Co-operatives in times of crisis

Crisis management for co-operatives in the agricultural sector

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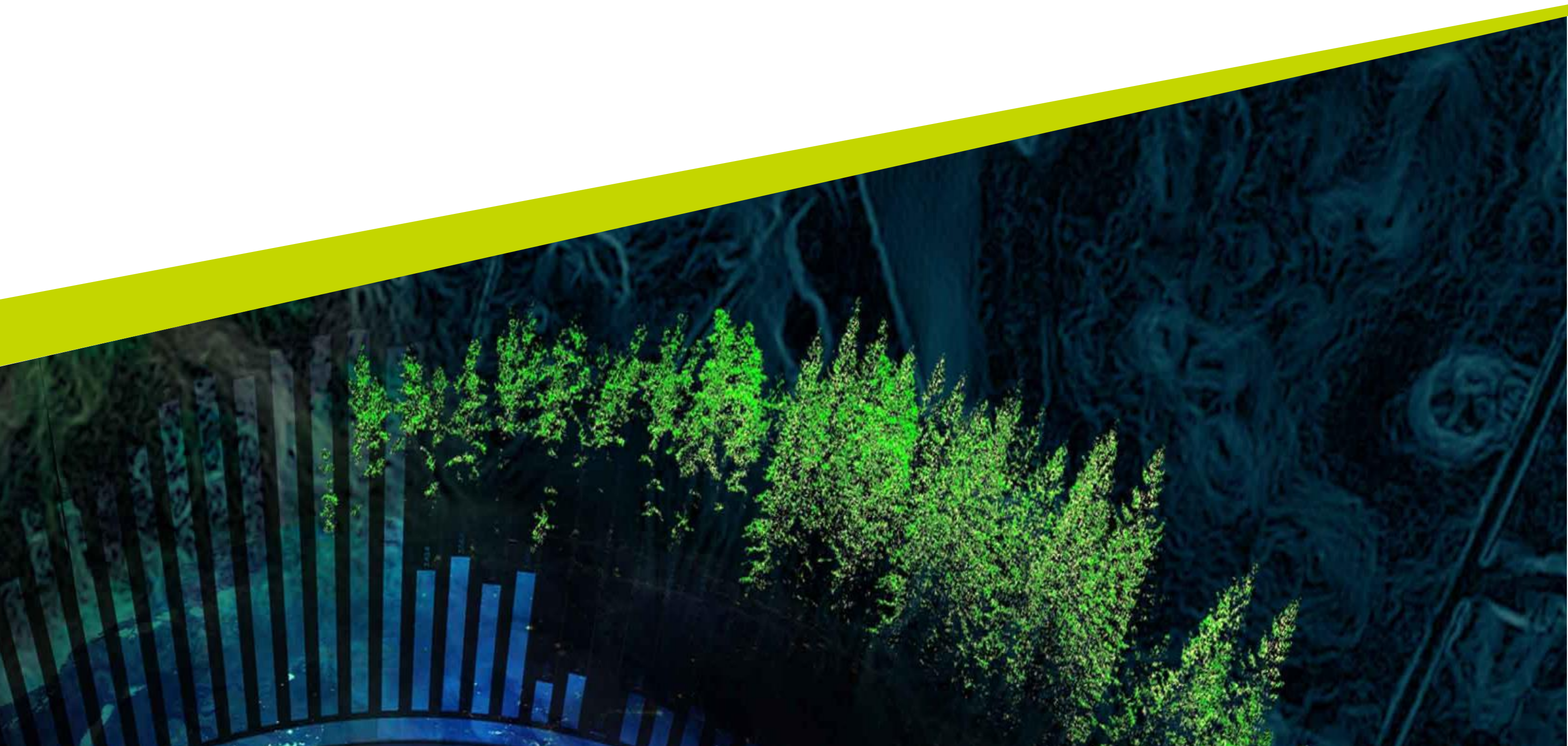

Co-operatives in times of crisis. Crisis management for co-operatives in the agricultural sector

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Abstract

In recent times Sweden has faced several crises beginning with the drought in 2018, Covid-19 during 2019-2022, and finally the war in Ukraine. All these three crises have and will affect the Swedish agricultural sector in different ways. Since we now see that crises can and will continue to happen it is important to see how the agricultural sector handle crises and how resilient it is. Since most Swedish farmers are connected to one if not several of Swedish agricultural co-operatives, it is of importance that the co-operatives which buy and sell agricultural products are resilient themselves towards crises. The goal for this study is to understand how co-operatives in the agricultural sector decide on strategies and if there are any differences in decision making and crisis management between a large co-operative and a smaller one. In order to do this the study is a comparative case study between Lantmännen (large co-operative) and Varaslättens Lagerhus (mid-sized co-operative). The data used to do this study was gathered via interviews with Patrik Myrelid, strategic manager at Lantmännen, and Karl Dehlin, CEO at Varaslättens Lagerhus. The focus of this study is to answer the research question: "What are the different strategies for dealing with crises for two co-operatives of different size?". In order to analyse the data that was gathered the study involves four main theories that are used in the analysis, these theories are: Co-operative theory, SWOT analysis, decision theory, and contingency theory. The analysis showed a number of similarities between the two co-operatives, the main point that was noted was however that both co-operatives are fast to swap their decision-making process in times of crisis to facilitate faster and more adaptable decisions, to increase their resilience and easier handle the uncertain environment that exists during a crisis.

Keywords: Co-operative, crisis, agriculture, decision theory

Sammanfattning

På senare tid har Sverige mött flera kriser, till att börja med torkan 2018, Covid-19 under 2019-2022 och slutligen kriget i Ukraina. Alla dessa kriser har och kommer att påverka den svenska jordbrukssektorn på olika sätt. Eftersom vi nu ser att kriser kan och kommer att fortsätta är det viktigt att se hur vår jordbrukssektor hanterar kriser och hur motståndskraftig den är. Eftersom de flesta svenska lantbrukare är anslutna till ett eller flera svenska lantbrukskooperativ är det viktigt att de kooperationer som köper och säljer lantbruksprodukter är motståndskraftiga mot kriser. Målet för denna studie är att förstå hur kooperativ inom jordbrukssektorn beslutar om strategier och om det finns några skillnader i beslutsfattande och krishantering mellan ett stort kooperativ och ett mindre. För att göra detta är studien en jämförande fallstudie mellan Lantmännen (stort kooperativ) och Varaslättens Lagerhus (medelstort kooperativ). Den data som användes för att göra denna studie har samlats in via intervjuer med Patrik Myrelid, strategisk chef på Lantmännen, och Karl Dehlin, VD på Varaslättens Lagerhus. Fokus för denna studie är att svara på forskningsfrågan "Vilka är de olika strategierna för att hantera kriser för två kooperativ av olika storlek?". För att analysera den data som samlades in involverar studien fyra huvudteorier som används i analysen, dessa teorier är: Kooperativ teori, SWOT-analys, beslutsteori och beredskapsteori. Analysen visade på ett antal likheter mellan de två kooperativen, huvudpoängen som noterades var dock att båda kooperativen är snabba med att byta ut sin beslutsprocess i kristider för att underlätta snabbare och mer anpassningsbara beslut, för att öka deras motståndskraft och lättare hantera den osäkra miljö som finns under en kris.

Nyckelord: kooperativ, kris, lantbruk, beslutsteori

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Abbreviations

LRF	Lantbrukarnas Riksförbund (Federation of Swedish Farmers)
IOF	Investment-Owned Firm
SLU	Swedish University of Agricultural Sciences
SWOT	Strengths, Weaknesses, Opportunities, Threats

1. Introduction

The introductory chapter presents a problem background, previous studies and culminates in problem formulation, aim and research question. The chapter then ends with delimitations, choice of theory and the disposition of the essay.

1.1 Problem background

In recent years one crisis has succeeded the next, and it has had an impact on Sweden's agriculture. There was the drought of 2018, which caused a massive decrease in harvest. Due to the increase in climate change, these types of extreme weather conditions might become progressively common (Zanocco et al 2018). In 2019 the Covid-19 pandemic spread through the world effecting all humans and businesses.

Then came Russia's invasion of Ukraine which has led to a decrease in production and export of wheat (LRF 2022a). This has had consequences for the global grain market since Ukraine is the 7th largest grain exporter in the world (Jordbruksverket 2014). Another effect of the conflict is the current energy crisis (LRF 2022b) which has led to an increase in prices of electricity and fuel (Jordbruksverket 2022). Seasonal workers usually come to Sweden from Ukraine every year (LRF 2022b), 1,600 Ukrainian workers who were contracted for agricultural work during 2022 were not able to do so because the Swedish immigration board did not grant them access to cross the Swedish boarder. This was motivated by the suspicion that they would not return to Ukraine because of the war (Gustafsson 2022).

When Russia attacked Ukraine, there was a sharp rise on the price of fertilisers as Moscow stands as one of the world leaders in natural gas production which is a key ingredient in nitrogen fertilisers. In addition to this, prices already saw high levels before the war due to droughts and pandemic hoarding behaviour. According to Financial Times (2023) the prices of fertilisers and crops have fallen since the peak when Russia attacked Ukraine. Still specialists in the agricultural sector warn that the food sector and supplies still stands under threat. After this the prices came down with the Black Sea grain deal, but experts still warn that the deal is fragile and can unravel in the blink of an eye. John Baffes, agricultural economist at the world bank said to Financial Times (2023):

> It's like flying with one engine, as long as that engine works it's fine, but if the engine stops then you have problems... if any of [these risks] materialise we'll see a [rise in prices] very, very quickly.

The Black Sea grain deal between Russia and Ukraine is meant to uphold Ukrainian grain export as well as Russian food and fertilisers to the global market (UN n.d). The grain deal will make sure that trade ships are guided through safe non-mined areas of the Black Sea so that trade can continue and minimise the impact of the war so that famine can be kept at bay and keep food prices from spiralling. The deal between Moscow and Kyiv is going to be renegotiated in March 2023, if that deal would fail, we will probably see a rise in prices again (Financial Times 2023). Since then, the deal has been extended in short increments which shows the uncertainty of the market for the future (Politico 2023).

In times of international crisis, the need for self-sufficiency in the agricultural sector increases. When several of the world's largest agricultural exporters' stock levels are at their lowest point in ten years (LRF 2022a) it is increasingly important to secure the domestic supply of food. In order to do this, the Swedish government launched a revised food policy that puts an emphasis on local production and food supply. It should establish requirements for those involved in the chain to boost their competitiveness, contribute to enhanced sustainability, promote goods made in Sweden, increase overall food production, and lessen our susceptibility in the event of a crisis (Regeringskansliet 2023).

It is challenging for farmers to set fair prices for agricultural goods because farmers are typically smaller players in the market. This is because the purchasers can encourage competition between the farmers by making offers to a number of them. Creating farmer co-operatives is one way to address this issue and enable them to jointly establish prices and earn a fair wage. In times of crisis agricultural co-operatives faces different types of challenges than Investor-Owned Firms (IOFs) (Abate et al 2014).

Countries, like Sweden, that are dependent on import are more vulnerable in times of crisis when there is a decline in global trade and an increase in prices of commodities (Mizik 2021). The question then becomes what can and should be done as to counter act it.

1.2 Previous studies

Humanity has seen multiple agri-food related catastrophes over the past 20 years. The several animal related pandemics, such as swine flu, foot-and-mouth disease, avian influensa, African swine fever, etc. were the most significant ones. Global crises include the 2014 EU sanctions against Russia and the 2007–2008 global financial crisis (Mizik 2021).

During the world economic crisis in 2008 the agricultural sector experienced a significant slowdown from the perspectives of demand, caused by the decline in household purchasing power. This reduced trade flows, and agricultural incomes, caused by the sharp decline in producer prices brought on by the significant imbalances between supply and demand. Crescimanno et al. (2014) link the cause of this increase in vulnerability to the increased involvement of the agri-food industry in both the global economy and the financial system. Despite this, the study shows that the agri-food industry has, overall, resisted the crisis, as can be shown by a comparison between the total trade flows and those of the agri-food items (Crescimanno et al. 2014). Mizik (2021) partially credits this to the fact that the greater supply chain flexibility and, in the case of countries in the EU, the tightly integrated EU markets seem to make the agri-food sector more resilient to crises.

Producer co-operatives, which have historically been very conservative in their profit practises, appear to be better prepared to handle the prolonged recession than their profit-maximising competitors. According to a study of Italian co-operatives by Delbono & Reggiani (2013), co-operatives considerably increased their own equity rather than paying out sizable dividends to their members during "good" years. Such a mindset enables co-operatives to safeguard members more successfully during "bad" years than businesses that historically paid out sizable dividends to their stockholders.

In general, countries that produce a surplus of agricultural goods saw a decrease of producer prices, whereas countries with food shortages saw price increases or a decline that was not as significant as in surplus countries (Hamulczuk & Skrzypczyk 2022). This shows that even though it is unfavorable for the nation as a whole, crises and especially trade restrictions can have economic benefits for farmers in countries that rely on import of agricultural goods.

Birchall & Ketilson (2009) have studied the resilience of co-operatives in times of crisis. The focus of their study was the financial sector after the 2008 banking crash. What they noticed was that co-operatives in several sectors managed to withstand the global financial crisis and some even made a profit which most investor-owned firms (IOFs) did not manage to do. The main factors to why co-operatives hold such a high resilience is, according to Birchall & Ketilson (2009), that the co-operative form of enterprises is more risk-averse and do not seek out profit for investors and bonuses for managers in the same way as an IOF would. This makes the co-operative more sustainable and better adapted to handle crises in any form.

1.3 Problem statement

In recent years, Sweden's agriculture has been affected by a variety of crises, including the drought of 2018, the Covid-19 pandemic, and Russia's invasion of Ukraine. This has had a negative impact on the global grain market, as Ukraine is the 7th largest grain exporter in the world. Additionally, the current energy crisis has led to an increase in prices of electricity and fuel, and 1,600 Ukrainian workers who were contracted for agricultural work were not able to cross the Swedish border due to the suspicion that they would not return to Ukraine. Despite this, the prices of fertilisers and crops have fallen since the peak when Russia attacked Ukraine, but experts warn that the food sector and supplies still stand under threat. The Black Sea grain deal between Russia and Ukraine is meant to uphold Ukrainian grain export and Russian food and fertilisers to the global market. It will ensure that trade ships are guided through safe non-mined areas of the Black Sea and minimise the impact of the war. In times of international crisis, the need for self-sufficiency in the agricultural sector increases, making it important to secure the domestic supply of food. Farmer co-operatives are one way to address this issue and enable farmers to jointly establish prices and earn a fair wage. This study aims to understand how co-operatives in the agricultural sector decide on strategies and if there are any differences in decision making and crisis management between a large co-operative and a mid-size one.

Previous studies show that agri-food-related catastrophes have occurred over the past 20 years, including the 2014 EU sanctions against Russia and the 2007–2008 global financial crisis. Despite this, the agri-food industry has been resilient, partially due to greater supply chain flexibility and tightly integrated EU markets. Producer co-operatives have also been better prepared to handle the prolonged recession than their profit-maximising competitors. Delbono & Reggiani (2013) found that Italian cooperatives increased their own equity rather than handing out dividends during "good" years, allowing them to safeguard members more successfully during "bad" years. Birchall & Ketilson (2009) studied the resilience of co-operatives in times of crisis and found that they were more risk-averse and did not seek out profit for investors and bonuses for managers. This makes them more sustainable and better adapted to handle crises in any form. There are however few studies that research the difference of crisis management between co-operatives of diffident sizes, which is what this study aims to do.

1.4 Aim and research question

The aim in this study is to understand how co-operatives in the agricultural sector decide on strategies and if there are any differences in decision making and crisis management between a large co-operative and a smaller one. The study strives to achieve this with the help of the following research question:

- What are the different strategies for dealing with crises for two co-operatives of different size?

1.5 Delimitations

In this study some delimitations have been made. The two co-operatives that take part in this study are mainly active on the Swedish market, they are Varaslättens Lagerhus being a mid-size grain co-operative, and Lantmännen being Sweden's largest co-operative mostly focused on grain. The large co-operative, Lantmännen, can be seen as the largest farmer co-operative in Sweden with some interest in international markets, the mid-size co-operative, Varaslättens Lagerhus, can be seen as a local farmer co-operative that focuses on farmers in its direct area. This study has also chosen to do one interview per co-operative with a person of interest regarding strategic choices within their respective co-operative. These delimitations have been done with the scope and range of the study in mind.

1.6 Disposition

The essay will be divided into six different chapters. The first chapter, introduction, we have now passed and here we have introduced the problem formulation and background. The next chapter is the theory where we present the theories that form the basis of our thesis. The third chapter is the method chapter where we will write about the methods we have chosen and why they are relevant for the thesis research question. The fourth chapter is the empirical study in which we will present the two co-operatives of our research and a summary of the interviews conducted with a representative from each co-operative. The fifth chapter presents the results. Using the selected theories, we will analyse the empirical data, leading us to the findings of this study. The analysis will be structured according to our theories. This chapter will also include a comparative analysis of the two co-operatives. At the end of chapter five there is a discussion about previous studies and their findings. The sixth and final chapter is the conclusion, where we will summarise what we have learned. The conclusion also discusses examples of future research on the subject. We also discuss what the reader might learn from the report.

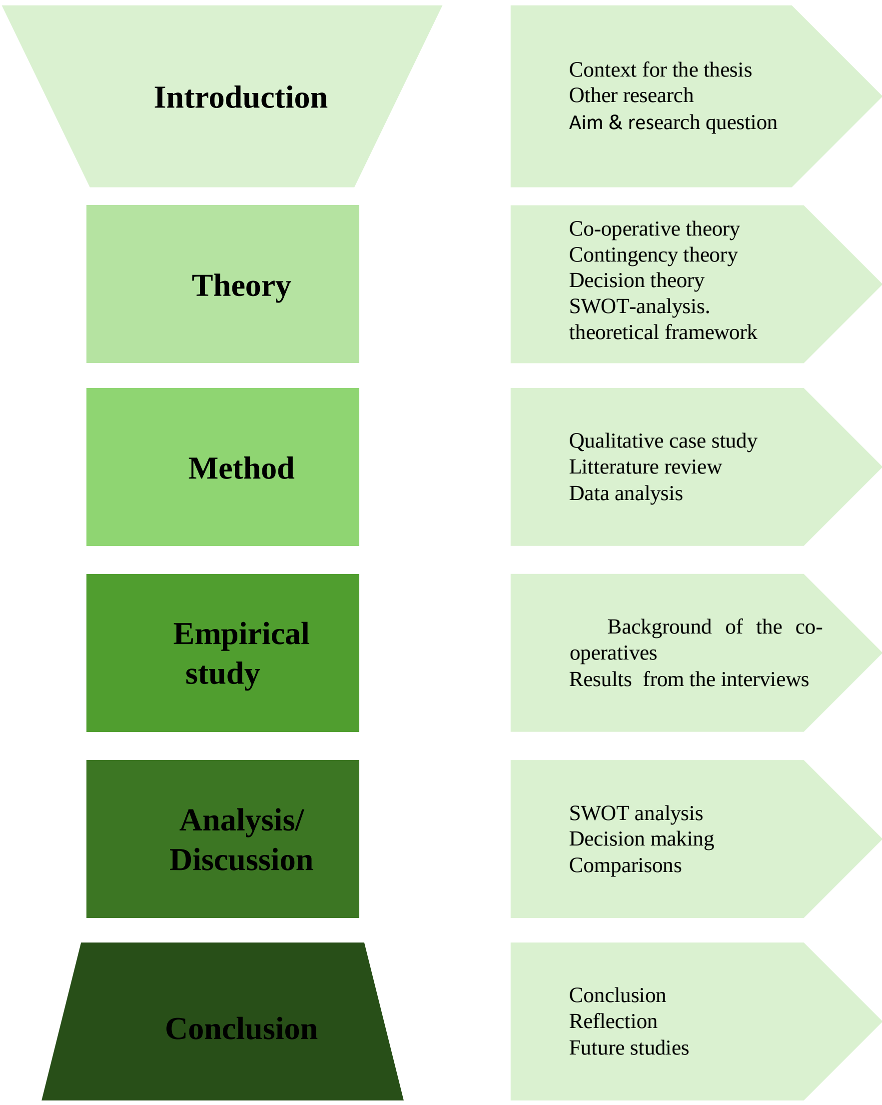

Figure 1. Disposition of thesis

2. Theory

In this chapter, the theory used in the work is presented to increase the understanding of the study and in-depth analysis. The theories presented in the chapter are co-operative theory, decision theory, contingency theory and SWOT analysis. The chapter ends with a theoretical framework.

2.1 Co-operative theory

How co-operatives in Sweden are formed and governed is regulated by law (2018:672). A co-operative is a form of economic association that has a democratic foundation, meaning one member one vote, this makes it so the members have equal power in the co-operative regardless of how large an actor they may be. The basis for a co-operative is to accommodate its members social and financial interests. Agricultural co-operatives in western Europe and the USA were first established as service providers for their members strengthening their market power against the retail sector, as well as reducing the risk that the members had to take (Abate & Francesconi 2014). Dunn (1986:83) tells us that *"The basic philosophy underlying all cooperative action is that through joint effort and mutual self-interest individuals may collectively achieve objectives unattainable by acting alone."* which describes the co-operative foundation. Dunn (1986) tells us that a unique part of the co-operative form of organisation, is the distinctive relationship between the user (farmer) interests to ownership and control interests, this since the users and the owners are the same persons. From regarding the special relationships that occur in a co-operative Dunn (1986:85) formed three main principles for co-operatives:

> The User-Owner Principle: Those who own and finance the cooperative are those who use the cooperative.
>
> The User-Control Principle: Those who control the cooperative are those who use the cooperative.
>
> The User-Benefits Principle: The cooperative's sole purpose is to provide and distribute benefits to its users on the basis of their use.

Continuing these three principles that further the understanding of the relationships in a co-operative Dunn (1986:85) formulates a definition of co-operatives "A *cooperative is a user-owned and controlled business from which benefits are derived and distributed on the basis of use.*" The three principles are closely connected, the first two user-owner and user-control both determine the interests of the co-operative organisation. The third one user-benefits principle declares the purpose of a co-operative organisation.

2.2 Decision theory

Decision theory examines how a person or organisation may or will choose between one or more options depending on their preferences and beliefs (Lunenburg 2010). Decisions are made subjectively since they are based on personal preferences, they will thus vary depending on who makes them. Decision theory is generally divided into two subcategories the normative and the descriptive (Kaufmann & Kaufmann 2016).

2.2.1 Normative theory

The normative ideas of rational behaviour are the foundation of the philosophy on which the normative type of decision theory is based (Lindqvist et al. 2014). Its foundations are found in economic theory and the concept of "the economic man," a well-known hypothesis based on examinations of consumer behaviour (ibid.). It holds a rather strict regimen, often holds a top-down management style, meaning all decisions has to come from the top of the organisation, and also follows certain steps, evaluation, ranking and utility maximising. These are the pillars of the normative approach and tries to explain how a decision should be made. The normative theory often requires the decision maker to have full knowledge and take certain steps which can be time consuming, this can then in reality become difficult since the decision maker will not have time to gather all the information needed to make a rational decision (Kaufmann & Kaufmann 2016).

The so-called "rational choice model" and other normative models assume that there is a best-case scenario for how decisions should be made in order to determine which options or alternatives produce the best results (Edlund et al. 1999). The model works under the assumptions that the process of decision is linear, meaning that you follow a certain path and go from point A to B to C (Edlund et al. 1999). In the rational decision theory, the decision maker enters the market with the notion of making the most amount of money or capital possible without taking sentimental values of any kind into account (Lindqvist et al. 2014). The rational decision-maker has a clear idea of what he wants and waits to act until he has a complete and utter understanding of all his variables and viable alternatives. Additionally, the paradigm posits that the decision-maker is content with his choice (ibid.). Normally a rational decision-maker follows the following steps: Makes a decision out of several alternatives, then ranks all possible outcomes, the decision chain follows a linear path A>B>C not A>D>B, the decision is maximising utility, and the outcome is the same if all is repeated (see figure 2).

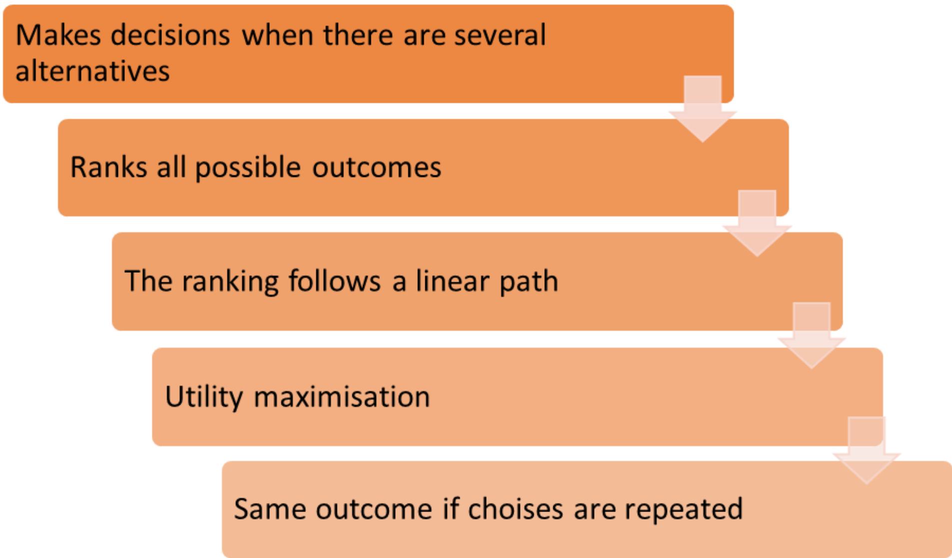

Figure 2. Steps of the rational decision maker (Lindqvist et al. 2014. Own design).

2.2.2 Descriptive theory

The second approach, which is the descriptive one, does not try to explain how one should make a decision rather how decisions actually are done in practise (Kaufmann & Kaufmann 2016). It focuses more on how decision makers adapt to a situation that is happening, rather than planning all the steps to come, like in the normative approach (Nemkova et al. 2012). In contrast to the normative theory, the descriptive one instead assumes that the market is more dynamic, and that the decision maker does not have the time or the capacity to gather and understand all of the information given. Instead, the descriptive theory puts more weight on the individual and its preferences and behaviour, this in turn can make the process at least as complex if not more than the normative theory (Brunes 2005). One thing that differs between the two is that the descriptive theory does not necessarily strive to achieve the decision with highest utility, instead one can settle for a decision with a good enough result (Edlund et al. 1999).

2.3 Contingency theory

Contingency theory argues that the “best way” to solve a problem is dependent on several factors such as the environment, the people, technology, and the goals of the organisation (Lartey 2020). Older theories often argue about “the best way” regardless of the situation, contingency theory, however, instead argue that the “best way” depends on the uncertainty and instability of the environment in which the organisation operates. Contingency theory stands in contrast to others with the notion that “the best way” differs from situation to situation. While other theories might put forth a certain managing style, contingency theory argues that the idea of a single managing style is futile and instead one should opt for different managing styles for different situations. The basis for contingency theory is situational decision making. This theory is newer than the ones brought up earlier, it is based on the descriptive theory but takes the ideas of flexibility and situation approach to the next level.

The way that contingency theory regards organisations is with an open system view of the organisation. The whole organisation is made up of several interdependent parts that together makes a whole, the organisation is then also interdependent on the environment in which the organisation operates. The organisation is regarded as both uncertain and rational at the same time, meaning that the organisation continually is faced with uncertainty while also being subjected to rational criteria. From this, contingency theory suggests that the organisation is a complex system built up by several interdependent subparts that all work together to create a whole. (Lartey 2020)

Companies need to understand the difference between a stable environment and a dynamic one if they want to achieve a balance between their internal and external situations (Kessler et al. 2017). Either a mechanical structure or an organic one is adopted by the organisation. Less people are engaged in the mechanical structure's decision-making and planning processes, which makes it more suitable for stable surroundings (Kessler et al. 2017). The organic systems, on the other hand, are decentralised, involve a wider range of individuals in decision-making and strategic planning, and this kind of management system or structure is suitable for the dynamic situations (Kessler et al. 2017).

As previously stated, contingency theory emphasises that no single ideal structure exists that perfectly satisfies all circumstances and instead takes an open and logical approach to the organisation's structure. As a result, the degree to which the operational environment is changeable dictates how the organisation should be built to meet the demands of this environment (Lawrence & Lorsch 1967).

2.4 SWOT analysis

The SWOT analysis is a well-known tool for making decisions within an organisation. In order to simplify the decision process, the SWOT analysis divide the process into four categories: S- strengths, W- weaknesses, O- opportunities, and T- threats. These four categories are then in turn sorted into positives and negatives with strengths and opportunities being positives and weaknesses and threats being the negatives. SWOT is also categorised into internal and external factors, with strengths and weaknesses being internal factors, which is factors that can be identified within the organisation, opportunities and threats being external factors, which is factors that affect the organisation from outside the organisation. (Lindkvist et al. 2014)

With the help of a SWOT analysis, one can create a comprehensible snapshot of an organisation and thus creating a solid foundation to stand on when attempting to make a decision for the organisation (Lindkvist et al. 2014). The following figure is a representation of a classic SWOT model.

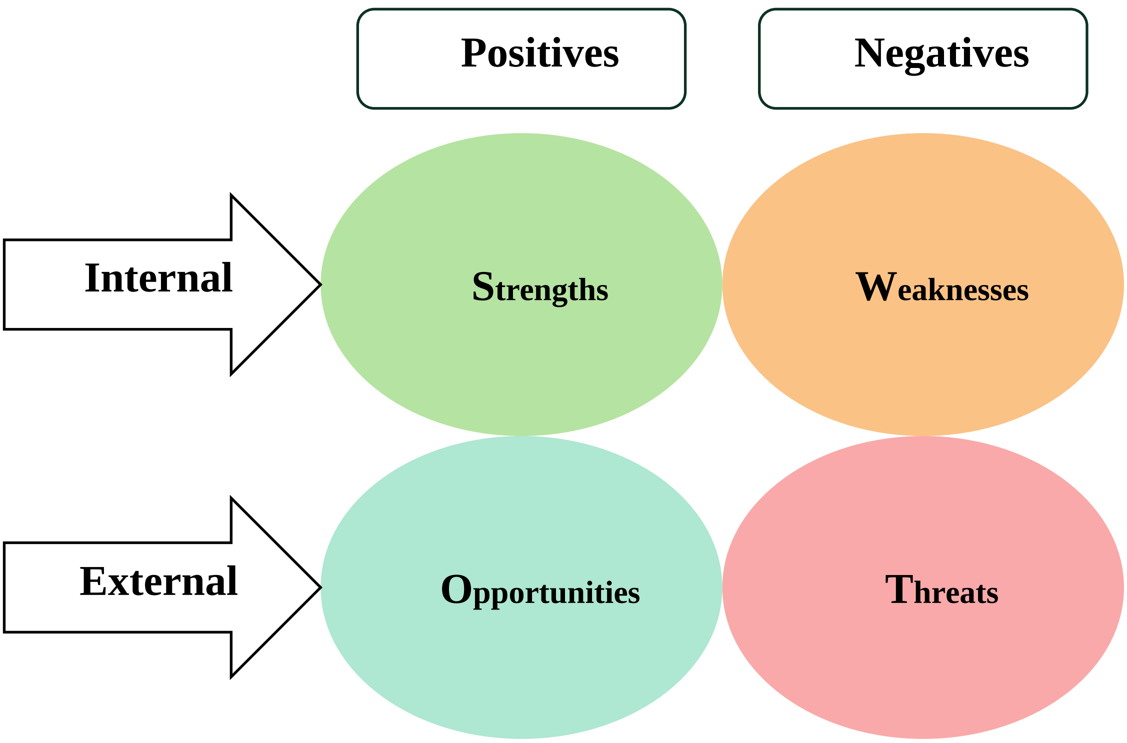

Figure 3. SWOT model (Lindkvist et al. 2014) own creation.

2.5 Theoretical framework

We start of our theoretical framework with the basis behind co-operatives, this is done so that we can understand the fundamental ideas behind a co-operative and in that way understand the beginning of how decisions are made within a co-operative. To further understand how the co-operatives operate and how the environment that they operate in function we will use a SWOT analysis to analysis different possibilities or obstacles that might affect them when making decisions. When we have understood the co-operatives by looking at them as co-operatives and applying a SWOT analysis to them, we will use decision theory to understand what they are doing and how their decisions are made. Mostly we will be using the descriptive theory which is more situational based and more suitable for the co-operatives in question. To further the usefulness of decision theory which in some cases can be seen as old and outdated we will apply contingency theory which is more suited to be used in an environment that is ever changing which is the case in times of crisis. The three decision theories that are being used in this study, normative, descriptive and, contingency will be treated like a spectrum, meaning that one could find aspects of the normative approach but still be more descriptive or even more towards the contingency theory in some cases.

3. Method

In this chapter the selected method is presented, which addresses the implementation and approach of the study as well as reflections regarding the chosen method. The chapter also includes a literature review, selection and data collection. Information on data analysis is presented as well as critical reflections and various ethical aspects of the research are discussed.

3.1 Qualitative research design

In scientific research there are two main methods used (Bryman & Bell 2017), these methods are the qualitative and the quantitative method. In quantitative research, statistical, measurable, and often generalisable outcomes are in focus. Quantitative researchers try to conduct the research in a way that makes it possible to view the measurements of the phenomena in focus in an objective way. The quantitative method focuses on data that can be quantified.

The other method and the method chosen for this research is the qualitative method with an inductive approach. What separates this from the quantitative method is that the social reality and words are in focus instead of quantifiable data (Bryman & Bell 2017). The qualitative method gives us a depth in the subject in focus by offering perceptions into the subject in question from the respondents' perspective, which facilitates the development of new theories (Bryman & Bell 2017). Since this method often times contains respondents, it is of importance that the researcher is aware and reflects on different factors that can come to impact how the respondents chose to answer the questions, this can be factors such as how the question is asked and where it is asked and more. As mentioned above, this study uses an inductive approach which means that the empirical material has been gathered so that it can be studied in order to generate theories.

In order to investigate the research question, the study was conducted with a qualitative approach (Bryman & Bell 2017). Interviews were conducted (see appendix 1) with a representative each, from the co-operatives that participated in the study. The two co-operatives chosen for the study have similar business operations but are of different sizes. In our opinion, this made it easier to discern differences in how the co-operatives work.

To further specify the research method, we have conducted a case study. In-depth research with the ability for respondents to expand on their opinions is the goal of a case study. A case study's drawback is that a small group is used because it is more time consuming to conduct in-depth research that considers a variety of aspects of cooperatives. This can lead to results that are not representative of the whole field of study. If the case chosen, in this case the two co-operatives, is an outlier the results may not be applicable to any other co-operatives.

3.2 Literature review

The study performs a literature review to gain a better understanding of the areas where there are gaps in earlier research. The literature review is narrative, making it appropriate for qualitative research and allowing the writers to be adaptable in their literature search (Bryman & Bell 2017). The narrative literature review facilitates interpretation that can include social aspects while reproducing a diverse picture of the study. A narrative review of the literature is suitable for research that aims to close gaps in the pre-existing ideas regarding the study's topic. The ideas are then briefly described, along with any gaps that can be filled with new information.

The majority of the literature that has been used in this research has been "peer-reviewed", which is a process where scientific publications are read and reviewed by subject matter experts before being accepted for publication (Bryman & Bell 2017). This typically raises the content's trustworthiness (ibid.). Primo, a database maintained by the Swedish University of Agricultural Sciences (SLU), served as the primary source of the majority of the study's material. Other data bases, such as Google scholar, have also been used when collecting the data.

3.3 Selection

The selection of co-operatives for this case study has been made regarding the purpose and question of the study. The study centres on the crisis management of farmer co-operatives. The largest and a mid-sized co-operative that deal with the storage and sale of grains were found and selected by using the ranking of Sweden's 100 biggest co-operatives 2021 by the organisation Svensk Kooperation [Swedish co-operation] (Svensk Kooperation 2022). All other types of businesses were not considered for the study because it concentrates on co-operatives. The respondent companies in this study are and the co-operative Varaslättens Lagerhus and the co-operative Lantmännen.

When choosing representatives from each company it was crucial for the respondents to have a thorough understanding of each respondent co-operative's operations, both historically and in terms of its future strategic goals. In the research, representatives who had significant experience working for their respective companies were approached and interviewed.

3.4 Data collection

The basis for the empirical data in this study are two semi-structured interviews conducted with the same interview guide (see appendix 1), except for a few changes to adjust for the difference in size between the two co-operatives. Semi-structured interviews mean that the interview questions are structured and built around themes that have been somewhat pre decided (Bryman & Bell 2017). This type of interview has relatively open-ended questions that are meant to guide the interviewee but not so much that he or she feels pushed in to answer in a certain way. Furthermore, this type of interview is flexible which can give the authors material and data that they otherwise would not have been able to get. It allows both researcher and respondents to explore issues that they might not have reflected on earlier because it gives both researcher and respondents the opportunity to delve deeper into some of the questions. The point and hope of these interviews is that the respondents will be able to give as wide a picture of the subject as possible. To facilitate the interviews the respondents were given the questions in advance to be able to prepare and give more well-rounded answers to the questions.

3.5 Data analysis

Coding of the empirical evidence is important to facilitate the analysis by creating an overview of the empirical evidence and increasing validity (Linneberg & Korsgaard 2019). We will use qualitative content analysis to examine the data gathered for this research. Qualitative content analysis, according to Schreier (2014), is a technique for systematically elucidating the significance of qualitative data. The material is categorised using a coding framework. All of the components that are mentioned in the material's description and interpretation are included in this structure. Three essential characteristics of qualitative content analysis include data reduction, systematicity, and adaptability. Additionally, qualitative content analysis is a technique that distils data by separating information from specific sections using categories. As a result, the researcher must concentrate on a few crucial traits that are relevant to the general research topic. As a result, it is possible that some data will be lost during the coding process, which should be considered when performing the analysis (Schreier 2014).

In order to facilitate the comparison between the co-operatives, a SWOT analysis of both co-operatives has been made, this to create an idea of the differences in crisis management between the two co-operatives.

A general problem for qualitative research is the question of reliability and validity – so also in this investigation (Bryman & Bell 2017). In this study, no attempts were made to generalise the results. The study's methodological point of departure was rather to examine the crisis management of the two co-operatives from our perspective as researchers. Future studies could study the same phenomenon with a generalising approach (ibid), against the background of the results obtained here.

3.5.1 Trustworthiness

Trustworthiness refers to how much one can trust what the study presents (Bryman & Bell 2017). Normally trustworthiness is divided into four subcategories: credibility, transferability, dependability, and confirmability. The following sub-sections will explain what is meant by these categories.

Credibility

This category explains how believable and probable the results of the study are (Bryman & Bell 2017). The research should assure the research framework and the social reality, which may be done by a triangulation or respondent validation, to acquire a high degree of dependability. Triangulation means that three or more sources of data has been used in order to research the social reality. Respondent validation, on the other hand, deals with how the data from the interviews is treated, the results of the interviews are sent back to the respondents so that they may read through it to make sure that the researcher has understood all that was said in the right way. As for this study a respondent validation has been done.

Transferability

Transferability deals with the results and how adaptable it is in other situations (Bryman & Bell 2017). Often times qualitative research is met with negativity regarding this criterion since this type of research often deals with smaller groups or cases that might not be so applicable in other situations. The goal then becomes to produce a result that even though not universally applicable might be useable for future researchers within the same context. This is something that this study aims to do by locating and filling a knowledge gap in the field.

Dependability

Dependability refers to the ability to recreate the same results of a study several times with the same setting and conditions (Bryman & Bell 2017). In order to be able to do this it is of utmost importance that every step of the study is noted as to facilitate any future attempt for recreation. Another way to increase the dependability of the study is to invite fellow researchers during the process for extra auditing. During this study there has been several reviews by peers as well as our supervisor, the choices that have been made as to what theories to choose and whom to interview have been done in collaboration with the supervisor in order to increase the dependability of this study.

Confirmability

Within trustworthiness confirmability is mostly about objectivity from the researcher's side (Bryman & Bell 2017). In short, this means that the researcher should attempt to withhold his or her own personal opinions. In this study to hold as high a confirmability as possible the focus will be kept on information from trustworthy sources.

3.5.2 Authenticity

The authenticity criterion holds as trustworthiness several sub criteria, which all need to be met in order to hold a high level of authenticity (Bryman & Bell 2017). In short, the authenticity criteria all deal with giving a fair picture of the information received by the respondents. Overall, this focuses on the fact that different situations and questions can appear widely different to different persons. In order to minimise the risk of this happening the interviews in this study will all follow the same guide with limited adjustments for the different sizes of the co-operatives in question.

3.5.3 Reflexivity

Reflexivity is used for the researcher to reflect on what he or she is doing and how their own thoughts and ideas effect the study (Bryman & Bell 2017). It is used to make sure that the study remains as objective as possible, this is done by being aware of the choices that one does and why they are being done, how thoughts, personal values, choices of method and theories effect the study. By being aware of this, the objectivity of the study can increase.

3.6 Ethical aspects

Byrman & Bell (2017) tell us that how the information from the respondents is interpreted is a problem that commonly can occur in this type of study. The information that is received from the respondents can be sensitive and therefore require to be handled with care. One way of dealing with this problem can be to make all the respondents anonymous. To make sure that the respondents feel comfortable in being part of the study they should be given the transcript of their interview, this is done in order to make sure that the information given by the respondents has been delt with and interpreted in a correct way that feels good for all parties. With this done the confirmability mentioned above is increased and guarantees that the results are correctly received and interpreted.

4. Empirical study

This chapter will start off with a presentation of the two co-operatives what they do, were they are located and so on. After the presentation off the co-operatives the interviews with one key employee from each co-operative will be presented.

4.1 Description of the co-operatives

The following section will present the two co-operatives that has been chosen for this study.

4.1.1 Varaslättens Lagerhus

About 1,950 grain producers in western Sweden are members of Varaslättens Lagerhus, which is an economic association. The co-operative stores, trades, and dries grain. The aim of the co-operative is that the farmers should get the best possible payment for their grain. They buy grain from the farmers and sell it to various industries, other consumers and export about 30-40% of the grain volumes within the EU and to Norway. They handle about 300,000 tons of grain annually and has an estimated SEK 900 million in revenue. They also provide guidance while selling a variety of items, including seeds, plant nutrition, energy, and plant protection, as well as its own haulage company with six trucks. They employ 38 people (Varaslättens Lagerhus n.d.). Varaslättens lagerhus is by no means a small co-operative and ranks as the 23rd largest co-operative in Sweden (Svensk kooperation 2022).

Sustainability issues are actively addressed by Varaslättens Lagerhus. Giving growers the appropriate advice, which enables them to make the best choices in light of the circumstances in their fields, is a component of having a sustainability mindset. At Varaslättens Lagerhus, emphasis is placed on using less fossil fuel, electricity efficiently, and efficient transportation. Since 2012, drying grain at the Vara plant has essentially been done without the use of fossil fuels. Their biofuel boiler, which was replaced in 2019, provides some of the heat (Varaslättens Lagerhus n.d.).

4.1.2 Lantmännen

Lantmännen is a co-operative for farmers in Sweden that are active in the fields of agriculture, machinery, bioenergy, real-estate and food processing. These five sub areas of Lantmännen are what together constitutes as Lantmännen. Agriculture, energy and food processing are there three divisions with the other two, machinery and real-estate being two business areas. In the three divisions Lantmännen are producers while being retailers in the two business areas. Lantmännen are a co-operative owned by 19,000 Swedish farmers, with 10,000 workers, operations in about 20 countries, and an annual revenue of SEK 48 billion (Lantmännen 2022). Lantmännen handle about 3 million tons of grain each year, which makes Lantmännen the largest actor within the Swedish industry.

"Svenska Lantmännens riksförbund" (The Swedish farmers national federation) was established in Stockholm on August 30, 1905. The association's capital needs and its organisational structure both grew in importance as the turnover continually increased. In the 20th century, as agricultural groups grew in strength, they gradually started to pool their resources to work on projects that served the members' immediate and long-term interests. To ensure demand for and raise the value of the members' grain, among other things, silo facilities, own feed factories, tool manufacturing, plant breeding programmes, as well as mill and bakery operations. It wasn't until 2001 that several regional associations merged to become the Lantmännen group as it is today. This allowed Lantmännen to become more involved in larger issues for Swedish agriculture, such as the establishment of the first ethanol production in the Nordic region, the founding of Lantmännen's research foundation, and initiatives to make Swedish grain more appealing to export markets (Lantmännen n.d.).

Table 1. key numbers of the two co-operatives (Varaslättens Lagerhus n.d., Varaslättens Lagerhus 2021, Lantmännen 2022, interview with Varaslättens Lagerhus) own creation

	Lantmännen	Varaslättens Lagerhus
Members	18,726	1,957
Revenue (MSEK)	48,183	918
Active since	1905/2001	1930
Employees	10,092	38
Grain (tons)	3,000,000	300,000

4.2 Interview Varaslättens Lagerhus

All information in the following section comes from an interview with the CEO at Varaslättens Lagerhus Karl Delin.

Effects of the drought 2018 and the Covid-19 pandemic.

According to our respondent Karl Delin (CEO at Varaslättens lagerhus) both these crises took their toll on their company in different ways. The drought affected their members and their deliveries, since the harvest that season was much lower than what they expected. This led to members not being able to fulfil their contracts which in turn resulted in the co-operative not meeting their contracts to buyers. In other words, the drought delivered economic problems for the co-operative which had to be solved by adaptive and quick solutions.

The Covid-19 pandemic brought on different problems more in a logistic manner. Members were less affected since the farms could more or less continue in the same way as before. Instead/Rather, the pandemic affected ‘the other side of the business’, i.e., during this crisis the co-operative had to investigate how they could run their facilities and what the lowest amount of personal they could have and keep it operational. More than this, they also suffered long deliveries on spare parts and other inputs. What was realised here was the need of personal with high problem-solving capabilities, able to quickly solve problems with the materials present at the moment.

Internal adjustments post drought and Covid-19

Due to these two crises the co-operative has had to reevaluate how they plan for the future. They cannot expect the harvest to keep the same high yield that it has had for years. Also, they need to be more aware and adaptable to large fluctuations in prices of grain and other inputs in their daily operations. Regarding how the co-operative deals with crises and develops their strategies, not much has changed as an effect of the drought or Covid-19, Delin says: The board holds strategy meetings throughout the year, and in case of a crisis they try to follow up more frequently as to adapt to any new situations that appear.

The war in Ukraine

The war in Ukraine has affected the production of grain for the members in a way that some inputs have been difficult to get your hands on, for example fertilisers. In addition to that, the co-operative needs to deal with large fluctuations in prices of grain and inputs because of energy prices and speculation. To counter act the speculation and difficulties of buying fertilisers the co-operative chose to sell fertilisers to their members in several smaller batches in order to make sure that everyone got what they needed. Despite this, they had issues acquiring all the goods necessary to satisfy the needs of their members.

Swedish grain import threatened by the war in Ukraine

When asked if the Swedish grain production would increase because of the import being threatened by the war in Ukraine, Karl Delin answered that he does not see the production increasing. Rather that the war will make it more obvious that there is a need of higher self-sufficiency especially regarding inputs to the grain production such as fertilisers. He also mentioned that the war could bring up the need for a standby stock to be used in times of crisis. However, he still thinks that the government has yet to open their eyes for the need of both self-sufficiency and standby stock.

Strategies during crises

The co-operative has long-term strategies that are developed by the board, this plan should be of the big picture and utilised by the entire company. During crises, the board meet more frequently as to address any changes in the situation. Also, smaller crisis groups are created to address their specific areas in the co-operative, these groups are created to facilitate faster decision-making during times of crisis. As for short-term strategies these are on a department level since the short-term plans often are more specific and centred around smaller goals or situations.

Effects of a co-operative

As a co-operative they hold their members needs high, which gives the members more of a security in crises since they know that the co-operative will do what is best for the members. This works the other way around as well in a crisis that affect the co-operative more than the members (Covid-19 for example), the members are more understanding concerning that things may not be as usual. It is a mutually beneficial relationship, with high trust between the two parties. This trust is also built on the fact that Varaslättens Lagerhus is unable to relocate to another country, they must stay and resolve the issues arising since they are tied to their members, which are located in Sweden. Since they prioritise their member's needs, they can be more flexible with them during crises. Karl Delin thinks that this trust and flexibility makes the co-operative more resilient towards crises than for example an IOF would be. If the members have strong opinions, they can express them at the annual meeting and in the board members they elect, however in the vast majority of cases, the board still appears to be trusted by the members to make the proper decision.

4.3 Interview Lantmännen

All information in the following section comes from the interview with the head of strategies at Lantmännen Patrik Myrelid.

Effects of the drought 2018 and the Covid-19 pandemic.

According to Patrik Myrelid, director of group strategy at Lantmännen, both of these crises affected Lantmännen but in very different ways. The first one, i.e., the drought in 2018, was an agricultural crisis where one could say that the harvest was cut in half which made the agricultural division of Lantmännen function at half capacity. Normally, Sweden is an exporting country when it comes to grain but here, Lantmännen were forced to import, all of the money flows were switched around, instead of income there was expenses. Despite this Lantmännen issued extra dividend during the drought. The change in import/export flow put high demands on the organisation when instead of sending out exporting boats they had to receive import boats. This was not only financially taxing but also a logistical problem, they now had to do things in a whole new way. In order to handle this, Lantmännen has what they call their 'portfolio strategy', i.e., the/a strategy they developed more than 10 years ago. The idea behind it is that if Lantmännen has several independent divisions that all create value for the company, when one division struggles the others can back it up and by doing this reduce the impact that conjunctions and different crises has on the company as a whole. For example, during the drought the agricultural division lost a lot of money, but the food processing division was able to back up most of it. As a co-operative, Lantmännen also had to help their members that were having difficulties because of the drought, which they did by increasing the dividend. In addition to the portfolio strategy, Lantmännen also makes sure that they have high solidity (over 40%) in order to handle these types of shocks (Myrelid, 2023).

As for Covid-19, it affected Lantmännen very differently than the drought. This crisis was more felt internally inside Lantmännen than by their members: The office personnel had to work from home, this was however not a solution that could be applied in the production part of the company. Lantmännen has a lot of personnel working in factories producing food. The factories had to be run by as few as possible and the different shifts were not allowed to see each other or swap shifts. This crisis became for Lantmännen a crisis in food supply. They were in close contact with several governmental departments regarding food supply during this global pandemic. Lantmännen also produces a lot of ethanol and during the pandemic they changed that production into hand sanitisers. The real change for Lantmännen happened in consumer patterns, i.e., people stopped eating lunch out and started eating at home. This made for a colossal change in production which had to be coordinated from a distance and also with minimal personal at the factories. In order to facilitate this change Lantmännen had to reduce their assortment down to only the big sellers.

Internal adjustments post drought and Covid-19

Lantmännen has a yearly strategy planning meeting. These two crises did not change the strategic plan that Lantmännen already has, but what they did was to reenforce the belief that they have in their portfolio strategy since they could see it working in both these crises and they also came out of the rather well.

The war in Ukraine

Already in mid 2021, Lantmännen started to notice the tendencies of inflation, they talked a lot about this internally even though the public debate was more focused on zero rent and had no inflation in sight. This crisis started just a week after Lantmännen had dissolved their crisis team. So, they had almost no time to recuperate before they had to start their crisis team again. When the war started, a lot of commodity flows were still standing still because of Covid-19. Lantmännen has operations in Ukraine, which they had to stop when Russia invaded Ukraine, however shortly after the start of the war the war favour turned around and the factory was no longer under any immediate threat so they could open it again. Lantmännen thinks that even though this production is not their most financially rewarding activity, the presence in Ukraine hold high symbolic value since food supply is part of Russia's tactics. More than this, Lantmännen has struggled with extreme price shifts. They have had to buy fertilisers at sometimes 4-5 times the normal price. This has mostly affected the agricultural division of Lantmännen, the food processing division just had to shift the price increase towards the consumers. As an effect of the war, there has also been an energy crisis which have given Lantmännen a very good result on their energy division of the company. Right before the energy crisis in 2022, Myrelid says, Lantmännen bought a wood pellets factory as part of their portfolio strategy which turned out to match perfectly with the need for more energy. Once again, a direct indicator of their portfolio strategy working as planned.

Swedish grain import threatened by the war in Ukraine

Until 2050 Lantmännen has two goals. One: to deliver a grain supply chain that can produce too zero environmental effect. Two: to be able to face a growing population both in Sweden and in the world. In order to fulfil these two goals, Sweden needs to increase the production of grains with about 50% (Myrelid, 2023). Right now, Lantmännen is in a dialog with the minister for rural affairs concerning this. It is part of the international food supply strategy. Lantmännen sees that the first step to increase production of grain is investment in plant breeding, which they have done the last few years. Here, Lantmännen also has projects going on with the government as this is a way for the state to react to the need for a higher degree of self-sufficiency. More than investing in plant breeding, precision farming and more, Lantmännen thinks that they and their members need to invest in more storage in order to meet the increase in production. Patrik Myrelid claims that drainage and irrigation also are crucial in order to become more resilient to climate change, which Lantmännen see as a serious problem for future increase in Swedish grain production. To conclude, Lantmännen believes that the war and other factors will lead to an increase in Swedish production of grain and other agricultural products. Furthermore, they do not believe that the area being farmed will increase as it is a finite resource, but with investment in the right areas the same amount of land can have an increased yield.

Strategies during crises

During these last five years, each crisis has been followed by the next. Lantmännen holds yearly planning meetings for strategic planning. The strategy that Lantmännen develop during the yearly meeting is then meant to follow the entire year. The strategy plan is ordered by the board and then developed and executed by the management team. During the year, this strategy plan is revisited and adjusted if needed. The long-term strategy for Lantmännen is mainly their portfolio strategy that has proven to do exactly what it was meant to, i.e., reduce the shocks of crises by parrying with a different "leg" of the co-operative.

Effects of a co-operative

Lantmännen's main objective is their members, the main goal is always to keep the members best at heart. This includes financial factors such as contributing to the profitability of the members' farms and to create a return on the capital invested in the association. As a co-operative, Lantmännen is bound to their members and if something happens, they cannot uproot and leave but instead have to stick around and solve the situation, which can be seen as a problem/something negative. However, this implies some positives as well, for example the members feel that they are seen and that builds trust between the members and the co-operative. This, in turn, makes the members more understandable when a crisis happens, and things move slower or does not work as it used too.

5. Analysis & Discussion

In the following chapter the results of the interviews are analysed and discussed by using the theories presented in this thesis. Firstly, a SWOT analysis is made for both co-operatives to give a larger picture of the co-operatives, following this the analysis continues by addressing the different ways decisions are made in the co-operatives. Lastly the chapter presents a comparison between the two co-operatives as well as a comparison with previous studies.

5.1 SWOT analysis of Varaslättens Lagerhus

The following section will present a SWOT analysis of the co-operative Varaslättens Lagerhus as seen in table 2.

Table 2. Own creation of a SWOT analysis regarding Varaslättens Lagerhus.

SWOT Varaslättens Lagerhus	
Strengths: - Experienced organisation - International market - Flexibility - Specialised strategy groups - Good reputation - Storage capacity	Weaknesses: - Lack of vertical integration - Tied to members - Lack of communication with politics
Opportunities: - Increase in domestic production	Threats: - Climate change - Geopolitical instability - Fluctuating prices of inputs - Fluctuating prices of grain

Strengths
Strengths are categorised as positive internal factors (Lindkvist et al. 2014). Varaslättens Lagerhus is an experienced organisation with over ninety years of experience in agricultural practices. They only buy from Swedish farmers, but export to the international market, mainly EU and Norway which ensure better prices for their goods. They have a flexibility towards their members and customers in times of crisis, which was especially clear during the drought in 2018, where

farmers and buyers got extra support. To produce plans for crisis management, the co-operative has specialised strategy groups that focus on their part of the co-operative's operations and then communicate with each other. The extra support and crisis management that have been given thus far have had a good impact on both reputation and trust among members and customers. Karl Delin mentions that storage capacity is not an issue, now or in the foreseeable future, either for grain or inputs.

Weaknesses

Weaknesses are categorised as negative internal factors (Lindkvist et al. 2014). Being a Swedish cooperative, "Varaslättens Lagerhus" is obligated to its Swedish members. This implies that they are unable to move their company to a new location in the event of a crisis. However, this can be viewed positively because it indicates that "Varaslättens Lagerhus" remains put and resolves problems, which creates loyalty and trust among their members. Since food supply is an integral part of society's function, communication between politicians and food suppliers could be expected, something that is expressed by Delin. Despite this, no contact has been made to Varaslättens Lagerhus regarding current or future plans for food supply.

Opportunities

Opportunities are categorised as positive external factors (Lindkvist et al. 2014). In 2023, Sweden's government has decided to update its food strategy to focus more on domestic production and self-sufficiency (Regeringskansliet 2023). This gives Varaslättens Lagerhus an opportunity to increase its current operations, even though they are not currently in any such discussions.

Threats

Threats are categorised as negative external factors (Lindkvist et al. 2014). Climate change is in principle a threat for all agricultural practices, Varaslättens Lagerhus included. Since Varaslättens Lagerhus's only operation is in agriculture they are especially vulnerable to abnormal weather conditions. There are currently fluctuating prices both of grain and on the energy side due to the war in Ukraine. Electricity and fuel have had immense price movements. The price and access of fertiliser have also been affected and Karl Delin says that they had problems acquiring enough of some good to satisfy the needs of their customers. Varaslättens Lagerhus has not been directly affected by the pandemic in any major way, despite this, they were affected by the disruptions in the supply chain that were caused by the pandemic. Karl Delin says that spare parts for crucial machinery were difficult to come by and they had to rely on their workers to fix the machines or come up with alternative solutions.

5.2 Decision making in Varaslättens Lagerhus

In this section Varaslättens Lagerhus' decision-making process is analysed by using decision making theories as a looking glass to see how decisions are made and how it is suitable for different situations.

The basis of the decision making is made on the foundation of the co-operative principles. That is for a co-operative to accommodate its members social and financial interests. Karl Delin expresses that the aim is not solely to have the highest possible profit, but it is satisfied members, that they feel they have been well compensated for their grain. If the members have strong opinions, they can express them at the annual meeting and in the board members they elect. Rarely does it progress in the direction of mistrust, in the vast majority of cases, the board still appears to be trusted by the members to make the proper decision. In such a large and diverse membership base, there are of course many different opinions about how things should be done. However, because people who sit in the corporate management are the ones who see the larger picture, most of the time it just a matter of minor tweaks.

When addressing decision making and strategies in Varaslättens Lagerhus, the first issue must be to separate long- and short-term strategies. The long-term strategies follow a stricter plan, the board brings them forward and develops them, these long-term strategies are centred around all of the co-operative's activities and should affect the entire organisation. This can be seen in the rational choice model, where the decision maker should plan for every possible outcome and create a perfect decision (Lindqvist et al. 2014). In the rational choice model, there are five steps that follow the decision-making process, these are: makes decisions when there are multiple choices, ranks all outcomes, follows a linear path, utility maximisation, and the same outcome if the process is repeated. In the case of Varaslättens Lagerhus, these steps are not a perfect fit; however, seeds of rationality can still be seen in their long-term strategies. With the board attempting to create strategies that should be applicable to every situation and finding the perfect decision.

With this top-down management approach, one can identify the co-operative as being and acting mechanically. Kessler et al. (2017) tell us that the mechanical organisation is more suited in a stable environment, where the outcome of situations is more easily predicted.

The short-term strategies in Varaslättens Lagerhus are created on a department basis, where each department is responsible for their own short-term goals and by extension also their strategies to fulfil those goals. These short-term strategies can be seen as more adaptable and situation based, since each strategy is developed with a certain situation in mind. This can be noted in the descriptive approach in decision theory as this approach is cantered around the decision maker being adaptable and situation based.

During crises, the board starts to meet more frequently as to adapt and address any changes in the situation. Furthermore, specialised focus groups are created to work on strategies in their specific areas within the co-operative. Both of these actions are made by the co-operative to facilitate faster decisions as well as making sure that they are fast to adapt to the ever-changing environment that is during a crisis. According to Kessler et al. (2017) and contingency theory, it is important for the organisation to understand the environment that the organisation operates in. As previously stated, the mechanical organisation is more suited for a stable environment where decisions can be rational, and the outcomes predicted. However, during a crisis, the environment changes and becomes more unstable this is when an organisation needs to be more organic, adaptable and faster to make decisions. Contingency theory argues for importance of adaptability and situation-based decision making. This becomes clear when looking at Varaslättens Lagerhus and how they adapt and facilitates decision making within the co-operative during crisis and unstable environment but keeps their decision making slower and more rational during stable times.

5.3 SWOT analysis of Lantmännen

The following section will present a SWOT analysis of the co-operative Lantmännen.

Table 3. Own creation of a SWOT analysis regarding Lantmännen.

SWOT Lantmännen	
Strengths: - Experienced organisation - International market - Flexibility - Good reputation - Diversified operations - High solidity - Political collaboration	Weaknesses: - Tied to members - Storage capacity
Opportunities: - Increase in domestic production - Political collaboration - Research and development - Diversification	Threats: - Climate change - Geopolitical instability - Pandemic

Strengths

Based on the SWOT analysis of Lantmännen, they have many strengths. Strengths are categorised as positive internal factors (Lindkvist et al. 2014). Lantmännen is an experienced organisation with over a hundred years of practice in agriculture. Their experience and size, along with their good reputation, makes them an actor both internationally and in the domestic political sphere. In addition to that, they have a diverse portfolio of operation as well as good economic stability. The diverse portfolio is, according to Patrik Myrelid, the biggest factor in Lantmännen's success during times of crisis. When the drought affected the agricultural division of the business, they could rely on the food processing division, and when Covid-19 affected the food processing division they could rely on the agriculture division. In addition, the energy devision of the business has done well through all the crises, especially now during the war in Ukraine which has driven up energy prices.

Weaknesses

Weaknesses are categorised as negative internal factors (Lindkvist et al. 2014). Since Lantmännen is a Swedish co-operative, they are tied to their Swedish members. This means that in times of crisis, Lantmännen does not have the opportunity to relocate their business somewhere else. But this can also be seen as something positive, since that means that Lantmännen stays put and sort out issues which creates loyalty and trust towards their members. They also do not have enough storage capacity for an expansion in grain production. Patrik Myrelid expresses the need for increases in storage space both for Lantmännen and for their members on farm level.

Opportunities

Opportunities are categorised as positive external factors (Lindkvist et al. 2014). As already mentioned, Lantmännen has a diverse portfolio of business ventures connected to agriculture. Despite that, they are not content but keep adding to their portfolio. An example of a seized opportunity is the wood pellet plant that was acquired in 2022, just before the energy prices increased. Lantmännen has a goal to increase grain production with fifty percent until 2050. They believe that this can be done without increasing the amount of agricultural land but instead increasing the output per hectare. This is closely related to the next opportunity which is research and development. In order to increase production to the extent required to reach their goal, Lantmännen has invested in projects regarding plant breeding. In addition to this they are also working with precision farming and fertiliser plant nutrition issues. Lantmännen has a close collaborative relationship with the Swedish government in agricultural issues. This means that they both get early access to what measures are planned as well as a say in what those measures should be.

Threats

Threats are categorised as negative external factors (Lindkvist et al. 2014). Climate change is in principle a threat for all agricultural practices, Lantmännen included. Patrik Myrelid claims that drainage and irrigation are crucial in order to become more resilient to climate change. Since Lantmännen is an organisation that has operations in several countries they are more vulnerable to geopolitical instability outside of Sweden. They have a factory in Ukraine that was at high risk during the Russian invasion. Food processing facilities that are managed by very few people are susceptible to disease outbreaks.

5.4 Decision making in Lantmännen

In this section Lantmännen’s decision making process is analysed by looking at it through decision making theories to see how decisions are made and how it is suitable for different situations.

The basis of the decision making is made on the foundation of Dunn's three co-operative principles (Dunn 1986). That is for a co-operative to accommodate its members social and financial interests. According to Patrik Myrelid, they have a dual mission: to contribute to the profitability of the members' farms and to create a return on the capital invested in the association. Since it is the members' business, the organisation is willing to go beyond what is required to help their members in trying circumstances. Its goal is the wellbeing of its members, and they are democratically run with a large owner base. The tight ties and mutual trust between the members and the cooperative are additional benefits. The membership role is both that of user and owner. In general, the governance structure is based on the members choosing their representatives and having a board; that's the way to handle different points of view, they say/think. There can be single issues where opinions are expressed, and it is not uncommon for management to listen in on the discussion. Although Lantmännen may make certain modifications or adaptations and show sensitivity to what is happening, everything ultimately comes from the control structure.

What has been noted in the interview with Lantmännen is how the co-operative makes decisions and what path the decision takes on its way of being implemented. According to Lantmännen, the norm of their decision-making process is that the board makes the decision and then the management team systematically develops it and executes the decision. This can be linked to what Lindqvist et al. (2014) tells us about the rational choice model and how it follows a strict regimen for making decisions. The steps that are presented in the rational choice model is as follows, makes decisions when there are multiple choices, ranks all outcomes, follows a linear path, utility maximisation, and the same outcome if the process is repeated. Some of these steps can be seen in the case of Lantmännen, for example they are satisfied with their decision of the portfolio strategy and sticks to it without changing it. Lantmännen is adding to their portfolio on a continuous basis, proving their certainty of this strategy.

What can be said about their process regarding crisis is that when entering a crisis Lantmännen moves away from a rather strict process to a more adaptable approach. In times of crisis, Lantmännen starts to have more meetings regarding strategy and tries to stay on top of things by adapting and making faster decisions based on the current lay of the land. This is closer to the descriptive approach of decision making. Brunes (2005) explains the descriptive approach as regarding the market as more dynamic, and that the decision maker don’t have time to gather all the necessary information to make a rational decision, this fits well with how Lantmännen acts during crisis. More weight is put on finding a solution that fits the problem and is “good enough” rather than making sure that it is the perfect and “best” decision.

From this, it can be gathered that what explains Lantmännen’s decision making process best is contingency theory. Lartey (2020) tells us that depending on if the organisation is mechanical or organic it is suited for a stable or uncertain environment. The mechanical organisation requires less people in its decision-making process which makes it more suitable for a stable environment where one can predict more what is going to happen, this fits with Lantmännen’s operation during “normal” times where the decision making is more outlined and follows a certain path. During crisis this approach changes, the environment is uncertain, and one cannot as easily predict what might happen. Even though the basis for Lantmännen’s organisation does not change the decision process is made to be faster and more adaptable. This can be seen as Lantmännen becoming more organic during crisis in order to manage the uncertainty of the environment. Kessler et al. (2017) talk about the importance for organisations to understand that if they wish to strike a balance between their internal and external circumstances, they must understand the distinction between a stable environment and a dynamic one. From what have been noted in the interview with Lantmännen, they seem to have understood how to act and adapt to a changing environment, and by doing so minimizing the affect that a crisis can have on them as an organisation.

5.5 Comparing the two co-operatives

From the SWOT analysis established in this thesis it can quickly be noted that many of the strengths, weaknesses, opportunities, and threats are shared between the two co-operatives. Regarding strengths, they are both experienced organisations that operates on an international market, they have good reputation and are flexible in what they do. However, with the size of Lantmännen comes some strengths that Varaslättens Lagerhus just cannot compete with, this are strengths like having a diversified portfolio to handle shocks during crises, and being approached by the state with questions and deals to create self-sufficiency in the Swedish food chain. In the weakness section, some things come up again such as Varaslättens Lagerhus not having the same diversification and connection to politics as Lantmännen. But also, the fact that both are tied to members, being co-operatives, and by that not being able to relocate or opt out of Sweden if there is a crisis. When it comes to opportunities, both co-operatives want to capitalise on the need for an increased domestic production, Lantmännen also see opportunities in research and development, and continued political collaboration as well as more diversification. Threats are mostly the same for the two co-operatives with it being climate change and geopolitical instability, these two threats are the most present for the organisations at the moment. Furthermore, Varaslättens Lagerhus also see the fluctuations in prices of inputs and outputs as a threat, these fluctuations can on some level also be connected to geopolitical instability with the war in Ukraine.

This is also a difference between the two co-operatives. Lantmännen has acquired several stages of the production process, including energy and food processing, which means that they have more control over the process. While Varaslättens Lagerhus had problems delivering on their contracts during the drought, Lantmännen delivers large quantities of grain to their own industries and therefore does not have the same outside pressure to deliver.

When looking at how the two co-operatives make decisions, both of them keep a more rational model for decision making during stable times. In both cases the board or management group decides what strategies will be used or what decision that needs to be made. Next, the board sends it down in the organisation to be created and implemented. This is closely related to what Lindqvist et al. (2014) tell us about the rational choice model and how it follows a rigid path. However, during crisis both co-operatives change their decision-making process and move towards a more flexible and adaptable approach. Both Varaslättens Lagerhus and Lantmännen make their board and management group meet more often to facilitate more flexibility and adaptability. This way of handling decisions is closer to the descriptive approach, with more importance on finding a “good enough” solution to problems rather than “the perfect one” for every situation (Brunes 2005). This change in decision making based on the environment shows that the co-operatives are situation based in their decision-making process. This situation-based method is explained by contingency theory and the need to adapt to the ever-changing environment that the organisation operates on (Kessler et al. 2017).

5.6 Previous studies

Previous studies that review the agricultural sector has mainly focused on crises that pre-dates 2015, while this study focuses on crises from 2018 to 2023. Despite this there were several similarities that could be found. One study shows that the agri-food industry has, overall, high resilience during crises (Crescimanno et al. 2014). That are the same findings that were shown in the interview with Lantmännen. Even though several crises have arisen during the last years, Lantmännen has increased its profits for the past eleven years, with only the exception of 2018 (Myrelid 2023).

The previous studies also show that co-operatives are better equipped to deal with prolonged crises than IOFs (Birchall & Ketilson 2009). This is because co-operatives are, historically, very conservative in their profit practises which enables them to safeguard members more successfully during "bad" years (Delbono & Reggiani 2013). Lantmännen put this to practice by issuing an extra-large dividend 2018, even though it was a year with lower-than-usual profits. Varaslättens

Lagerhus were also safeguarding their members by being more flexible towards their members in times of crisis (Dehlin 2023)

6. Conclusion

In the following chapter the conclusion on the study will be compiled. The authors then present a reflection on the work and its conclusions and finishes with suggestions for continued research in the area.

6.1 Conclusion based on the research question

The aim in this study was to understand how co-operatives in the agricultural sector decide on strategies and if there are any differences in decision making and crisis management between a large co-operative and a smaller one. The focus of the study has been to try to answer the following question:

- What are the different strategies for dealing with crises for two co-operatives of different size?

The study showed both similarities and differences between the two co-operatives. The most significant difference is Lantmännens diverse portfolio, which include agriculture, machinery, bioenergy, food processing, and real-estate. This makes them more resilient in times of crisis since they can rely on different parts of their portfolio if one part preforms worse. This also links to the issue with few stages of the production process, which was most prevalent during and in the aftermath of the 2018 drought, when Varaslättens Lagerhus was unable to deliver on all their contracts. Lantmännen could back their losses in grain with different parts of their portfolio. By doing this, Lantmännen could come through the drought with minimal losses. The main issue that we identify here is the difference in size between the two co-operatives, Lantmännen's portfolio strategy is an effect of them being larger and having the means to expand into different areas.

When it came to operating and making decisions during crises both co-operatives operate in a similar way. They both organise so that the board and management group meet more frequently as to facilitate faster and more adaptable decisions, which is needed during the uncertain environment that a crisis provide.

6.2 Reflection

This study has studied two co-operatives in an attempt to see if there are any differences between how they deal with crises. The first one being Lantmännen which is Sweden's largest co-operative in the grain industry and the second one being Varaslättens Lagerhus which is the second largest grain co-operative in Sweden, but still 10 times smaller than Lantmännen in number of members. Both co-operatives have delt with our three most recent crises and come out alive, so they both seem to have high resilience towards crises. What cannot be said in this thesis is that this is a generalisable result, this has been a qualitative case study with only two cases and the sample pool is far too small to make any attempts at generalising, that being said generalising is often not the goal for qualitative studies. What can be said however is that in this case we have found some useful data that can be used within the context that is presented.

6.3 Future studies

Future studies could start by extending the sample pool and include more co-operatives within the grain industry. This could also be expanded even more by looking at co-operatives in different markets as well, and not only in the agricultural sector but they could also look at co-operatives in banking, retail etc. In short future studies should attempt to expand on this thesis to create a broader understanding of how co-operatives deal with crises. This study also delt with the ongoing crisis that is the war in Ukraine, this could be further developed and looked at when the war has come to an end, to see if it differs any from what we have noted during the war.

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Popular science summary

This study has been done using two interviews with one mid-size co-operative in the Swedish grain industry, Varaslättens Lagerhus, and one large grain co-operative in Sweden, Lantmännen. The study has examined how the two co-operatives of different sizes make decisions and form strategies during times of crisis. The focus regarding crises has been the drought 2018, covid-19, and Russia's war on Ukraine. These three crises were vastly different and as such had different effects on the co-operatives.

Sweden today faces many different challenges, the two crises in our rear mirror, the drought of 2018 has shown that we cannot expect our harvest to be bigger and bigger and Covid-19 showed us that many things in our society are fragile, and that as a society we need to be better prepared. With the background of these previous crises and geo-political instability in the Baltic Sea region, this study wants to investigate if there is any difference between the two co-operatives based on their size regarding how they face decisions in times of crisis and how resilient they are to said crises.

This research is a comparative case study, where the two co-operatives will be compared using tools such as SWOT analysis, but also examined based on theories regarding decision making. After analysing the co-operatives this study came to realise that the larger size of Lantmännen made it possible for them to have more thought out strategies already in place to counteract a crisis. Since Lantmännen has several different divisions acting on different markets they can let the other divisions carry the one effected by the crisis which is what happened during all three of the crises brought up in this study. Looking at how the decisions are made in the co-operatives it is quite similar, during calm times both co-operatives have a slower more thought-out process. But during times of crisis the co-operatives switch over to a much more flexible way of doing decisions, the management group and the board meet more frequently to facilitate the speed of decisions that is needed during an unstable environment.

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Appendix 1

Interview questions

1) To start off can you explain your company shortly, what is your basic business model?
2) The most recent crisis in peoples mind is probably the corona crisis and the drought in 2018 how did these crises affect you?
3) Right now, we have an ongoing crisis with the war between Russia and Ukraine. Have you felt this crisis and what have you done to counter act it?
4) During these crises have you learned anything that have made you change or revaluate your strategies?
5) Would you say that there are strengths and weaknesses connected to your brand as a co-operative in the grain industry?
6) A cooperative often needs to protect different interests, for example the social capital (loyalty between members and the association, capital needs). Do you see it as an advantage or disadvantage in a crisis?
7) What would you say you as a cooperative do differently compared to an IOF when it comes to strategic crisis management?
8) A cooperative often has different interests to protect such as social capital (loyalty between members and the association, capital needs). Would you see this as advantages or disadvantages during a crisis? Why?
9) Are the members in agreement when it comes to what is being done or should be done when it comes to crisis management? If not, how do you balance this?
10) Since parts of grain imports are threatened by the war in Ukraine, do you think this will lead to increased Swedish production? If so, how do you prepare for this?
11) Do you have a clear plan for how to act in times of crisis or do you act more adapted based on what happens?
12) How are your strategies developed? What does the process look like? Is there a difference between long-term and short-term strategies?
13) How do you handle the uncertainty in the grain price?
14) How does the ongoing speculation around input goods and food prices affect your strategies?
15) Do other parts of your business affect grain pricing?

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