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Mitigating Supply Chain Disruptions in Retail Discount Department Stores

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This is to certify that the doctoral study by

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Walden University
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Abstract

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MS, Walden University, 2008

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Doctoral Study Submitted in Partial Fulfillment

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Abstract

Supply chain disruptions can have adverse effects on business outcomes. Retail industry supply chain leaders are concerned with supply chain disruptions because supply chain disruptions can lead to dissatisfied customers and loss of profits. Grounded in game theory, the purpose of this multiple case study was to explore strategies four retail industry supply chain leaders in Northern Illinois and Northwest Indiana implemented to mitigate the effects of supply chain disruptions. Data were collected using semistructured virtual interviews with four retail industry supply chain leaders and a review of company documents. Through thematic analysis, four themes emerged: (a) choosing appropriate inventory strategy, (b) determining facility capacities, (c) conducting ongoing evaluation and control of cost, and (d) monitoring customer satisfaction. A key recommendation is for retail industry supply chain leaders to increase safety stock to mitigate the effects of supply chain disruptions. The implications for positive social change include the potential to improve job stability for employees and support economic growth in local communities.

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Dedication

I would like to dedicate this doctoral study to my mother, Shirley Patton, who raised me with the knowledge that education is important and that you should always be the best that you can be. To my lovely wife, Erma Patton, who supports me in every endeavor I embark upon and was my greatest cheerleader through the doctoral journey. Special thanks to my children, Devin and Ana, Anthony and Victoria, MaiAnais and Shawn, Darian and Christopher, Chloe and Cameron, and Branden and Ashley, for their moral support. Finally, to all my grandchildren, J'anah, JaShawn, Makiyah, Matthew, Skylar, Bailey, Malachi, Gabriela, Camilla, Adalyne, Elijah, Brooklyn, Amaris, and one in the womb, I was encouraged to finish because of you.

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Dr. Janice Garfield was an excellent leader, enthusiastic professor, and superior encourager. The insightful feedback, coupled with her professionalism and encouragement, were a key component to my completion and success on this journey. No words can thank Dr. Garfield enough. I would also like to thank my second committee member, Dr. Warren Lesser, and my URR, Dr. Betsy Macht, for their invaluable input during my doctoral journey. The feedback that was provided by both of you helped me with the achievement of my goal.

I would like to acknowledge the faculty and staff of Walden University, especially my student success advisor, Rick Hay. Rick answered all of my questions, randomly called to check on my progress, and help me register on several occasions. I would like to also thank the four retail industry leaders who participated in this study and provided valuable feedback. The journey was successful because of all of the help and encouragement received from family and faculty.

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Section 1: Foundation of the Study

Background of the Problem

Organizations are facing challenges within their supply chain because of the global expansion of supply chain networks. The complex competitive environment of supply chains has drastically increased supply chain disruptions (Shekarian et al., 2020). Annually, more than 56% of companies globally are challenged with some type of supply chain disruption (Katsaliaki et al., 2021). The general business problem is the high rate of supply chain disruptions that affect business performance. The specific business problem was that some leaders in the retail discount department store industry lack strategies to mitigate supply chain disruptions.

Problem and Purpose

The purpose of this qualitative multiple case study was to explore what strategies retail discount department store industry managers implement to mitigate supply chain disruptions. The research took place in Northern Illinois and Northwest Indiana and included four leaders from three retail discount department stores who had successfully used strategies to mitigate supply chain disruptions. The implications for positive social change include the potential for consumers to maintain or increase productive lifestyles from increased economic growth in local communities stemming from a decrease in disruptive supply chains of retail businesses.

Population and Sampling

The population for this qualitative multiple case study was retail leaders from retail discount department stores located in Northwest Indiana and/or Northern Illinois. The sampling method that I used was purposive sampling. The participants were required to have at least 2 years of experience in supply chain with their employer. I gathered data and information from semistructured interviews with the participants and any available documents from their companies.

Nature of the Study

Researchers can use one of three methods: quantitative, qualitative, or mixed methods (Yin, 2018). Researchers use the quantitative method to test hypotheses, ask closed-ended questions, and conduct numerical analysis (Yin, 2018). A quantitative approach was not an appropriate choice for this study because neither closed-ended questions nor a numerical analysis were a suitable approach to addressing the research question. Rutberg and Bouikidis (2018) suggested using a qualitative approach to ask open-ended questions to explore complex problems to allow participants to openly share their perspectives. Based on Ruthberg and Bouikidis, I selected a qualitative research method for this study to ask open-ended questions to participants relating to retail store supply chain disruptions. A mixed-methods approach includes both qualitative and quantitative methods (Rutberg & Bouikidis, 2018). I did not use the quantitative method. Researchers use the quantitative method to evaluate numerical or statistical relationships; therefore, the mixed method was not suitable for my study.

I considered the following research designs: (a) ethnography, (b) phenomenology, and (c) case study. Researchers use the ethnographic design to collect observational and interview data from a cultural group over a prolonged period (Yin, 2018). I did not use an ethnographic design because I did not need to collect and analyze data relating to cultural phenomena. Researchers use the phenomenological design to collect data from a small group about the essence of their human experiences with a phenomenon over an extensive period (Yin, 2018). I did not use a phenomenological design because I did not focus my study on subjective human experience related to a phenomenon over an extensive period. A multiple case study allows researchers to compare and contrast similarities and differences across multiple cases (Yin, 2018). I selected a multiple case design to explore and understand the similarities and differences between the strategies leaders use to mitigate supply chain disruptions across multiple cases.

Research Question

What strategies do leaders use to successfully mitigate supply chain disruptions in the retail industry?

Interview Questions

1. What strategies are you using to mitigate supply chain disruptions?
2. What challenges did you have implementing these strategies?
3. How do you measure the effectiveness of the strategies?
4. As a leader, when implementing strategies, what payout did you observe?
5. As a leader, when implementing strategies, what happened to inventory equilibrium?

6. What information about supply chin disruptions did you gain from implementation of these strategies?
7. What additional information would you like to share about your organization's strategies for mitigating supply chain disruptions?

Conceptual Framework

Von Neumann and Morgenstern developed game theory in the early 1940s. Von Neumann and Morgenstern (1944) used game theory to study how decisions made by multiple participants affect each participant's behavior. Von Neumann and Morgenstern identified the following key constructs underlying game theory: (a) information sets, (b) payoffs, and (c) equilibrium. Information sets are data that are available to the player at the time when a player makes a choice or decision. Payoffs are the expected outcome that each player would receive from each combination of the strategic choices made by each player. Equilibrium is a point in the game at which players make decisions and each player's decisions create the best outcome for everyone (Roth & Wilson, 2019). Von Neumann and Morgenstern posited that the key to game theory is that one player's payoff is affected by the strategy implemented by the other player or players (Bhuiyan, 2018). Leaders can utilize the strategic decisions made by participants in game theory, resulting in positive payoffs to develop strategies to mitigate the effect of supply chain disruptions. Using game theory as a conceptual framework for this study provided a view into the successful strategic decisions that lead to the optimum payoff. Game theory is a lens I used to evaluate strategic decisions made by participants that lead to successful strategies

to mitigate supply chain disruptions, to gain a better understanding of these decisions as a researcher.

Operational Definitions

Business ecosystem: Business ecosystems are used by organizations to transcend the boundaries of the organization to include additional partners to provide increased value to customers. Organizations use ecosystems to connect with multiple partners to meet customer needs that one organization is not able to meet by itself (Denning, 2021).

Global supply chain: A global supply chain is a vertical and horizontal network of connected firms engaged in coordination of production and distribution activities (Soundararajan et al., 2019).

Nash equilibrium: Nash equilibrium is the point at which the behavior of the agents creates an outcome that, when achieved, creates the circumstance that no player can increase their payoff by making a different decision (Einy et al., 2022; Fisher, 1989).

On-time-in-full delivery: On-time-in-full delivery is when all supplier deliveries are expected to arrive at the facility on time and the deliveries must be for the full amount ordered (Lukinskiy et al., 2023).

Safety stock: Safety stock is an additional quantity of a product that is stored to prevent an out-of-stock situation and is insurance against demand fluctuations (Oliver et al., 2022).

Supply chain disruption: An unexpected event that affects the performance of a firm in the longer and shorter term (Baghersad & Zobel, 2021).

Supply chain management (SCM): SCM is managing the risks associated with disruptions caused by natural disasters, human-made disasters, uncertain supply, or uncertain demand (Sodhi & Tang, 2020).

Supply chain strategy: Supply chain strategy is the organization's supply chain team strategic alignment with the business strategies that are cross functional, continuous, and able to adapt to varying circumstances (Chandak et al., 2019).

Assumptions, Limitations, and Delimitations

Assumptions

Assumptions are subjective and uncertain but assumed to be true without proof (Yang et al., 2018). The first assumption for my study was that leaders from retail discount department stores would provide accurate and honest information when interviewed. Another assumption for this study was that the findings could help in identifying mitigation strategies to reduce supply chain disruptions for retail discount department stores.

Limitations

Limitations in a research design represent weaknesses within the study that may influence conclusions and outcomes of the research (Ross & Zaidi, 2019). The main limitation of this study was that leaders from the retail discount department stores would be from Northern Illinois and Northwest Indiana and not from the entire United States. The second limitation was that the sample size included a small number of leaders from retail discount department stores. One limitation may have been that for proprietary reasons, one or more subjects may have been reticent to explicate the information they

revealed, for proprietary reasons. Even so, as long as study subjects answered the standardized interview questions, the data they reveal should be contributory to study outcomes.

Delimitations

Delimitations are the boundaries and limits that have been set by the author to limit the scope of the research (Theofanidis & Fountouki, 2019). A delimitation for this study was that leaders from the retail discount department store were located in Northern Illinois and Northwest Indiana. Leaders from retail discount department stores outside of Northern Illinois and Northwest Indiana were not chosen to participate in this study. Another delimitation of this study was including only those leaders from retail discount department stores who had experience with strategies to mitigate supply chain disruptions.

Significance of the Study

This study might be of value to the practice of business leaders to gain insight into mitigating supply chain disruptions. Leaders in the retail industry can use this study to develop strategies and procedures to reduce the impact of supply chain disruptions. Retail leaders can review information in this study and identify and develop steps to work more effectively and create steps to mitigate supply chain disruptions.

Contribution to Business Practice

Retail leaders can use knowledge gained in this study to adjust their supply chain processes. They could also use knowledge gained in this study to improve profitability. In addition, retail leaders can use the information in this study on equilibrium, the point at

which all players are satisfied with their decisions, to make strategic choices that benefit the company.

Implications for Social Change

By using effective supply chain strategies, retail leaders can improve job stability for employees. Job stability could support economic growth in local communities. Economic growth could lead to a higher quality of life for residents, thereby contributing to positive social change.

A Review of the Professional and Academic Literature

The purpose of this qualitative multiple case study was to explore what strategies retail discount department store industry managers implement to mitigate supply chain disruptions. The research question was the following: What strategies do leaders use to successfully mitigate supply chain disruptions in the retail industry? The purpose of the literature review was to gather information and knowledge about the overall research topic and create a logical foundation for the study. Literature analysis leads to the development of framework around a subject (Bressanelli et al., 2019).

My literature review strategy included a focused but broad search of various sources across multiple disciplines: books, articles, scholarly journal articles, and electronic media. Key sources from the search engines on the Walden University library research databases included A/B INFORM Complete, Business Source Complete, Sage Premier, ProQuest, and Emerald Management Journals. The literature review involved reviewing 173 relevant sources. The study had 135 of the 173 relevant sources published between 2019 and 2023. The percentage of published articles dated within 5 years of my

anticipated graduation date was 78% of the total. The total number of references in this study that were peer reviewed is 153, which is 88% of the relevant sources. The key words used in the search of the literature included *supply chain disruptions, supply chain risk management, supply chain collaboration*, and *business ecosystems.*

The effects of COVID-19 have caused organizations to review their supply chain practices and procedures. The practices and procedures for supply chains in organizations have shifted in focus due to the effects of COVID-19 in the world (Sharma et al., 2022). COVID-19 has caused a substantial shortage of supplies from food to automotive chips that has caused disruptions in supply chains. Organizational leaders adjust their approaches to business relationships and processes because of disruptions (Micheli et al., 2021). Prior to COVID-19, retail leaders were only able to view a supply network at a Tier 1 level, which is the first level of partnership when conducting business. According to Solaimani and van der Veen (2022), retail leaders have limited knowledge of the supply partners in their network outside of the first level. This poses a problem because the organization leaders fail to understand and have visibility into what other businesses their first-level partner is depending on to produce the product.

Organizational leaders realized that they needed more visibility into the entire supply chain network that was responsible for the delivery of products. The COVID-19 pandemic resulted in supply shortages across the world. Understanding the entire network would assist retail leaders in avoiding the supply chain disruptions. Retail leaders need to adjust their processes in relation to suppliers and demand planning (Micheli et al., 2021). Therefore, organizational leaders should adjust inventory purchases to meet demand

forecasts and, if financially feasible, include ample safety stock for unplanned events resulting from pandemics such as COVID-19.

Organizational leaders' ability to adjust their strategic plans is important in order to be able to meet demand forecasts. Prior to COVID-19, retail leaders were content with receiving product from all over the world and just in time (Zhu et al., 2020). During COVID-19, retail leaders adjusted their strategies to manage customer demand and combat supply chain disruptions. With their new strategies, retail leaders sourced more goods locally, diversified their suppliers, and carried excess inventory (van Hoek & Dobrzykowski, 2021). Because of the disruptions, retail leaders learned to operate in business ecosystems. Business ecosystems are the platforms that allow leaders to work together in partnerships and collaborate to achieve the best possible outcome by ensuring that each partner is fully aware of the other partner's issues and schedules (Awano & Masaharu, 2021; Denning, 2021). Ecosystems were organized for organizations to intentionally generate, facilitate, and benefit from interactions (Denning, 2021). When using ecosystems, leaders create an advantage for the organizations that are in partnership through the sharing of information. When the demand in the market changes from one product to another, that information can be communicated to all of the partners. By sharing comprehensive information quickly with their network partners, leaders can make prompt production decisions to efficiently meet customer demand. As demand increases, leaders can take the necessary steps to ensure additional production, and as demand decreases, leaders can take the necessary steps to reduce production. Partners can use

ecosystems to enhance communication, improve supply chain efficiency, and avoid stockouts.

Supply chains are a critical component of retail discount department store operations and efficiency. Retail leaders can use the supply chain concept to manage inventories more efficiently together than if the supply chain functions were performed separately (Munson et al., 1999). Relationships among ecosystem members, partners, and stakeholders are critical for supply chains to be effective because of the interdependency of partners and collaborators. Supply chain management is managing the risks associated with disruptions caused by natural disasters, human-made disasters, uncertain supply, or uncertain demand (Sodhi & Tang, 2020). Leaders in retail discount department stores should develop their supply chain teams to maximize product availability according to customer demand.

Retail leaders should take proactive steps to ensure product availability. These steps can include setting up an appropriately staffed supply chain team, implementing effective technology, maintaining strategic supplier relationships, optimizing inventory, and collaborating on strategic sourcing (Modgil et al., 2021). The focus of leaders in retail discount department stores changed because of COVID-19. In a research study conducted by Forehand et al. (2021), some leaders adjusted their focus on items such as contingency planning, resilience, adaptability, flexibility, and production recovery planning to improve inventory management and maximize company sales; these actions may have been consistent with game theory.

Game Theory

Von Neumann and Morgenstern's (1944) game theory served as the conceptual framework for this study. Game theory ideas can be traced to the 18th century; in the 1920s, major development of the theory began with the work of mathematician Emile Borel and polymath John von Neumann (Osborne, 2017). I used game theory as the lens for this study because managers in an organization, especially in the retail industry, need to understand how their partner's decisions affect their ability to manage supply chain disruptions strategically.

Von Neumann and Morgenstern established the foundations for game theory. In 1944, the publication of the book *Theory of Games and Economic Behavior* by von Neumann and Morgenstern was a significant breakthrough for game theory (Binmore, 2021). The foundations for game theory included a mathematical theory of economic and social organization based on game theory. Game theory has a range of applications from war and evolutionary biology to economics and business (Zhang, 2022). Game theory provides an avenue for leaders and organizations to anticipate or estimate decisions that need to be made that have economic impact. Using game theory as my lens facilitated comprehension and evaluation of performance outcomes based on payouts and quantifiable consequences from decisions made by partners.

In the early 1950s, Nash expanded game theory and developed a key concept called the Nash equilibrium. The Nash equilibrium is the point at which the behavior of the agents creates an outcome that, when achieved, creates the circumstance that no player can increase their payoff (Einy et al., 2022; Fisher, 1989). The Nash equilibrium is

built on two principles. The first principle is that each player chooses their action according to the model of rational choice. Second, every player's belief concerning other players' choices is correct (Sucha et al., 2021). The Nash equilibrium was pertinent to this study because each leader in the retail discount department supply chain must make decisions based on their partner organizations' decisions.

Game theory has several key components: information sets, payoffs, and equilibrium. Game theory operates with the assumption that those who participate in the game will operate in a rational fashion when making their decisions (Osborne, 2017). The strategy in game theory is to get to a point where all players have maximized their payoff with the decisions that they choose (Sucha et al., 2021). Game theory involves interactive decision making in which players consider the thinking of the other players before deciding upon an action or reaction. This rational decision making is key to the payoffs and ability of players to come to a point of equilibrium in the game.

Game theory is a theoretical framework for social situations amongst competing players. Game theory produces optimal decision-making of independent and competing players in a strategic setting. Equilibrium is the point in a game at which players have made their decisions and an outcome is reached. Leaders use game theory for real-world scenarios and situations such as pricing competition and product releases to predict their outcomes. Each decision by the supply chain partners affects the other partner. Any deviation from a rational decision, positive or negative, from any of the partners has an upstream or downstream effect. I used the Nash equilibrium in my analysis of the primary data, as part of the game theory conceptual framework. The Nash equilibrium is

the point where the decisions maximize the benefit for all partners; therefore, partners have no incentive to deviate from a rational response. The retail discount industry has many supply chain partners; therefore, it is important that all partners have the proper incentives not to deviate from their commitments. I used game theory to analyze the point of Nash equilibrium for retail discount store leaders. Although I selected game theory, there are other theories that I could have chosen.

Contrasting Theories

I explored contrasting theories to provide a context for using game theory as the conceptual framework for this study of mitigating supply chain disruptions in retail discount department stores. The contrasting theories I explored were the resource dependence theory (RDT), normal accident theory (NAT), and contingency theory of fit (CTF).

Resource Dependence Theory. Pfeffer and Salancik (1978) formalized RDT with the publication of *The External Control of Organizations: A Resource Dependence Perspective*. The foundation of RDT is that organizations depend on resources and that resources are generated from the organization's environment. The organization's environment includes not only the organization, but also supply chain partners that should collaborate with each other.

Collaboration between managers in organizations and their supply partners is an important part of RDT. This collaboration has a focal point of interchanging resources between partners to manage the uncertainty in the supply chain (Zhou et al., 2018). Managers depend on their partners to supply external resources. Minimizing

organizations' dependence on partners is a focal point of RDT (Craighead et al., 2020). RDT differs from ecosystems in this respect.

Managers who use the ecosystem concept emphasize the importance of partnerships and seek to strengthen the communication between partners to gain the best outcome for all. Relationships between organizations are necessary to access capital and resources that are not available within the organization. The relationships between organizations help to minimize disruptions. Retail leaders should obtain resources from external sources to operate the business, which leads to resource dependence (Craighead et al., 2020).

RDT is focused on the dependency organizations have on one another for resources and not on how one business leader's strategic move affects the opportunities available to another. I did not use RDT as the conceptual framework for this study, because the focus of RDT is on the resources and relationships between partners rather than helping to identify and understand the factors that cause disruptions to the supply chain process. I also evaluated the normal accident theory.

Normal Accident Theory. In *Normal Accidents: Living With High-Risk Technologies*, Perrow (1984) outlined three conditions that will cause a system to be susceptible to a normal accident. These three conditions are the system being complex, the system being tightly coupled, and the system having catastrophic potential. Normal accidents or system accidents are inevitable in complex systems (Perrow, 1999).

NAT supply chains consist of three significant members: the manufacturer, the supplier, and the customer. Researchers use NAT to focus on understanding the

disruptions that occur in supply chains (Scheibe & Blackhurst, 2018). Perrow (1984) believed that decreasing the level of interactive complexity could minimize disruption in the supply chain. The less complex the operational levels, the better the visibility into the supply chain, which results in less disruption to the supply chain (Scheibe & Blackhurst, 2018). Retail discount department stores are large organizations that are often in interactive, tightly coupled, complex supply chains. These supply chains have numerous employees communicating and managing information for and with departments, suppliers, and customers. It is critical to identify areas of potential vulnerability for the departments, suppliers, and customers (Ali & Gölgeci, 2019). The focus of NAT is on the occurrence of the accident/disruption and not how to avoid the accident/disruption. I did not use NAT as the conceptual framework for this study because the focus of NAT is on accidents in the supply chain process versus decisions to avoid accidents, disruptions to the supply chain. I also evaluated the contingency theory of fit.

Contingency Theory of Fit. In 1985, Drazin and Van de Ven introduced the CTF. CTF is an approach that researchers can use to study organizational behavior to discover explanations as to how contingent factors such as technology, culture, and the external environment affect and influence the functioning of the organization (Islam & Hu, 2012). The contextual factors that affect the way a business is organized is part of CTF. Leaders in organizations use CTF to organize their business so that it will generate performance results, dealing with certain contextual factors, which produce what is classified as a good fit (Romero-Silva et al., 2018). Researchers determined that an underlying premise for a company to perform well is that context and structure must

somehow fit together (Drazin & Van de Ven, 1985). There are certain organizational structures, organizational practices, business processes, and business policies that are more suited to organizational environments according to CTF (Romero-Silva et al., 2018). The contingency theory is a conditional association that has two or more independent variables with a dependent outcome. The performance of a business unit can have various outcomes based on a series of fits relative to different contextual factors (Romero-Silva et al., 2018). One principle of CTF is that organizations should adapt their structure, processes, and coordination strategies to fit the degree of uncertainty in their environment. When uncertainty is high, organizations need more coordination strategies and processes to choose appropriate courses of action.

Drazin and Van de Ven (1985) indicated that at least three different conceptual approaches to fit emerged in their research: selection, interaction, and system. The environment for an organization is considered fit when there is congruence between context and structure in the selection approach. The environment of an organization is also considered fit as pairs of organizational contextual–structural factors that affect performance in connection with the interaction process. Fit for the environment of an organization is also defined as multiple contextual factors matched up with multiple structural factors in conjunction with the systems approach (Drazin & Van de Ven, 1985).

I did not use CTF as the conceptual framework for this study because I was using the qualitative multiple case approach. CTF would be better suited as a theoretical framework for a quantitative study because various outcomes or a series of outcomes

need to be evaluated. In my study, an important part of evaluating the organization's environment was understanding how leaders on the supply chain team strategize to maximize the organization's profits.

Retail Industry Strategies

Leaders in the retail industry conduct business through strategies that produce maximum profits for the organization. There are several strategies that are employed to maximize the organization's profit. One strategy is the use of quantity discounts. Quantity discounts are used as incentives to cause the buyer to purchase more product (Jadidi et al., 2021). Leaders in the retail industry work with their supply chain partners to create quantity discount incentives that are optimal for the manufacturer and the retailer.

The quantity discounts that leaders of the supply chains work together to create have a financial gain for all parties involved (Das et al., 2021; Heydari & Momeni, 2021). Researchers determined that the coordination strategy between supply chain partners is a valuable tool for effective supply chain management (Liu et al., 2021). This is a different strategy from the traditional strategy where each member of the supply chain makes decisions that only create an advantage for their own organization.

Leaders also collaborate with their partners to determine what is the optimal price and optimal supply that will maximize profit. This strategy is used by leaders in the retail industry to sell more product by having the best prices. Leaders in the retail industry coordinate with their supply chain partners to improve overall supply chain costs (Shah et al., 2021). The reduction of supply chain cost allows for a reduction in the price to the

consumer. The right combination of price and supply maximizes the organization's profit.

Retail industry leaders maximize profits through multiple strategies. In addition to collaborating with partners, cost reductions, optimal price, and optimal supply, some retail leaders have implemented a multichannel strategy. Organizational leaders recognized that the traditional brick and mortar stores were not enough to maximize organizational profits (Davis-Sramek et al., 2020). Therefore, leaders added online stores to enhance the customers' shopping experience.

Enhancement of the customer's shopping experience was a key aspect for retail leaders but leaders still experienced challenges. Some retail leaders using the multichannel strategy recognized that this strategy increased costs and caused some customer dissatisfaction (Grewal et al., 2021). Researchers determined that the omnichannel strategy is necessary for the retail industry, but leaders needed to remove the silos within the channels and work within the channels together (Eriksson et al., 2022; Gerea et al., 2021). Customer dissatisfaction was a result of the customer's inability to buy, return, or pickup from either channel despite the way the purchase was made. Some retail industry leaders adopted the omnichannel strategy, which is a multichannel sales approach to facilitate a seamless customer shopping experience.

The omnichannel approach would allow flexibility between channels that was needed to provide a better customer experience. Leaders in the retail industry incorporate the omnichannel strategy to enable integration between channels to meet customer expectations for speed, availability, and consistency (Lim & Winkenbach, 2019).

Researchers determined that a successful omnichannel allows customers to move freely between the available multichannel of an organization (Davis-Sramek et al., 2020; Shen et al., 2018). Leaders use this strategy to combine their multichannel offering to customers into a singular approach that delivers a better value to the customer than what each channel can offer individually. Retail industry leaders can adjust a fragmented service process between separate channels into a consistent and coordinated cross channel structure. Leaders in the retail industry are decision makers.

Supply Chain Managers' Decision Making

Organizations depend on their supply chain managers' decision-making skills. The best defense for retail industry organizations against the changing market dynamics is having supply chain managers with an effective decision-making process (Khan et al., 2021). In the retail industry, the supply chain manager's task is to optimize supply activities, reduce costs, deliver product expeditiously, and gain a competitive advantage in the market. Retail industry leaders make many decisions,

Retail industry supply chain managers make decisions quickly and with real-time data. The decisions that are made affect downstream and upstream processes within the supply chain. Each decision leaders make helps the organization reduce an issue or can make the issue worse (Rousseau, 2018). The upstream consequences are unsatisfied customers whereas the downstream consequences are being out of synchronicity with supply partners (Min, 2015). Retail industry supply chain managers make decisions on challenges in manufacturing and logistics as well as changes in consumer demand.

Decision making within the supply chain is a critical component of the supply chain manager's job responsibility. Supply chain managers must be able to identify problems before they arise and act before the problem causes a disruption to the supply chain. Retail industry supply chain managers use data and operational teams to develop solutions to issues (Kazancoglu et al., 2021). The supply chain manger has the responsibility to communicate and educate all team members and outside partners to the solutions that have been developed.

Supply chain managers in the retail industry use data to make decisions. Data are important to understand market trends in relation to consumer behavior. Data collection is a key asset and tool to assist supply chain managers in effective decision making. Retail industry supply chain managers set-up systems that consistently collect and analyze data on a daily basis. Some of the processes that supply chain managers use to collect data, support their ability to make decisions with accurate and up-to-date information (Kazancoglu et al., 202; Lai et al., 2018). Processing data with up-to-date information helps to ensure supply chain managers are allocating resources, both internal and external, to the right products and stores, and helps avoid disruptions to consumer demand and over allocation from reduction in consumer demand.

The decision-making process for supply chain managers in the retail industry involves both an internal and external component. The external component is important as well as the internal component. Supply chain managers collaborate with their external partners and share data to optimize the supply chain network (Bechtsis et al., 2022). The sharing of information and collaboration among the parties assists all parties because of

improved demand forecasting, having the right balance among purchasing, ordering, and storage, and avoiding stockouts (Beheshti et al., 2020). When all parties within the supply network have the same information and are operating under the same knowledge, a buffer is created against the volatility of the market.

The decision-making process in the retail industry is complex for supply chain managers. Not only do the supply chain managers have to account for both internal and external parties, but also, they should be aware of competing priorities for all parties involved. Supply chain managers should weigh the pros and the cons of the problems and solutions and prioritize them (Pereira et al., 2021). This prioritization agreed upon by internal and external parties allows the supply network to operate efficiently.

Supply chain managers in the retail industry make decisions based on a dynamic market that changes based on unforeseen factors. In the retail industry, supply chain managers make decisions and have backup plans to insulate the organization against the unpredictable (Kumar & Venkatesan, 2021). Supply chain managers in the retail industry stand by their decisions but adjust, when necessary, to maintain a smoothly running supply chain. Supply chain managers in the retail industry have many tools at their disposal for decision making.

The rational decision-making model is a simple tool that is commonly used by supply chain managers to make decisions (Wemnér & Anderson, 2008). When supply chain managers use the rational decision-making model in supply chain management, they follow these steps:

1. Leaders should identify the problem or opportunity.

2. Leaders should identify potential solutions.
3. Leaders should create a gap analysis to explore the work needed to bridge the gap.
4. Leaders should gather the data and explore alternative solutions.
5. Leaders should analyze what the possible outcomes may be.
6. Leaders should choose the best solution for their individual situation.
7. Leaders should put their decision into action.

Supply chain managers implement rational decision making, which is a more advanced type of decision-making model that includes emphasis on research and logical evaluation selecting among choices based on facts and reasoning (Belhadi et al., 2022). Supply chain mangers are able to make rational, better decisions when using the rational decision-making process, because it considers many factors and follows a logical sequence.

Supply chain managers in the retail industry select from the possible choices learned from rational decision making and begin implementation of the decision. Supply chain managers account for the complexity of the supply chain network when they move into the implementation phase (Wieland, 2021). Coordination with internal and external partners is an important part of the implementation success. Leaders in the retail industry understand the complexity of implementation and most retailers have attempted to remove the barriers to implementation through visible participation by senior management or assigning a vice president of supply chain (Sharma et al., 2022). Retail

industry supply chain managers make decisions to reduce costs, create price advantages, attract, and retain customers while enhancing the revenue of the organization.

Supply Chain Collaboration and Business Ecosystems

A supply chain is defined as a network of individuals and companies that engage in creating or delivering a product to the consumer. A supply chain includes the components of producers, warehouses, vendors, transportation companies, retailers, and distributors (Shcherbakov & Silkina, 2021). The supply chain functions include product development, operations, marketing, distribution, and customer service (Geissdoerfer et al., 2018). In the 2020s, many supply chains are global.

Supply chains can operate on different models according to the structure of the company. There are several models that organizations can use to be in conjunction with their structure. One model is the continuous flow model. Another model is the fast chain model.

The continuous flow model is the traditional model that is used by organizations. When leaders in organizations are creating the same product with little to no variation the continuous flow model is a viable choice. This model is normally used for products that are in high demand and products that do not require redesign (Dolgui et al., 2020). The fast chain model is a model that works well for organizations that sell products in response to the latest trends. This model is used by organizations so the organization can be agile and have the ability to move an idea to a prototype, a prototype to production, and production to the consumer very quickly. This agility allows manufacturers to ramp up quickly when demand is strong and ramp down quickly when demand shrinks (Sawik,

2019). Retail leaders should determine which model is best for their organization while also observing supply chain management best practices.

Supply chain management has best practices. The best practices that have been identified by researchers are supporting continuous improvement, seeking innovative technology, and encouraging collaboration among the individual businesses and the supply chain (Blanchard, 2021). Supply chain collaboration is defined as two or more autonomous firms working together to plan and execute supply chain operations (Baah et al., 2021). This two-way, multilevel collaboration is anchored in the sharing of information on demand, product, market, and trends among partners (Raweewan & Ferrell, 2018). Supply chain collaboration provides benefits to all the partners. A cooperative strategy is when one or more organizations or business units work together to create mutual benefits. Collaborative communication is the message sharing process among supply chain partners in terms of direction, mode, frequency, and strategy. Supply chain collaboration is an important part of having a successful supply chain for large organizations such as retail discount department stores.

Supply chains are an important part of business operations. The supply chain is the network through which material and information flows. The entities that are part of a supply chain—suppliers, retailers, carriers, manufacturers, distributors, and customers—depend on this flow of information (Wu & Zhang, 2022). Leaders use the information to make decisions and integrate the supply chain effectively so that the right distribution of the product or service occurs in the right quantities to the right locations at the right time

(Min et al., 2019). Leaders place emphasis on supply chain management due to increased national and international competition.

Increasing or unmet customer demand has a direct effect on the national and international competition that leaders of organizations are facing. Customers are able to choose the organization or source from which they wish to satisfy their need. Leaders are tasked with maximizing sales by having product in the right place at the right time throughout the supply chain distribution channels to maximize profits (Davis-Sramek et al., 2020). Researchers have determined that the previous model of holding additional inventory ties up funds, space, and inventory; therefore, organizations have moved to just-in-time inventory models.

The just-in-time inventory model is valuable because of the dynamic nature of the marketplace. Leaders are aware that the buying habits of customers are constantly changing; therefore, leaders are no longer holding additional inventory greater than calculated customer demand. Leaders seek cost improvement when using the just-in-time model through reduction of warehousing cost, and efficiency improvement (Lyu et al., 2020). Some retail leaders use the just-in-time inventory model to manage customer buying habits along with continuously improving processes and technology.

Continuous improvement and technology are considered together with regards to supply chain management. Manufacturers in the United States are dependent on the benefits realized through technology to improve supply chain agility, reduce cycle time, achieve higher efficiency, and deliver products to customers in a timely manner and can use business ecosystems to facilitate supply chain agility (Fasanghari, 2008). When

leaders in organizations implement technology into their supply chain that leads to improving the supply chain. Leaders' use of technology allows organizations to move information from organization to partners in a more efficient manner. In addition, leaders also are able to create more accurate demand forecasting, as information on products sold and inventory levels are managed through technology.

Business Ecosystems

The rise of business ecosystems is impacting all major industries from the media industry to the mining industry. Business ecosystems have two options, transaction ecosystems or solution ecosystems. Transaction ecosystems exist when a central platform links two sides of a market such as buyers and sellers in a digital marketplace. Solution ecosystems exist when a core firm orchestrates the offerings of multiple complementors such as product manufacturers in a smart-home ecosystem (Markova, V. & Kuznetsova, S., 2021). Many organizations listed on the S&P Global 100 companies participate in one or more ecosystems (Chung et al., 2020). Ecosystems are a priority on the strategic agenda for many organizations.

Leaders use business ecosystems to help with achieving organizational goals. Organizational goals that are hard to achieve with one organization are achievable through ecosystems that engage more than one organization. Value is gained from business ecosystems because leaders use business ecosystems to open new sales channels for existing products or services and expand market access into adjacent markets for existing offerings through the ecosystem partnerships (Basole & Karla, 2012). Leaders

can also use ecosystem partnerships to strengthen the core business through complements that partners can provide that add value to the organization's offerings.

Leaders identify the viability of business ecosystems by examining the customer journey in their industry and defining the points of customer frustration, unmet needs, and unfulfilled desires that are too much for one organization to solve (Ozel & Hacioglu, 2021). Business ecosystems are effective in markets where there is fragmented demand or fragmented supply. Ecosystem partners can work together to coordinate profitable solutions to fulfill the fragmented demand and supply to customers.

Leaders in organizations that participate in business ecosystems must decide what role they will take responsibility for in the ecosystem, Organizations that use business ecosystems have several roles that need to be fulfilled. Leaders in organizations have to choose what role the organization will perform in the business ecosystem, the role of orchestrator, complementor, or supplier (Dedehayir et al., 2018). Orchestrators have the position of power and governance within the business ecosystem.

The leader of the organization that takes on the role as orchestrator has the responsibility to build the ecosystem. The leader will encourage essential partners to join the ecosystem. The partners will join if they can perceive the benefits or incentives from the ecosystem (Gueler, & Schneider, 2021). The leader will also have to establish the right governance for the ecosystem.

The flywheel effect is the concept that a firm always has a mix of variables, that when properly aligned, they are able to develop momentum, and as a result of the momentum the variables produce a self-reinforcing virtuous cycle for the organization

(Ganguly, 2020). There are three potential flywheels when using ecosystems, the data flywheel, growth flywheel, and cost flywheel. The data flywheel provides more and richer data from the ecosystem, which gives deeper and better insights into the industry. The growth flywheel uses more users and more partners within the ecosystem thereby improving the overall value proposition. The cost flywheel spreads the fixed costing within the ecosystem, which lowers the unit cost pricing.

Researchers determined that leaders of organizations which use business ecosystems will at some point need to also incorporate digital business ecosystems. A digital business ecosystem is a technological infrastructure that allows leaders in organizations to develop, configure, and deliver advanced services efficiently on an unprecedented scale (Ishfaq et al., 2022; Suuronen et al., 2022). Leaders use digital business ecosystem platforms to solve technical problems and to provide insight into manufacturing and production networks within the ecosystem.

Partners can have visibility into the digital business ecosystem platform; therefore, leaders no longer work in silos. Engaged platform leaders can cultivate mutual trust among ecosystem members. Digital business ecosystems are only successful if the members of the ecosystem are engaged in using the platform.

There are three main characteristics—symbiosis, coevolution, and self-organization—that are born along with the implementation of a digital business ecosystem platform. Symbiosis influences interdependencies in the digital business ecosystem such as technologies, processes, and partners. Synergy and cocreated value are created between partners through symbiosis. Coevolution occurs when leaders of the

digital business ecosystem platform transform the platform form one stage to another. Self-organization is in reference to the leaders of the digital business ecosystem platform using the platform to learn and respond to changes in environment events, requirements, opportunities, or threats (Suuronen et al., 2022). The three main characteristics that are born along with implementation of a digital business ecosystem will evolve as leaders make strategic choices concerning the platform.

Leaders make strategic choices when determining how and when to incorporate digital business ecosystems. The strategic options leaders of organizations have fall into four categories, digital foundations, production ecosystems, consumption ecosystems, and digital monopolies (Subramaniam et al., 2019). Leaders use digital foundation ecosystems to embrace new digital technologies to make changes from traditional business procedures. Production ecosystems are incorporated to channel product-in-use information from a digital envelope onto a production ecosystem. Consumption ecosystems are used by leaders to channel product-in-use information from the digital envelope onto a consumption ecosystem. Leaders use digital monopolies to aggregate multiple sources of product-in-use information. Leaders use one of the strategic choices for a digital business ecosystem to transform the way the organization conducts business.

Leaders in organizations have opportunities to grow their existing ecosystems. Growth of an ecosystem can occur through geographic expansion, market consolidation, or scope expansion (Coe & Yang, 2022). Leaders can expand business ecosystems geographically by increasing global coverage of models and or transferring local models to additional locations. Leaders achieve market consolidation by gaining share through

acquisitions and extension of offerings through acquisitions. Leaders can also grow existing ecosystems through scope expansion, staggering expansion into new products and services.

Supply chain collaboration can be accomplished through business ecosystems. A successful ecosystem is one in which all partners are satisfied with the outcome and this alignment between partners represents the point of equilibrium (Adner, 2016). Leaders in organizations must work to ensure they understand their business ecosystems, and all the organizations involved must remain active and take leadership roles to ensure collaboration on the rules of engagement for the ecosystems (Zhang, 2022). The collaboration includes proactively reaching out to business counterparts on integrating ecosystems, supporting infrastructure to enable change, and improving strategies. (Raweewan & Ferrell, 2018). For ecosystems to be effective all the partners involved must agree to the process. There can be a productive ecosystem if there is agreement and communication is shared for strategic purposes between partners. Leadership from each organization has the responsibility of ensuring that their organization is participating in the ecosystem by the defined rules.

Retail discount department stores can benefit from ecosystems when proper strategies are implemented. According to Muctor and Micheli (2021), ecosystems provide benefits to leaders in organizations that take advantage of using them in their strategy. Leaders can use ecosystems to create expansion of existing offerings in the market. Ecosystems strengthen an organization's core business through complements and ecosystems allow organizations to launch new ventures separate from their core business

(Radziwon et al., 2021). Ecosystems also create relationships with suppliers that allow them to work together and adjust requests to move product into the appropriate area where the demand for the product is the highest to mitigate supply chain risks (Stone et al., 2020). All of these items are advantages of ecosystems realized through collaboration. Leaders in organizations use ecosystems to examine and identify critical information pertaining to customers such as unmet customer demand and unmet customer needs. Ecosystem platforms are suited to consolidate customer demand and increase necessary products to meet customer demand.

Supply Chain Risk Management

Risk management strategies are an important aspect of managing supply chain networks. Risk management is the implementation of strategy and plans to manage supply chain networks through constant risk assessment and reduction of vulnerabilities to ensure resilience in supply chain networks (Gurtu & Johnny, 2021). The more partners the more vulnerable the supply chain and the risk of failure of the supply chain is greater (Gurtu & Johnny, 2021). Supply chain risk management (SCRM) is a phased and systematic approach for recognizing, evaluating, ranking, mitigating, and monitoring disruptions in supply chains. SCRM needs to be tailored in conjunction with the characteristics and objectives of the supply chain (Gaudenzi & Qazi, 2021).

A supply chain is only as strong as the most vulnerable partner of the supply chain. Identifying risks within supply chains and how risks can affect performance becomes increasingly critical as supply chains have become complex and vulnerable.

All supply chains do not have the same risk, but they do have some risks in common. The risks that are associated with supply chain networks fall into four categories: economic, environmental, political, and ethical (LeBaron & Lister, 2021). The supply chain risks that cause disruptions to come from various and diverse situations such as physical damage at production facilities, natural disasters, strikes and labor disputes, capacity issues, delays, inventory stock problems and incorrect forecasts (Sakib et al., 2021). Leaders in organizations must manage their supply chain to resist these vulnerabilities.

Evaluating risk uncertainty is a crucial step for leaders to establish effective risk management practices for their organization. Researchers determined that best management practices for supply chain leaders are identifying internal and external environments, risk identification and assessment, risk treatment, and continual monitoring and review of risks and their treatment (Dellana et al., 2021; Srivastava & Rogers, 2022). SCRM and supply chain disruptions are affected by the external environment.

Supply chain managers work in unison with their partners when taking risks to find the point of equilibrium for all partners within the supply network. This task incorporates market data and market intelligence, as well as human factors, such as judgment, management style, and communication skills (Tseng et al., 2021). Retail industry supply chain manager's use intelligent risk, opportunities in which the potential gain outweighs the harm or loss to the organization, to collaborate with partners to reach a supply position that benefits all parties (Gurbuz et al., 2022). The leaders within the

entire supply chain network consider the following factors when deciding when and if to take an intelligent risk:

- Leaders make proactive decisions to avoid the unexpected before it happens.
- Leaders determine what is the appropriate amount of risk to take for their organization.
- Leaders work to ensure transparency and alignment with key stakeholders when taking risks.
- Leaders take risks to survive in the short term but have success in the long term.

Failure by supply chain partners to agree and take intelligent risks can negatively impact the organization and the markets the organization serves (Bacchetta et al., 2021). Retail industry supply chain managers and their partners can take intelligent risk to avoid disruptions in business continuity, product quality and compliance, and reduction of price competitiveness. Taking intelligent risk allows supply chain managers and their aligned partners to proactively mitigate risks and avoid cost overruns (O'Hearen, 2022). Supply chain managers can also take intelligent risk to identify problems before they occur to plan and implement risk handling activities as needed to mitigate adverse impacts to achieving organizational goals and objectives.

Supply Chain Disruptions

Disruptions in the supply chain are more likely because of complex coupled systems. Supply chain disruptions are events that are neither planned nor anticipated that disrupt the normal flow of goods within a supply chain. Supply chain disruptions can be

caused by catastrophic events or fluctuations that occur in the regular operations (Bier et al., 2020). Disruptions can occur from natural or fabricated causes. Natural disasters are disruptions such as earthquakes, floods, hurricanes, or pandemics. Fabricated disruptions can be linked to wars, terrorist and cyber-attacks, or mistakes that lead to operational issues (Iliopoulou et al., 2020; Sabbaghtorkan & Batta, 2020). Common causes of supply disruptions throughout history are the weather, financial crises, labor disputes, deregulation, and market expansion or market contraction.

Disruptions cause interventions to supply chains, and the implications from disruptions are seen on the supply and demand side for organizations. A supplier's ability to produce is impacted by the lack of raw materials, funds, labor, or inefficient production processes caused by natural or fabricated disasters (Gupta & Maranas, 2003). Organization leaders, from the demand side, face changing customer needs, which also leads to disruptions along the supply chain (Oke & Gopalakrishnan, 2009). Disruptions to the supply chain can occur for reasons from insufficient production to natural disasters. Disruptions can also occur because of customer behavior and changing customer needs. Leaders in organizations face these challenges and collaborate within the organization to respond to disruptions.

Collaboration is a strategic response to supply chain disruptions. Duong and Chong (2020) stated that the supply chain is an integration of businesses and organizations; therefore, to manage the impact of supply disruptions it is important to understand the integrations. Researchers concluded that leaders who use the humanitarian supply chain focus on reduction of lead times as loss of life may come into play, whereas

commercial supply chains focus on reduction of costs (Duong & Chong, 2020; McLachlin & Larson, 2011). According to Blackhurst et al., 2005, unexpected disruptions make it more difficult to execute effective supply chain management. These unexpected disruptions manifest in many forms such as transportation delays, port stoppages, accidents, part shortages, poor communication, operational issues, and even terrorism. Disruptions will have a negative effect on organizational performance (Katsaliaki et al., 2021). Researchers agree that the disruptions can be costly. Researchers determined that there are two important perspectives for supply chain collaboration when disruptions occur, demand prediction and consequences of disruptions. Supply chain disruptions have caused organizations to move toward global sourcing, toward higher agility, and maintaining lower inventories (McLachlin & Larson, 2011). Because of the effect that supply chain disruptions can have on organizations, supply chain managers and their organizations have also moved toward more networked highly dependent organizations.

As organizations move toward more networked highly dependent the leaders in the organization face risk. Oke and Gopalakrishnan (2009) determined that leaders of retail supply chains have specific risk when it comes to supply chain disruptions. These risks are climate, fabricated disasters, natural disasters, socioeconomic, and loss of key suppliers. Each of these situations, including events such as pandemics have a disruptive impact to the supply of goods and services offered by retail stores to their customers.

Supply Chain Strategies During COVID-19

Supply chain disruptions have occurred throughout history. Examples of events that have caused disruptions are the 9/11 terrorists' attack and the west coast port lockout in the USA in California. There was also the SARS outbreak in 2003 and the Union carbide gas leak disaster in Bhopal, India in 1984. COVID-19 has managed to create the perfect storm with varying levels of all forms of historical disruption rolled into one (Dulam et al., 2021). COVID-19 was worldwide and not specific to any geography. COVID-19 happened quickly, and the origin was not man made (DeLeo et al., 2021). COVID-19 is a pandemic that affected the entire world. The effects of COVID-19 were experienced in all areas of life. COVID-19 caused unanticipated disruptions to supply chains.

Researchers determined that the extraordinary COVID-19 outbreak caused organizations supply chains across the world to operate in crisis management. The negative effects of large outbreaks such as COVID-19 are serious because of unique characteristics, which include long-term damage and downstream impacts on supply chain networks that affect demand and product availability (Ivanov, 2020). The slowdown or halt of the transferring of raw materials between businesses posed significant problems for suppliers and organizations (Correia et al., 2020; Govindan et al., 2020). COVID-19 had a distinct effect on supply chains and the effect was not like any that leaders in organizations had previously encountered. Some retail leaders experienced an interruption to the free flow of products from country to country when some

governments throughout the world implemented lockdown measures because of COVID-19.

COVID-19 became a catalyst for leaders in organizations to evaluate their supply chain strategies to determine how to minimize the effect of disruptions like COVID-19. Studies on COVID-19 show that COVID-19 served as the mechanism for organization leaders to reconsider their current supply chain plans in an effort to reduce supply chain disruptions (Butt, 2021; Mollenkopf et al., 2020). Organizational leaders can review their production plans to enhance production on products that are in highest demand. Organization leaders can partner with secondary suppliers to hedge against shortages realized from having only one supplier that may be experiencing trouble. Organization leaders should forecast sales for unusual situations and determine how to maximize product during these events. Organization leaders should become more agile to minimize shortages caused by supply chain disruptions (Butt, 2021; McKibbin & Fernando, (2020). Organizational leaders adjust their processes and become more agile in efforts to manage the bullwhip effect.

The bullwhip effect has caused some leaders to experience issues within their supply chain. Global supply chains leaders sometimes fail to manage the bullwhip effect caused by the lack of transparency within the supply chain network (Sajjad, 2021). The bullwhip effect occurs when slight changes in customer demand cause large swings to supplier's demand (Hu et al., 2022). When buyer behavior for a product increases or decreases slightly this could be problematic for supply chain networks that are intertwined since the move toward globalization. Supply chain network partners need to

share critical information with all of the partners to meet customer demands in an efficient and effective manner. If the shift in customer behavior is visible to one partner but not all partners, then customer demand results in excess products or not enough products in the necessary markets. Supply chain partners while experiencing COVID 19 became aware of the issues around the need for transparency amongst all supply chain partners. According to Sajjad (2021), the COVID-19 pandemic severely affected the performance and ability of global supply chains to respond and absorb to supply and demand shocks variabilities caused by COVID-19 panic buying.

Transition

In Section 1 I introduced the study on how to mitigate supply chain disruptions in retail discount department stores. Section 1 included the background of the problem, the problem and purpose statement, the nature of the study, research questions, interview questions, conceptual framework, operational definitions, assumptions, limitations, delimitations, significance of the study, and a literature review. In Section 1 I provided significant information on mitigating supply chain disruptions. In Section 2, I provided in-depth research on the subject. In Section 3, I expounded upon the findings and results from the interviews and analysis of the data. In addition, Section 3 includes application of the research findings to professional practice.

Section 2: The Project

Purpose Statement

The purpose of this qualitative multiple case study was to explore strategies that retail discount department store industry managers implement to mitigate supply chain disruptions. The research took place in Northern Illinois and Northwest Indiana and included retail leaders from retail discount department stores who had successfully used strategies to mitigate supply chain disruptions. The implications of this study for positive social change include the potential for consumers to maintain or increase productive lifestyles from increased economic growth in local communities stemming from a decrease in disruptive supply chains of retail businesses.

Role of the Researcher

As the researcher in this study, I collected data through semistructured face-to-face interviews, Microsoft Teams interviews, or Zoom interviews. I documented and analyzed the data and presented findings objectively. A qualitative researcher provides an in-depth understanding of the phenomenon being studied by collecting data from participants' lived and perceived experiences (Morse et al., 2014). Researchers are responsible for collecting data from the participants chosen for their study (Noble & Smith, 2015). My professional experience in relation to the research topic included working as the director of sales with supply chain management on my job in Chicago, Illinois. I had no professional contact or business arrangements with the organization or participants I selected for this study.

I followed the principles of the Belmont Report while conducting this research. The Belmont Report has three fundamental principles that researchers must adopt to maintain ethical guidelines (Pritchard, 2021). These three principles are respect for persons, beneficence, and justice. Respect for persons means protecting people's autonomy and treating people with courtesy while maintaining truthfulness. Beneficence means doing no harm; that is, maximizing the project information but minimizing the risk to the participants. Justice means using nonexploitative and standardized procedures when dealing with participants (Pritchard, 2021). I adhered to Belmont Report guidelines.

Researchers must avoid prejudice and biases and have integrity to produce trustworthy results (Noble & Smith, 2015). Achieving credibility for truthful results is accomplished through multiple means, truth value, consistency, applicability, and neutrality. Truth value is achieved when a researcher acknowledges that multiple realities exist (Noble & Smith, 2015). The researcher must clearly and accurately present each participant's perspective. Consistency is achieved when a researcher's decisions are clear and transparent (Noble & Smith, 2015). Applicability is the consideration given to whether the findings can be applied to other groups, settings, or contexts (Noble & Smith, 2015). When truth value, consistency, and applicability have been achieved, then the researcher has established neutrality (Noble & Smith, 2015). Reflexivity is achieved when the researcher enlists the help of a peer to review the results to uncover biases or assumptions of which the researcher is unaware (Noble & Smith, 2015). I separated my individual experiences, feelings, morals, and beliefs when interpreting participants'

answers to avoid biases. In addition, I followed the concepts of truth value, consistency, and applicability to obtain neutrality.

Data were collected through face-to-face interviews with supply chain managers responsible for managing supply chain disruptions in retail discount department stores. In-depth information that pertains to participants' experiences and viewpoints on a particular topic is gained from interviews (Turner & Hagstrom-Schmidt, 2022). The interviews with participants were voluntary, and the participants could discontinue an interview at any time. Each participant responded to the same open-ended questions in the same order. I used a prepared interview protocol to avoid inconsistencies and omissions. An interview protocol is used as a valid method to measure and map an individual's considerations when making complex decisions (De Ceunynck et al., 2013). As the researcher, I assured the participants of the confidentiality of their answers from the interview. I used purposive sampling to choose participants for this study.

Participants

Participant selection is an important aspect of a qualitative study. Effective participant selection is important to obtaining robust results in any qualitative study (Yin, 2018). I used purposive sampling to select participants for my study. A purposive sample is defined by having a purpose that is relevant to the study (Andrade, 2021). Researchers use purposive sampling to assist in choosing participants who have experience, understanding, and knowledge of the research question. Researchers who conduct qualitative research do not seek to generalize results to a population of interest but aim to capture a wide and diverse range of perspectives on a phenomenon. Therefore, participant

selection is based on the participants' ability to provide rich and diverse insights relevant to the research question (Baumgart et al., 2021). For this reason, I chose to use a purposive sampling strategy to select participants.

I selected participants for my study who could provide robust information and knowledge. The criteria for selecting participants for my study were that they (a) must have a minimum of 3 years of experience as a supply chain manager, (b) must have information and experience about supply chain disruptions, (c) must have experience in implementation of successful strategies for preventing supply chain disruptions, and (d) must have worked in a retail discount department store supply chain.

The process of gaining access to participants begins with Institutional Review Board (IRB) approval. Access to participants can be challenging. To overcome the challenge, once IRB approval was received, I reached out by email and phone to potential participants. To build relationships, I offered participants a 5-minute introductory Microsoft Teams meeting, Zoom meeting, or phone call. Technological advances in communication offer new opportunities for conducting qualitative research. Zoom, an innovative videoconferencing platform, is one of the technological advances that presents a number of unique features that enhance its potential appeal to qualitative methods researchers (Archibald et al., 2019).

Research Method and Design

Research Method

Researchers use the qualitative research method when a problem exists and there is a desire to explore the problem thoroughly. Researchers provide insights on problems

and causation through qualitative research (Maxwell, 2021). A researcher uses qualitative research to gain knowledge and understanding of a problem by interviewing participants and learning from their individual and life experiences about the phenomenon (Lanka et al., 2021; Roberts & Struckmeyer, 2018). Researchers can gain a deeper understanding of the phenomenon by asking interview participants open-ended questions in semistructured interviews. Researchers attempt to interview participants in their natural setting (Anderson, 2017; Busetto et al., 2020). Rutberg and Bouikidis (2018) suggested using a qualitative approach to ask open-ended questions to explore complex problems to allow participants to openly share their perspectives. Qualitative research is an exploratory research method (Mozersky et al., 2020). Researchers heavily weight the views of the participants in qualitative research. The qualitative research method was the most appropriate method for this study to explore what strategies leaders use to mitigate supply chain disruptions in the retail industry.

Quantitative researchers use numerical data and variables for the empirical study of a phenomenon that has an accumulation of facts and causes of behavior (Duffy, 1987). Researchers use a quantitative method to test hypotheses, ask closed-ended questions, and conduct numerical analysis (Yin, 2018). Quantitative research is primarily used to test hypotheses; therefore, quantitative research is not suited for exploring strategies to mitigate supply chain disruptions in retail discount department stores (Franz, 2023). Quantitative research was not a sound choice for this study because neither closed-ended questions nor numerical analysis were a suitable approach to address the research

question. Mixed methods was also not a sound choice because I did not need a quantitative arm for this study.

Research Design

I considered the following qualitative research designs: (a) ethnography, (b) phenomenology, and (c) case study. I selected a multiple case study research design for this study. I chose a multiple case study over a single case study because a multiple case study allowed a wider exploration of the research questions and more credibility because there was more than one participant. The qualitative multiple case study design was appropriate for this study because I was able to identify strategies to mitigate supply chain disruptions in the retail industry.

Researchers use ethnographic research design to understand the shared patterns of behaviors, language, and actions of an intact cultural group over a prolonged frame of time. This evaluation is done in the participant's natural environment, and the focus is on understanding the behaviors of a culture (Asenahabi, 2019; Fetterman, 2019). The pool of participants in an ethnographic study are of the same race, culture, and location (Bernard, 2013). Ethnographic research design involves creating a descriptive written account of a culture or group (Yin, 2018). In this study, I was not focused on a culture or race, but I was focused on mitigating supply chain disruptions in the retail industry; therefore, ethnography was not the appropriate design for this study.

Researchers use the phenomenological research design to describe the meaning of people's lived experiences. Yin (2018) posited that the phenomenological design is used to collect data from a small group about the essence of their human experiences with a

phenomenon over an extensive period of time. According to Knaack (1984), one of the purposes of phenomenology is to attempt to understand the structure and meaning of human experience. I did not use a phenomenological design because I do not plan to focus my study on human experience related to a phenomenon over an extensive period of time.

Researchers use case study designs to gather emerging ideas from multiple sources (Trkman, 2010). Researchers use a multiple case study design to compare and contrast similarities and differences among cases (Czosnek et al., 2022; Mathews et al., 2022; Wiklicki & Pilch, 2021). Case studies involve investigation of a phenomenon within its life context. The information collected is subjective rather than objective; therefore, the researcher is not able to generalize beyond the knowledge (Singh, 2006). The multiple case study design was appropriate for this study because I was able to identify strategies to mitigate supply chain disruptions for the retail industry in a subjective manner by exploring the life experiences of the leaders who participated in this study.

Some researchers have concluded that a key driver for determining the adequacy of a sample size in a qualitative study is data saturation (Aguboshim, 2021). The concept of data saturation involves bringing in new participants continually in a study until a point is reached when participants do not provide any new relevant data. Researchers have stated that this point of data saturation is indicated by data redundancy, data replication, or the point when continuing to gather data produces diminishing returns (Alam, 2020). Researchers have also determined that what is important to researchers is

not the size of the sample, large or small, but what sample size will generate the best opportunity for data saturation (Galvin, 2015; Guest et al., 2006). I determined data saturation for this study as the point when interviews with participants yielded redundant information.

Population and Sampling

The population for this qualitative multiple case study was retail leaders from retail discount department stores located in Northwest Indiana and/or Northern Illinois. The leaders were required to have experience in mitigating supply chain disruptions to participate in this study. A sample that is too large is unnecessary, and a sample that is too small is unscientific (Andrade, 2021). The goal of purposive sampling is to develop and in-depth understanding with the richest evidence possible (Staller, 2021). I used purposive sampling to engage the retail leaders concerning their knowledge about mitigating supply chain disruptions in their industry. In purposive sampling, the sample size is flexible, and it is not predetermined (Staller, 2021). At the time the study took place, I needed to estimate the size of the sample.

One interview protocol element that helped control the sample size and drive data saturation was that during interviews, I asked all participants the same questions. Data saturation is the point in data collection when no additional issues or insights are identified and data start to repeat, signifying that an adequate sample size has been reached. At the point when my study participants' answers did not yield new information, that is, participants' responses reflected repeated and redundant information, I achieved data saturation. I completed four interviews and reached the point where responses were

redundant. Saturation is an important indicator that the sample is sufficient for the phenomenon being studied (Hennink & Kaiser, 2021). I did not seek approval to add more interview participants because saturation was achieved.

The interview participants were selected from members of retail discount department stores' supply chain teams. I selected participants who were leaders in the organizations' supply chain departments and had experience with mitigating supply chain disruptions within their organizations. The interview in a qualitative study is based on a topic, focusing on the knowledge of the expert, which is characterized as direct knowledge in a specific field of action (Doringer, 2021). Participants should have at least 2 years of experience in the supply chain of their organization. I interviewed participants by phone, Zoom, or Microsoft Teams, whichever was most convenient for the participant. Advancements in communication technologies are due to the availability of the Internet. Videoconferencing is used as an alternative to traditional interviews for qualitative research because of the availability of the Internet. Videoconferencing communication technology allows real-time, online conversation coupled with the ability to send and receive audiovisual information (Irani, 2019). Videoconferencing is a useful tool that the researcher utilizes for interviews while conducting qualitative research.

Ethical Research

Researchers have the obligation of protecting participant identity when conducting qualitative research. Ethical researchers follow the ethical standards that require researchers to respect human dignity and ensure the integrity of participants' data (Arifin, 2018). Adhering to high ethical standards is particularly important in research

because doing so protects participants and researchers and improves the quality of the data that are retrieved (Broom, 2006). To demonstrate compliance with research ethics, I informed participants in this study that there would be no incentives for participating in this study. It was their right to withdraw from the study at any point for any reason by simply informing me that they no longer wanted to participate. I complied with the Belmont Report and Walden ethical policies throughout this research.

I presented the participants in this study with an informed consent form to ensure that they understood that their participation was voluntary, what their responsibility was in the study, and what are the risks were for participating in the study. I requested signatures on the informed consent form from all participants in this study. To maintain participants' privacy and confidentiality, the names of companies and participants should remain anonymous (White, 2020). The names of participants and their organization were not included in this study. Each participant was assigned an identification pseudonym, such as P1 or P2.

I stored the participants' completed informed consent forms and my data collection logs on a password-protected computer. In addition to maintaining records in the password-protected computer, I ensured that the stored files were password protected. I locked documents, flash drives, and files in a file cabinet, and I am the only person with a key. After 5 years, I will delete all files from the computer, erase any files on flash drives, and shred any paper documents with a shredding device. The final study includes my IRB approval number, which is 12-29-22-0017620.

Data Collection Instruments

In qualitative research the researcher is the primary data instrument; therefore, I was the primary data instrument for this study. As the researcher I was tasked with remaining unbiased with regards to the data collection from the participants in my study. Data collection is the process of gathering and measuring information in an established systematic fashion, from the participants involved in the study, which enables the researcher to answer stated research questions (Allibang, 2020). According to Yin (2018), systematic and accurate data collection is essential to research. Methods of data collection include document review, observation, questioning, measuring, surveys, or interviews (Degner et al., 2022).

As the researcher, I collected data by conducting semistructured interviews for this qualitative multiple case study. Semistructured interviews include predetermined questions and the interviewer has the freedom to slightly modify wording when necessary (Yin, 2018). It is the job of the researcher to establish trust with the participants to elicit participants' honest and thorough answers (Chen et al., 2021). Data collection is a vehicle by which research questions can be answered through interaction and building trust with research participants (Bondwe, 2019). The interviews with the participants were recorded with the permission of the participants. On the informed consent form, participants acknowledged their agreement to interview recording. Recording the participants enhanced the reliability and validity of the data. I recorded the interviews with the participants using Microsoft Teams or Zoom audio recording. I followed a standardized

interview protocol (Appendix A) that contains planned interview questions (Appendix B).

Data Collection Technique

Researchers use data collection techniques to collect information in a well-ordered, repeatable, scalable order that embeds opportunities for review of the approach to allow for improvements. The researcher collects data in a systematic manner, otherwise the researcher has a challenging time answering questions in a conclusive way (Cln, 2013). Data gathering is accomplished through multiple procedures, observation, interviews, and/or surveys. For this study, I used semistructured interviews and analyzed company documents. I conducted these interviews face to face or via Microsoft teams following the interview protocol outlined in Appendix A. Researchers use semistructured interviews with predetermined questions as a guide to maintain a natural flow with interview participants (Gupta & Pathak, 2018). I used the interview protocol to introduce the interview and set the stage for the conversation with the participant. During the interview I watched the participant for nonverbal clues, paraphrased answers to questions as necessary, and asked follow-up questions to get a more in-depth understanding.

In case studies, semistructured interviews are a primary source of data. This type of interview is insightful and an efficient means to collect rich, empirical data, especially when the phenomenon of interest is episodic (Agboola & Scofield, 2018; De Massis & Kotlar, 2014). Because of the nature of the phenomenon of this study, mitigating supply chain disruptions in the retail industry, I anticipated the phenomenon to be episodic. Phenomenological researchers gather data directly from participants who have had direct

experience with the phenomenon. This direct knowledge from participants is an advantage but direct knowledge is also a disadvantage. The information received by the researcher is subject to participant bias and participant memory. The researcher has to rely on the memory and reasoning of the participants. According to De Massis and Kotlar (2014), participants can suffer from memory failure, inaccurate recall of past events, or memory distortion. Interviews are a valuable tool for researchers. In qualitative studies, researchers are aware of the pros and cons of interviews and researchers follow protocols and ethical guidelines to ensure the accuracy and reliability of their data collection techniques.

Researchers ensure the accuracy and reliability of data also by using member checking. Member checking is when researchers ask participants in the study to check the researcher's account of their responses for accuracy. Member checking involves taking findings to participants and requesting them to validate the accuracy of the report (Candela, 2019). Member checking includes validating if the researcher's description is complete and realistic, are the themes accurate, and are the interpretations fair and representative. Member checking is a crucial step in validation and credibility for a study. I used member checking to validate the data from the transcribing of the interview, to ensure the accuracy of the themes and answers to interview questions.

Data Organization Technique

I collected the data, coded the data, and analyzed the data for this study. Thematic analysis is coding used in qualitative research to find common themes and concepts. This process involves choosing to use deductive or inductive reasoning, reading data to get a

sense of what is in it, going through data line-by-line to code, and categorizing codes and determining how they fit into the study. I stored data collection logs on the computer. In addition to the password-protected computer, the stored files were also password protected. I will store data for 5 years and, after 5 years, I will delete all files from the computer.

Data Analysis

Data analysis in qualitative research is a systematic process of searching and arranging interview transcripts, observation notes, and other material that is gathered by the researcher for the purpose of increasing the understanding of the phenomenon being studied. Yin (2018) identified five phases of data analysis. The five phases are a nonlinear cycle of compiling a database, disassembling data, reassembling data, interpreting data, and concluding data. For this study I compiled the data, disassembled the data, reassembled the data, interpreted the data, and then used the data to determine conclusions. Analyzing qualitative data involves the process of coding or data categorization. Following this process allows the researcher to reduce the volume of raw information, identify patterns in the data, draw meaning from the data, and finally build a logical chain of evidence. QSR International developed NVivo, a computer assisted qualitative data analysis software. The software moves qualitative data inquiry past coding, sorting, and retrieval of data (Wong, 2008). I used NVivo software for this study to assist with the synthesis of the data and to assist with data triangulation.

There are four types of triangulations that can be utilized for qualitative studies. The triangulation methods are data triangulation, investigator triangulation, theory

triangulation, and methodological triangulation (Noble & Heale, 2019). Data triangulation is the use of multiple data sources, which includes time, space, and persons, to corroborate findings and compensate for weaknesses in the data with the strengths of the other data (Levin & Forward, 2021; Noble & Heale, 2019). Triangulation is used to increase the validity and credibility of the research (Noble & Heale, 2019). For this study. I used the data triangulation method by reviewing multiple sources of data. The primary multiple source of data was semistructured interviews, while the secondary sources of data were supply chain procurement, sustainability, and general company documents.

Reliability and Validity

Reliability

Reliability is defined by two conditions, according to Krippendorff (2004). Research is considered reliable when the research responds to the same phenomena in the same way no matter what the circumstance. Another condition for reliability is the degree to which members of a defined group agree on the readings, interpretations, and responses to or uses for given data. Yin (2018) stated a qualitative researcher is able to address the concerns of reliability of the study by ensuring accuracy and consistency of the documentation of the procedures and results. Researchers also achieve reliability for a study through coding themes. This form of reliability requires researchers to efficiently define the codes so that the codes are able to be applied similarly by another researcher (Watts & Finkenstaedt-Quinn, 2021).

I used coding to increase the reliability of the study. I gathered the themes from each participant's responses and coded them accordingly. The codes used were simple so

that anyone reviewing the information could easily understand and be able to transform the use of the codes, if necessary. Researchers also conduct audit trails, member checking, transcript reviews, and interview protocol to increase the reliability of their research (Yin, 2018). Also, for this study, I used member checking as another way to check dependability. After conducting semistructured interviews, I documented the responses from the participants. I returned the documented responses to the participants for review to make sure the documented responses were interpreted correctly. I conducted this member checking in conjunction with the semistructured interviews to enhance reliability.

Validity

The validity of research verifies the accuracy and trustworthiness of the instrument used and that the results extracted from the research have minimal systematic errors (Chander, 2018). Yin (2018) posited, verification of the interview information of research participants can help to establish construct validity. Researchers are able to establish validity of their research by considering credibility, transferability, and confirmability of their findings (Amin et al., 2020).

Credibility is established through member checking of data interpretation, triangulation, participant transcript review, or interview protocol. Member checking will be utilized in this study to establish validity. I gave the research participants the opportunity to review the data interpretations and incorporated their feedback.

Transferability is achieved when researchers provide detailed descriptions of the research study participants and research procedures that were used. Providing this

information allows the reader to determine if they should use the study or not per their setting (Korstjens & Moser, 2018). Providing detailed documentation of data collection methods and analyses enhances transferability (Yin, 2018). In this study, I provided a detailed description of the data collection instrument, data collection technique, data organization, and data analysis.

Confirmability concerns the extent to which the researcher's interpretations and conclusions can be confirmed by others (Nassaji, 2020). To establish confirmability, the researcher will describe the data and findings in such a way that others can affirm the accuracy of the data and findings. To accomplish confirmability, researchers can use audit trails or triangulation. I used data triangulation in this study to enhance confirmability by using multiple sources for data gathering and tracking data collection.

Data saturation is an important aspect of content validity in qualitative research. Failure to reach data saturation impacts the quality of the research (Fusch & Ness, 2015). As the researcher, I conducted semistructured interviews. I coded the results of each of the interviews. I used coding to assist in determining when no new information was recorded; therefore, data saturation was achieved.

Transition and Summary

In Section 2, I discussed the role of the researcher, research participants, explanation for choice of research method, explanation for research design, and research population and sampling justification. In addition, Section 2 included standards I used to maintain ethical research, data collection instruments, data collection techniques, data organization, and data analysis process. I concluded Section 2 with how I achieved data

reliability and validity, and the process for achieving data saturation. In Section 3, I expound upon the findings and results from the interviews and analysis of the data. In addition, Section 3 included my application of the findings of my study to professional practice, implications of my study for social change, and my recommendations for action and further research, along with the conclusion of the study.

Section 3: Application to Professional Practice and Implications for Change

In Section 3, I provide an overview of my study and presentation of the findings, and I discuss the potential applications of my research to professional practice. Additionally, I include implications for social change, along with recommendations for action and further study. Finally, I present the conclusion and closing statements for my study.

Introduction

The purpose of this qualitative multiple case study was to explore strategies that retail discount department store supply chain managers use to mitigate supply chain disruptions. I conducted semistructured online interviews with four retail discount department store supply chain managers and directors from Northwest Indiana and Northern Illinois who had developed strategies to mitigate supply chain disruptions for more than 2 years (see Table 1).

Table 1

Participants' Demographic Data

Participant code	Organization code	Supply chain experience (years)	Function in organization supply chain	Developed strategy for disruptions (yes/no)
P1	O1	8	Manager	yes
P2	O2	22	Director	yes
P3	O3	12	Director	yes
P4	O3	18	Manager	yes

Additional sources of data included pertinent company supply chain procurement policy, company supply chain sustainability reports, and documents from three companies. There were four themes that emerged from the analysis of the data collected from the semistructured interviews and review of the additional sources of data. The four themes that emerged were (a) choosing appropriate inventory control strategies, (b) determining facility capacities, (c) ongoing evaluation and control of costs, and (d) monitoring of customer satisfaction (see Table 2).

Presentation of the Findings

The research question for this multiple case study was the following: What strategies do leaders use to successfully mitigate supply chain disruptions in the retail industry?

Table 2

Themes That Emerged From Interviews

	Participant 1	Participant 2	Participant 3	Participant 4
1. Choosing appropriate inventory control strategies				
A. Increase safety stock	X	X	X	X
B. Add additional supplier	X	X	X	X
C. Place inventory in high sales area		X		
2. Determining facility capacities				
A. Space—onsite	X	X	X	X
B. Space—offsite storage		X		
3. Ongoing evaluation and control of costs				
A. Manage cost	X	X	X	X
B. Evaluate available working capital	X		X	
C. Evaluate effect on profit		X	X	
4. Monitoring of customer satisfaction				
A. On time in full	X	X	X	X
B. Right place right time	X	X	X	

Theme 1: Strategic Choices

The leaders from the participant interviews identified one of the themes as choosing appropriate inventory control strategies. The data gathered from directors and managers from interviews coupled with company documents revealed that leaders used three strategies to mitigate supply chain disruptions in the retail discount industry. The three strategies leaders used were (a) increasing safety stock, (b) adding an additional supplier, and (c) and placing inventory in high-sales areas. Leaders implemented these strategies to mitigate the effect of supply chain disruptions in the retail discount industry.

Increasing Safety Stock

P1, P2, P3, and P4 acknowledged the importance of increasing safety stock to mitigate supply chain disruptions in the retail discount industry. Increasing safety stock is the concept of maintaining more product within the store to manage unplanned supply disruptions. Safety stock is the projected inventory stored above the forecasted sales.

P1 stated that increasing safety stock at the store and at the plants is an effective way of storing and building inventory in an effort to work through periods of supply disruptions. Pl also stated, “creating more weeks of stock on hand, then hopefully gives enough on-hand inventory.” P2, P3, and P4 made general remarks in this area, and their statements indicated that this is a normal strategy. The strategy requires financial evaluation and additional space. P2 also referenced that leaders utilize safety stock to hold inventory at the manufacturing location until a determination is made of the store location where more inventory is needed.

Adding Additional Supplier

P1, P2, P3, and P4 all recognized the second theme, adding additional suppliers, to mitigate supply chain disruptions in the retail discount industry. P1stated that adding an additional or secondary supplier is critical to supporting customer needs during production shortfalls or supply chain failures. P1 also indicated that the buyer must ensure that the secondary supplier can meet the same specifications as the primary supplier, depending on the item purchased.

Engaging additional suppliers is a strategy that can be used to increase and maintain inventory during disruptions. Engaging additional suppliers provides a safety net if a supplier runs into difficulties. Additional suppliers provide flexibility to deal with events that are unexpected that could jeopardize capacity. Having additional suppliers is also a defense against a disruptive event that may be happening to one supplier in one area but not another supplier in a different area.

Place Inventory in High-Sales Areas

P2 was the only participant who referenced placing inventory in high-sales areas. P2 stated that "when an item being purchased is selling rapidly and cannot be distributed to all stores, the item is held offsite." Holding the item offsite allows decisions to be specifically made about when to send the item to the stores and what stores will receive the item. This practice allows the areas with high sales to receive the available inventory. This also allows inventory to be distributed where needed versus having it in places where it will not sell.

There was no mention of this strategy by P1, P3, or P4. I considered this strategy an outlier; therefore, this strategy was not pursued. P1 had more experience than the other participants and had used more strategies. Because of the number of years of experience that P2 had in supply chain management, this is a strategy that could be utilized, although the other participants did not mention the strategy in their interview.

Correlation to Literature

The findings in Theme 1 aligned with the existing literature. The best defense for retail industry leaders against changing market dynamics is having supply chain managers with an effective decision-making process (Khan et al., 2021). In the retail industry, supply chain managers make decisions and have backup plans to insulate the organization against the unpredictable (Kumar & Venkatesan, 2021). The findings in Theme 1 corroborate that retail leaders make strategic choices to mitigate supply chain disruptions.

The findings also validate that there are two main directions that retail leaders pursue to mitigate the effect of supply chain disruptions, increasing safety stock or adding additional suppliers. According to Alikhani et al. (2023), inventory managers use safety stock as extra stock to use during supply chain shortages or when customer demand is higher than anticipated. Alikhani et al. also stated that safety stock acts as a buffer inventory when the supply flow is interrupted or demand is greater than planned. Micheli et al. (2021) highlighted that retail leaders need to adjust their processes in relation to suppliers and demand planning. With proactive strategies, retail leaders can source more

goods locally, diversify their suppliers, and carry excess inventory (van Hoek & Dobrzykowski, 2021).

The findings in Theme 1 affirmed my choice for game theory and not the contrasting theories, resource dependence theory or normal accident theory. Leaders use resource dependency theory to focus on the resources required between organizations to get a job done. Leaders use this theory to evaluate resources and not to solve a problem. In this study, I explored how successful retail leaders mitigate supply chain disruptions. All participants (P1, P2, P3, and P4) agreed that leaders must choose a strategic direction to reduce the effects of supply chain disruptions. All participants (P1, P2, P3, and P4) also gave answers that focused on mitigating the effect of supply chain disruptions to maintain customer satisfaction. None of the participants gave answers focused on the cause of the disruption.

Theme 2: Capacity Review

The second theme that emerged from leaders to mitigate supply chain disruptions in the retail discount industry was leaders conducting a capacity review. The data analysis from participant interviews and company documents revealed two areas for capacity review that leaders use to mitigate supply chain disruptions. The two areas of capacity review were how much space the organization has (a) onsite and (b) offsite.

Space—Onsite

There was consensus from P1, P2, P3, and P4 on the need to evaluate how much onsite capacity is available for product storage. P1 stated, “lot of times, vendor is running short because of lack of capacity within their own plant.” P2 verbalized that “first

challenge is capacity, ensure you have sufficient thruput capacity at your distribution center (DC) to make sure your supply chain stays fluid." P3 commented that it is important to answer the question "How much inventory you can carry?"

Space—Offsite

P2 and P3 gave answers that supported having space offsite. P1 and P4 did not mention offsite storage in their interview. Both P2 and P3 noted that offsite space is a viable solution for mitigating supply chain disruptions. P2 stated that their organization has inventory in shipping "containers stored at offsite locations."

Correlation to Literature

Theme 2 aligns with existing literature, although there is not much current literature posted on scholarly websites concerning offsite storage for retail stores. During COVID-19, retail leaders adjusted their strategies to manage customer demand and combat supply chain disruptions. The findings in Theme 2 were confirmed in a study by van Hoek and Dobrzykowski (2021). In this study, van Hoek and Dobrzykowski concluded that with proactive strategies, retail leaders can source more goods locally, diversify their suppliers, and carry excess inventory. Leaders in the retail industry adjusted their behavior because of COVID-19. Holding more inventory was a strategy to avoid supply disruptions. Leaders were consistent with increasing inventory onsite to mitigate the effect of supply chain disruptions. The findings in Theme 2 corroborate the choice for game theory and not one of the contrasting theories evaluated for this study, CTF. CTF is an approach that researchers can use to study organizational behavior to discover explanations as to how contingent factors such as technology, culture, and the

external environment affect and influence the functioning of the organization (Islam & Hu, 2012). In their research study in 1985, Drazin and Van de Ven determined that an underlying premise for a company to perform well is that context and structure must somehow fit together. In this study, I did not focus on the leader's ability to have their organization fit, but rather what strategic choices and decisions need to be made to mitigate the effects of supply chain disruptions.

Theme 3: Cost Evaluation

The third theme that emerged from leaders to mitigate supply chain disruptions in the retail discount industry was leaders conducting a cost evaluation. The data analysis from participant interviews and company documents revealed three areas for cost evaluation that leaders use to mitigate supply chain disruptions. The three topics for cost evaluation were (a) managing cost, (b) evaluating working capital, and (c) evaluating effect on profit.

P1, P2, P3, and P4 all agreed that when making strategic decisions to mitigate the effect of supply chain disruptions, it is essential to manage the cost associated with the strategy that is being proposed. P1 responded that when "we are utilizing these different strategies, there is a differential cost on the books. We could be paying additional cost for the items, so the question is are those cost worth it?" P2 responded by saying that, as a leader when managing costs, "I remain within in the cost parameters set forth within my budget to ensure I meet that number." P3 responded that managing cost entails "finding balance between cost and service." P3 also stated that as a leader they would be willing to pay for assurance of supply. P4 responded by stating that managing cost requires

determining “what is the cost of losing these orders versus moving heaven and earth to meet them and is the juice worth the squeeze?”

P1 and P3 both referenced working capital, whereas P2 and P4 did not make mention of it. Working capital is defined as the sum of accounts receivable and inventories minus accounts payable and other nonfinancial debts that are due in less than 1 year. Working capital refers to the funds that are available and used for daily operations of an enterprise (Nicolas, 2022). P1 stated that “increasing safety stocks impacts the organization by increasing working capital.” P3 responded that working capital has increased with the increase of safety stock but eventually leaders “will reduce working capital in the future.”

P2 and P3 both referred to evaluating effect on profit. P1 and P4 did not mention profit in their interview. Although P1 and P4 did not reference profit, it appeared that this would be a standard point of decision for any leader in an organization. P3 expressed during the interview that leaders have “obligations to owners and leadership. Are we meeting our profitability goals?”

Correlation to Literature

The findings in Theme 3 aligned with the existing literature. Evaluating cost is an important part of understanding what strategy leaders should implement to mitigate the effect of supply chain disruptions. Cost consciousness has always been important in the retail industry.

Prior to COVID-19, leaders had adopted the just-in-time inventory model to reduce cost (Balkhi et al., 2022). Leaders seek cost improvement when using the just-in-

time model through reduction of warehousing cost and efficiency improvement (Lyu et al., 2020). The experience of COVID-19 has caused leaders to adjust their strategy. In a research study conducted by Forehand et al. (2021), some leaders adjusted their focus on items such as contingency planning, resilience, adaptability, flexibility, and production recovery planning to improve inventory management. Improving inventory required cost evaluation. Leaders in the retail industry coordinated with their supply chain partners to improve overall supply chain costs (Shah et al., 2021). Although leaders adjust their strategy, they must also understand the financial implications associated with adjusting their strategy.

Supply chain leaders also worked together to use quantity discounts to create a financial gain for all parties involved (Das et al., 2021; Heydari & Momeni, 2021). Some retail leaders used the multichannel strategy but recognized that this strategy increased costs and caused some customer dissatisfaction (Grewal et al., 2021). All the strategies participants discussed were to manage cost to help maintain or augment profitability.

Theme 4: Customer Satisfaction

The fourth theme that emerged from leaders to mitigate supply chain disruptions in the retail discount industry was monitoring customer satisfaction. The data analysis from participant interviews and company documents revealed two areas for customer satisfaction that leaders use to mitigate supply chain disruptions. The two topics for monitoring customer satisfaction were (a) on time and in full and (b) right place, right time.

P1, P2, P3, and P4 agreed that mitigating the effect of supply chain disruptions is critical to maintaining customer satisfaction. Maintaining customer satisfaction is accomplished by receiving inventory on time and in full. On-time-in-full delivery is defined as all supplier deliveries are expected to arrive at the facility on time and the deliveries must be for the full amount ordered (Lukinskiy et al., 2023). P1 commented that, "from an operations standpoint the biggest thing we look at are customer fill rate so are we able to deliver on our customer po's." P2 stated that, "term used by companies on time in full, inventory needs to be available at the store when the consumer wants to purchase. In fill rate of 93 to 94 percent or better." "On time and in full, this is how our customers judge us," according to P3. P4 responded that, a benefit of increasing safety stock was "better on time fill rates." Participants posited that receiving inventory on time in full is important.

In the retail industry having inventory in the right place at the right time is important. P1, P2, and P3 agreed on this principle but P4 did not mention having inventory in the right place at the right time. P1 stated that, "from a positive standpoint you can increase customer fill rates and reduce production downtime," when distributing product to the right places. P2 commented that, "any delay along that pathway from origin to discharge to delivery to store can create a bottleneck and resort in possibly delays in getting inventory to the store for consumers to purchase." P3 said that the question must be asked, "are deliveries happening when we want them, and where we want them to be delivered?" The participants acknowledged the importance of having inventory at the right place and right time helps with maintaining customer satisfaction.

Correlation to Literature

The findings in Theme 4 on monitoring customer satisfaction aligned with the existing literature. Customer satisfaction is an important reason leaders implement strategies to mitigate the effect of supply chain disruptions. The one concept that was discovered that is not in correlation to the literature was that customer satisfaction could lead to reduction of production downtime. P1 stated that, "from a positive standpoint you can increase customer fill rates and reduce production downtimes." Increasing customer fill rates through increased production, to satisfy customers, reduces production downtime. Customer satisfaction is accomplished by having product delivered to the stores on time in full.

In the retail industry, having product at the right place on time is essential to the success of the organization. Leaders make decisions and integrate the supply chain effectively so that the right distribution of the product or service occurs in the right quantities to the right locations at the right time (Min et al., 2019). Leaders are tasked with maximizing sales by having product in the right place at the right time throughout the supply chain distribution channels to maximize profits (Davis-Sramek et al., 2020). Leaders can mitigate the effects of supply chain disruptions by having product in the right place at the right time while also maximizing profits.

Correlation to Conceptual Framework

The findings in the themes align with game theory. Game theory has a range of applications from war and evolutionary biology to economics and business (Zhang, 2022). The strategy in game theory is to get to a point where all players have maximized

their payoff, with the decisions that they choose (Sucha et al., 2021). Figure 1 and Figure 2 display how the themes align and the decision sequence using Game Theory. Figure 1 follows the series of decisions made when Player 1 chooses to take the route of increasing safety stock. Figure 2 follows the series of decisions made when Player 1 says "no" to increasing safety stock, but "yes" to adding an additional supplier.

Figure 1

Game Theory Strategy for Increasing Safety Stock

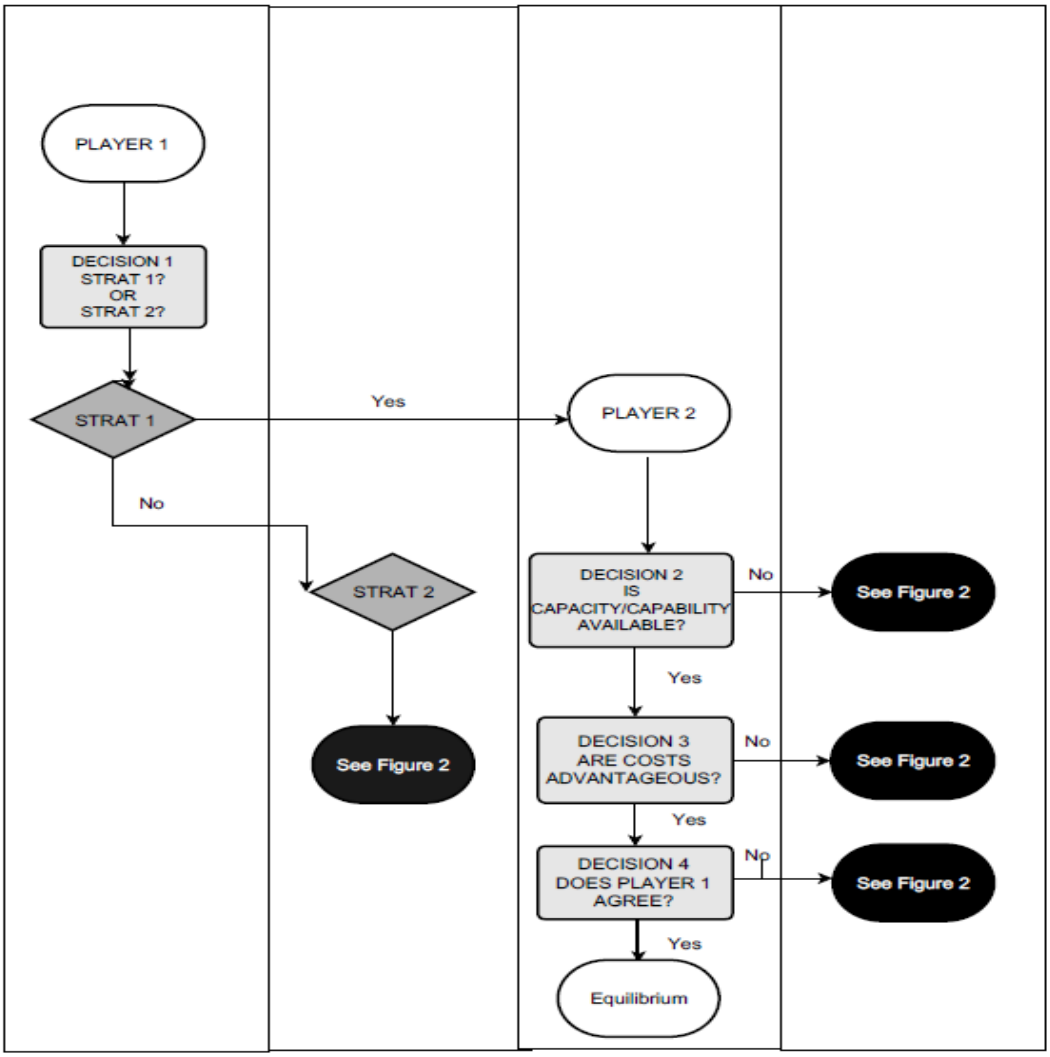
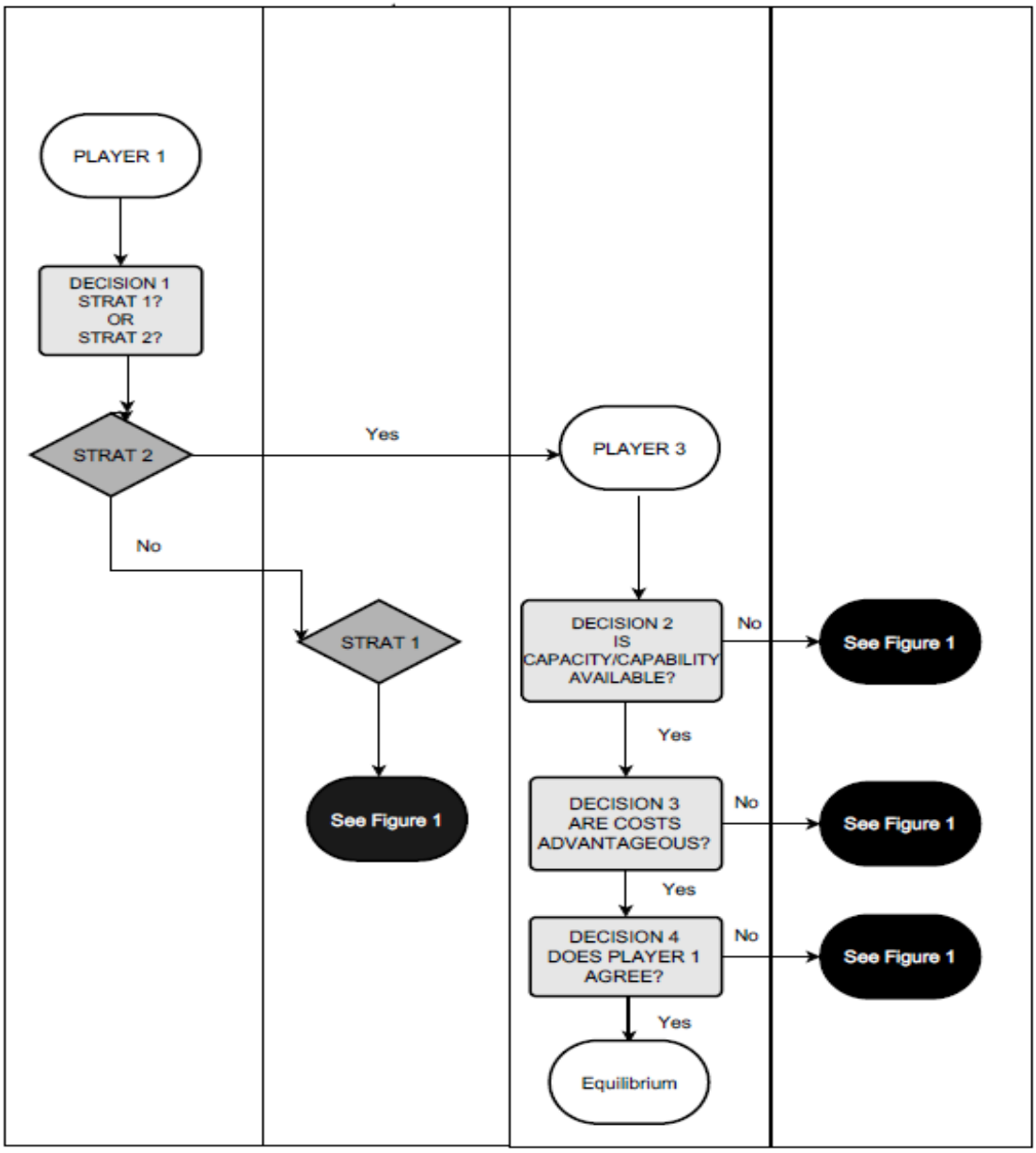


Figure 2

Game Theory Strategy for Adding Additional Supplier



Game theory begins with multiple players that have a series of choices that they must make. Supply chain managers implement rational decision making, which is a more advanced type of decision-making model that includes emphasis on research and logical evaluation selecting among choices based on facts and reasoning (Belhadi et al., 2022). Leaders can utilize the strategic decisions made by participants in game theory resulting in positive payoffs to develop strategies to mitigate the effect of supply chain disruptions.

In Figure 1 and Figure 2 Player 1 begins with the strategic choice question, titled Decision 1. Player 1 is faced with choosing the appropriate inventory control strategy to mitigate supply chain disruptions. The strategy that is chosen by Player 1 is contingent on the strategy being advantageous for all players in the supply chain. In game theory the goal of the players is to reach a position of Nash equilibrium which is built on two principles. The first Nash equilibrium principle is that each player chooses their action according to the model of rational choice. The second Nash equilibrium principle is that every player's belief concerning other players' choices is correct (Sucha et al., 2021). By achieving Nash equilibrium, the players have positioned themselves where no player has a reason to deviate from the strategy.

Figure 1 and Figure 2 are models of game theory and Player 1 must decide between Strategy 1 and Strategy 2. Strategy 1 entails Player 1choosing the strategic path of increasing safety stock to mitigate the effects of supply chain disruptions. Strategy 2 entails Player 1choosing the strategic path of adding an additional supplier to mitigate the effects of supply chain disruptions. Retail industry supply chain manager's use intelligent risk, opportunities in which the potential gain outweighs the harm or loss to the

organization, to collaborate with partners to reach a supply position that benefits all parties (Gurbuz et al., 2022). Player 1 must consider how Player 2 is thinking and what action Player 2 would consider is a rational choice. Choosing Strategy 1 or Strategy 2 follows the tenet of game theory, as the decision by Player 1 is made based on how Player 1 believes Player 2 will respond. Strategy 1 was referenced by P1, P2, P3, and P4 and Strategy 2 was referenced by P1, P3, and P4 which would indicate that both strategies would be a rational choice, which is a Nash equilibrium principal of game theory.

The remaining decision points are made to continue to move the players to a point of Nash equilibrium. The decisions made by the Players are based on the information set that is available at the time the decision is made. The goal of both strategies is to increase the product delivered in order to mitigate the effects of supply chain disruptions. The information set available to Player 2 is that Player 1 is requesting an increase in the amount of product to be delivered. The decision for Player 2 is to determine if Player 2's company has the capacity and capability to fulfill the request? Capacity is in reference to space, on site or off site, product availability, and parts availability, whereas capability refers to having enough personnel and the proper equipment to get the job done. P1, P2, P3, and P4 all referenced the need for and importance of on-site storage.

The answer of "yes," by Player 2 to having capability and capacity to fulfill the request of Player 1 means Player 1continues with Strategy 1. If Player 2 does not have the capacity, then Player 1 must shift from Strategy 1 to Strategy 2. This follows the principals of game theory because each player's decision affects the other player. Supply

chain managers should weigh the pros and the cons of the problems and solutions and prioritize them (Pereira et al., 2021). Each decision leaders make helps the organization reduce an issue or can make the issue worse (Rousseau, 2018). The decisions made by players during the game have a direct impact on the final decision.

Applications to Professional Practice

I conducted this qualitative multiple case study to explore what strategies leaders use to successfully mitigate supply chain disruptions in the retail industry. The data gathered from my interviews with the retail industry supply chain leaders as well as review of company documents provide information about the successful strategies that some retail industry supply chain leaders use to mitigate the effect of supply chain disruptions. Through analyses of data collected I found the following two strategies that play a significant role in mitigating the effect of supply chain disruptions in the retail industry, by choosing an appropriate inventory strategy which could be (a) increasing safety stock or (b) adding an additional supplier.

Retail leaders in the supply chain need to plan for disruptions before they occur. Proper planning means leaders need to implement a strategy to minimize the effect of the disruption. In the retail industry, supply chain managers make decisions and have backup plans to insulate the organization against the unpredictable (Kumar & Venkatesan, 2021). Retail leaders should increase the safety stock, which means carry excess inventory in the store, to minimize the disruptive effect of supply chain disruptions. Leaders making this decision put the organization in position to have product when customers want to purchase despite a supply chain disruption.

A supply chain disruption for one supplier may not exist for another supplier for various reasons; therefore, it is important to have some diversity in your supply chain network. Retail leaders sourced more goods locally, diversified their suppliers, and carried excess inventory (van Hoek & Dobrzykowski, 2021). Diversity in suppliers means leaders in organization seek to procure goods from multiple channels and suppliers which includes a focus on minority owned businesses. Adding additional supplier allows the leader to carry more inventory and allows the leader to have options in the event of a supply chain disruption. This strategy is yet another effective way to mitigate the effects of supply chain disruptions.

Implications for Social Change

The strategies identified in the current study have been successful for retail industry leaders to mitigate supply chain disruptions. General improvements for individuals, communities, or organizations are possible as referenced from the themes in this study. The best defense for retail industry organizations against the changing market dynamics is having supply chain managers with an effective decision-making process (Khan et al., 2021). The increasing safety stock strategy and adding an additional supplier strategy identified by participants could guide retail industry leaders on how make inventory decisions that will mitigate the negative affect of supply chain disruptions. Participants acknowledged that it is important to have inventory at the store when the customer wants to purchase. Any delay from product origin to store delivery could cause a bottleneck in getting inventory to the store for customer purchases.

Leaders that adopt either of the two strategies, increasing safety stock or adding an additional supplier, will have extra inventory, which allows customer purchases to occur despite supply chain disruptions. Organizational leaders adjust their approaches to business relationships and processes because of disruptions (Micheli et al., 2021). Consequently, the customers were satisfied, and the leader has helped the organization maintain or increase their profitability. Leaders are tasked with maximizing sales by having product in the right place at the right time throughout the supply chain distribution channels to maximize profits (Davis-Sramek et al., 2020). By using effective supply chain strategies, retail leaders improve job stability for employees. Job stability supports economic growth in local communities. Economic growth leads to a higher quality of life for residents, thereby contributing to positive social change.

Recommendations for Action

Results of this study indicated that leaders in the retail industry supply chain can successfully use different strategies to mitigate the impact of supply chain disruptions. These strategies include increasing safety stock and/or adding an additional supplier. The business problem addressed in this study was that some leaders in the retail discount department store industry lack strategies to mitigate supply chain disruptions. Participants in this study recommended several strategies to use to minimize the impact of supply chain disruptions in the retail industry. A review of the findings led to the following recommendations for action:

1. Retail industry supply chain leaders should determine which strategy works best for their organization, increasing safety stock or adding an additional supplier.
2. Retail industry supply chain leaders should take time to do a capacity review within their organization to determine if on-site or off-site space is available to store inventory.
3. Retail industry supply chain leaders should do a cost evaluation when implementing supply chain mitigation strategies to ensure effective cost management, to ensure working capital is available, and to evaluate the effect on profitability.
4. Retail industry supply chain leaders should implement strategies that create customer satisfaction by having inventory for customer purchase on time and in

My study will be a guide for leaders to assist them with the strategies and choices that should be made to be able to proactively mitigate the effects of supply chain disruptions. I will share a summary of the current study's results with the interview participants, and I intend to publish my research findings in the *Journal of Supply Chain Management,* and *Journal of Operations and Supply Chain Management.*

Recommendations for Further Research

Retail industry leaders in supply chain should implement strategies to mitigate the effect of supply chain disruptions. One limitation of this qualitative multiple case study was that participants were from a small geographic area, Northern Illinois and Northwest

Indiana. Future researchers should gather data from a larger geographic area. (Almalki, 2016). Future researchers could also conduct a mixed-methods study about how to mitigate supply chain disruptions in the retail industry. Mixed methods research is the approach that combines both qualitative and quantitative methods into a single study to provide a broader vision of the problem supply chain disruptions, because a mixed methods study enables the researcher to integrate qualitative and quantitative data conceptually and analytically.

Reflections

In this study I focused on exploring strategies leaders in the retail industry supply chain use to mitigate supply chain disruptions. Before beginning this study, I had no preconceptions concerning what is the right or wrong strategy for leaders to use to mitigate supply chain disruptions. My experience in the business world has me surrounded by supply chain professionals. I work beside these supply chain professionals in my role as director of sales and customer service. Although I work with supply chain professionals, I have no personal or professional experience in developing strategies to use to mitigate supply chain disruptions.

I conducted the research with the intent of learning from leaders in the retail industry. After obtaining IRB approval, I had to rely on my business relationships to find willing research participants. This was a revelation for me, as I wondered how a student who does not work in corporate America engages research participants. The interviews were rewarding and informative for me. I enjoyed listening to each participant and their perspective. Each participant answered the seven open-ended interview questions and

then participated in member checking of their transcribed data and my notes on the essence of their responses. Developing the themes and comparing the interview data were exciting and absorbing.

This journey has been challenging and rewarding. The encouragement and direction I received from my chair has been instrumental and inspirational to me. In sports, players often get the accolades and not coaches. My chair and faculty committee members have shown me the importance of effective leadership. This journey has enhanced my knowledge, writing skills, research techniques, and writing skills. I am equipped to address the subject of how to mitigate supply chain disruptions in the retail industry from a research and professional point of view.

Conclusion

The strategies supply chain managers use to mitigate supply chain disruptions in the retail industry are an important aspect for organizations based on the frequency of supply chain disruptions. Supply chain disruptions occur for various reasons. Supply chain disruptions can be caused by catastrophic events or fluctuations that occur in the regular operations (Bier et al., 2020). Leaders in the retail industry should create strategies to mitigate the effect of supply chain disruptions.

In this study, I analyzed data from four participants that are supply chain leaders in the retail industry. These four participants had experience in supply chain that ranged from 8 years to 22 years. Four themes emerged from the data and all participants agreed that leaders in the retail industry should choose appropriate inventory strategies, such as increasing safety stock and/or adding an additional supplier, to mitigate the effects of

supply chain disruptions which is a shift from the just in time inventory method. Analysis of the responses from the leaders in supply chain from the retail industry along with supporting documents lead me to the conclusion that leaders in the retail industry have opportunities to implement strategies that will mitigate the effects of supply chain disruptions.

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Appendix A: Interview Protocol

Introduction to Interview

My name is Anthony Patton, a student at Walden University pursuing a doctoral degree in Business Administration specializing in Global Supply Chain Management. I am conducting a qualitative multiple case study to uncover strategies for mitigating the effects of supply chain disruptions in the retail industry in Northern IL and Northwest IN. The length of this interview should be about 20-30 minutes. The interview format is open-ended questions. Please feel free to seek clarity on questions and add personal views as you deem appropriate.

- Collect signed consent form
- Assure participant that responses to questions are confidential
- Prior to beginning interview, ask for permission to begin audio recording
- Start audio recording if given permission
- Begin to ask interview questions
- Collect detailed responses to the interview questions
- Ask participant probing and follow up questions

Post Interview

- Inform participants they will receive a copy of the transcribed audio recording
- Ask participants to review copy of transcribed audio recording for accuracy
- Ask participants to please send any feedback by email asap
- Thank participants for their time

Appendix B: Interview Questions

1. What strategies are you using to mitigate supply chain disruptions?
2. What challenges did you have implementing these strategies?
3. How did you measure the effectiveness of the strategies?
4. As leader when implementing strategies, what payout did you observe?
5. As leader when implementing strategies, what happened to inventory equilibrium?
6. What information about supply chin disruptions did you gain from implementation of these strategies?
7. What additional information would you like to share about your organization's strategies for mitigating supply chain disruptions?