

If war or crisis comes

A qualitative study about preventing stock-outs in case of a crisis, grocery store managers perspective.

Nina Kolomiets (50681)

Bachelor thesis

May 2024

Stockholm School of Economics

Abstract

This thesis takes a qualitative approach to assess the Swedish grocery store managers perspective in case of a crisis. While crisis management at organizations continues to be a highly centralized top-down practice, the employee perspective of each managerial level is missing. In this study the focus is on the store managers - active agents that must deal with a contingency. The aim is to find practical suggestions on how managers in the grocery stores could respond to the threat of a potential stock-out in the event of a crisis. This study is based on 10 qualitative interviews with the managers of the most popular Swedish grocery chains and applying Gioia methodology to structure the empirical finding. Findings suggest that in case of potential crisis, level of empowerment store managers have from the retail organisation may influence the effectiveness of in-store crisis response. There are different degrees of freedom when it comes to implementation of stock-out preventive measures in-store for different retail chains. During the course of this work, it has been discovered two stock-out preventive measures that Swedish grocery store managers can implement in a crisis: (1) setting purchase limits, to mitigate the effect of consumer panic buying behavior; (2) approaching alternative suppliers, to mitigate the risk of shortages on the supply side in a crisis. Purchase limits have a high level of freedom when it comes to implementation and could be to a high extent decided by the manager's own initiative. Approaching alternative suppliers has a low implementation freedom for the most interviewed organizations and is being controlled by the central office. In event of a crisis the level of the grocery store managers empowerment by the organization may determine effectiveness of in-store crisis response.

Key words: Crisis management, Emergency management, Stock-out prevention, Shortage prevention.

Supervisor: Karina Liljedal, Department of Marketing and Strategy.

Examiner: Fredrik Lange, Department of Marketing and Strategy.

Acknowledgements

I would like to express my gratitude to Karina Liljedal and Sara Rosengren for their piece of advice and for always being very optimistic. I also would like to thank all my wonderful interviewees, who found time for dealing with student issues and kindly shared their valuable insights.

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1 Introduction

According to the Federation of Swedish Farmers (LRF), the average grade for self-sufficiency in food decreased from 75% in the early 1990s to 50% at present. (Lantbrukarnas Riksförbund, 2023). It means that in case of trade lockdown and no emergency stock holding Sweden can provide supply for only half of its population. After the Cold War, maintaining large-scale emergency stocks of food was not considered necessary and, in the beginning of 2000's, Sweden had no emergency stock left (MSB, 2022). Lately, in response to increased turbulence, the Swedish government urgently decided to invest into building up civil defence to prepare for an eventual crisis (Krisinformation, 2024). To restore the former level of crisis preparedness requires a lot of work, finance, and time. The latest report from The Royal Swedish Academy of War Sciences (KKrVA, 2023) says that in the best-case scenario it will take up to five years to build up Swedish civil defence.

The Swedish civil contingency agency (MSB) constantly communicates the vulnerability of production and delivery chains in case of a crisis and encourages every household to stockpile emergency supplies at home which would cover at least one week of household consumption. Indeed, delivering food supplies in contingency times may become more difficult in comparison to times with stable operations. It takes open roads, functioning transportation, availability of fuel and electricity, and even if one of the links in the long chain fails, problems may occur (MSB, 2022).

In case of a new crisis event and no emergency stock holding it is hard to underestimate the role of grocery retailers. Providing enough food for the population will be highly dependent on the initiatives of private corporations. The way the crisis event is handled inside the grocery store to a high extent is determined by actions of the grocery store managers, serving essential societal needs of local communities all over Sweden.

1.1 Background

The last few years have been challenging for both retailers and consumers. For those who survived pandemics, supply chain disruption and change in consumer preferences, new geo-political instabilities are knocking on the door and suggest that it's time to re-evaluate preparedness for potential future crises (Barman et al., 2021; Guenette et al., 2022; Seddon & Cook, 2024).

It's only lately that COVID-19 has caused global supply chain disruption and economic slowdown, now its's continuing with invasion of Ukraine, that have affected trade roads, caused shortages, global rise of commodity prices and threatened food security in the most vulnerable regions (Barakat et al., 2023). Recent years have witnessed that demand forecasting in grocery stores did not allow for unpredictable crisis events and could result in empty shelves for essential types of goods and consumer panic buying behavior (Kirk & Rifkin, 2020). Moreover, lean supply chains were criticised for applying just-in-time (JIT) inventory holding practices and has been routinely blamed for shortages, multiple losses across the industries and not being suitable for turbulent times (Choi, 2023). Occasionally to stabilise continuity of retail operations it was necessary to use strict top-down managerial practices, such as interventions from the organization's upper management and governmental authorities (Choi 2023; Reuters 2020).

What if a new crisis emerges? One of the most important tasks for managers is avoiding possible risks that could lead to a crisis escalation (Labeat, 2015). Resilience building and mitigating future shocks and disruption should become a high priority to grocery retail. Reflecting on lessons learned during pandemics, being proactive is a key to organizational and societal resilience against large systematic shocks (Sacco & Domenico, 2021). Another important lesson learned is the need to improve cooperation between public and private sectors to decrease societies' vulnerability to future emergencies (Yagoub et al., 2024; Busch et al., 2021). This study was conducted with grocery store managers, to bring their perspective on mitigating stock-outs in a crisis event. Establishing crisis routines and decision making performed in a place of a crisis escalation have a positive impact on organizational agility and flexibility so highly required in an emergency (Ohrling et al., 2022).

1.1 Previous research and research gap

Most of the crisis management research is guided through two approaches: crisis-as-process or crisis-as-event (Oscarsson, 2022). The process view is a well-established concept which has its focus on the steps that characterises a crisis and is reflected in most of the academic literature through a holistic process of preventing, preparing, experiencing crisis event, and recovering (Fink, 1986; Pursiainen, 2017; Jaques, 2007). Another approach to crisis management research is a crisis-as-event, resulted from the case studies, it focuses on the type of the crisis incident. Event approach describes objective situation posing a threat to organizations ability perform its activities, such as disasters or natural catastrophes (Rizutto & Maloney, 2008; Hori & Iwamoto, 2014).

Oscarsson (2022) suggests that both approaches are more useful for creation of normative models, rather than helping to cope with a crisis event and recognizes a need for bringing more attention to crisis-as-practise approach. Lately, scholars showed more interest in the practice lens within organization studies, since practical approach helps understanding relations between people actions and structures of organizational life from various perspectives (Feldman & Orlikowski, 2011).

According to Oscarsson (2022) practical approach aims to answer how to deal with a crisis event and what situated practises typical for the context. The author suggests that practice-based view compliments crisis management research and highlights the ordinary practises involved in managing a crisis.

Pandemic has inspired a great deal of academic research on dealing with SC disruption. Systematic literature review by Moosavi et al., (2022) has collected various articles to determine practical approaches for managing SC disruption under the COVID-19 crisis and the study by Saarinen et al., (2020) has its particular focus on grocery SC responses to pandemics.

While crisis management at organizations continues to be a highly centralized top-down practice (Hart et al.1993), the perspective of employees of each managerial level is missing. Existing studies have a broad view on the supply chain in a crisis and there is a lack of research that brings focus to managerial insights to future possible crisis events and stock-outs in Swedish grocery stores.

1.3 Purpose of the study and expected contribution

This thesis aims to find out from the grocery store managers' perspective what practices could be applied to mitigate the risk of stock-outs in a grocery store in event of a crisis and what constraints store managers from applying those practices.

It can potentially be useful for crisis managers in retail organizations and governmental policy makers, as the objective is to depict possible stock-out preventive measures and constraints to an effective crisis response in a grocery store. This study may help practitioners to develop an appropriate set of routines for grocery stores in turbulent times. Here I seek response to following questions:

1.4 Research questions

RQ1: What risks to stock-out of supplies can be mitigated in the grocery stores in a crisis event, according to grocery store managers perception?

RQ2: What stock-out preventive measures can be implemented in the grocery store in a crisis event, according to grocery store managers perception?

RQ3: What constraints grocery store managers from applying stock-out prevention practices in a crisis event?

1.5 Focus and delimitations

This thesis has aims to bring only the perspective of grocery store managers in a contingency. The interviewed grocery store managers represent Sweden's most popular grocery retail chains: ICA, COOP, Axfood, LIDL and one private no-chain boutique to get the perspective. This research doesn't describe the standpoint of the Swedish retail top management and supply chain management and narrowed only to

what stock-out preventive measures could be applied in the grocery store and brings the focus to down-top crisis management practises at the retail organizations.

1.6 Disposition

The report consists of 5 chapters, starting with a short introduction and background explaining why the chosen topic is relevant. Therefore, the purpose and the contribution are presented, leading into three research questions that the thesis aims to answer as well as the description of the focus and delimitation of the study. Followed by the literature review, providing valuable insights on importance of crisis management practices, role of grocery store managers in a crisis and relevant literature on benefits and drawbacks of modern supply chain practises. Further, relevant theoretical framework is described, used to guide through the research question. Followed by methodology section, describing choice of method in the study. Afterwords empirical finding and analysis has been outlined. Lastly, there is a discussion section that talks through research questions and finding, describes theoretical and managerial implications and suggestions for the future research.

2 Literature review

The following section presents literature from the relevant topics to create a comprehensive understanding of the stock-outs in the grocery store in event of a crisis. Firstly, reviewed the definition of crisis the importance of crisis management practises for the organizational resilience. Continuing with leadership role of store managers in retail organizations. Lastly, the benefits and drawbacks of lean SC has been reviewed.

2.1 Importance of crisis management practices for organizational resilience

The vital part of retail strategy in the post-crisis world is developing resilience to potential future threats (Hynes, 2021). The term “crisis” doesn't have a clear or uniform conceptual content, instead it's a complex phenomenon. In academic literature it can be defined divergently with its multiple synonyms such as: “emergency”, “contingency”, “accident”, “adversity” (Milasinovic & Kesetovic, 2008). Here synonymic definitions of the term “crisis” are used interchangeably with each other. Taking a broad view, Pearson & Clair (1998), crisis can be defined as:

“A low- probability, high impact event that threatens the viability of organization and is characterized by ambiguity of cause, effect, end means of resolution.”

Present-time crises could be characterized by increased complexity, interdependence and politisation (Rosenthal et al., 2001). Boin (2009) refers to a crisis event in a modern globalised world as transboundary, meaning that threats look familiar (e.g., natural catastrophes, violence, technological failure), but the scale of consequences play out differently. The transboundary nature of modern crises implies that crisis consequences are hard to set geographical, functional and time boundaries and they can evolve from one geographical region to another, cross the boundaries from public sectors to private and vice versa (Boin, 2009).

To be prepared for future disruption organisations get involved into crisis management planning. Crisis management’s main objectives are to identify potential threats and to build resilient capability based on four main stages: mitigation, readiness, response, and recovery (Speight, 2011). The main objectives of crisis-oriented planning are to maintain risks of the new abrupt crisis events happening (Herbane, 2010).

Crisis preparedness is salient for organizational credibility, as there is a risk of destroying organizational reputation, if managers have not responded to crisis appropriately (Coombs, 2007). Managing crisis successfully is important for organisations relationship with stakeholders (Bundy et al., 2017). According to

Sarriegi et al., (2009) very often emergency managers respond to a contingency situation considering merely crisis event and post-crisis stage but ignoring the crisis prevention mechanism.

Mitroff & Alpasan (2003) propose that all organisations could be grouped into two broad categories: crisis prepared (proactive) and crisis prone (reactive). A distinguishing difference between the two is that crisis prepared organisations develop plans to handle emergencies that they have not suffered in the past. According to Boin & McConnell (2007) many companies are not ready to invest in emergency planning, since it requires using time and budget with no visible output. Pember (1996) advocates that despite the extra costs, proactive crisis planning should be considered as an important corporate management tool which helps to minimize the risks and reduces the degree of company's vulnerability to future crises.

2.2 Store managers' role in everyday organisational life and in a crisis

It's hard to underestimate store leaders' key role in the success of retail operations. Retail store managers can direct favorable retail employee performance, that may result in customer brand equity and brand loyalty (Jung et al., 2021; Inyang et al., 2018). Managers of multi-unit enterprises play a critical role in corporate strategy implementation and driving customer satisfaction and unit profitability (Murray & Evans, 2013). Managers inevitably become role models for their employees, leading by example they influence overall employee performance and business success (Rich 1997). According to Arnold et al., (2019) store managers have an important role in building relationships through direct interaction between upper management and employees, which enables valuable exchange between the members of the organization. Moreover, store leaders contribute to retail performance by creating retail purchasing networks and building informal ties, that connect individuals operating at the same level in a supply chain (SeEVERS et al.,2010).

According to Lazarov (2020) the role of managers is important in any situation, however in the event of a crisis it's essential, "the human factor decides how the crisis will be perceived, and the means used to mitigate or end the crisis". Some types of

crises require that leaders take prompt decisions and can perform an urgent emergency response (Rosenthal, 2001). While in “normal” times the managers must evaluate employee performance and productivity, in a crisis they should focus on a crisis respond in accordance with organizational goals, empower employees and prepare them to cope with a crisis event (Lazarov, 2020). Once a threat becomes a crisis, leaders are expected to arrange an effective crisis response (Boin, 2009). Grocery stores, that are normally clustered around population centers, are important community resources that can be vital in disaster management, bringing innovative solutions for food distribution and providing cooperation between private and public sectors (Yagoub et al., 2024). Recent pandemics have shown that the grocery retailers are expected to step up to serve community needs in a crisis (Delasay et al., 2022).

2.3 Lean supply chains, benefits and drawbacks

Modern businesses have adopted lean supply chains in response to emerging trends of globalization, increasing economies of scale and production outsourcing (Paulsson, 2018). According to Paulsson (2018) supply chains commonly increase their leanness by reducing buffer stock and applying just-in-time (JIT) deliveries, which helps firms to achieve the same production with less capital employed.

Increasing lean component in the SC has become vital for businesses survival and achieving competitive advantage (Cudney et al., 2011; Paulsson, 2018; Ugochukwu et al., 2012). There are multiple benefits of lean in the supply chain, such as low inventories, optimised efficiency, high flexibility, waste elimination, reduced costs and improved delivery practices (Ugochukwu et al., 2012).

According to Lambert & Cooper (2000) one of the most remarkable changes for modern businesses is the shift in the competition paradigm. “Instead of brand versus brand, or store versus store, it’s now supply chain versus supply chain”. The winning SC delivers products to the end customers in the most cost-effective way and gives the firms an opportunity to drastically increase their competitiveness (Paulsson, 2007).

Paulsson (2018) characterizes the modern world as a “flow-based society”, which is to a high extent built around the supply chains, depends on constant flow of goods and

services and negatively affected by disruptions within any of the flows. Figure (1) illustrates a typical simple flow within a multi-product retail environment, from the manufacturer to the store (Meisheri et al., 2020).

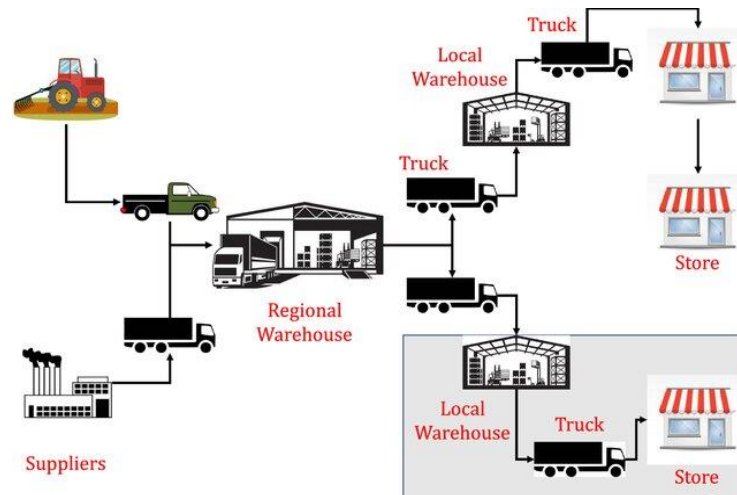


Fig 1. Flow of products within retail supply chain

Successful inventory replenishment is a complex task which requires maintaining full range of products in the stores and determining optimum inventory for products with different lead times, while minimizing waste, costs and ensuring fairness across the product range (Meisheri et al., 2020). “The biggest risks to the company are not within the company itself, but its dependency on the supply chain”, globalisation, outsourcing and lean supply chain practices have made modern supply chains more vulnerable and risk-prone (Paulsson, 2007).

Recent pandemic has significantly affected global SC exposing vulnerabilities across different sectors and industries (Ivanov & Dolgui, 2020). Especially disruptive the crisis has been for automotive, health, FMCG and food industries (Moosavi & Hosseini, 2021). Supply chains in the food industry have experienced sudden unprecedented shocks both on demand and on supply side (Saarinen et al., 2020; Burgos & Ivanov, 2021) The extreme demand shocks have been triggered due to panic buying and change in the consumer behavior, and supply-shock has resulted from resources and labor shortages (Durugbo & Al-Balushi, 2022; Ovezmyradov, 2020; Burgos & Ivanov, 2021). Pandemic related worldwide SC collapse has confirmed vulnerability of modern lean SC design to profound disruption, and emphasised to

professionals and policy makers' that the resilience of SC should go before its efficiency (Moosavi & Hosseini, 2021).

3 Theoretical framework

To guide through the research questions, this study relies on theoretical framework “The issues and crisis management relationship model” by T. Jaques (2007). The conceptual framework is used here as a reference to empirical world (Blumer, 1954) and helps to enhance the understanding and complexity of crisis management practices at organization. Further, using scenario methodology in this thesis is motivated.

3.1 The Issue and Crisis Management Relational model

Crisis life cycle is a well-established conceptual framework it determines crisis and emergency management to be process that could be generally outlooked through the stages of preparation, prevention, crisis management and post-crisis recovery. There are many different interpretations of crisis management framework (Fink, 1986; Pearson & Mitroff, 1993; Pursiainen 2017). The number of stages and names of stages could to some extent vary in different crisis management frameworks, depending on the interpretation of authors. However, it's generally accepted among crisis management theorists and practitioners is that effective crisis management appears from dedicated pre-crisis management.

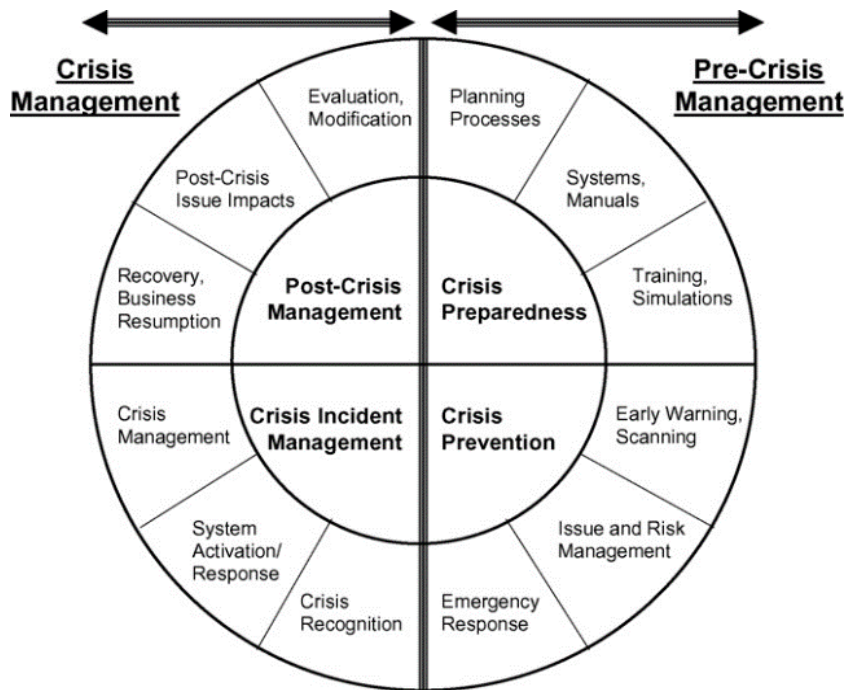


Figure 2. The Issue and Crisis Management Relational model.

In this thesis used continues relational model of crisis management by Tony Jaques (Jaques, 2007). According to Jaques (2007), the concept of the crisis management model has significantly revolutionised over the last 20 years, from simple linear construct into non-linear continues model. Model describes that issue and crisis management could be managed in different stages by clusters of activities. It consists of 4 major elements: crisis preparedness, crisis prevention, crisis incident management and post- crisis management. Every stage is further divided in three clusters of activities, representing different suggestions for crisis management practises. The author describes that elements of the model should be seen as clusters, activities which are not sequential and can be undertaken both separately and simultaneously. Furthermore, T. Jacques emphasizes that crisis management process should be seen holistically, where crisis prevention and crisis preparedness are important steps to for an effective crisis management process.

The focus of the study is on crisis prevention stage. Crisis prevention is further described in the model by three cluster of activities: early warning and scanning, issues and risk management and emergency response. T. Jacques characterises each cluster of activities in the following way:

Crisis prevention- early warning and scanning.

Includes processes such as audits, preventive maintenance, issue scanning, social forecasting, anticipatory management, environmental scanning and future studies. Jacques (2007) describes that early warning and scanning requires monitoring and processing a vast amount of data. It can be established by the means of monitoring media and key-websites, trend analysis, legislative and public opinion surveys, which helps to determine potential future threats.

Crisis prevention- issue and risk management.

Includes identification, prioritization and strategy development. Risk identification described as a process of analysing what can threaten the continuity of the firms' operations, followed by prioritising the risks based their significance and finally developing a plan to reduce a chance of problem becoming a crisis. According to Jaques (2007), early warning and scanning and issue and risk management are highly overlapping clusters of activities, as both depend on "recognizing a threat, deciding what to do and getting it done".

Emergency response.

Emergency response cluster includes infrastructure, documentation and training. T. Jaques emphasises that prompt and effective emergency response is a key element in crisis prevention for any organization. It's important for firms to recognise when an emergency can trigger organizational crisis. Development of the infrastructure, appropriate normative and training routines may help to prevent emergency from becoming a large organisational crisis.

Even though the focus is on crisis prevention stage, T. Jacques emphasises that crisis management process should be seen holistically, where cluster activities could be undertaken both simultaneously or separately and crisis prevention is highly important step for an effective crisis management process.

3.2 Why contingency scenario planning?

Scenario in the research helps to relate to the future and is used as a “complimentary tool kit that has a promise to generate new ideas and arguments, broadening the range of casual relationships” (Ramirez et al., 2015). Mitroff and Alpaslan (2003) who groups crisis into three categories: natural accidents, normal accident, and abnormal accidents, suggest that it’s much more challenging to assessing risks when preparing for abnormal crises and recommends random scenario planning. Scenario planning is a strategic tool broadly used both in strategic planning and risk management methodology (Wade & Wagner, 2012). It helps organizations to “see realities, that might otherwise be overlooked” (Wilkinson & Kupers, 2013). According to Holt (2001) the main advantage of scenario in contingency management is that it allows to “capture rapid reaction to events that may have been unforeseen” and to “evaluate a variety of alternative futures”. Pursiainen (2017) suggests that risk scenarios have features of combining both a qualitative risk analysis method and a strategic planning method.

4.Methodology

4.1 Research methodology

This study is based on a qualitative research method. Since the focus of the study is bringing up the perspective of grocery store managers their thoughts and experience and “seeing through the research participants eyes” a qualitative approach has been chosen as the most appropriate to depict small nuances and interviewees insights on the chosen research questions (Bryman, 2012). The analysis relies on a combination of both theoretical and empirical evidence gathered simultaneously. The research is based on abductive reasoning which combines features of both inductive and deductive logic (Bryman, 2012). The analogical abduction takes place, when based on previous experience, it’s possible to relate to the new situation (Thagard, 1993).

This study could be described as a cross- sectional, where the focus is on how grocery store managers of 10 different grocery stores could respond to the situation of high

contingency. First the interviewees are presented with a contingency scenario of the highly unfavorable crisis happening. Scenario could be described as a scenario of a normative type and created to bring the focus on how objectives could be realised in the future (Björjeson et al., 2006). After that the interviewees proposed a set of questions, aimed to capture their reactions and attitudes and solutions to the problem of stock-out due to proposed contingency scenario.

4.2. Data Collection

The interview sample criterion was that all the interviewees worked as store managers in the Swedish grocery boutiques. The same role of the interviewees and same type of the company in the study ensured that comparability criteria of the research (Bryman, 2012). It was estimated that Swedish grocery store managers, who work every day “on-the-floor” may come with un-biased view on in- store crisis response, consumer behaviour in the store and share their perspective on a proposed crisis scenario and followed interview questions.

The selected interview sample are grocery store managers, working at ICA, COOP, Axfood, LIDL and one private grocery store. The store managers have been contacted both via email and approached directly in the store with the request for an interview. The participants randomly agreed to be part of the interviews, that is why the number of representatives for each store chain is not evenly distributed between 10 participants. Participants who have been contacted directly in the store have agreed to make an appointment later or agreed for a direct time limited interview. Online participants were contacted via email, and further has agreed for a digital appointment via Zoom. The general agreement for the in-store interviews was that the interview will take no longer than 20 min, it was the maximum amount of time participants were ready to offer during their working hours. The general time for in-person and digital interviews varies between 20 to 28 min. In-store interviews were very carefully written down during the interview, to make sure that no information or important details were lost. Digital interviews have been audio- recorded with the previous approval from the participants. After that, the recordings have been listened to and transcribed the same day in order take notes while person is talking or as soon

as possible after the interview (Hammersley & Atkinson, 1995). The crisis scenario used in the interview is suggested to be a tool for both qualitative risk analysis and strategic planning method (Pursiainen, 2017) The semi- structured style interviews had an objective to give the interviewee freedom to decide how to reply (Bryman, 2012). Overall, 18 questions have been asked during each interview, 12 of them have been depicted as the most relevant for the thesis. The crisis scenario and main questions that have been asked during the interview described further (Appendix 1). Overall, 10 interviews with store managers at Swedish grocery boutiques has been collected from 28 of February until 9 of April (Appendix 2).

4.3 Data analysis

To identify and structure the findings the Gioia methodology has been used. (Gioia et al., 2012). Firstly, the transcripts have been carefully read and grouped based on repetition, similarities, and analogies. After that, the interviewee statements were grouped into first-order themes categories, which helped to categorise data in a structured manner. The first-order themes after that have been categorised into second order themes. Lastly, second order themes have been once again categorised in aggregate dimensions that presented findings in a rational form. The data overview is depicted in Figure 3.

4.4 Discussion of method

Qualitative research methods are often criticised for being subjective, as the researcher can impact their own beliefs and ideas on the study results (Bryman, 2012). The main criteria for qualitative study proposed by Lincoln & Guba (1985) is trustworthiness. Trustworthiness of study's finding is determined by credibility, dependability, confirmability, and transferability of the study (Bryman, 2012). To delaminate subjectivity and ensure trustworthiness factor my role has been clearly communicated to the interviewees and both theoretical and empirical evidence has been collected simultaneously. To structure the empirical findings the Gioia method has been applied. The Gioia method is generally accepted to satisfy trustworthiness criteria for research. Moreover, this study is inspired by the need for a practice-based

view to crisis-management research (Oscarsson, 2022) and could be criticised for lack of generalisability. To increase the generalisability of the study the managers of different grocery store chains have been addressed, so the sample of participants has been to some extent randomised. Furthermore, this study can be complimentary for well-established crisis management literature and can be developed further by capturing views of different actors of crisis management planning in the retail organisations.

The interviews were conducted in different forms, which could have had a certain impact on the collected data. There is a concern that different forms of data collection can to some extent skew the result (Bryman, 2012). During online interviews the participants were more willing to get into details of each asked question. While during the in-store interviews the high-tempo atmosphere could be to some extent destructive for the participants. I would suggest that both online and offline interaction were helpful for the study. In-store interviews helped to observe the details and enriched practical understanding, which increases overall credibility of the study.

4.5 Ethical Considerations




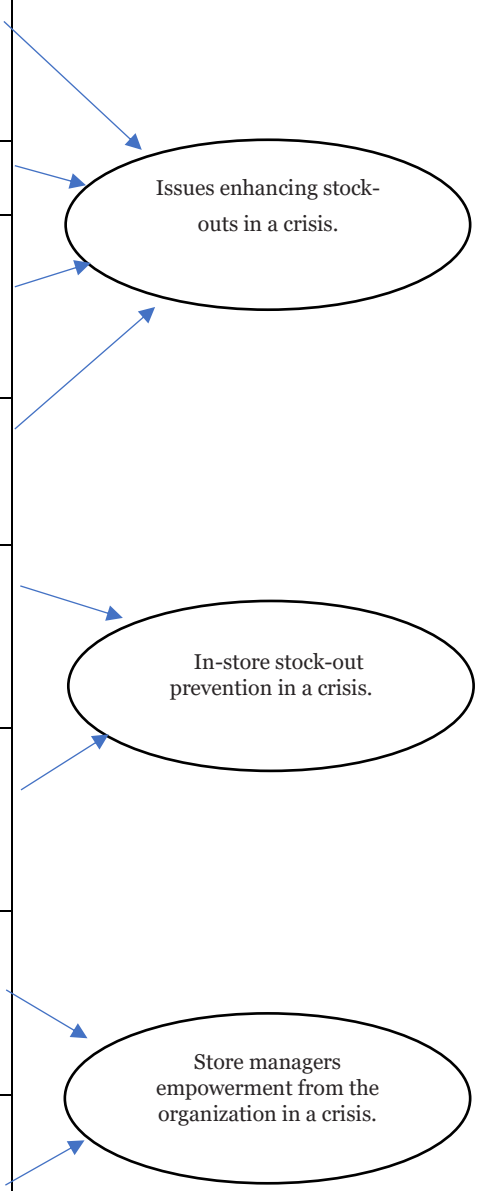

















Ethical procedures have been an important part of the interviewing process to ensure the main objective of avoiding harm (Bryman, 2012). In the beginning of the interview the participants were informed that the shared data will be handled according to EU's General Data Protection Regulation. To ensure that participants feel free to share information without worrying about their privacy, they have been informed that there will be no sensitive data shared in the report and their names and the name of the store will not be revealed.

5 Empirics and Analysis

This chapter outlines empirical findings captured by the interviews and analysis. With the help of Gioia methodology (Fig. 3) three main aggregate dimensions has been identified: issues enhancing stock-outs in a crisis, in-store stock-out prevention in crisis and store managers empowerment from the organization in crisis. Each of

the dimensions has been described by the relevant themes and analysed further with the presentation of relevant quotes from the interviews.

Figure 3. Overview of Data Structure Created with the Gioia Methodology

1 ST ORDER THEMES	2 ND ORDER THEMES	AGGREGATE DIMENTION
Evidence of disruptive changes in consumer demand during the pandemics. Managers estimation of store resilience in case of contingency. Routines to managing sudden abnormal consumer demand and crisis do not exist.	 Risks on the demand side.  (Panic buying and hoarding behaviour)  (in control)	
Suppliers' challenges in post-pandemic times. Current issues with stock- outs.	 Risks on the supply side.  (in control)	
Suppliers and retailer's minimization of inventory holding and its consequences in case of crisis. Reduction of deliveries frequencies practises, good for logistics or for retailers?	 JIT logistics.  (out of control)	
High level of automation for reordering practises. Out-of- stock and auto- reorder, store managers experience.	 Auto- reordering system.  (out of control)	
Issues that store managers can fully control. Managers suggestions in response to a crisis scenario. Solidarity practises, making sure that it's enough food for all customers in crisis.	 Purchase limits.  	
Store managers suggestion in response to a crisis scenario. Suppliers- store managers contact post-pandemics.	 Alternative suppliers. 	
Confidence to make decisions on behalf of the organisation. Decisions in control for store managers. Upper management planning, flexible solutions for stock-outs.	 Freedom.  	
Issues out of control for grocery store managers. Store managers do not feel responsible for crises response. Strict instructions for crisis response coming from the top.	 Control.  	

5.1 Issues enhancing stock-outs in a crisis

To answer the thesis questions, it was important first to identify and analyse issues or risks that could lead to stock-out of supplies in the grocery boutique. It has been identified four major issues described further.

5.1.1 Panic buying behaviour

In case of the worst-case scenario, when there is no new deliveries and customers demonstrating panic buying behaviour common assumption among the interviewees is that it will take 2 to 4 days before grocery store shelves will stay empty for most of goods.

Store A: “If there is a panic, we are going to last approximately 2 days. Toilet paper will disappear day one.”

It has been assumed by most of the interviewees that it takes up to 2 days for a medium-size stores, such as Coop Central, ICA Kvantum, LIDL and up to 4 days for large store formats, such as ICA Maxi, Coop Stora, Willys. When estimating the number of days, the stores can last without new deliveries, store managers define panic buying behavior as a key factor for making trustworthy predictions and suggesting stores to last much longer when consumers hoarding could be avoided.

Store G: “Depends entirely on whether consumers hoarding has started. But without panic buying anywhere from one day to 2 weeks depending on the item section.”

Store H: “In this situation perishables would disappear in 2 days I think, the rest would last probably up to 1 week depends how bad is panic.”

Majority of interviewees discussed that they could relate to panic buying behaviour, after COVID-19. The interviewees have identified panic buying as one of the main causes of out-of-stock during pandemics, due to uncontrolled demand shock, retailers couldn't satisfy.

Store B: “The first months we got delivery trucks running back and forward. We had no problem getting most of the supplies. It just disappeared very quickly, because of high demand and for the customer it looked like we had empty shelves all the time.”

The common answer among the interviewees was that the longest out-of-stock period during pandemics was one week without toilet paper deliveries.

Store D: “We were without toilet paper for approximately a week, but as soon as we got our delivery it disappeared almost directly. Then, the central office succeeded in buying a huge stock of toilet paper, and secured supply to all boutiques.”

With the experience gained during pandemics, the interviewees had no difficulties to name the products that they expect to disappear from the shelves first in case a new contingency panic buying set up: toilet paper, household paper, water, conserves, and dry foods.

Store E: “There are certain products that would finish first, like toilet paper, household paper, diapers, and conserves. Those products would also give me longer time to get back home. There are so many boutiques that are going to place the order at the same time.”

The interviewees also suggested that in crisis described in the scenario, they expect problems with perishables. In contrast to dry foods, perishables can't be stored and have infrequent deliveries for some categories.

Store J: [...] “Milk and yogurt and fruits and vegetables and meat because we don't have much of those products in stock. For example, we get milk products 4 times a week and we cannot stock perishables.”

Overall, due to panic buying and consumer stockpiling behavior is unusual phenomenon in Sweden, boutiques do not have special routines or rules to deal with panic buying, however, having pandemics experience in mind, many store managers could come up with suggestions for dealing with it.

5.1.2. Supply side risks

One of the common responses to proposed contingency scenario was to get more goods in anticipation of future disruption on the supply side.

Store J: “What would I do? I probably try to activate as many contacts as possible I must get more goods in house...”

Interviewees reveal that pandemic and post-pandemics years has been quite challenging for both retailers and suppliers lately. Here are examples from the interviews on what caused late deliveries in the past years: pandemics, crisis of fuel in Europe, strikes in France, boats that couldn't get to ports because of war in Ukraine, vegetable oil and pasta stock-outs because of war in Ukraine, poor harvest of olive oil in Greece. Even though, majority of the interviewees estimated that they see a tendency of increase in locally- produced products in the assortment, Swedish market is highly dependent on global producers and functioning supply chain.

Store J: “[...] We had many months that we couldn't get home the goods and you know, we had a crisis with “Salta pinnar” for almost one year, it's in Europe they make all “Salta pinnar” [...] It's obvious that the suppliers have tuff times...”

Store E: “[...] the oil that is used for production of “Smörgåsrån” is from Ukraine. We had stock-out for” “Smörgåsrån” for about 8 months now.”

Shortages in connection to instabilities in the World had a long-lasting effect and lately implied many months of stock-outs for the store manages. Some interviewees admitted that business doesn't feel completely back to normal.

Store D: “No, I cannot say that we are 100% back to normal. We still must deal with late deliveries [...] ... now we have a problem to deliver Asian goods. We cannot transport goods over the Red Sea anymore, because of pirates. The ships must sail around all Africa.”

5.1.3 Just-in-time logistics

All logistics are utilizing JIT (just-in-time) approach. Every retail store is aiming to hold the least possible stock. The rule of thumb for all interviewed boutiques is there is no excessive inventory holding or “buffer” in the store, with some exceptions for campaign products.

Store D: “We don’t have a lot of back storage, we work a lot with just-in-time deliveries.”

Inventory holding “just in case” is a very costly practice for retailers, some interviewees had practice during pandemics, to stay of the safe side. Now in post-crisis times, obviously stores try to minimise inventory to the highest extent.

Store C: “I don’t store anything, everything I have is on the shelves.”

Moreover, most of the store managers admitted there is no physical space in the store for excessive inventory holding. Store managers rely on continues flow from the central warehouse and supplies and all interviewed stores have deliveries seven days a week.

Store B: “Normally it takes us one day to get the supplies. As far as we have a product in central storage, we are safe.”

Operations are highly dependent on frequent deliveries and the general assumption among the store managers is that in case of crisis, any problem on the supply side will become a serious risk to normal store operations.

Store I: “We get deliveries every day from Monday to Sunday. If we don’t get deliveries for one day, it will be an empty store. Two-three days -everything will be empty.”

Minimising inventory holding is a common practice even for suppliers. According to the store managers of a private store, the suppliers try to minimise their inventory holding to the highest grade.

Store H: "I believe is that most I work with today don't have that much "home" in stock. I think if there were a crisis, the goods would finish quite quickly with the most supplies. Supplies have much less in stock now compared to before. It's how it looks like nowadays in Sweden. Before, just like 5- 6 years back, suppliers had a much bigger stock of goods. I think under pandemics it has changed."

When asked whether there any changes in logistical operations, the issue which has been identified by several respondent is that store managers have harder requirements when it comes to frequency of deliveries to minimise transportation and logistical costs. The interviewees do not equally share altruistic concerns for less frequent deliveries. Apparently, managers at store H and J have different thoughts towards the issue.

Store H: "The suppliers have higher demands at us, now they will sell higher volumes to reduce transport. And we work the same, we also think that it's better to have less transportation and buy more..."

Store J: "We must buy as much as possible to get a more effective flow. However, I don't know if it is a favor for us in the boutique. Should we deliver a good customer experience in the store, or should we be good for our logistics? Should they earn the money, or should we earn the money?"

It's also has been proposed that stores in smaller towns with fewer visitors may have it hard in case unexpected events happening due to unfrequented deliveries. There is a possibility that less centrally located stores are more prone to being left out in case of severe crisis.

Store J: "Luckily, we are that big that we have deliveries almost every day. Because here there are stores that have deliveries only 3 days a week for some products, and then it's a very big problem."

While being an asset in normal times, JIT practices may become not the most crisis-friendly approach, due to the low stock of inventory holding by both retailers and suppliers as well infrequent deliveries for some product categories.

5.1.4 Auto-reordering of supplies

Store managers at the chain stores mentioned that all reordering practises are automated to a high extent a (90- 100%). With some exceptions for fruits, vegetables and bread and possibility to adjust the order, when necessary for majority of boutiques.

Store E: “90% is automatic orders, another 10% fruits and vegetables we must order ourselves.”

Auto- reordering system is a great advantage to ease the workflow and control when the flow of goods is functioning. However, in case of crisis and operation disruptions auto- reordering may become a constraint to an effective problem solving:

Store A: “Everything is being reordered automatically in this store. Automatic systems are not done for big crises like wars.”

Taking alternative solutions to solving the shortage is problematic, some store managers express the issue is hard to control, when it’s to a high extent automated.

Store J: “[...] It’s like that, we discover: “Oh, the shelf is empty”, and then we go and then we continue keeping an eye on it, we know it’s empty, but we don’t get new deliveries, so when the new delivery is coming, there is a notice, that they couldn’t deliver. We will go and wait until the deliveries come. We can’t do much about it when there is an auto-order.”

5.2 In-store stock-out prevention in a crisis

The shortages prevention in contingency situation is a complex issue that requires cooperation from upper management, logistics administration and governmental institutions. There are obviously risks, that can’t be in control for store managers. However, the interviewees identified two most common preventive measures to

stock-outs in crisis, which they can implement in the store by the managers themselves. When suggesting preventive actions towards out-of-stock in crisis, it's been identified two measures that grocery store managers can influence fully or to a certain extent.

5.2.1 Purchase limits

Purchase limits, or maximum amount of purchased items per customer, was proposed by half of interviewed store managers as a measure to prevent panic buying behaviour and stock-out prevention in the grocery store. Majority of the interviewees can decide to apply buying limits on the scarce products by their own initiative. It's been depicted two opposite reactions to introducing buying limits.

Some interviewees had been driven by altruistic ideas and purchase limits had been suggested to satisfying egalitarian goals of providing enough food for every customer.

Store D: "We can restrict the max number of products bought buy customer let's say to 10.... to express solidarity with other customers."

Store H: "We don't have any stock-out routines, but I think if things like you described in the scenario would happen, we could imply maximum number of purchases, so it's enough food for as many people as possible."

On the other side some interviewees were concerned on how purchase limits can affect profit- maximization and store brand name. Those respondents said that applying purchase limits can be too radical measure for a store brand to practise, as it may result into many unhappy customers. Even though the managers understood the altruistic "dilemma" behind the purchase limits, they proposed it to be unlikely that they are willing to use this measure.

Store J: "We could set buying limits in the store we are in control of it. But...we have normally 130-140 thousand buying clients every month. If I go and start deciding which of them can shop and how much they can shop. I think this is going to hit me and my brand very badly."

For some purchase limits have been seen as something that contradicts the essence of retail business.

Store F: “No, I can’t stop people from buying, they are clients, let them buy if they want to.”

5.2.2 Alternative suppliers

Alternative suppliers were a common solution in connection to the proposed contingency scenario. Many interviewees said that they will try to actively approach alternative suppliers, in case of a crisis. Now most of the chain stores orders 90-100% comes via main supplier. Reaching alternative suppliers proposed to diminish risks and disruption on the supplier’s side is through alternative contacts.

Store E: “It’s important to react fast if it’s a crisis, we must act outside the box. I will probably contact alternative suppliers other than our main supplier.”

Some of the interviewees suggested that they gained a lot of experience of how to deal with future crises during pandemics and gained important suppliers contacts they can use in the future crisis.

Store D: “During the COVID times we had a big issue with getting goods and we worked on building up relationships with alternative suppliers. Now after the pandemics we have a developed quite broad contact net when it comes to alternative suppliers. We get can both goods from our main supplier and alternative private actors.”

It's important to mention that searching for alternative suppliers has been proposed only by half of the interviewees. Another half said that any actions outside established routines is not part of their responsibility in case of crisis.

Store A: “I am responsible for the personnel, not for goods. No special routines, we continue working as usual, unless we get an order from the top.”

Common explanation why it will be problematic to seeking alternative suppliers in crisis is that all of them should be approved firstly by the central office. The interviews suggested that certain reasons that could prevent store managers from an effective crisis response may not always lay on the surface. For example, shrinkage of assortment depth for certain products categories.

Store J: “[...] we don’t have that many channels, compared to before. We will have to buy from approved suppliers. So, in case of crisis, I have either store brand, my own organization that will provide me with ketchup or Heinz or Felix. So big a difference is that before there were so many more brands that the competition would be much higher [...] I could buy from other producers.”

5.3 Store managers empowerment from the organization in a crisis

The interviews revealed that store managers were differently empowered to make an important decision on the behalf of the retail firm. The Gioia method helped to depict that level of freedom and control from the retail organization can vary for different retailers. The general tendency is that the degree of freedom and control the store managers experienced was determined by the ownership structure in the retail firm. In a crisis event the level of store managers empowerment may determine the effectiveness of crisis response. The right combination between control and freedom in the organization- store manager interaction, can become crucial for effective crisis management practices.

5.3.1 Freedom

The aspect of freedom determines how empowered are interviewees from the organization to make important decision in crisis. Some of the respondents expressed

that they have high degree of freedom to contact alternative suppliers in crisis. That could be determined by the ownership structure at the organization:

Store H: “We are a private store, not a part of any chain. We have many ways to seek alternative suppliers. Right now, we have about 15 purchasing channels.”

The aspect of freedom could also be described by the level of flexibility and assistance that store managers receive from the organization in crisis. Two out of ten interviewees expressed that they would feel their back covered in case of a future crisis event, because they know that the management team is developing a crisis management plan. Those interviewees expected a high level of flexibility from the organization when dealing with supply chain problems.

Store D: “I think there is a low chance that all our stores to run out of goods, it’s likely that every store will get some products depending on size and number of visitors. Our main supplier can also work with its suppliers, so the goods are sent directly to the stores and do not have to go via central storage.”

Generally, managers, who knew that organization can be flexible at dealing with issues of shortages in crisis and had high level of freedom contacting alternative suppliers were more confident at coming up with suggestions to proposed crisis scenario.

5.3.2 Control

On the other hand, half of the interviewees suggested that they will not do anything about the proposed crisis scenario, motivating that crisis prevention is outside of their control. For those interviewees the most common suggestion was to wait for instructions from the top management.

Store F:” Personally, I will not do anything. We are waiting for the central office to say what we are supposed to do. I will get instructions from the central office which I am going to follow.”

Some of the managers explained their role in the company does not imply taking initiative in case of a major crisis, there are restrictions from the top and the level of top management control is high at their organization.

Store J: "I cannot make a list of emergency suppliers because the responsibility for the assortment is not my responsibility. The decisions are made centrally. It's the central office who responsible for the contracts with the suppliers. It's the central office who decides whether I, for example, can buy a certain number of eggs directly, or should it go via central storage. It's not that easy."

It was suggested by one of the interviewees that managerial instructions sometimes do not time well with the crisis event happening. In this case, store managers are not able to respond to the crisis event effectively.

Store G: "Central office often sends out checklists we can follow in an emergency. But very often, it is required that the individual retailers are more agile than instructions from central office."

Lastly, it's important to emphasise that a high level of organizational control was not necessarily seen by the managers as a disadvantage from the interviewees:

Store F: "I contact central office if I have problems and they are supposed to solve it."

However, the general tendency among the interviewees was that high level of organizational control, and low level of empowerment from the organization has prevented store managers from coming up with any proposal for a crisis preventive measure in the store.

6 Discussions

6.1 Revisiting research questions

This study aims to bring out the perspective of Swedish grocery store managers in a contingency. The collected data has been analysed with the help of the Gioia method and resulted in three aggregate dimensions of topics discovered in the interview:

- Issues enhancing stock-outs in a crisis.
- In-store stock-out prevention in a crisis.
- Store managers empowerment from the organization in a crisis.

All the dimensions were found relevant to answering the research questions. Each dimension could be represented with second order themes depicted in the table “Overview of data structure created with the Gioia method” (Fig 3).

The empirical analysis of the first aggregate dimension has identified main issues enhancing shortages in case of emergency. Grocery store managers are concerned with four main issues that can aggregate stock-outs in a crisis event. Firstly, it's an uncontrolled increase of demand, caused by consumer panic buying and hoarding behavior. The second issue is supply-side risks, due to not being able to deliver goods in the grocery stores in a crisis. Followed by the increased usage of lean techniques in the modern SC is another cause of possible stock-out in times of uncertainty. According to the store managers' perception, JIT practices have substantially increased lately both with suppliers and retailers. Relevant literature presented in detail in the literature review section, describes that modern lean SC philosophy, applying inventory minimizing practices, makes retailers and consumers more vulnerable in time of uncertainty. The last issue enhancing shortages in a crisis, according to grocery store managers perception, is that reordering practices in the grocery stores are highly automated and managers cannot control the abrupt disruptions with their initiatives. Previous research suggests, when automatic reordering system in combination with panic buying behavior in a crisis causes too high demand pulling and results in costly and disruptive bullwhip effect. It raises

product shortage and labor expenses, costs of supply chain stabilization, while the sales in the long run remain the same (Ovezmyradov, 2020).

After identifying relevant risks to stock-out of supplies in the grocery retail stores, the study has got closer to answering the first research question.

RQ1: What risks to stock-out of supplies can be mitigated in the grocery stores in a crisis event, according to grocery store managers perception?

To answer the first research question, identified risks to stock-out of supplies in a crisis have been further prioritised, based on what is seen to be in-control for grocery store managers. Empirical analysis identified two main risks that grocery store managers are being able to partially mitigate by an in-store crisis response:

- Panic buying and hoarding behavior - the main risk for shortages, due to excessive demand.
- Risks on the supply side, due to suppliers not being able to deliver goods in the event of a crisis.

Panic buying behaviour is described as social phenomenon that usually provoked by disaster, major crisis or adversity, results in imbalance between supply and demand and has no clear explanation of occurrence (Arafat et al., 2020). Main reasons for consumer panic buying could originate from a feeling of fear and anxiety (Ahmadi et al., 2022), a response to perceived scarcity and low on-shelf-availability (Gupta and Genry, 2019; Parker and Lehman, 2011) or a way for a customer to regain control and sense of safety (Kirk and Rifkin, 2020; Billor & Anisimova, 2021).

The interviews have shown that there are no settled routines or crisis response practices for mitigating panic buying in Swedish grocery stores. Researchers suggest, that in the initial and the most crucial stage of panic buying, retailers normally practice a “wait and see” strategy (Herbon & Kogan, 2022). This reaction to a crisis can be undesirable for both consumers and retailers. Empirical findings reveal that in the worst-case scenario, combining consumer panic buying behavior and suppliers not being able to deliver goods in a crisis, it will take 2 to 4 days before the shelves

will become empty for the most vital types of goods. Panic buying behavior has highly undesirable consequences not only for the consumers. For retailers too high demand pulling may result in lost revenues due to SC disruption, inefficient transportation and excessive inventory holding (Lee et al., 1997).

Next step was finding the answer to the next research question:

RQ2: What stock-out preventive measures can be implemented in the grocery stores in a crisis event, according to grocery store managers perception?

The empirical analysis of the second aggregate dimension in the Gioia method has indicated two main stock-out prevention measures in a crisis:

- Setting purchase limits (maximum number of purchases per customer), to mitigate consequences of panic buying behavior in the store.
- Approaching alternative suppliers, to secure delivery risks on the supply side.

Both crisis-prevention practices could be applied by the grocery store managers locally in the stores to secure continuity of the operations in a crisis event to serve consumers essential needs. Setting purchase limits has evoked different reactions from the interviewees. Even though managers realised retailer's important societal role in a crisis, only some of the respondents would consider applying purchase limits. The main concern among respondents has been the loss of potential profit. The best way to avoid losses from panic buying and stockpiling behavior is to announce "zero-panic-buying policy", already when shock is expected to arrive (Schmidt et al., 2023). Previous research suggests that purchase limits benefit both altruistic and profit-maximizing types of retailers. Applying purchase limits during shortages can serve the purpose for altruistic stores, seeking to satisfying egalitarian goals and reducing unfair distribution, but even beneficial for profit-maximizing stores, as it may increase store traffic and sales from unexpected items, consumer surplus and overall profitability during the shortages (Moon & Shugan 2022).

The second stock-out prevention practice that can be done locally in a store, according to grocery store managers' perception, is approaching alternative suppliers

in a crisis. The use of backup suppliers has been identified as an effective crisis management practice to secure delivery risks on the supply side. According to Faisal et al., (2006), the essential drivers of mitigating supply chain risks are supply's chain agility, trust, information sharing and collaborative relationship. Shekarian et al., (2020) suggest that finding the right trade-off between flexibility and agility increases businesses resilient to future supply chain disruptions.

Lastly, the answer to the third question is identified.

RQ3: What constraints grocery store managers from applying stock-out prevention practices in a crisis event?

The research highlighted that store managers have different degrees of freedom to act against the threat of a potential crisis in different store chains. Those differences have been depicted by the third aggregate dimension in Gioia method and suggests that level of empowerment store managers have in crisis varies for different retail organisations. While some retail chains provide a high level of freedom and flexibility for store managers, others have a high level of organisational control, which makes store managers less empowered to suggest crisis prevention initiatives in their retail organisations. The general tendency is that the degree of freedom and control the store managers experienced was determined by the ownership structure in the retail firm. In a crisis event the level of store managers empowerment may determine the effectiveness of crisis response. The right combination between control and freedom in the organisation- store manager interaction, can become crucial for effective crisis management practices.

6.2 Conclusion

Referring to research findings, the level of empowerment store managers have from the organisation can influence the effectiveness of the in-store crisis response. There are different degrees of freedom when it comes to implementation of stock-out preventive measures in-store for different retail chains. In a crisis event the level of store managers empowerment by the organisation may determine the effectiveness of local crisis response. The empirical analysis suggested two stock-out preventive

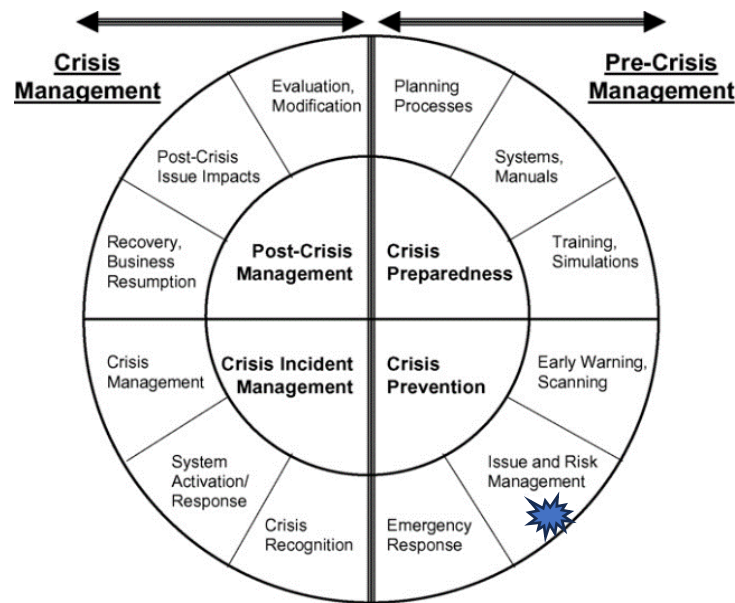
measures that Swedish grocery store managers can implement in a crisis. Firstly, is setting purchase limits, to mitigate the effect of consumer panic buying behavior. Purchase limits awoke a different reaction from the store managers. Interviewees driven by altruistic concerns considered applying purchase limits in crisis to provide enough food and express solidarity with all members of community. Those interviewees who had strong profit-maximizing concern, would not consider applying purchase limits on their own initiatives, with a fear that it may affect store brand name and store profitability. One more stock-out preventive measure discovered was enabling store managers to approach alternative suppliers in a crisis, to mitigate risks of shortages on the on the supply side. In contrast to applying purchase limits, this measure has a high level of control from the central office for the most of interviewed organisations and store managers in different retail firms are differently empowered to contact alternative suppliers in case of a crisis. There is a general tendency that ownership structure in the organisation determines the level freedom to contact alternative suppliers in an emergency.

6.3 Theoretical contribution

This thesis contributes to the existing crisis management research by bringing practical approach to crisis management research (Oscarsson, 2022; Feldman & Orlikowski, 2011), highlighting situated practices that are typical for the context.

Here the perception of grocery store managers and the stock-out practical solutions to crisis preventing in the grocery store is in focus. Revisiting the crisis management theoretical framework by Jaques (2007), this study had its initial focus on crisis prevention stage in the model. Empirical findings are beneficial for developing crisis prevention stage for the grocery retail stores, with a micro focus on issue and risk management cluster.

The Issue and Crisis Management Relational model.



Crisis prevention- issue and risk management cluster:

Described by Jacques (2007) by three main activities: risk identification, risk prioritization and strategy development. Empirical findings used in the research could further enrich the model for a typical context of stock-out prevention in retail grocery stores.

Risk identification:

- Risks on the demand side of the SC, due to panic buying and hamstring.
- Risks on the supply side of the SC, due to not being to deliver goods in a crisis.
- JIT logistics, minimisation of inventory holding in a crisis.
- Auto-reordering systems, not being able to apply CM response efficiently.

Risk prioritisation: prioritised based on risk control factor, only factors that store managers can influence are considered.

- Risks on the demand side of the SC, due to panic buying and hamstring.

- Risks on the supply side of the SC, due to not being to deliver goods in a crisis.

Strategy development: this stage can be enriched by situational practises, discovered in the research.

- Setting purchase limits.
- Approaching alternative suppliers.

6.4. Managerial implications

This thesis could be useful for crisis management teams at retail organisations and policy maker organisations, as it brings focus on the grocery store manager as an active agent of a crisis prevention and response in retail branch. Heart et al., (1993) suggest that centralised decision making in contingency planning have serious drawbacks, when it comes to making time-pressured decisions. Understanding what routines could be implemented locally in the grocery store as well as possible implementation constraints can make crisis management practises in the organisation more effective. Situational crisis management practises performed locally can facilitate agility and flexibility of organisations in a crisis (Ohrling et al., 2022).

Bearing in mind retailers' important societal role in a crisis, decision makers should consider organisational constraints that grocery store managers have in a contingency. For instance, to empower store managers for effective crisis response practises, organisation may reconsider the level of freedom managers have to contact alternative suppliers in a crisis. When it comes to setting purchase limits, policy makers should be aware of the purchase limits "dilemma", when egalitarian goals meet profit maximisation concerns for the retail store managers.

6.5 Limitation and future research

Limitation of the study is that it can be hard to generalise it to the larger population and only depicts the perspective of grocery store managers. To bring a broader view on the topic, the further research with supply chain managers and crisis management teams of popular Swedish grocery chains could be beneficial. Another way to increase generalisability of the study is conducting future research with the focus on customer perspective, for instance considering attitude to crisis-prevention and emergency food storage in Swedish households. There are a few more aspects that could be developed in the future. The aspect of centralised and decentralised crisis response in the retail organization that needs more attention. Is it more effective in crisis to have all decisions made by the central office, or certain level of decentralisation of crisis decision making could be beneficial? What level of freedom and control is optimal for store managers to feel empowered by their organisation in crisis?

Here the problem of stock-outs in crises is developed, however there are many more threats for retail operations. During the interviews store managers were asked to name their biggest fear that would disturb continuity of operations. The most popular answer was threat from the cyberattacks and not being able to pay in-store. Therefore, I would suggest that threat of cyberattack may need more attention from the researchers and the practitioners when it comes to preparing, preventing, and mitigating the consequences of the issue.

Appendix 1. Scenario and main research questions.

Scenario

Imagine there is a major crisis happening. For example, Putin have decided to attack Sweden. People in panic rush in your store to stockpile supplies. The situation is very uncertain. You don't know if you will get new deliveries or how stable your operations will be in the future.

Having in mind scenario written above, please answer the following questions:

1. In case you don't get new deliveries, how many days do you expect it to last before shelves will become completely empty?
2. What would you do to prevent stock-out of supplies in case of crisis described in the scenario above?
3. Do you have any routines in case of stocks-out due to emergency?
4. Do you have any emergency suppliers?
5. Do you have any early warning monitoring system?
6. How do you reorder your supplies?
7. In case of described emergency, what products do you expect to disappear from the shelves first?
8. What can you do in case of panic buying behavior in the store?
9. What was the longest time you had stock-out problem? For which products?
10. Are there any differences in logistics before and after pandemics?
11. Do you store more supplies in the grocery store after pandemics?
12. Are there any products you can order from suppliers directly?

Appendix 2: Interview Sample.

Interview number	Grocery store	Interviewee role	Interview place	Interview length	Interview date
1	A	Store manager	In-person, In the store	20 min	28-02-2024
2	B	Store manager	In-person In the store	20 min	04-03-2024
3	C	Store manager	In- person In the store	20 min	04-03-2024
4	D	Store manager	Digital	26 min	07-03-2024
5	E	Store manager	Digital	24 min	07-03-2024
6	F	Store manager	In-person In the store	20 min	07-03-2024
7	G	Store manager	Started in-store, continued via mail	-	12-03-2024
8	H	Store manager	In- person In the store	20 min	09-04-2024
9	I	Store manager	In-person In the store	20 min	09-04-24
10	J	Store manager	Digital	28 min	09-04-24

Appendix 3. Use of Artificial Intelligence.

The AI has not been used with regards to this study.

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