertainty (Fleischhacker & Fok, 2015). Managers may implement strategies to mitigate against some uncertain market problems. Managers can use strategies to influence owners and managers to increase safety stock, satisfy demands in times of uncertainty, and improve the firm's profits (Luo et al., 2017). Another strategy is to use several supplier sources to resolve the shortage and reduce defective costs (Hong et al., 2017). The

availability of consumer demand and the timeliness of information is essential for planning inventory and supply chain processes (Atnafu & Balda, 2018).

Demand variability is a problem that managers and business owners face when determining the inventory level they need to carry (Pastore et al., 2019). There may be uncertainty and the probability that consumers may not purchase as much as the forecast when there is variability in demand. The result could be excess inventory and a profit reduction (Pastore et al., 2019). The volatility and demand uncertainties are challenging, and retail owners and managers have difficulty deciding on inventory levels to hold. Planning is also uncertain, as demand forecasts can be inaccurate. Therefore, owners and managers can experience increasing holding costs resulting from excess stock levels (Papanagnou & Matthews-Amune, 2018). Excess stock can ultimately lead to unsold products in a business. Unsold inventory will negatively affect the profitability of the business owners (Datta, 2017). Owners and managers can implement strategies to manage inventory and reduce the negative impact on profitability (Datta, 2017).

Contingency Theory: Customer Loyalty and Behavior

Inventory managers and business owners value their reputation and use it to create policies and strategies. Customers will choose firms with owners with a reputation for delivering products on time (Khmelnitsky & Singer, 2015). The customer develops a perception of business reputation after placing an order and experiencing the delivery of products.

Business owners and managers of brick and mortar stores sometimes have limited product lines while using limited product space resulting in the inability to satisfy

delivery demands. The limited space for inventory in the brick and mortar store can be offset in the online store because there are fewer display needs in an online store (Sung & Huddleston, 2018). Managers can implement a mix of brick and mortar and online strategies to satisfy customers' demands.

Trust and loyalty are two customer traits that are important for business retention. To satisfy customers, increase their trust, and increase the probability of customers' regular patronage, business owners must maintain appropriate inventory levels. Business leaders tend to grow and make profits when customers are loyal (Kandampully et al., 2015). Customer loyalty or disloyalty can be measured by looking at a trend in purchases over a given period. Evaluating the owners' and managers' actions as unfavorable is one criterion customers may use to continue with the firm or break ties (Khmelnitsky & Singer, 2015). Excellent service quality can result in customer satisfaction, trust, and loyalty.

Business owners and managers should create strategies to keep unsatisfied customers at a low level. The reputation of owners and managers is affected when unsatisfied customers are high (Khmelnitsky & Singer, 2015). Managers should provide quality products and services where there is competition because the customers can move their patronage to competitors with a good reputation. Creating strategies that involve building a close relationship with customers through excellent customer service is what owners and managers should do to protect their reputations and guard against losing sales to online businesses (Kureshi & Thomas, 2019). Managers and owners can maintain a good reputation by sharing information with suppliers.

Contingency Theory and Inventory Modeling: Sharing Information between Business and Supplier

Agile supply chain members support exchanging information, cooperation, and integration (Ju et al., 2016). Owners and managers share information with suppliers to form strategies to support efficient inventory systems (Nemtajela & Mbohwa, 2017). Owners should choose a user-friendly inventory management system so the owners can skillfully augment business performance (Song & Sun, 2017). The impact of information sharing on performance improvement is based on demand variance, lead time average, forecasting period, and inventory policy (Dominguez et al., 2018).

Supply chain members can optimize decision making by sharing information (Ali et al., 2017). Business owners using enterprise systems (ES), enhanced business supplier information (BSI) processes and significantly improved inventory management capabilities (IMC) and value creation facilitate information sharing between retailers and suppliers (Ochoa et al., 2017). Partial information used by managers as a strategy is crucial and should be adequate to improve performance substantially (Dominguez et al., 2018).

IT tools can assist inventory managers in sharing information with other players in the supply chain and enhance demand forecast accuracy (Singh et al., 2015). Singh et al. considered cloud technology to improve information sharing in the supply chain, as demand forecasting is crucial to inventory management. Owners and managers can employ Collaborative Planning, Forecasting (CPFR), and replenishment to reduce inventory management costs. CPFR is a system where users can collaborate and share

relevant demand information (Hill et al., 2018). The demand forecast data under CPFR is reliable, and business owners and managers can use technology and information sharing to replenish inventory levels only when necessary (Hill et al., 2018).

By sharing information, supply chain partners allow for a clear review of the demand requirement. Information sharing allows business owners and managers to reduce inventory to an acceptable level. There is a decrease in uncertainty and BWE by sharing knowledge and collaborative planning (Hill et al., 2018). Business owners and managers can carefully plan inventory management by providing products, avoiding stockouts, and reducing holding costs (Hill et al., 2018). However, sharing information by itself may not be optimal for retailers. Using technology to track inventory and collaboration will benefit retail managers and owners to develop optimal inventory strategies (Jain & Mamani, 2017).

Contingency Theory: Effective Inventory Management Strategies

Inventory managers should use an effective inventory management system to ensure enough funds to cover business operations or improve performance (Lekkakos & Serrano, 2016). Proper inventory management is essential for firms to maximize efficiencies and profits. Retail owners and managers use procurement management tools to manage revenue and control inventory (Wang & Wang, 2018). Inventory managers must obtain information from customers who rely upon excellent service and product availability. (Salam et al., 2016). SME owners strive to monitor cash, receivables, and inventory for efficiency and effectiveness to improve their financial performance and competitiveness (Karadag, 2018). Inventory managers relate to financial management, as

managers determine solid financial management as essential for SMEs' competitiveness (Karadag, 2018).

Managers who optimize inventory quantities will improve business performance, retain employees, and foster firm sustainability (Ahmad & Zabri, 2016). Business owners and managers may experience a decrease in profitability because of inventory mismanagement costs. Inventory managers could implement a sharing strategy to reduce costs and improve business performance (Tathan et al., 2017). The sharing strategy involves managers exchanging information at different levels in the supply chain (Du & Jiang, 2019). Owners and managers can share demand information throughout the supply chain to satisfy customers' needs.

Focusing on consumer needs is essential for owners and managers to achieve business success. When retailers concentrate on customers' needs, they can provide the products and services that the customers need. According to Finne and Grönroos (2017), the customer is integral to the business's plans and strategies. Under inventory control, modelling leaders and managers can employ strategies that optimize profit. Effective inventory management strategies align with inventory control modelling as business owners and managers implement strategies to maintain customer loyalty and optimize profits. Therefore, customers, satisfaction, and loyalty are what retailers use to drive growth in business. Retailers provide goods and services to increase sales and create and maintain loyalty.

Contingency Theory and Inventory Modeling: Space Limitations and Other Inventory Management Challenges

Small business owners and managers may experience the problem of limited space to showcase products. With long life cycle products, limited space can be challenging and lead to a limited assortment or a wide assortment of products with low inventory levels (Zhang & Rajaram, 2017). Business owners experiencing stock shortages could also decrease profits by failing to satisfy customer demands. Inventory shortages and anticipation of lack of stock can be a deterrent to making purchases by prospective customers (Foster et al., 2019).

Managers should be aware of the impact of space limitations and shortages on customers' behavior and prospective customers. Retailers with limited shelf space can optimize the area by making strategic decisions on how many products to stock. The plan to have more stock can mean ordering more each time and reducing the number of orders. A high quantity of one item may mean less space to carry other items. A backroom to store items can free up space to sell things that customers may need (Hübner & Schaal, 2017).

Another challenge inventory managers can face is when the business is growing. To satisfy demand increases, business owners must procure more inventory and evaluate opportunities to reduce the cost of goods, such as buying in bulk. In addition, inventory managers may provide an assortment of products to satisfy increases in demand (Timonina-Farkas et al., 2020). As inventory managers evaluate design options to stock sufficient inventory for demand fulfillment, space limitation is a contingency factor.

Owners and managers could formulate inventory management plans and implement the right strategic combination to solidify longevity in the business growth stage.

Inventory Volatility and Risk Mitigation

Inventory managers with deficient system processes may subject themselves to higher risks during demand volatility periods (Boudia et al., 2018). As a result of these fluctuations, SMROSS owners who use one supplier do not have the production flexibility to fulfill varying inventory needs and may have difficulty remaining competitive. Therefore, SMROSS owners may mitigate this risk by buying goods from more than one source (Nakandala et al., 2018). The tradeoff of having more than one supplier is a possible increase in the cost of goods. However, the increased cost of goods may have less of a financial impact than not being able to satisfy customer needs, especially if the SMROSS owner does not have to procure the most expensive products from more than one supplier. The reason is that some customers may be willing to wait long periods to receive high-end products (Marino et al., 2018). Business leaders aware of customer demands can implement strategies to satisfy customers and create wealth.

To minimize customers' waiting for high-end products, business owners and managers can proactively employ strategies to manage inventory and proactively prevent supply chain disruptions. A strategy such as risk mitigation inventory (RMI) is one way of mitigating supply chain disruption risk (Lucker et al., 2019). Under RMI management, owners and managers maintain additional inventory to reduce shortages. Holding additional stock means added costs for business owners and managers paying extra

storage. Business leaders who maintain stock to mitigate shortages should also use forecasting to satisfy customer demands.

Bull whip Effect. Business owners and managers should understand customers' demands and forecast accurately to ensure inventory is at an optimal level to satisfy demand (Dai et al., 2016). However, challenges such as the BWE hinder inventory managers' ability to analyze order variances correctly. The BWE is where managers maintain some inventory no matter the demand level (Ojha et al., 2019). However, BWE may negatively impact demand forecasts leading to cash flow issues, stock-outs, backorders, and excessive inventory. There may be additional costs because of out of stock or overstock situations (Mohan & Chitale, 2016). BWE can be costly for business owners because of lost sales or excessive obsolete inventory.

The BWE may result from a lack of collaboration or inefficient operational processes in the supply chain. Problems such as variability between demand and supply are one of the main reasons for inaccurate forecasts. Experts discuss big data analytics as the main tools to mitigate supply chain problems, such as forecast problems resulting from BWE (Hofmann, 2017). Lean inventory techniques may improve profitability, and some researchers have indicated that lean inventory eliminates waste, reduces costs, and improves quality (Panwar et al., 2017).

Demand information may be incorrect, resulting in unreliable forecasts and discrepancies between orders and customer demand (Jin et al., 2017a). Information distortion is one challenge that retail business owners and managers face, and the effect is variability in demand or BWE (Wang et al., 2016). Sharing information is one method

that retail owners and managers can use to mitigate fluctuations in the market (Wang et al., 2016). The retail owners will receive sufficient goods to satisfy customers' demands without experiencing overstock or understock. Retailers should estimate consumer demand based on retail orders or make mathematical inferences (Ali et al., 2017). Suppliers and manufacturers use the information in forecasts to accurately provide production and sales.

Business owners and managers generally react to the BWE crisis, and some scholars argue that owners and managers may have high-cost utilization (Zhang et al., 2018). The high costs result from inefficient processes, obsolete inventory, additional spending to purchase merchandise, and increased operational costs (Taylor, 2016). Lack of timely information among suppliers may be a causative factor in BWE (Jaipuria & Mahapatra, 2014).

Researchers such as Mamavi, Nagati, Pache, and Wehrle explored the operations process's implications where network stakeholders have different priorities. Mamavi et al. (2015) concluded that operating under varying preferences is the prime cause of disruptions in the supply chain. Where the priorities differ and collaboration is inefficient, the result is more SCM problems, such as disruptions and additional operational costs (Nagashima et al., 2015). Inventory managers and other business stakeholders must proactively implement policies to mitigate the BWE (Nagahen et al., 2017). The fallout from factors under the BWE, such as forecasting, process costs, and inventory obsolescence, can result in additional costs through lost revenues. Business owners and

managers may be unable to provide the level of goods to satisfy customer demands; therefore, customers may defect to other brands and businesses.

Hofmann (2017) argued that inventory and supply chain managers could use big data to reduce the BWE. Big data includes large amounts of information collected from social media (Iqbal et al., 2020). Users need to analyze the data to determine the information that will be of value by identifying patterns and data relationships (Iqbal et al., 2020). Managers can analyze complex data sets for specific business needs to ensure the optimum benefits of using big data.

Contingency Theory and Inventory Modeling: Big Data and Inventory Management

Managers are using big data more frequently to gain innovative, competitive advantages. Big data consists of digital information in large volumes, and users can use technology to aid in analytical research (De Mauru et al., 2016). Big data can be valuable, and business owners can search through large volumes of data using analytical tools to analyze the data quickly (Witkowski, 2017). Business owners and managers can retrieve information that can be valuable to maintaining a competitive edge (Bertsimas et al., 2016). Big data to mitigate business risks has proven to be why some businesses can operate efficiently and increase profitability (Bertsimas et al., 2016). Business owners and managers can avoid delivery uncertainties by using data to predict demand accurately and reduce the variation between orders and demand. (Bertsimas et al., 2016; Witkowski, 2017).

Social Platforms. Social platforms such as Facebook are helpful as advertising tools in businesses. Inventory managers can glean information by exploring the use of

Facebook, Twitter, and big data to improve business strategies in SCM (Singh et al., 2017). The platforms are valuable tools managers can use to mitigate risks and communicate with stakeholders in the supply chain and customers.

The information on social media is the customers' voice and is an opportunity for managers and owners to zone in on the problems to sustain the business (Singh et al., 2017). Business owners and managers can use the platforms to network, share information by monitoring problems in the supply chain, and communicate with customers and suppliers (Chae, 2015). Papanagnou and Matthews-Amune (2018) have also written about the benefits of big data in information sharing to provide accurate demand forecasts.

IT Integrated Systems as a Management Tool. Inventory managers and retailers can use IT integrated systems to promote strategies to reduce costs, minimize disruptions, and promote change in social behavior (Ju et al., 2016). Business owners and managers can implement strategies, including innovations, to induce customers and experience a more significant competitive edge (Wang & Wang, 2018). To stay ahead of the competition, business owners and managers can form global partnerships with suppliers while expanding customer bases and accessing new IT inventions as tools (Ha Nguyen, 2017). Integrating IT systems in business is a strategy for business owners, and managers can use it to reduce information-sharing deficiencies, improve operational performances, and minimize the BWE (Botham et al., 2017).

Information Technology as a Competitive Tool. Business owners need to compete against others in the industry to remain sustainable. According to Datta (2017),

business stakeholders can implement strategies that align with the market environment to maintain a competitive advantage. Managers and owners can maintain business relevance by implementing strategies that align with the market. Inventory managers can apply big data analytical tools to gain a competitive advantage (Côrte-Real et al., 2019). Business leaders are using IT to gather market information to maintain a competitive advantage.

Inventory managers and owners create employment opportunities by implementing IT coordinated systems to improve inventory management and provide customer satisfaction at a lower cost (Priyadarshini et al., 2017). Chowhan et al. (2016) concluded that market competition rules changes with the use of new IT innovations as users have a competitive advantage. Business leaders can establish networking sites to enable a consistent flow of information and reduce uncertainty.

Uncertainty in business performance is challenging for business owners and managers. The use of data is one tool managers can use to glean information on business performance and mitigate and plan against uncertainties such as errors in forecasting (Papanagnou & Matthews-Amune, 2018). Inventory managers can use big data tools to collect sales and purchase information and, more precisely, formulate demand plans and inventory control strategies.

Contingency Theory and Inventory Modeling Inventory Management and Online Retailing

Online retailing is becoming more popular among business retailers who desire to increase sales. Some retailers give the option of delivery or having the customer pick orders up at the store. The opportunity to visit the store for pickup allows the store

owners to increase revenue as customers make further purchases on arrival for pickup (Fan et al., 2019). However, business owners and managers face inventory challenges with logistics and delivery for online sales. For example, the packing process of online retail will be different from brick-and-mortar store sales. Online sales may involve multiple small purchases, and there is a need for more flexibility regarding delivery hours to satisfy customers. The online consumer purchase choice may increase sales, so inventory managers should treat replenishment with exigency.

Replenishment Strategies. Retail managers use various replenishment techniques to avoid stockouts and minimize inventory costs. Strategies include selecting the delivery location for online sales and minimizing online costs (Paul et al., 2018). The optimum inventory level for online inventory sales is sophisticated. So, managers should use best estimates, such as sales over a given period (Angulo-Baca et al., 2020).

Alawneh and Zhang (2018) explored the efficiency of an inventory control model, including an online sales model, an offline sales model, and a dual-channel warehouse model. Retailers are starting to implement various strategies and may use all three models. The online model is where the business owner seeks to avoid some overhead costs and has no physical storefront. Managers owning physical stores cater to walk-in customers and may have to cover costs such as wages, utilities, and lease payments. Business owners can also allow customers to purchase online and pick up goods from a physical store. By implementing a dual-channel warehouse model, business owners will experience cost reductions in ordering costs, holding costs, backorder costs, and reduction in carbon print (Alawneh & Zhang, 2018).

The model reduces the number of warehouses, and stakeholders can reduce the carbon footprint, negatively affecting global warming (Li & Hai, 2019). The frequent replenishment of stock and holding inventory increase the carbon footprint (Li & Hai, 2019). When there are charges or surtax for carbon footprint, business owners and managers who continuously replenish stock will pay more tax than others with less (Bouchery et al., 2017). Business owners can strive to implement policies and formulate strategies to reduce the number of warehouses, decrease carbon emissions, and reduce the payment of carbon tax (Li & Hai, 2019).

Business owners and managers can implement a joint replenishment strategy where the inventory personnel who place several orders from usually a single supplier may experience a decrease in costs. The cost savings will include ordering the goods, holding stocks, and transportation costs (Otero-Palencia et al., 2019). The magnitude of the cost savings varies depending on the strategy managers use. Business stakeholders benefit from significant savings by placing several orders using a joint replenishment strategy versus a single large order where business owners and managers experience more considerable cash outlay. The transportation cost savings are realized by placing all the orders in one run instead of preparing each order separately (Otero-Palencia et al., 2019).

Another strategy is for business owners and managers to offer goods online and allow customers to pick up orders at a store (Fan et al., 2019). An online retailer can enter into a business agreement with an offline retailer to share revenue through an added distribution channel. The strategy of allying with others benefits the retailers when the

market is specific (Fan et al., 2019). Inventory managers and business owners can use strategies such as joint replenishment and offering goods online to help mitigate uncertainty and other challenges.

Transition

Section 1 of the study included an introduction, the foundation of the study, the background of the problem, the problem statement, the purpose statement, the nature of the study, the research question, interview questions, and the conceptual framework. In this study, I referenced the significant contribution to business practice and its implications for social change. The section included operational definitions, assumptions, and delimitations. The literature review supported the study results to explore inventory management strategies that SMROSS business owners use to maintain sustainability. I also included information from peer-reviewed studies and materials of authors in my research to understand the concept.

In Section 2, I explained the researcher's role and the criteria I used to select the participants for the study. The participants were owners or business managers from six SMROSS businesses who have implemented inventory management strategies and successfully maintained sustainability. In addition, I explained the research method, research design, population and sampling, ethical research, data collection instruments, data collection techniques, data organization techniques, data analysis, and reliability and validity. In Section 3, I presented the data findings, the implication for social change, and its application to business practice in inventory management.

Section 2: The Project

In Section 2, the focus of the discussion was on sections of the study, including the role of the researcher, participants, research method, design, population, and sampling. Section 2 includes discussions on ethical research, data collection instruments, data collection techniques, data analysis, reliability, and validity. The purpose statement is also a part of Section 2 and is a point of emphasis in the study.

Purpose Statement

The purpose of this qualitative multiple case study was to explore strategies successful business owners of SMROSS use to manage inventory efficiently**.** The target population comprised eight SMROSS business owners in Greater Toronto Area (GTA), Canada, who have managed inventories efficiently. The social benefits of this study may be SMROSS owners could use the results as a guide to understand business success and create strategies that may lead to firms' sustainability. Successful business owners could benefit from higher profits that allow for community economic growth, decreased unemployment, and a higher standard of living. Individuals could understand how to become successful business owners and managers. Some owners and managers of successful firms could contribute to charitable organizations, retain a workforce, and reduce welfare costs.

Role of the Researcher

The role of the researcher was to conduct a study by collecting data using ethical means (Bergen, 2019; Wesley, 2018). As the researcher, I guarded against bias as well as preserved ethics. I mitigated bias in choosing the participants from office supply

businesses. Fusch and Ness (2015) advocated that researchers approach their study with rigidity. The research process included interviews, recording, and collecting information from inventory managers and business owners. I used tools such as keeping a personal diary of my preferences, member checking, and methodological triangulation to mitigate personal bias.

As a researcher, I followed *The Belmont Report* principles. *The Belmont Report* is the guide on ethical principles regarding studies involving humans. *The Belmont Report* includes ethical principles concerning respect for persons, beneficence, and justice (Adashi et al., 2018). In conducting the study, I upheld the three ethical principles of the *Belmont Report* by allowing voluntary participation, minimal harm to participants, and equitable justice. To uphold the ethical requirement of *The Belmont Report*, I maintained confidentiality in collecting participants' data and avoided compromise during the research process.

I began my research after approval by Walden University Institutional Review Board (IRB). I did not contact any prospective study participants until I received IRB approval. I provided a consistent structure, such as an interview protocol (see Appendix B, which is essential in qualitative research. Interview protocol is documentation of structure that provides the steps the researcher will follow in the interview process. Researchers can use the interview protocol to maintain consistency and reduce bias in the interview process (Rosenthal, 2016; Yin, 2018). A clear audit trail of activities should support validating information and control bias and preconceptions during the study (Van de Wiel, 2017).

Participants

The participants were owners and managers of SMORSS in the GTA who implemented successful inventory management strategies. The selection of participants was an essential aspect that researchers used as a measurement of the validity of the study (Rosenthal, 2016; Yin, 2018). When conducting a qualitative study, the researcher gathers rich, in-depth data to validate the study's outcome (Rosenthal, 2016; Shepherd & Suddaby, 2017). Researchers should select from the general population to identify and specify traits of the target population (Asiamah et al., 2017; Boddy, 2016; Kline, 2017). The participants had firsthand knowledge of inventory management in the business and were willing to share relevant information for this study. The participants were individuals who implemented strategies for forecasting demand, procurement, inventory control, and replenishment.

After approval from IRB, I approached the eligible participants to request interviews. I introduced myself to the participants in a letter as the researcher and provided a list of interview questions, the informed consent form, and the study description. Researchers can use telephones, emails, and in person communication to gain access to participants (Yin, 2018). Maintaining a friendly rapport allowed me to build trust and develop a good working relationship with the participants. To facilitate the meetings, I formally introduced myself, provided a description of the study, and gave participants the option to contact me if they accepted the invitation to participate. To begin developing rapport with prospective participants immediately, I provided invitation letters and invited questions or conversations about the study. The researcher's focus in a

study is to encourage the spirit of trust and respect between researcher and participant through transparency (Wolgemuth et al., 2015). The voluntary informed consent of participants was solicited through email communication and requesting the return of the forms via the same medium. The emphasis on the informed consent form was essential to the interview process as all the participants should be aware of the process and could choose to decline to be a part of the study at any time (Marshall & Rossman, 2016). The participants are owners or managers of SMROSS and meet the eligibility criteria regarding the research topic.

After determining the eligibility criteria, the focus moved to discussing the meeting date, venue, and details of the consent form with the participants. Informing the participants of confidentiality requirements regarding collecting business data or information can ensure researchers' access to relevant information (Boucher et al., 2017). As a researcher, informing participants of the intention to protect their identities while promoting a trusting relationship was critical to gathering information to increase study credibility.

Research Method and Design

Research Method

For this study, I selected the qualitative multiple case study design to gain insight into the inventory strategies owners, and managers of SMROSS may use to achieve success and sustainability. Researchers using the qualitative method can better understand a research problem by posing open-ended questions to the participants (Alase, 2017; Leedy et al., 2019). The information was from data collected using interviews and

observation of owners Masudin and managers of SMROSS. According to Houe and Murphy (2017), researchers use qualitative research because of the need to gather information on the activities and perceptions of individuals. Participants expressed their inventory management strategies by discussing experiences. Therefore, the qualitative method was ideal for understanding the successful strategies owners and managers of SMROSS use.

The researcher uses a quantitative approach to use mathematical analysis and comparisons to understand the research question (Barnham, 2015). Mixed methods involve both qualitative and quantitative methods. Researchers who seek to gather in-depth data and use mathematical or quantitative analysis to view a complete picture of a study can use the mixed method (Gutterman & Fetters, 2018). The quantitative and mixed approaches were not suitable because this study did not involve mathematical comparisons or analysis.

Research Design

The ethnographic design was inappropriate as the study did not involve individuals' beliefs, behavior, or cultural anthropology. Researchers use the ethnographic design to study the beliefs, values, customs, and rituals that comprise the whole culture of individuals (Darpatova-Hruzewicz & Book, 2021). Under ethnographic design, the study's credibility depends on the researcher's ability to observe and accurately identify participants and avoid bias (Marshall & Rossman, 2016).

The purpose of phenomenological design is to focus on the participants' lived experiences (Alase, 2017). Researchers use the phenomenological design to explore the

lived experiences and the perception of study subjects (Alase, 2017). The phenomenological design did not suit the study because the intent was not to obtain individuals' perceptions about a phenomenon or describe the participants' lived experiences.

Researchers use narrative design to examine and analyze participants' life stories (Shanahan et al., 2018). The narrative design describes events and experiences in story format (Shanahan et al., 2018). I did not use the narrative design because my study purpose was not to explore and analyze participants' life stories in the study.

The case study design was appropriate for my study. Researchers use the design when the intent is to gather in-depth information by asking open-ended questions about the research problem (Villarreal Larrinaga, (2016). A single case study design represents a single set of ideas not representative of a larger population (Yin, 2018). As the researcher, I used the multiple case study design to gather in-depth information on a sample representative of the population. Interviewing enough participants allowed me to collect rich data and achieve data saturation.

I achieved data saturation when I collected data until there was no new information and the data collection process became redundant. To increase the study's rigor, validity, and reliability, researchers seek to achieve data saturation by gathering relevant data (Fusch & Ness, 2015). Gathering enough rich information from multiple participants was essential to replicating a study and reaching data saturation (Fusch & Ness, 2015; Morse, 2015; Peterson, 2019; Saunders et al., 2017). In addition, I followed

an interview protocol, used open-ended questions, and ensured participants responded with rich and relevant information to achieve consistency and facilitated data saturation.

Population and Sampling

The owners and managers of SMROSS who work with inventory management in the businesses formed the study population. Researchers should choose participants based on the participant's knowledge of the study topic (McCalman et al., 2017). The participants were from GTA, possessed knowledge of inventory management and were selected using purposeful sampling.

The selection criteria I used for the participants aligned with the population sample size and strategies. Purposeful sampling is a nonrandom method that researchers use to select the participant with the requirements of the research topic (Ames et al., 2019). Researchers relate the criteria for selecting participants to the study topic (Rosenthal, 2016). The sample consisted of eight business owners or managers of SMROSS who have implemented successful inventory management strategies. The number of participants represented the population as no new information surfaced after a sufficient number was interviewed (Fusch & Ness, 2015; Yin, 2018).

The criteria I used to select the participants for participants were related to the study topic. I used tried-and-true research methodology to define participant selection criteria and subject selection, which would later facilitate the fulfillment of data saturation for this study. Upon data saturation, sufficient information is collected and analyzed to support the study topic (Hennink et al., 2017). I selected owners and managers of SMROSS located in the (GTA) that have implemented strategies leading to

successful inventory management. According to Yin (2018), the reliability and validity of researchers' outcomes are contingent upon the accuracy and truthfulness of information from study participants. I chose knowledgeable owners and managers who could explain their business success.

Ethical Research

Ethical considerations are essential aspects of a study. Ethical research involves respecting the rights of individuals participating in the study and protecting confidential data and information (Yin, 2018). The responsibility included explaining my trustworthiness to each study subject and my willingness to maintain confidentiality to protect the subject's identity and proprietary information. The Institutional Review Board (IRB) at Walden approved the proposal before data collection from participants.

After IRB approval, I prepared the letters and consent forms for SMROSS business owners and managers participating. On the day of the interview, I inquired if participants understood that their participation was voluntary and informed study participants that they may withdraw from the process at any time. Resnik (2015). discussed the ability of participants to withdraw from engaging in a study without justification. Researchers should not coerce participants to participate in a study (Patton, 2015). Participants could choose to leave the study after giving information, and I did not coerce them. Participants used modes of communication such as email or telephone to inform me of their decision. Participants did not need to give a reason for deciding not to participate in the study.

Participants were not offered incentives to participate in the study. Participation in the study was voluntary, and participants could decide to withdraw at any time without penalty. Before signing the approved *Informed Consent Form* identified by IRB number 03-11-22-0635973, participants read and acknowledged protecting their privacy and confidentiality.

The privacy of the participants was a critical requirement of the research process. In qualitative research, the researcher should undertake confidentiality measures to protect the information collected from participants (Ali et al., 2020). I reassured the participants that data confidentiality and hidden identities with no mention of individual names were in the study. Confidentiality is a means of added protection for participants. I committed to protecting data such as emails and transcripts for 5 years.

All information regarding the interview and study was included in the informed consent form to participants. Participants could look at the requirements in the informed consent form and accept the participation terms (Creswell & Poth, 2018; Grady et al., 2017). The standardized informed consent forms were provided to participants after first contact. The participants reviewed, electronically signed and returned the forms via email. Using interview questions, data collection techniques, and enforcing the participants' choice to participate can ensure that the participants' moral rights are protected (Surmiak, 2018).

The confidentiality rights of the participants are outlined in *The Belmont Report*. Researchers should adopt proper security measures to secure documents and exchange information (Wittenberg & Elings, 2017). To ensure the participants' privacy, the

identities of participants remained hidden by using codes. Pseudonym codes such as P1, P2, P3, P4, and P5 were the identifiers for the participants. Researchers can maintain confidentiality by using pseudonyms to conceal participants' identities and personal information (Surmiak, 2018). *The Belmont Report* requires researchers to ensure that the rights of participants are protected (National Commission for the Protection of Human Subjects of Biomedical and Behavioral Research [NCPHSNNR], 1978).

I protected the information from the study to maintain the requirement of *The Belmont Report*. Confidentiality of the data collected is critical to upholding ethical standards and supporting the study's integrity (Petrova et al., 2014). The electronic data on flash drives have password protection to protect the participants' confidentiality. Storage of the hard copy and other physical documents, such as transcripts, are in a safe with a code and no outside access. I commit to storing the data for 5 years. After 5 years, I will permanently destroy the electronic and hardcopy and other documents as per Walden University's requirement. Shredding documents, destroying flash drives and disposing of the remnants will satisfy Walden's University requirements. The IRB approval number for the study is 03-11-22-0635973.

Data Collection Instruments

I am the researcher, and as the primary data instrument, l focused on collecting data to answer the research problem. The collection of quality data is essential for the researcher to provide reliable and valid information for analysis in research (Yin, 2018). For qualitative studies, researchers use semistructured interviews to gather in-depth details with validity (Morse, 2015; Yin, 2018). I assumed the role of primary data

collection instrument for this qualitative study. I conducted semistructured interviews using open-ended questions and member checking and examined corporate documents such as Excel spreadsheets and inventory reports. I chose open-ended questions to probe the participants and to ensure the interviews were adequate and consistent. I examined the documents with the permission of the participants. The Excel spreadsheets and inventory reports included inventory purchases and balances. I used the information from the documents in the evolution of the theme development and confirmation of gleaned interview data.

As the primary data collection instrument, I followed an interview protocol to gather in-depth information. Researchers can use semistructured interviews to facilitate the use of open-ended questions and allow for a full explanation of the experience by participants (Heath et al., 2018). I asked each participant 10 open-ended questions as listed in Appendix A and followed the interview protocol listed in Appendix B as follows: (a) getting the participant's consent, (b) greeting the participant at the interview, (c) discussing the contents of the form with the participants, (d) seeking permission from participants to record the interview, (e) request to look at policy documentation (f) complete interview process and end recording (g) providing any explanation on member checking, (h) asking for participants' concerns, (i) thanking the participants. I gathered in-depth information and sifted through data to uncover relevant details on the study topic by following the protocol. The six steps in the interview protocol consist of introduction, study purpose, confidentiality, follow-up questions, interview, and wrap-up (Yin, 2018).

To maintain equity and consistency in gathering the data, I administer the same interview protocol to each participant, asking the questions in the same order.

Researchers are responsible for informing participants of the duration of interviews and member checking sessions. I helped to prepare subjects and guide their expectations regarding the interview process by informing participants of the 45-minute interview and approximate 30-minute follow-up member checking interview. The participants can provide an in-depth explanation of inventory management in answers to open-ended questions. Researchers can unearth comprehensive information through semistructured interviews (Nel et al., 2018).

To gather the information from participants, I conducted interviews via Zoom. I checked the video and audio settings before the interviews to confirm working conditions. One advantage of conducting interviews in research is that the interviewer can observe the body language of participants and ask follow-up questions to get clarification (Bowden & Galindo-Gonzalez, 2015). Body language, such as facial expressions and eye contact, may indicate the participant's comfort level or discomfort with the interview questions (Yang, 2017). Using various interview platforms, the interviewer can observe participants' body language.

I used the Zoom interview platform to gather information for the study. I ensured the participant's name was hidden on the screen to protect privacy. After collecting the data, I conducted a member checking session with participants to confirm the details of the interview summaries to enhance the reliability and validity of the data. Researchers can use instruments such as audio recorders and member checking to validate the data

they collect (Kern, 2018). A writer or researcher can ensure the reliability and validity of the data the researcher collects using member checking (Morse, 2015). Researchers optimize the reliability and validity of data by using rigorous data collection instruments.

I also examined secondary data sources, including company documents showing inventory strategies implemented and policies and procedures relating to inventory management. To get an in-depth understanding and confirm primary data from interviews, I examined the participants' inventory management process. I gained an understanding through the participants' answers to my open-ended questions, who were my primary data source.

Data Collection Techniques

Before I began recruiting participants or collecting data, I achieved IRB approval from Walden University to allow the commencement of field research. I contacted participants to start the data collection process and provided each participant with the informed consent form to request permission and follow the interview protocol. I used semistructured interviews and asked probing open-ended questions. Researchers use semistructured interviews to capture rich and in-depth data (Baines et al., 2018). Researchers conduct activities such as interviews to collect data, members check the interview summaries with participants, review company documents and record the interviews (Rosenthal, 2016). After requesting documentation, I reviewed company documents provided by participants via Zoom screen. I examined excel worksheets and computer reports comprising suppliers, purchases, sales, and inventory balances. From the company documents examined, I saw how the business owners relied on the

information to plan inventory purchases. I gained added insight as I compared the information from company documents to interview summaries. I used the information from interviews and company documents to develop the four emerging themes. I checked to ensure the recording devices worked well and adhered to protocol during the interview process. In addition, I used two devices, an iPhone, and an iPad, to ensure I captured the data if one instrument should fail.

I conducted Zoom interviews with the participants to collect the data. Researchers can use interviews to collect data for qualitative studies (Moser & Korstjens, 2018; Yin, 2018). I scheduled each interview after the participants agreed on the meeting times and according to the interview protocol in Appendix B. Collecting data using interviews allows the researcher to get an immediate response (Yang, 2017). As the interviewer, I observed each subject's body language and determined if the interviewee was trying to avoid questions. The researchers can decide what questions need clarification by observing the participants during the interview (Buschle et al., 2021). As well as using the interview to compare with documentation, researchers can collect adequate data during the interview process as participants have the freedom to answer at will (Heath et al., 2018; Ilyushin & Azbel, 2017).

A participant's reaction may appear as a disadvantage when participants fail to answer or do not provide complete responses resulting from weak questioning (Groth & Haslwanter, 2016; Yin, 2018). There is also the possibility of bias when interviewers fail to ask complete open-ended questions to participants (Yin, 2018). However, the researcher may ask follow-up questions to probe further when conducting face-to-face

interviews (Ilyushin & Azbel, 2017; Rosenthal, 2016). Member checking and transcript reviews are essential factors in the data collection process. The member checking can be conducted with participants to confirm the transcript reviews (Silverman, 2017). Researchers recommend audio recordings to ensure that participants' views are captured (Silverman, 2017). I conducted member checking to verify responses in the interview summaries and support interpretation accuracy.

Confirmability of data is essential to writing accuracy (Korstjens & Moser, 2017). To ensure that participants recall the member checking details, I emailed the review notes to participants 5 days before the member checking meeting. The information did not include a personal trace of the identity of any participants. After the interview, I also asked participants for supporting documentation on inventory management policies to validate and corroborate the data collected.

Data Organization Technique

As a researcher, I organized the data collected to allow for understanding. The information I received from the interviewees was recorded and transcribed. I used Excel worksheets to arrange the information and store on a memory stick. The physical documents and the memory stick will be held in a locked safe for 5 years. The information did not include a personal trace of the identity of any participants. I will destroy electronic data, as well as physical data, by deleting electronic information and shredding documents.

Researchers organize, analyze, categorize, rearrange, and evaluate the data when conducting research (Yin, 2018). I used information gleaned from the company

documents reviewed as a basis for the data analysis and coding process. I collected and coded the participants' information to allow access to the transcriber only and to protect the identity of the participants. Four themes emerged from the analysis of the data in interview notes and company documents. I assigned a unique code to determine the classification of each participant's information. The analysis of the data began after proper coding and classification. I could engage in interpretation and analysis by coding the data without divulging the participants' personal information.

Data Analysis

I interpreted the data by reviewing inventory information on purchases, sales, and storage and evaluating inventory interview data collected. Data analysis is an essential process that researchers use to ensure the credibility of the study (Rosenthal, 2016). The data in the report should be consistent and reliable, enhancing the study outcome's viability (Rosenthal, 2016). The researcher can use more than one data collection method to enrich the information and improve data validity (Abdalla et al., 2018). Phillippi and Lauderdale (2018) recommend documenting information in qualitative research so researchers can provide context to future scholars. Methodological triangulation in a case study as a technique can also be beneficial as the process involves different bodies of evidence (Kim & Kim, 2018). Researchers can use data triangulation and multiple source connections to increase data validity (Foley et al., 2017). For methodological triangulation, I used secondary data sources from company inventory, policy, and procedure documents to corroborate the veracity of the study findings. I used methodological triangulation as a tool to establish data reliability and validity.

Yin 2018 identifies a five-step model comparing the main themes with the conceptual framework. In data analysis, researchers can follow the uniform data collection process, data deconstruction, data reassembly, and data reconstruction and ask the same questions in the same order (Yin, 2018). I documented the interviews, analyzed the information recorded, and reviewed it for an initial understanding of the data.

I used NVivo software to identify and code similar themes between the sources. Researchers can use NVivo software to determine the themes from multiple sources for coding and organization in the data triangulation process (Wang et al., 2019). The step-by-step process of data analysis is a path researchers use to gain insight into how the data fits the conceptual study framework and published literature (Vaismoradi et al., 2016; Yin, 2018). I reviewed company documents excel worksheets, and computer reports, including purchases, sales and inventory balances provided by the participants. I analyzed the participants' interview responses and compared the information in the company documents. I compared the key themes, conceptual framework, and any current publication relevant to the study to enhance the reliability and trustworthiness of my findings.

Reliability and Validity

Credibility, dependability, transferability, and confirmability are valid and reliable information characteristics. Researchers conduct the study in a manner that excludes biases and involves gathering in-depth information (Assarroudi et al., 2018). The information collected should meet the validation test using more than one means (Morse, 2015). findings of data collection and analysis. I also discuss how the study applied to

professional practice and the implications for social change—the discussions on my reflections of experiences on conducting the study form a part of the content. By applying rigorous validation procedures, I achieved meaningful, valid outcomes.

Reliability

Using reliable methods by the researcher ensures that the study is dependable. In qualitative research, the outcome is reliable when the researcher can repeatedly arrive at the same result while consistently using similar methods (Morse, 2015). Scholars describe dependability as the process where researchers follow identical patterns of the original researcher to arrive at the same outcome (Spiers et al., 2018). I used methodological triangulation, member checking, and standard interview protocol to ensure the study's findings were valid, dependable, and replicable. To further enhance the dependability, I also triangulated the data from all the sources after coding and matching. In addition, the participants' member checked the interview notes and asked the interviewer questions to reduce the possibility of errors to increase the study's validity. I aligned and compared the themes to the conceptual framework to show how business leaders can use the results to succeed.

Validity

Researchers align validity with data that is transferable, confirmable, and credible (Morse, 2015; Rosenthal, 2016). Researchers can use triangulation and member checking to achieve validity and credibility (Abdalla et al., 2018; Cypress, 2017). I used the information from the literature review, interview protocol, and member checking to ensure the credibility of my study findings. Triangulation is a tool researchers use to

enhance the richness and rigor of qualitative case studies (Morse, 2015; Noble & Heale, 2019). A quality research paper involves the researcher gathering believable data to ensure credible, transferable, and confirmable content.

Credibility. The study is credible when researchers produce believable work (Marshall & Rossman, 2016). As a researcher, I member checked the interview results with participants to engage participants' beliefs in the study. I had no previous relationship with the potential participants and had no bias toward the data. Administering the same interview protocol and standard for all participants is one way of detecting participants' behavior and strengthening credibility**.**

Transferability. Researchers follow interview protocols to maintain structure and consistency in data collection (Heydon & Powell, 2016). Transferability is the ability to replicate the research findings in future studies (Cook et al., 2016; Moon et al., 2016). Achieving transferability through rigorous research is critical to research confirmability (Abdalla et al., 2018). To enhance transferability, I maintained details of interviews in notes and company documents and employed member checking after the interview so participants could verify and clarify the information in the interview summary. The researcher produces a quality study that is reliable and valid when the work is proven to be confirmable by participants (Moser & Korstjens, 2018).

Confirmability. Confirmability involves other researchers being able to replicate the study (Haven & Grootel, 2019; Moon et al., 2016). Researchers can use confirmability to measure accuracy and objectivity in research data (Abdalla et al., 2018; Morse, 2015). As a researcher, I applied appropriate research methods to avoid bias and

enhance credibility and confidence in my work. Demonstrating confidence in the study can be strengthened by confirmability (Moser & Korstjens, 2018). In addition, I followed the interview protocol and did not meet the study participants before the interview date. I analyzed the interview data for consistency and trustworthiness to provide a creditable trail to support the findings.

Data saturation. I achieved data saturation to ensure the research results were trustworthy. Data saturation occurs when the researcher can find no new information or theme (Fusch & Ness, 2015; Saunders et al., 2017). I interviewed eight participants to achieve data saturation in the sixth interview. Reaching data saturation indicates no new themes, codes, or data collected from the interview participants.

Transition and Summary

In Section 2, I discussed how I followed ethical requirements to ensure the confidentiality of participants and information. I also justified using the qualitative research method and discussed the participants, the method of selection and the participants' eligibility. I discussed the research sample and described my role as the researcher. I also described my plan to gather data from selected participants. I discussed methodological triangulation to enhance the validity and reliability of the information in the study. In addition, I described data collection techniques and protocol and discussed the plan's analysis to improve the information's reliability.

In Section 3, I presented the findings of data collection and analysis. I also discussed how the study applied to professional practice and the implications for social

change and described my reflections. Section 3 also includes recommendations for research to provide a basis for future researchers.

Section 3: Application to Professional Practice and Implications for Change

Introduction

The objective of this qualitative case study was to explore strategies successful business owners of SMROSS used to manage inventory. I used purposeful sampling and semistructured interviews to gather information from eight participants in the GTA Canada. I interviewed eight owners of seven SMROSS in GTA Canada to gather data for the study.

Each of the eight participants reviewed the informed consent forms and agreed to participate in the study. Participants were interviewed, and after the interviews, I provided the subjects with the interview summaries for member checking to validate the accuracy of my interpretations. I used NVivo software to identify and extract patterns and themes from the interviews of the participants and company documents showing inventory strategies implemented and policies and procedures relating to inventory management. The participants were assigned code names P1, P2, P3, P4, P5, P6, P7, and P8. The data from each interview was analyzed, and some common themes emerged. The themes are the strategies successful inventory managers in SMROSS use to control inventory. The following themes emerged: (a) inventory management efficiency, (b) nurturing of supply chain partner relationships, (c) using IT in inventory control, and (d) responsiveness to customer demand. The participants were allowed to review the interview summaries for validation in a member checking session. Next, I analyzed the

themes emerging from the data collected relating to inventory management strategies of successful SMROSS business owners. As per the study findings, successful SMROSS business owners implemented strategies to manage inventory efficiently by satisfying customer needs to maintain sustainability.

Presentation of the Findings

The research question for this study was: What strategies do successful SMROSS business owners use to manage inventory efficiently? I interviewed the eight owners of seven SMROSS in the GTA Canada. I prepared interview summaries of the participants' responses in a Word document. The participants validated the information in summary to ensure correctness. In analyzing the data, I used a data driven approach to explore the strategies successful SMROSS business owners used to manage inventory efficiently.

Participants shared documents via the Zoom Screen Share functionality in support of some statements, but I could not review the documents in detail. I used the NVivo software program to identify and link similarities in the data and manually reviewed the data for redundancy, accuracy, and identification of themes. Combining this approach with a multiple case study design, I gained an enhanced understanding of the phenomena and the participants' experiences. Following the coding process, four major themes emerged, and themes and corresponding subthemes as discussed below.

Theme 1: Inventory Management Efficiency

The inventory strategy was the first theme that emerged as participants P1, P2, P3, P4, P5, P6, P7, and P8 responded that they aim to maintain the level of inventory that results in minimum costs. Inventory management is critical to sustainability, and retailers

must maintain the proper inventory to satisfy customer demand (Gupta & Ramachandran, 2021). Shokouhifar et al. (2021) opined the importance of implementing inventory management strategies to minimize shortages. The participants kept track of inventory balance and sales as a strategy to determine when to replenish. P1 and P4 noted that because the business was small, both owners checked shelves and inventory in the storage area daily to ensure adequate inventory was on hand to satisfy customers and determine to reorder level. In addition, the participants P1, P4, P5, P6 and P8 used Excel to record sales, purchases, and inventory balance, while P2, P3, and P7 used more advanced software models. The participants' responses corresponded to the examination of the documents examined. Participants described the processes maintained to ensure timely purchases and the accuracy of inventory balances in their businesses. All Business owners could use IT to manage inventory efficiently (Zohdi et al., 2022). By tracking inventory movement, business leaders can determine when to purchase and the balance on hand (Goltsos et al., 2021).

The participants focused on managing inventory effectively by documenting purchases, sales, and balances. Business leaders maintain documents to ensure correct inventory levels to satisfy customer demands and avoid stockout or excess stock (Gupta & Ramachandran, 2021). The participants P1, P2, P3, P4, P5, P6, P7, and P8 provided access to documentation for review on inventory policy and tracking. The documents I examined were Excel spreadsheets for the participants P1, P4, P5, P6 and P8 print reports for each participant P2, P3, and P7. From the excel spreadsheets of participants P1, P4, P5, P6, and P8, I noted the practice of recording purchases, sales, and inventory ending

balances. I also noted purchases, sales and closing stock from the reports presented by P2, P3, and P7. The participants made plans for future purchases by looking at the balances on hand.

All the participants explained the importance of having a stock level where storage cost is lowest while maintaining inventory to satisfy demand. The participants P1, P2, P3, P4, P5, P6, P7, and P8 acknowledged the importance of eliminating stockouts and excess stock levels. Participants P2, P3 and P7 stated they maintained a relationship with the supplier where the goods could be shipped directly to customers. P2, P3, and P7 stated that there was no storage for drop shipped products, and cash was not tied up in products unnecessarily. P2, P3, and P7 also stated that the inventory would not become obsolete as the inventory was drop shipped to the customers and was not on shelves or in storage. P2, P3 and P7 stated, “there were increased costs and a reduction in drop shipment during COVID.” Alkahtani et al. (2021) explained how inventory costs could increase during uncertainties and disasters as business owners implement strategies to manage losses and remain sustainable. Some drop shipment suppliers had difficulty accessing stock which led to P2, P3, and P7 purchasing from other suppliers and delivering to customers at increased costs for storage and shipping.

Retailers can make bulk purchases to reduce shipping expenses in business and increase profit margins (Zohdi et al., 2022). Participants P1, P2, P3, P4, P5, P6, P7, and P8 explained the process of purchasing the maximum required by the supplier in most instances to reduce or eliminate freight and shipping costs and keep storage costs low. In addition, P1 and P4 stated that most suppliers are nearby and use the pickup option to

reduce shipping costs. P2, P3, P5, P6, P7, and P8 noted the use of the pickup option for some products since COVID because of the extended shipping time.

The participants sold inventory that large established office supply companies carried, and these large companies would be able to make large purchases at lower costs. However, the participants maintained that focusing on customer needs and requests was key to sustainability. P1 and P4 stated that they operated in a mall and facilitated requests by other business owners in the mall by stocking the items requested. In addition, new item requests from walk-in customers were also purchased for resale. All the participants stated that they had several repeat customers and therefore ensured the stock availability to satisfy the demand while maintaining a lean inventory policy.

To adopt a lean inventory policy, business leaders should plan and forecast inventory demand (Becerra et al., 2022). All the participants maintained that they used a lean inventory strategy to reduce costs and satisfy customer demands. P1, P2, P3, P4, P5, P6, P7, and P8 asserted that maintaining the right inventory level was critical to minimizing costs as some products had low margins. The participants stated they would not miss out on sales by having the optimal level where there is no overage or stockouts. All the participants acknowledged that sales on some inventory used for both office and school would increase during seasonal periods such as September and December. All the participants indicated the importance of monitoring seasonal patterns to obtain knowledge of customer demand and to follow sales trends.

The strategy was to purchase more office supplies in June and November to ensure the stock level was adequate during the summer and December. Students would

make their purchases in the summer and December for back to school in September and January. The participants expressed increased online purchases during the COVID-19 pandemic as more parents and their kids were at home.

Business leaders adjusted inventory management strategies and forecasts to account for uncertainties during the COVID-19 pandemic (Villalobos-Madriz et al., 2022). Participants stated they adopted new inventory strategies during COVID-19 to maintain sustainability. Strategies include purchasing from new suppliers, special customer deliveries, and regular pick-up from some suppliers. Also, forecasting demand by communicating with some customers was necessary to keep sufficient inventory. The participants also explained how they market the products on their websites and platforms like Facebook.

From the secondary documents examined, I confirmed the statements made by participants P2, P3, and P7 regarding the drop shipment of goods to customers. I reviewed Excel spreadsheets and computer reports and confirmed the argument participants on bulk purchases as some large purchases. From the company documents, I noted some large purchases from some suppliers.

Table 1

Theme 1 Inventory Management Efficiency

Factors of Inventory Management Efficiency	Participants							
Checked Shelves Manually	P1			P4				
Used Excel Spreadsheets	P1			P4	P5	P6		P8
Used More Advance Software Tools		P2	P3				P7	
Drop Shipment Strategy		P2	P3				P7	
Bulk Purchase Strategy	P1	P2	P3	P4	P5	P6	P7	P8

The inventory management efficiency theme aligns with Fielder's 1964 contingency framework and Prasad's 1994 inventory control modeling. The participants adjusted their inventory strategy depending on the situation. The participants documented purchases and sales and maintained stock balances in Excel spreadsheets and reports. Participants forecasted seasonal product demand for September and January based on the market for the periods in the previous year. Business leaders could use Fielder's conceptual framework and Prasad's inventory control modeling to plan inventory balances based on need. Inventory modeling is based on the business owner implementing the model that best suits the business. The findings aligned with inventory modeling as the study participants used different models to address inventory.

In addition, the finding of this study aligned with existing literature on effective inventory strategies. Planning the correct inventory balance to match demand is aligned with several peer-reviewed studies (Liberopoulos & Deligiannis, 2021; Xin & Goldberg, 2022). The participants P1, P2, P3, P4, P5, P6, P7, and P8 acknowledged that following best practices relating to inventory replenishment might result in lower costs and increased profits. The supply chain is one channel inventory managers can use as an inventory management strategy.

Theme 2: Nurturing of Supply Chain Partner Relationships

All the participants P1, P2, P3, P4, P5, P6, P7, and P8 opined on the importance of having a relationship with suppliers. Retailers and suppliers should form business relationships to support sales and inventory replenishment (Tarigan et al., 2021). Participants P1, P2, P3, P4, P5, P6, P7, and P8 stated that "the aim was to build

relationships with suppliers over time to negotiate discounts and freight charges." The participants P1, P2, P3, P4, P5, P6, P7, and P8 also spoke on the importance of purchasing the minimum purchase that qualifies as a bulk purchase to ensure reduced shipping and freight costs. Suppliers offer lower prices to retailers when they buy in bulk, and transportation and shipping are also reduced (Ji et al., 2022). P2, P3 and P7 discussed the period before the COVID-19 pandemic when the demand for office supplies and the drop shipment agreement with suppliers was higher. However, the dynamics changed when the office workers worked from home, and there was no need to drop ship. P2, P3 and P7 could eliminate storage costs as the items were shipped to the customers as needed and would not end up on the shelves of the participants.

Participants P1, P2, P3, P4, P5, P6, P7, and P8, explained the importance of fostering collaboration with suppliers. For example, more frequent communication can be beneficial so that suppliers know how much stock the office supply stores will need according to each season. As Venegas and Ventura (2018) posited, adequate, two-way communication between retailers and suppliers benefits both parties and mitigates out-of-stock situations and overstocking of inventory. P2 and P3 stated, "during COVID, some items were in short supply and so had to seek to make adequate purchases to ensure a sufficient stock to satisfy customer demand." Participants P1, P4, P5, P6, P7 and P8 also communicated to suppliers via email and telephone to ensure no delivery issues. The participants also communicated with multiple suppliers to avoid interference in supplies to customers.

The participants P1, P2, P3, P4, P5, P6, P7, and P8 explained the need to use various suppliers to source some items demanded by customers. Retailers can implement the strategy of having multiple suppliers to mitigate supply chain disruptions. Disruptions in the supply chain could outweigh the benefits of solid relationships using a single supplier (Namdar et al., 2018). Business owners may need to use several suppliers to avoid customers moving to other retailers because of dissatisfaction (Namdar et al., 2018).

In situations when the supply chain is interrupted and products are scarce (e.g., during a pandemic such as COVID-19), participants P1, P2, P3, P4, P5, P6, P7, and P8 stated that despite higher costs, purchasing from a new supplier enabled them to satisfy their customers. The experience of increasing prices and administrative expenses was a global effect resulting from COVID-19 (Burdenko & Shchepetov, 2021). To avoid long wait times at regular suppliers, business owners purchased items from new suppliers. All the participants maintained that business owners had to utilize multiple supply bases to mitigate disruption in the supply chain. Fan et al. (2019) posited the benefits of using multiple suppliers to reduce supply chain disruptions. All the participants stated that customer satisfaction was the primary consideration in inventory procurement, which may mean trying several suppliers if the primary supplier is out of stock.

From the excel sheet provided by participants P1, P4, P5, P6, and P8, I observed the names of several suppliers. I also observed multiple suppliers' names in the report sheets presented by participants P2, P3, and P7. Business leaders may use multiple suppliers to mitigate the possibility of supply shortages and satisfy customers' demands

(Fan et al., 2019). The participants explained how sourcing products from multiple for the strategy relied on purchasing products during the COVID-19 pandemic.

Observing the Excel spreadsheet documents shown by the participants, I determined alignment with the analysis of interview data. The documents include purchases, sales, inventory balances, freight information on purchases, the price of the products before discounts, discounts, and the ending prices. I noted the end prices after discounts confirming the participants' statements on cost savings.

Table 2

Theme 2 Nurturing Supply Chain Partnership

Supply Chain Relationship	Participants							
Freights & Discounts	P1	P2	P3	P4	P5	P6	P7	P8
Drop Shipment Agreements		P2	P3			P6		
Communication with Supplies	P1	P2	P3	P4	P5	P6	P7	P8
Email & Telephone Communication	P1			P4	P5	P6	P7	P8

Consistent with contingency theory, participants preserved flexible thinking to procure inventory from secondary suppliers. Participants were able to fulfill customer needs with a prompt and responsive inventory adjustment approach. Das (2018) posited that supplier flexibility was a factor that disrupted the supplier chain.

The findings also support inventory control modeling as the participants P1, P2, P3, P4, P5, P6, P7, and P8 all opted to use inventory models suited to their situation. Saha and Bhattacharya (2020) suggested that choosing an effective inventory model is essential for business profitability. The option to purchase from several suppliers allows inventory managers to create new models when necessary. The lists of suppliers were

also documented for access when required. All the participants stated they sourced products from other suppliers when they could not get the goods from the usual source.

The research findings also align with existing literature. Ali et al. (2017) postulated the benefit of a resilient supply chain using multiple vendors. In addition, Seifert et al. (2017) opined that business owners could be afforded flexibility by using multiple suppliers. Inventory managers could also use IT as a flexible tool to communicate quickly with various suppliers to make purchases and enquiries.

Theme 3: Using Information Technology in Inventory Control

All participants implemented an IT strategy to determine purchases, sales, and stock on hand. Most participants used simple Excel worksheets, while others used more advanced software tools. P2, P3, and P7 had software tools to produce reports on purchases, sales, and closing inventory. P1, P4, P5, P6, and P8 used Excel and manually input data. However, the participants' use of features such as count and sum in Excel allowed for estimates of stock level. IT can be used in inventory management to share information with suppliers, maintain accurate inventory, improve customer service, and reduce inventory costs (Tian & Wang, 2022). All the participants agreed that using IT could enhance business operations. P1, P4, P5, P6 and P8 suggested that since the business size was small, there was no need to fix the process unless the business expanded. However, some researchers have opined that spreadsheets may not benefit business owners who could use more robust IT tools to track inventory (Tarigan et al., 2021). However, participants P1, P4, P5, P6, and P8 had access to spreadsheet inventory performance information.

Observing the spreadsheet documents shown by participants P1, P4, P5, P6, and P8 and the reports from P2, P3, and P7, I recognized the process of tracking purchases and sales and maintaining balances to use as the forecast for future purchases. Retailers use forecasting to determine accurate demand trends (Nikolopoulos et al., 2020). The participants explained the risks of not maintaining the documents. The participants determined the main threat as timely purchase orders.

By placing orders using IT tools, inventory managers can track goods from the order stage to delivery. Retailers desire access to inventory performance information necessary for retailers to track and make timely orders (Ishfaq et al., 2021). Inventory managers can use delivery information to plan future inventory requirements. Business owners increased their IT usage during the COVID-19 pandemic to engage suppliers and customers (Rangarajan et al., 2021).

IT is used by society in many circumstances. Government leaders mandated restrictions worldwide because of the impact of COVID-19 on the population's health (Fairlie, 2020). During the COVID-19 pandemic, the participants explained the increased use of emailing to some suppliers and customers. Business owners used the customers' email addresses to receive electronic copies of receipts to reduce physical contact during COVID restrictions. Participants utilized electronic screens to inform customers of the need to wear masks and maintain social distancing during the COVID-19 pandemic. To increase customer appeal and build business market share, leaders can communicate with multiple customers using social media (Hayes, 2020).

Business leaders may conduct business using several IT communications tools. Social media is a tool business leaders can use to communicate with many individuals on the platforms (Cartwright et al., 2021b). Platforms such as Facebook and Instagram were used by some participants to advertise their products to potential customers and to communicate new product information to existing customers. P2, P3 and P7 used their websites to showcase the products, while P1, P4, P5, P6 and P8 used Facebook to run advertisements. P1 also used the physical store as the primary advertisement stage by arranging the products by similarity for easy customer access. In addition, P5 occasionally used Instagram by sharing pictures of items sold in the store. The websites of P2, P3, and P7 included product advertisements and the option to search for products, view the products, and learn additional product information. The customers could also access information on monthly promotions and specials on store websites. The participants explained that using social platforms during slower periods drives sales.

I confirmed the use of advanced software tools for participants P2, P3 and P7 as I examined the computer reports showing purchases, sales, discounts, freight, and inventory balance. As per the interview, participants P1, P4, P5, P6, and P8 used Excel spreadsheets, while participants P2, P3, and P5 used advanced computer software tools to maintain inventory. From the secondary documents examined, I confirmed the information as per the interview data. I concluded that the participants used Excel and computer software to determine inventory balance and time of purchase. I determined that the participants used Facebook pages and websites to promote products and inform customers and potential customers.

Table 3

Theme 3 Using Information Technology in Inventory Control

Information Technology Tools	Participants						
Use of Advance Software Tools		P2	P3			P7	
Use of Excel Spreadsheets	P1			P4	P5	P6	P8
Using Websites		P2	P3			P7	
Using Social Platforms	P1			P4	P5	P6	P8

Using technology in inventory management, Theme 3 aligns with the conceptual framework contingency theory and inventory control modeling used in this study. Participants implemented various IT strategies to manage inventory to align with the framework and used platforms best suited for business success to align with inventory control modeling. The participants documented pertinent information using IT tools such as Excel spreadsheets and more advanced software models. Puspitawati (2021) postulated that users of IT do not use the resources to the same extent, and users could implement IT structures to match the business model and situation. Under contingency theory, the leader implements strategies based on the case, and strategy could change if the situation changes. The participants P1, P2, P3, P4, P5, P6, P7, and P8 used online platforms, especially during slow periods, to ensure the business could operate optimally. Participants P2, P3 and P7, used websites, and participants P1, P4, P5, P6, and P8 negotiated social platforms to attract new customers and alert loyal customers to new deals. During slow periods to increase customer awareness and drive sales, business owners sustained operations by modifying and intensifying social media strategies. Here the participants employed P1, P4, P5, P6, and P8 and explained how they used Facebook presence to keep loyal customers aware of product availability and how potential

customers became aware of product opportunities. By adopting varying levels of online presence, the participants created inventory models best suited to the situation. The participants explained how customers on Facebook could become followers and share information with other users on the platform. P2, P3, and P7 explained the use of websites to maintain customer loyalty by offering new products, providing product information, and allowing customers to chat to discuss any additional details if necessary.

The theme IT in inventory management also aligns with current and past literature reviews. Business leaders use IT to operate efficiently and track inventory balances to maintain the correct stock level at minimal cost (Beheshti et al., 2020). Business owners who use IT tools to support the correct stock level can satisfy customers' demands and create lasting relationships (Obermayer et al., 2021).

Theme 4: Responsiveness to Customer Demand

All eight participants discussed the importance of satisfying the customers' demands. To ensure continuity, business operators must create a relationship where customers are satisfied (Itani et al., 2020). The participants listened to the customers and source new products to satisfy demand. The participants used previous years' data to forecast consumer needs during seasonal periods. Accurate forecasting is necessary to determine future demand (Nikolopoulos et al., 2020). The participants P1, P2, P3, P4, P5, P6, P7, and P8 acknowledged how customers' expectations were essential factors in business and remained competitive and maintained customer loyalty by satisfying customers' demands. Arslan (2020) posited the need to satisfy customer needs to achieve loyalty, maintain competitiveness, and remain sustainable. P1, P4, P5 and P8 stated that

they access items when customers enquire about products not carried on shelves to fulfill customers' demands. P2, P3, P7 and P8 stated that “it was critical to understand customers' needs.” “Serving the same customers for some time helps with being proactive in fulfilling demand.”

Using the information in the documents to forecast purchases, the participants could promptly purchase the stock required. Implementing the right inventory strategies based on knowledge of customer needs can lead to more efficient forecasting and the ability to avoid excessive inventory levels or stockouts (Rehmani et al., 2021). The participants maintained that understanding the customers' needs and knowing high and low demand periods is key to determining inventory levels. All the participants spoke about the importance of satisfying customer needs, maintaining good customer relationships, and optimizing profits. Participant P1 stated, “The pandemic is rough, and several businesses are closed, so the opportunity to serve is a privilege.” The participants mentioned customer satisfaction, customer discounts, loyalty and business continuity. The participants could satisfy customer demands, minimize costs, and increase profits by implementing effective inventory strategies to maintain competitiveness.

Included in the secondary data reviewed were some unique purchases. Leaders purchased items such as business cards for some customers as specific requests. From the documents, I confirmed the participants' actions in acknowledging and understanding each customer’s needs.

Table 4

Theme 4 Responsiveness to Customer Demand

Response To Customer Demands	Participants							
Acknowledgement of Customer Expectations	P1	P2	P3	P4	P5	P6	P7	P8
Accessing Items based on Customer Inquiry	P1			P4	P5			P8
Understanding Customer Needs		P2	P3				P7	P8

The theme of responsiveness to customers' demands aligns with the contingency framework and inventory control modeling. Fielder (1964) postulated that leaders could change styles to match situations and attain success. Prasad (1994) supported managers in selecting inventory models suitable for operating conditions and requirements. The participants adjusted inventory strategies to satisfy customers' demands by maintaining the level of stock and variety, and as per Fielder's contingency theory, strategies changed depending on the situation. The participants responded to customer needs using documented information in excel and printed reports to plan future purchases. The study also tied in with Prasad's inventory control modeling as participants identified the model required to satisfy customers' demands. The findings aligned with existing studies on inventory management with responses to customers. Inventory managers are effective when customer needs are satisfied (Nirmala et al., 2021).

Most business owners thrive on catering to customers' needs. Scholars expressed the importance of understanding and addressing customers' needs when conducting business (Rintamäki & Saarijärvi, 2021). All eight participants discussed the importance

of satisfying the customers' demands. Without the customers, business owners would fail; therefore, the study findings apply to sustainability.

Applications to Professional Practice

The study findings apply to SMROSS owners who wish to implement strategies to manage inventory effectively. The purpose of this qualitative multiply case study was to explore strategies successful business leaders of SMROSS used to manage inventory efficiently. SMROSS owners could use the information presented in the study to improve inventory management strategies, thereby increasing business profitability. SMROSS inventory managers could experience success with a focus on the following themes identified: (a) inventory management efficiency, (b) nurturing of supply chain partner relationships, (c) using IT in inventory control, and (d) responsiveness to customer demand.

Inventory managers can use the themes to support improving strategies and mitigate operational disruptions. SMROSS business leaders can use the inventory theme to ensure the correct stock level is on hand. Furthermore, inventory managers can satisfy customer demand more effectively when collaborating with the supply chain (Zaid et al., 2021). Nurturing supply chain partner relationships is a strategy that business owners can use in inventory control to avoid stockout and maintain customer niche (Smith et al., 2021). Technology is also vital in business as leaders can use various platforms to communicate, highlight products, and attract new customers (Varadarajan et al., 2022). By responding to customers’ demands, business owners could maintain business sustainability and customer loyalty.

The study results could apply to some SMROSS leaders seeking to maintain business continuity. Managing inventory can be challenging for many business owners as inventory managers need to understand the strategies to implement to remain competitive (De Sousa et al., 2021). By adopting the themes identified in the study, business owners could implement strategies necessary for competitiveness and sustainability. The resilience of some business owners surviving the COVID-19 pandemic aligns with the strategy mentioned in the study, as retailers changed their operation plans to mitigate the impact of COVID-19. SMROSS owners changed plans to ensure no overstock or stockout during COVID-19 (Runfola et al., 2021).

Business owners can use assets more effectively by not holding excessive stock or depleting cash. The themes could guide to following reasonable business practices to avoid stockouts and satisfy customer demands. SMROSS business leaders could use the results to fill gaps in knowledge about effective inventory management strategies. Business leaders can create competitive strategies to withstand difficult economic climates and maintain stability. Owners and managers should be able to create new or adjust existing business strategies to achieve optimum returns in instances such as a pandemic. Inventory managers could maintain adequate cash flow to increase business sustainability by using the study findings and keeping track of inventory to ensure the correct level.

Implications for Social Change

Inventory management is the tool business leaders use to determine the stock level necessary to satisfy customer demand. Customer loyalty develops when consumer

needs are consistently met, increasing the customer base. Business owners and managers should be aware of the possibility of events disrupting the flow of products and the possibility of accumulating excess inventory that may become obsolete. Consequently, inventory managers can implement strategies to enhance business sustainability and increase employment (Wong & Ngai, 2021). SMROSS business owners could use the findings to improve business strategies and respond quickly to disruptions to enable business sustainability.

As the owners of SMROSS businesses listen to customers and satisfy customer demands, customer service and profitability can also improve. The financial results of maintaining a competitive business are the benefits of reduced stockouts on customers. By managing inventory efficiently, business owners create customer loyalty, reduce costs, and pass cost reductions on to customers, leading to growth and business continuity (Arslan, 2020). In addition, employment growth could result in lower welfare costs and citizens leading dignified lifestyles (Ravallion, 2019).

Business leaders should adjust strategies to minimize costs and achieve long term sustainability. Using the findings from this study, I can advise on inventory management, cost reduction and increased cash flow. With improved cash flows, SMROSS owners could invest in store expansions and provide more jobs for people in the community. Also, when business leaders achieve long term sustainability, employees' jobs are more stable, leading to prosperity in the community. The social benefits of this study are that SMROSS owners could implement inventory management strategies to increase business sustainability, which could result in employment and the provision of necessary business

and educational supplies for citizens of the local community. Individuals contribute to charitable organizations to ensure life improvement for others facing difficult situations (Hafenbrack et al., 2020). Residents experiencing a prosperous lifestyle may pay more in taxes. Government officials could use the tax revenues to fund infrastructure and develop social and economic programs in the community.

Recommendation for Action

The purpose of this study was to explore strategies successful business owners of SMROSS use to manage inventory efficiently. Successful SMROSS owners could implement strategies, maintain the correct stock level, and satisfy customer demand to enhance business survival. The strategies identified from the themes of the study are relevant to success in inventory management and business continuity. Fan et al. (2021) posited the importance of maintaining correct inventory levels, communicating with suppliers, and utilizing IT and customer satisfaction as strategies to enhance inventory management and support sustainability.

SMROSS business owners in other geographic locations in Canada could find the study findings helpful for enhancing business sustainability and ensuring success. The study participants implemented strategies to mitigate the effect of the COVID-19 pandemic and to ensure continuity in business operations for the foreseeable future. The leaders' strategies were successful as the businesses remained in existence while some other small businesses did not survive.

I recommend that business owners maintain a level of stock that allows for minimum working capital and avoid failure. Business leaders could consider building

relationships with multiple suppliers to mitigate supply chain disruptions. Business owners could also attempt price negotiations to lower costs, pass some cost reductions to customers and increase profits. Inventory managers should use IT to identify inventory, show reorders level, and provide forecasting opportunities. Some participants added inventory, such as masks, gloves, and hand sanitizers, during the COVID-19 pandemic. Therefore, identifying new business opportunities should be a strategy used by business operators to mitigate market uncertainties. Another strategy recommended is offering customers alternatives if the required product is unavailable.

The study findings could benefit other SMROSS owners to improve strategies to maintain business sustainability and add to the body of research on inventory management. In addition, business owners in similar industries could use the results to implement strategies to improve inventory management. I will disseminate the information from the study findings through forums such as conferences, workshops, training seminars, and other business forums so interested stakeholders can have access.

Recommendation for Further Research

In this study, I explored the strategies successful business owners of SMROSS used to manage inventory efficiently. The study population was limited to SMROSS owners in GTA Canada. I recommend expanding the study to cover other provinces and territories in Canada, as culture and demographics may differ. SMROSS business owners in different regions of Canada, where the culture and demographics are similar, may benefit from using the strategies implemented by the study participants.

I also recommend interviewing employees and customers in future research, which I did not include in the study. Future researchers may glean information from interviewing employees and customers that SMROSS owners could use to implement bolder inventory strategies. In addition, conducting a similar study of other business types and comparing the findings is also an option for future researchers.

Reflections

The process of finding participants to agree to take part in the study was tedious. The interview process was engaging, and each participant agreed to participate in the study. I was unaware of the strategies SMROSS owners used to manage inventory, and now, after the interviews, I understand the process.

I conducted interviews, collected all the data, and completed member checking before analyzing the data and achieving saturation. After data saturation, I validated the study findings by interviewing more subjects. The doctoral research experience was challenging, and the results were fulfilling. Knowing the benefits of inventory management to business leaders is practical information I can add to academic research.

Conclusion

In this study, I explored inventory strategies successful SMROSS owners implemented to achieve efficiency. Using purposeful sampling, I identified the eight participants in the study. Four themes emerged from the participants and are presented in the study. The themes were inventory management efficiency, nurturing of supply chain relationships, using IT in inventory control, and responsiveness to customer demand.

I concluded that the business owners in this study implemented strategies to reduce costs, avoid stockouts, and maintain the correct stock level. The conclusions align with interviews of participants and a review of information on websites. SMROSS leaders could use the findings from this study to implement effective inventory strategies, augment corroboration with supply chain partners, implement and maintain the latest IT, increase responsiveness to customer demands, and improve profitability.

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Appendix A: Interview Questionnaire

1. What inventory management strategies do you use to ensure sufficient, but not excessive, inventory levels?
2. Which inventory management strategy gives optimal results?
3. How does the organization assess the effectiveness of its inventory management strategies?
4. What inventory management technology did you use to manage inventory?
5. How do you organize your resources to ensure you purchase the right quantity of stock?
6. How do you use sales forecasting in combination with your inventory strategies in combination with your inventory strategies to determine required ordering points and quantity?
7. What controls did you put in place to monitor inventory inflows and outflows?
8. What are the controllable variables you must consider when dealing with suppliers to ensure effectiveness of inventory management strategies?
9. Based upon your organization's experience, how has improving inventory management influenced inventory management of your business?
10. What other information can you share with me about your organization's inventory management strategies?

Appendix B: Interview Protocol

1. Email agreed date and time to meeting to each participant. The email will include telephone number and place of meeting.
2. Email meeting reminder to participants the day before meeting.
3. On day of meeting perform introductory and greetings, as well as explain purpose of research.
4. Discuss the consent form and member checking process with participants.
5. Seek permission to record meeting and then proceed with audio.
6. State the overall research question.
7. Commence asking the 10 interview questions and follow up questions if necessary.
8. Request to look at documentation such as policies and process guidelines and advise the participant to exclude any identifying information.
9. Complete interview and end the recording
10. Ask participants if they have any concerns and emphasize contact detail
11. Thank the participants