



# **The Effect of Age Structure in Agricultural Cooperatives**

Focus on internal governance aspect

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# The Effect of Age Structure in Agricultural Cooperative in Sweden—Focus on internal governance aspect

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## Abstract

Aging of population is a universal phenomenon, especially in rural Europe, where more than one third of the workforce is over 65 years old. Age affects cooperatives in different ways, but it seems that age is not regarded as the main factors in numerous cooperative studies. Few scholars focus on the research about the impact of age on the internal governance of cooperatives. While this study aims to unveil the link between the age of members and the internal governance of cooperatives, thus trying to fill the gap. Three Swedish cooperatives, Lantmännen, Södra skogsägarna, as well as Arla Foods, were chosen as the study cases. Besides, primary data was collected by semi-structured interviews with the director of Lantmännen and the chair of the Nomination Committee of Södra Skogsägarna and Arla Foods, respectively. The respondents were asked questions about age, internal governance, social capital, as well as commitment. The research results show that the age of the members affects their interest and willingness to participate in the internal governance of cooperatives. Specifically, the elder the members are, the more willing they are to spend time on the internal governance. On the contrary, the younger the members are, the more reluctant they are to participate in the election due to economic and family factors. Therefore, the study concludes that the increase in the age of the members is conducive to the internal governance of cooperatives.

*Keywords:* Aging, Internal governance, Heterogeneity, Social capital, Commitment

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## Abbreviations

ACs	Area Councils
Arla	Arla Foods
BoD	Board of Directors
BoR	Board of Representative
CT	Council of Trustees
DC	District Council
EU	European Union
GA	General Assembly
GDPR	General Data Protection Regulation
IOF	Investor-oriented firms
LRF	Federation of Swedish Farmers
NC	Nomination Committee
SB	Supervisory Board
Södra	Södra skogsägarna
UN	the United Nations
US	the United States



# 1. Introduction

*This chapter introduces the background of age structures as a basis for presenting the problems caused by age structures in agricultural cooperatives. The purpose and research question of this thesis are presented based on these problems, the delimitation and the research outline of this thesis follows.*

## 1.1 Background

This section focuses on the aging situation around the world and within the EU, and the current status of aging in rural areas, hereby highlighting the inevitable trends of aging.

### 1.1.1 Global aging

All over the world, because of lower fertility rates and longer life expectancy, the age structure of the population has become a common phenomenon that cannot be ignored (Park 2012). The process of aging is on its way up. Data from the United Nations (UN) shows that the world's total population will reach 7.7 billion by 2019, with the percentage of population over 65 years old is climbing from 5.1% in 1950 to 9.3% in 2020, and the proportion of the elderly population is forecasted to reach 15.9% in 2050 (UN 2019).

The age structure varies from region to region. In more developed regions, due to low birth rates and low death rates, the proportion of aging is higher than in less developed regions, reaching almost 20% in 2020 (ibid). However, the less developed regions have a large population base of older adults due to their large population base and high birth rates (ibid). In contrast, developed countries in Europe and the United States (US) are facing the problem of population aging earlier than developing countries (Stloukal 2001). For example, in the United States, because of the baby boom generation, the government now needs to consider if they could maintain current levels of social security and health care (Glasgow & Brown 2012). Unlike developed countries, developing countries need to consider the challenges of aging in the context of sustained economic development. In many countries, the median age is older in rural areas than in urban (Panti & Živanovi

2010), especially in developing countries, the median age is increasing faster in rural areas than in urban areas (Stloukal 2001).

### 1.1.2 Aging in Europe

As Table 1 shows, the proportion of the population older than 65 years old in the European region exceeds 20%. The proportion of aging will reach 30% in 2030 (Marie & James 2020). Because of the low birth and mortality rate and life expectancy extension, almost all European countries are moving towards an aging society (Tinker 2002). Klijn et al. (2005) predicted that the rural population of Europe will decrease from 100 million in 2000 to 75 million in 2030, but at the same time, rural aging rate would be higher than urban aging rate due to the labor migration<sup>1</sup> (Stloukal 2001; Panti & Živanovi 2010). Marie and James (2020) pointed out that this phenomenon is due to a vicious circle<sup>2</sup> created by social and economic factors. Changes in age structure caused by aging and labor migration will have an influence on viability of rural communities (Klijn et al. 2005).

*Table 1 Proportion of population older than 65 years old in Europe*

Country	%	Country	%	Country	%
European	20.6	Lithuania	19.9	Switzerland	18.7
Belgium	19.1	Luxembourg	14.5	Montenegro	15.6
Bulgaria	21.6	Hungary	19.9	North Macedonia	14.5
Czechia	19.9	Malta	18.5	Albania	14.8
Denmark	19.9	Netherlands	19.5	Serbia	21.0
Germany	21.8	Austria	19.0	Turkey	9.1
Estonia	20.0	Poland	18.2	Andorra	:
Ireland	14.4	Portugal	22.1	Belarus	:
Greece	22.3	Romania	18.9	Kosovo	8.9
Spain	19.6	Slovenia	20.2	Moldova	:
France	20.4	Slovakia	16.6	Russia	:
France	:	Finland	22.3	San Marino	:
Croatia	21.0	Sweden	20.0	Ukraine	17.1
Italy	23.2	Iceland	14.4	Armenia	12.3
Cyprus	16.3	Liechtenstein	18.3	Azerbaijan	7.1
Latvia	20.5	Norway	17.5	Georgia	15.1

*Source: Eurostat (2021). Population structure indicators at national level*

<sup>1</sup> Labor migration is the movement of labor from one place to another to seek work.

<sup>2</sup> Vicious circle is a dilemma that has the effect of creating a new problem, which then leads to a further worsening of the original situation.

### 1.1.3 Aging in rural Europe

In 2018, more than 101 million people who were older than 65 years old lived in the EU, while 42% of the elderly lived in urban areas, 38% of this group lived in urban rural intermediate areas, and the remaining 20% resided in rural regions (Marie & James 2020). The median age of those who are working in rural areas is rising rapidly (Panti & Živanovi 2010), almost 60% of the workforce is older than 55 years old, and one-third of the workforce are 65 or older (Marie & James 2020), only a few young farmers work in rural regions. As a result of structural changes, agriculture became less labor-intensive and the young workforce lost the work opportunity on farms, choosing to move to urban areas where more employment options are available. Compared to young farmers, older farmers have more sunk costs which means the older they are, the less opportunity they can find a job when leaving the farm (Balmann et al. 2006). That is why most elderly farmers work on farms until they reach retirement age. This has caused the agricultural population to continue to decline until now.

It is a general situation that elderly farmers are not willing to accept innovations and new technology (Hamilton et al. 2015; Zagata & Sutherland 2015), and are not good at adapting to the new economic demands (Rigg et al. 2020). The productivity improvements by the innovation and new technology only benefit a few farmers, but the majority of farmers need to endure the consequences of falling prices (Balmann & Valentinov 2016). Li and Sicular (2013) think that agricultural labor productivity reaches the peak at age 45 and will continue to decrease after that. Older farmers cannot improve their productivity as effectively as younger farmers, so that farm economic efficiency decreased, and they have to face the risk of bankruptcy.

## 1.2 Problem statement

Agriculture is a most important branch of the economy and a productive sector, providing raw materials for industry, providing food products for consumer demand and ensuring food security (Popescu et al. 2021). Agricultural cooperatives are major players in European agriculture, which account for 40-60% of the agricultural trade (Ajates 2020). Cooperatives hold the majority of agricultural market share and have a close relationship with farmers, since cooperatives could help to improve their productivity and bargaining power (Candemir et al. 2021), reduce transaction costs<sup>3</sup> (Tortia et al. 2013), and create more benefits for cooperative members.

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<sup>3</sup> Transaction cost is the cost created in the process of trading.

Cooperatives are controlled by the members (Dunn 1988), the principle of democracy is one of the core elements of agricultural cooperatives. The key to democracy is one member, one vote. But there are some troubles in communicating information between members and the board. It is important that cooperatives need members' trust. Hakelius (1999) said that the older farmer is more "faithful" to their cooperative than the younger farmer. Based on research with 1,170 Swedish farmers, Österberg and Nilsson (2009) found that the members who were older than 60 years have stronger ideological belief, distrust the Board of Directors (BoD) of cooperatives, and prefer that the cooperative's members control their cooperative. But, some scholars hold different views: a study showed that age only has little effect on trust and cannot ultimately influence the development of trust (Jensen-Auermann et al. 2018). Burt and Wirth (1990) believed that the age of the farmer has no effect on the relationship between the cooperative and the cooperative member.

For members of a cooperative, they can attend the General Assembly (GA) and democratically vote on who can become a board member. In addition, there are other ways for members to become directors, for example, cooperatives in Sweden can recommend members to become directors through the Nomination Committee<sup>4</sup> (NC).

There are some factors that can influence cooperative members' willingness to join governance (Morfi et al. 2015; Hakelius 2018) and one of the important factors is the social network.

Over time, members have become more willing to be elected when they receive backing from their social networks, with personal networks being more important than professional networks. (Morfi et al. 2021:264)

Younger farmers can be at a disadvantage in the election because they lack governance experience and skills, are less well-known in their cooperatives, and less oriented towards cooperative business (Hakelius 1996). But Kim and Lim (2010) and Mahadeo et al. (2012) found the importance of age diversity among directors, and younger directors could provide more productivity than older directors.

Age affects cooperatives in many different ways, but age is only a small part in numerous cooperative studies. Few studies in Swedish agricultural cooperatives have examined the effects of aging among members and the effect on the

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<sup>4</sup> The Nominating Committee is elected at the first year's annual meeting and makes its recommendations to the Board of Directors at the second year's annual meeting. Members hear the Nominating Committee's recommendations and vote at the annual meeting.

governance system of cooperatives alone, and most studies have examined age as one of many influencing factors. There is a lack of relevant theories that individually corroborate the relationship between aging and cooperatives.

### 1.3 Aim and question

This thesis hopes to find the link between aging in members and the internal governance of cooperatives, trying to fill the theoretical gap in this area. Choosing Lantmännen, Södra skogsägarna (Södra) and Arla Foods (Arla), three of the biggest agricultural cooperatives in Sweden, as case for in-depth analysis. Here is the research question:

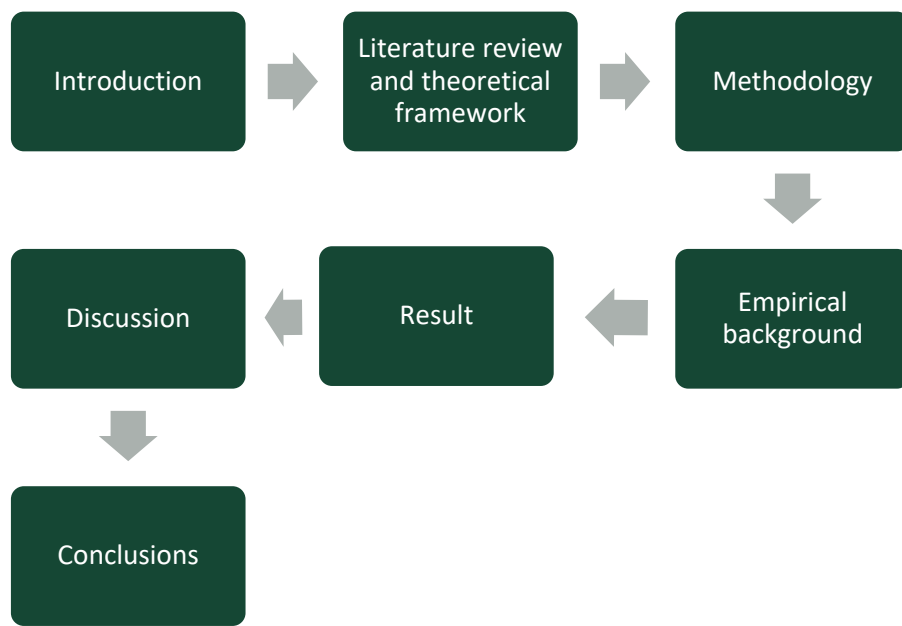
What is the link between the age structures of cooperative's members and agricultural cooperative's internal governance?

### 1.4 Delimitations of the study

This thesis focuses on the effect of the age structure among members in agricultural cooperatives. This study is focused on Swedish agricultural cooperatives and selected specific representative cooperatives as case studies. This study uses qualitative analysis, and the results are only used for the cooperatives covered in this thesis and can only be used as a reference for other cooperatives and are not generalizable.

### 1.5 Outline

The structure of the thesis is presented below (Figure 1). This thesis first introduces the background of aging, from which the problems associated with aging in existing cooperatives are drawn. The aim and research question of this thesis is then presented, based on the background description. In chapter 2, a literature review is performed, through literature search, followed by the constructing development of a theoretical framework. The next step is to select the research object and methods and collect data, which is presented and discussed in chapter 3. Doing case study and cross-case study when enough data has been collected. After that, a discussion is carried out, and conclusions are drawn.



*Figure 1 Thesis outline (own illustration)*

## 2. Literature review and theoretical framework

*The first part of this chapter introduces the research related to internal governance, heterogeneity, commitment, and social capital in agricultural cooperatives. Based on the literature review, the theoretical framework of this thesis is constructed.*

### 2.1 Literature review

The first subsection focuses on the basic components of governance within agricultural cooperatives, separation of rights and tensions. The next three subsections introduce heterogeneity, commitment, and social capital and their implications for cooperatives.

#### 2.1.1 Cooperative internal governance

Internal governance is important for an agricultural cooperative, as Bijman et al. (2012a) said that this is one of the core factors that decide the degree of success of cooperatives in the agribusiness chains. Unlike an Investor-Oriented Firm (IOF), cooperatives lack an external-control from markets, therefore there is a higher need for internal rights and control mechanisms (Igual et al. 2015). This is why scholars have studied the internal governance of cooperatives.

Generally, the GA and the BoD constitute the governance structure of cooperative (Henry 2005). Bijman's definition of the GA and the BoD is as follows:

All members together form the GA, which convenes at least once a year and in which major decisions are taken. At the GA the members of the cooperative elect the members of the BoD, from among the membership of the cooperative. Other decision-rights of the GA relate to major decisions..... The GA also has the right to (dis)approve the annual financial report. The control of the GA over the decisions of the BoD usually is ex-post, although cooperatives' by-laws may include the right of prior approval by the GA of major decisions by the BoD. (Bijman et al. 2014:648)

The Supervisory Board (SB) is also an important part of internal governance (Bijman et al. 2012b). Some countries require cooperatives to have a SB (Henry

2005), and the main function of the SB is to supervise and control the BoD on behalf of the GA (Bijman et al. 2012b). Igual et al. (2015) suggested that the SB increase control by bringing in outside experts. Regarding SB, different countries have different ways of handling these, for example, Greece, Spain, and the UK are not authorized to establish SBs or similar regulatory bodies (Bijman et al. 2014). Bulgaria, Cyprus, the Czech Republic, Poland, Portugal, and Slovakia do not allow non-members to serve on SB, while Estonia's SB may be composed entirely of non-members (ibid).

In the beginning of a cooperative's development, decision control and decision management are not separated, but when the cooperative becomes larger, the two rights are separated (Bijman et al. 2012b). When a cooperative grows, the increased heterogeneity of members due to the increasing number of members can make it difficult to align members' goals, leading to managers gaining more decision power (Hind 1999). For the cooperative, when investment at the cooperative level is more important than at the farmer level, the decision management will shift to professional managers (Hendrikse & Bijman 2002). This implies that the BoD has decision control while the professional managers have decision management (Bijman et al. 2012b). After consultation with the SB and the GA, the BoD appoints professional managers (ibid). Cooperatives that have professional managers running the business perform better (Bijman et al. 2012a).

As well as in the IOF, the appointment of professional managers can lead to agency problems<sup>5</sup>. Members can reduce agency costs by accepting monitoring costs, but there will still be some residual (Morfi et al. 2018). By playing down monitoring costs, members run a risk of elected representatives and management reaping rents. There is a trade-off between agency costs and monitoring costs (Morfi et al. 2018:582).

Cooperatives take the following method in the internal governance to maintain a balance between agency cost and monitoring costs (Bijman et al. 2014): (1) introduction of external directors to improve the BoD knowledge level and avoid professional manager domination; (2) introduction of district meetings and district committees to enhance member and the BoD contact; (3) increase the chances of choosing good delegates by the NC.

In addition to agency problems, there are other tensions. Cornforth (2004) presented three tensions that exist in cooperatives based on paradox viewpoint. In other words,

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<sup>5</sup> Agency problem means that conflict of interest due to inconsistent direction of interests between the principal and the agent.



how the BoD find a balance between the two extreme positions (Bijman et al. 2012b). The three tensions are as follows:

The first tension concerns the BoD acting as representatives for members and the experts responsible for driving organizational performance (Cornforth 2004:13): on the one hand, the board members should have expertise and experience that can create more benefit, but on the other hand, the board members are lay representatives that represent the members they serve. In response to this dilemma, board members and potential board members can be trained to obtain board members who have specialized skills yet represent the members of the cooperative (Michaud & Audebrand 2022). There is, however, a risk of oligarchic<sup>6</sup> tendencies if the cooperative is controlled through a small elite (Diefenbach 2019; Cornforth 2020).

The second tension concerns conformance and performance (Cornforth 2004). In strategic decisions, should the BoD choose a conservative position on behalf of members' interests or an offensive position on behalf of the cooperative's interests (Bijman et al. 2012b). Based on stewardship theory<sup>7</sup>, the board should focus on improving the cooperative's performance, but based on agency theory<sup>8</sup>, the board should represent the members' interests and ensure that the cooperative acts in the interest of the members (Cornforth 2004). It means that the first one considers more on the economic aim of cooperatives while the second one considers more on the social aim of cooperatives.

The third tension is between controlling and supporting, which relates to the BoD and the professional management (Cornforth 2004). Cooperatives lack appropriate ways to motivate the directors (Michaud & Audebrand 2022). This can lead to directors sacrificing control and regulatory functions to cooperate with managers to gain more benefits (Spear 2004). This tension is rooted in the question of whether the interests of the board and the professional manager are aligned (Bijman et al. 2012b). Stewardship theory emphasizes the BoD is the partner of management, while the agency theory emphasizes the BoD is the controller of management (Shleifer & Vishny 1997; Muth & Donaldson 1998; Cornforth 2004). Sundaramurthy and Lewis (2003) suggest that if the BoD puts too much emphasis on being partner or controller of management, it will be detrimental to the development of the organization.

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<sup>6</sup> Oligarchic is most of the power is in the hands of a few board members.

<sup>7</sup> Stewardship theory means that managers do what they can to create more benefits for the company.

<sup>8</sup> Agency theory is the theory that explains and resolves the contracts between the agent and the principal.

### 2.1.2 Heterogeneity

Heterogeneity<sup>9</sup> (or homogeneity) has important implications for collective action (Poteete & Ostrom 2004). Homogeneity of members can provide cooperatives with more competitive advantages (Hansmann 1996), reduce transaction costs and common ownership issues (Nilsson 2001), facilitate better functioning of trust and commitment mechanisms (Höhler & Kühl 2018). Conversely, heterogeneity increases transaction costs (Apparao et al. 2019), which in turn leads to increased decision making cost (Hansmann 1996).

Heterogeneity has several sources. Baland and Platteau (1996) think the main sources of heterogeneity are the differences in cultural background and in economic interests. Vedeld (2000) argues that heterogeneity arises from differences in endowments, politics, wealth, culture, and economic interests.

Höhler and Kühl (2018) categorized member heterogeneity into three categories through a compilation of previous literature: farm-level, member-level, and product-related heterogeneity. Specifically as follows: (1) farm-level, size and geographical distribution of members are important factors contributing to heterogeneity; (2) member-level, age, experience, educational background, level of commitment and contractual relationship between members and the cooperative are the main reasons; and (3) product-level heterogeneity is mainly due to the quantity and quality of products (ibid). Differences in farm size can increase the cost of control and influence, individual differences can influence investment decisions and commitments, and product differentiation can lead to changes in costs (ibid).

Increased heterogeneity could cause a shift in decision-making power from the board to professional managers (Bijman et al. 2012b). Membership heterogeneity can negatively affect investment, collective decision-making cost, commitment mechanisms, and cooperative performance and may cause cooperative degradation<sup>10</sup> (Hansmann 1996; Chaddad & Cook 2004; Iliopoulos & Hendrikse 2009; Pozzobon & Zylbersztajn 2013). Grashuis and Cook (2021) think that member heterogeneity can influence the production and consumption of collective goods while potentially increasing the benefits of defection rather than cooperation.

In the study of the effects of different types of heterogeneity on collective action, Heckathorn (1993) found that heterogeneity favors collective action in the early stages of organizational development, but is detrimental in the later stages. Member heterogeneity increases with cooperative expansion operations and can lead to more

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<sup>9</sup> Heterogeneity refers to the existence of differences in at least one individual characteristic in a group

<sup>10</sup> Degradation means a reduction in the size and operations of the cooperative and a decrease in membership.

conflicts of interest to the disadvantage of cooperative development (Garrido 2007; Battilani & Schröter 2012).

### 2.1.3 Commitment

Becker (1960) defines commitment in terms of a side bet<sup>11</sup>: commitment is an ongoing investment by employees in the organization. Porter et al. (1974) focus commitment on the psychological attachment to the organization and see commitment as a sense of personal identification and involvement with the organization. While Meyer and Herscovitch (2001) believe that commitment is a force that connects individuals to target-related actions.

For cooperatives, commitment is important. Cooperatives require members to invest in raw materials, capital, and management (Fulton 1999). Commitment can be defined as members patronizing the cooperative regardless of fluctuations in the cooperative's price services (ibid). It is worth noting that because members have multiple roles in the cooperative, the concept of member commitment is multifaceted (Österberg & Nilsson 2009; Apparao et al. 2019). As a customer, the number of transactions can affect production capacity; as an investor, the number of investments can affect the cooperative's ability to raise capital; as a manager, voting can affect the board's control of management (Bhuyan 2007).

Commitment has multiple functions. The commitment of members can reduce the likelihood of trading with others, not withdrawing from the cooperative, lowering transaction costs and reducing free-rider behaviors<sup>12</sup> (Cechin et al. 2013a; Hakelius & Hansson 2016). Participation in internal governance and commitment interact. Members may be reluctant to invest time and effort in internal governance if commitment is lacking (Bijman & Verhees 2011). Österberg and Nilsson (2009) believe that the success of the cooperative can be measured by the commitment of the members to the cooperative.

The influencing factors that affect membership commitment include social, economic, and organizational factors, as well as cooperative characteristics (Bijman & Verhees 2011). The main influencing factors are as follows: trust, participation in governance, age, education level, type of cooperative, communication strategy, heterogeneity of member base and size of cooperative (Fulton 1999; Bijman & Verhees 2011). The level of commitment decreases as the education level of members increases, while active participation in the management of the cooperative tends to increase commitment to the cooperative (Bijman & Verhees 2011).

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<sup>11</sup> Side bet is personal value of investment accumulation.

<sup>12</sup> Free rider means that a person who indicates in advance that he or she does not need a public good but enjoys the results without paying for them after others have paid for them.

Because heterogeneity makes it more difficult for a cooperative to demonstrate that it can meet the interests of all its members at the same time, higher membership heterogeneity may lead to lower commitment (ibid).

#### 2.1.4 Social capital

Although there is no uniform definition of social capital by scholars, they generally agree that its characteristics include norms, values, relationships and networks (Apparao et al. 2019). Putnam (1993) thinks that social capital is the characteristic that enables mutual benefits to be achieved by coordination and cooperation. While Woolcock (1998) argues that social capital consists of norms and networks that promote common benefits and it could be defined as the norms of information, trust and reciprocity inherent in a person's social network. It differs from tangible capital because the amount of social capital stock becomes larger as it is used (Woolcock 1998). For example, trust used today will increase tomorrow and will not decrease as the result of use.

Cooperatives are built on the foundation of social capital (Apparao et al. 2019), and it is the common point of all explanations and theories related to the formation and development of cooperatives (Nilsson et al. 2012). Economies of scale in cooperatives can reduce production cost (Apparao et al. 2019). But one study found that large cooperatives are slowly losing social capital, while the benefits of economies of scale are offset by the loss of social capital (Nilsson et al. 2012). Loss of social capital is usually manifested in declining trust, reduced participation, weak governance, increased opportunistic behavior, reduced satisfaction and disunity (Valentinov 2004; Apparao et al. 2019).

There is a negative correlation between social capital and heterogeneity. The loss of social capital is caused by the emergence of heterogeneity between members (Valentinov 2004). Nilsson et al. (2012:191) think that "The trend towards horizontal integration (large-scale operations) tends to create memberships, which are very large and heterogeneous." Simultaneously, the expansion of a cooperative would lead to a loss of social capital (Nilsson et al. 2012). Increased heterogeneity of members can lead to loss in terms of social capital, for example, members distancing themselves from the cooperative (Österberg & Nilsson 2009). In contrast, research has shown that the level of heterogeneity is lower in small cooperatives than in large cooperatives, and the smaller the size of the cooperative, the higher the social capital (Feng et al. 2016).

## 2.2 Theoretical framework

Apparao et al. (2019) construct a theoretical framework centered on heterogeneity, social capital, and commitment for examining and analyzing cooperative performance. Regarding the relationship between the three, scholars have made the following hypotheses based on the literature review (Apparao et al. 2019):

Hypothesis 1: Heterogeneity and commitment are negatively correlated.

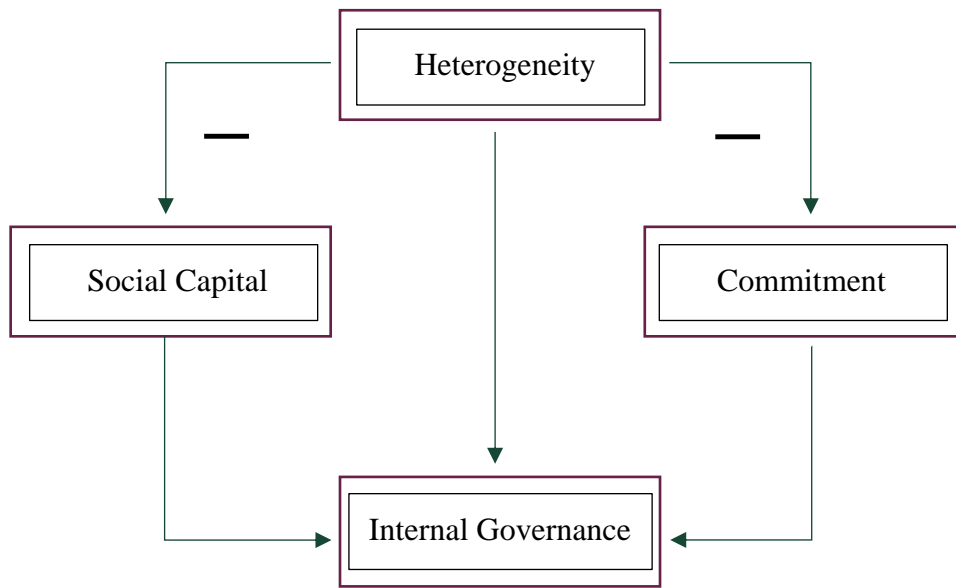
Hypothesis 2: Social capital and commitment are positively correlated.

Hypothesis 3: Heterogeneity and social capital are negatively correlated.

This thesis introduces internal governance based on the above hypotheses. Based on the literature review, heterogeneity, commitment, and social capital all have an impact on internal governance. Also, heterogeneity has a negative impact on commitment and social capital. The theoretical framework of this thesis focuses on the impact of aging, one of the heterogeneity, on internal governance and therefore ignores hypothesis 2 of Apparao et al. (2019) on the relationship between social capital and commitment.

As shown in Figure 2, in this thesis, studying the impact of age on internal governance from a heterogeneity perspective is in focus. Heterogeneity includes both farm-level (e.g., farm size, crop type) and farmer-level (e.g., education, gender). Age is one of the heterogeneities on the individual level. While this thesis focuses on the relationship between age and internal governance, it also considers the effects of other heterogeneities. Internal governance encompasses (1) participation in governance as a member of cooperative and (2) participation in direct governance, such as becoming a director. This thesis examines the direct impact of age structure on internal governance through heterogeneity between different age groups. Based on the effects of heterogeneity on commitment and social capital, the indirect effects of age structure on internal governance are researched from both commitment and social capital perspectives. The detailed information can be found in Appendix 1.

|



*Figure 2 Theoretical framework (own illustration)*

## 3. Methodology

*In this chapter, the research methodology is presented and discussed. This chapter begins with the research philosophy and research design. It then introduces the literature review, how to collect data and how to analyze the data. Lastly, data quality criteria and ethical considerations are discussed.*

### 3.1 Research philosophy

Research philosophy is a system of beliefs and assumption of the development of knowledge (Saunders et al. 2009). Guba and Lincoln (1994) pointed out that when choosing the method of a study, research philosophy is an essential factor to be considered. Generally, the ontology and epistemology views are two views of the research philosophy.

Methodologies determine methods, in a sense that the choice of particular mythology (philosophical position) leads to a preference for a particular research method (tool) on the grounds of its appropriateness within that specific methodological orientation. (Slevitch 2011:75)

Ontology is the study of reality and primarily describes what exists and what kind of relationships exists among basic kinds of being (Guba & Lincoln 1994). Epistemology focuses on the assumption of knowledge, how can we know what we know, what is considered acceptable knowledge and what kinds of contributions to knowledge can be made (Saunders et al. 2009). The ontological perspective of this study is based on an interpretive approach because it will help to understand the impact of age structure in agricultural cooperatives. The reason why positivism<sup>13</sup> is not adopted is because it relies on empirical data and cannot explain human nature. By using interpretivism we can understand what is happening through interaction with people.

Interpretivism is able to understand the aim and motivation behind the studies behavior (Chowdhury 2014) and to know how the event occurred (Lin 1998). It is worth noting the neutrality of the data, as researchers' personal tendencies may

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<sup>13</sup> Positivism is a philosophy centered on practical examination

influence respondents' perceptions (Walsham 1995). Therefore, researchers should avoid bringing personal thoughts into the interview process to avoid affecting the result.

## 3.2 Research design

The purpose of this thesis is to gain an in-depth understanding of the link between age structures and internal governance. Therefore, the selection of a case study design is appropriate for a detailed and in-depth analysis of the case (Bryman & Bell 2011). Despite the preference of some scholars to connect case study design with qualitative analysis, both qualitative and quantitative analysis are actually applied to case study design (ibid). In this thesis, Lantmännen Södra and Arla were selected as cases from which data were collected. As Stake (1995) said, the aim of multiple cases is to explore a general phenomenon. While multiple case studies, as compared to single case studies, enable comparison of the results in each case and reflection on the similarities and differences between the cases can be made (Bryman & Bell 2011). Therefore, multi-case analysis is beneficial to explore the relationship between age structure and internal governance.

As Eisenhardt (1989) said, the case study design is suitable for areas where there is a lack of research. The case study design is applicable to this thesis because there are fewer studies on age structures on the internal governance of Swedish cooperatives. It is important to note that the results of the case study cannot be generalized, as it results from a specific object in a specific place at a specific time (Bryman & Bell 2011). Unlike other research designs, the case study design focuses on a bounded situation or system, a purposeful, function entity (ibid). While Yin (2013) said that case studies require clear boundaries and units of study. This thesis focuses on the impact of age group heterogeneity on internal governance. Therefore, the boundary of the case in this study is cooperatives and the units of study are heterogeneities related to members.

## 3.3 Literature review

This thesis reviews scholarly research related to the research question through a literature review. As Bryman and Bell (2011) said, the literature review helps researchers to deepen their understanding of the field of study. The literature review supports one's own views or arguments with theories and perspectives of other scholars (Bryman & Bell 2011). It can also provide the basis for this thesis to justify the research questions and research design and provide data collection and analysis methods (ibid).



To ensure the source and quality of the literature, the references in this thesis are from Google scholar, Primo and ScienceDirect. Credibility is ensured by selecting previous articles that are relevant and highly cited to the topic and high-quality articles related to the topic in recent years. For the references under the same topic, the credibility is ensured by referring to multiple highly cited literature (Robson 2016). Literature was obtained by searching the following keywords related to age in the cooperative area: cooperatives, heterogeneity, commitment, and social capital. In this thesis, a narrative literature review is conducted for each topic to deepen the understanding of the relevant theories. At the same time, the four concepts are connected together through the literature review, which provides theoretical support from the theoretical framework by the literature review and adds credibility to the theoretical framework.

### 3.4 Data collection

For this research, collecting data is to get the real situation from cooperative members, which will help to understand the internal governance of the cooperative. The primary data of business research is mainly collected by questionnaires, interviews and observations (Bryman & Bell 2011). First-hand data is more reliable than second-hand data, but first-hand data can be easily influenced by subjective factors of the researcher, especially for interviews (Walsham 1995; Bryman & Bell 2011). In contrast to primary data collected directly from the source (Bryman & Bell 2011), secondary data can be collected by literature search (Yin 2013). Secondary data can increase the veracity of primary data, but it can also suffer from interpretation errors (Bryman & Bell 2011).

#### 3.4.1 Semi-structured interviews

Interviews are the main source of qualitative research. Interviews can be divided into structured interviews, unstructured interviews and semi-structured interviews (Bryman & Bell 2011). Structured interviews require interviews based on a pre-determined framework, similar to a questionnaire, while unstructured interviews have no fixed framework and the results are difficult to predict the results (ibid). Semi-structured interviews, however, are in between structured and unstructured interviews. Semi-structured interviews have a list of questions, often referred to as an interview guide (Bryman & Bell 2011), but the interview does not need to be conducted exactly according to the guide and time schedule, giving the researcher more freedom than structured interviews. Also, because of the guide, it is easier to obtain the desired results compared to unstructured interviews, as the content of the interview is always kept on topic.

The primary data for this thesis is collected through semi-structured interviews. This is because the more flexible semi-structured interview is more conducive to obtaining the data needed for the study than the other two types of interviews. In this study, the interviewed persons have extensive experience in the NC or the BoD of Lantmännen, Södra and Arla, respectively. The interviews were used to understand the impact of aging on internal governance.

The interview guide helped the interview to run smoothly (Bryman & Bell 2011). The specific interview guide can be found in the Appendix 1. Based on the theoretical framework, the interview guide formulated questions in terms of individual-level and farm-level heterogeneity, commitment, social capital, and internal governance. An attempt was made to find the relationship between age structure and internal governance through these questions. Respondents are informed prior to the interview that they would be anonymized. The respondents are consulted for audio recording to ensure the correct content of the interviews. Also, interviewees have received a written summary of the interview and have the right to comment the summary.

### 3.5 Data analysis

Data analysis is a difficult but important part of the thesis (Yin 2013). The data collection process generates a large amount of complex data, so effective data analysis methods are needed to analyze the data. The content analysis method is applicable to case studies. Bryman and Bell (2011) note that content analysis is a transparent, replicable, and highly flexible objective method of analysis, while enabling access to more difficult-to-obtain information. To categorize qualitative data by setting keywords and coding is useful for content analysis.

This thesis uses the two-step model developed by Eisenhardt (1989): a first step for case analysis and a second step for cross-case analysis. The case studies are based on the data collected and the relevant context, looking for links between the age structure and cooperative internal governance. Because the case studies are based on the specific context, the results obtained are not generalizable. Therefore, the second part conducts a cross-case analysis to compare the cases and find the similarities and differences between them. A two-step model is used to try to find results with more generalizability.

## 3.6 Quality criteria

Qualitative research can be influenced by subjective factors of the researcher during data collection (Walsham 1995). Therefore, researchers need to think about how to reduce their influence on the study and ensure the quality of the study. For qualitative research, quality can be measured by validity and reliability (Bryman & Bell 2011). This thesis refers to the viewpoint of Lecompte and Goetz (1982) to construct quality criteria, i.e., to focus on external reliability and internal reliability, and external validity and internal validity.

### 3.6.1 Reliability

Reliability means that bias and error are minimized and that similar results can be obtained in repeated experiments with identical conditions (Yin 2013). When discussing the results of a qualitative study, the researcher's analysis needs to be included in the results (ibid). A detailed description of each step in the study facilitates the reduction of bias and error. To improve reliability, interviews need to be recorded and saved to ensure that what is noted by the researcher and what is expressed by the interviewee are consistent. Reliability is generally divided into external reliability and internal reliability.

#### *External reliability*

External reliability means the degree of a study can be replicated (Bryman & Bell 2011), but it is difficult to meet in qualitative research. The external environment is constantly changing and it is difficult to ensure consistent conditions, so the external validity of qualitative research is low (Lecompte & Goetz 1982). However, the social roles and social environment of the respondents can be described in detail by describing the research process. This will facilitate other researchers to find similar environments and respondents with similar social roles for their studies and draw similar conclusions. Lecompte and Goetz (1982) point out that external reliability is improved by describing in detail the research process, the social role of the respondent and the social environment.

#### *Internal reliability*

The key to internal reliability is inter-observer reliability, in other words, the degree to which the set of meanings held by multiple observers is sufficiently consistent (Lecompte & Goetz 1982). In this thesis, since there is only one researcher, there is no disagreement. However, there may be discrepancies between what was heard and what was recorded during the interviews, so audio recordings can be made to ensure accurate data. At the same time, low-reference descriptors can be used in the description process, i.e., using descriptors that are as specific and accurate as possible (ibid). low-reference descriptors can also improve internal reliability.

### 3.6.2 Validity

Validity is one of the most important criteria of research in many ways (Bryman & Bell 2011). As Bryman and Bell (2011) said, validity means the completeness of the conclusion drawn from a study. Validity is generally divided into external validity and internal validity.

#### *External validity*

External validity relates to whether the results of the study are generalizable (ibid). In other words, whether the study's population and results are representative. External validity contributes to credibility by building a logical framework to deepen the understanding of the results (Bryman & Bell 2011). A single case study is selected to study a specific object in a specific context, and therefore has low external validity (ibid). In response, this thesis selects three representative Swedish cooperatives as case studies to improve external validity. This study is based on a theoretical framework that provides insight into the impact of age structures on internal governance from multiple perspectives.

#### *Internal validity*

Internal validity relates to the problem of causality (Bryman & Bell 2011). Lecompte and Goetz (1982) argue that internal validity is often a strength of qualitative research. Internal validity can be judged by whether the empirical findings correspond to the theoretical framework (Bryman & Bell 2011). To improve internal validity, this thesis uses the triangulation method. Triangulation means using more than one approach or data source in the research of social phenomena (ibid). Thus, this thesis ensures internal validity by combining qualitative and quantitative data, collecting data from two data sources through interviews and literature searches, and collecting secondary data from different sources.

## 3.7 Ethical consideration

It is very important to consider the ethical issues in business studies (Bryman & Bell 2011). In business studies, ethical issues can take different forms (ibid). Scholars summarize the ethical issues in the following four points: 1) whether there is harm to participants; 2) whether there is a lack of informed consent; 3) whether there is an invasion of privacy; 4) whether deception is involved (Diener & Crandall 1978; Bryman & Bell 2011). The above four principles were followed in the research process to avoid main ethical problems. However, data management is also an ethical issue that need to be considered (Bryman & Bell 2011). The collected data needs to be handled properly, for example ensuring that people other than the

researcher are not allowed access to the data and ensuring the confidentiality of the data. Respondents' personal data needs to be protected according to General Data Protection Regulation (GDPR)<sup>14</sup>.

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<sup>14</sup> GDPR is the EU privacy and security law for the protection of data relating to people in the EU

## 4. Empirical background

*This chapter focuses on the basic information of Lantmännen Södra and Arla. The three specific cases are presented in terms of the current situation, development experience and internal governance structure, respectively.*

### 4.1 Lantmännen

Lantmännen was founded in 1880 as the agricultural cooperative in Sweden. It has 19,000 members and 10,000 employees and operates in more than twenty countries (Lantmännen 2020). It is now the largest agribusiness company in Northern Europe, formed in 2001 through the merger of nine cooperatives (Hakelius & Nilsson 2020).

Lantmännen has five major businesses, namely, agricultural sector, energy sector, food sector, Swecon business area and real estate business area (Lantmännen 2020). Of these, only the agricultural sector has a business relationship with members. The agricultural sector accounted for 44% of total sales (ibid). This sector constitutes the core business of Lantmännen. The goal of the other four divisions is to maximize profits. According to the Lantmännen Annual Report with Sustainability Report (2020:4), the proportion of total sales in the other four divisions is as follows: energy sector (8%), food sector (31%), Swecon business area (16%) and real estate business (1%).

As shown in Figure 3, its business model has four aspects: (1) being a farmers' cooperative, which uses cooperative to obtain more profit for members and optimize return on capital; (2) operations from field to fork (Lantmännen 2020), which meet farmers' needs and add value to agricultural products through strong business capabilities; (3) research, innovation and sustainable development, which reinvest profits to improve varieties and (4) value from farmland, creating greater value for our members by efficiently using farmland resources (ibid).



*Figure 3 Business model of Lantmännen (Lantmännen Annual Report with Sustainability Report 2020:5)*

#### 4.1.1 Internal governance structure

As can be seen in Figure 4, the members belong to different districts. Lantmännen is divided into 20 districts (Lantmännen 2020). These districts are the base of its governance. District meetings provide an opportunity for members to present their views to the BoD and management in multiple ways, including motions and written communications (ibid). The district meetings follow the one-member-one-vote rule. The delegates that make up the GA are selected by the district meetings. The member of the GA mainly consists of District Council (DC). Each delegate has one vote at the meeting and each member is entitled to have business considered at the meeting (Lantmännen 2020:62).

The members of the national BoD are elected at the GA and are responsible for the cooperative and its members. Typically the BOD includes seven member representatives, three employee representatives and two external members (Lantmännen 2020). The main task of the chairman of the BoD is to lead the work of the BoD, while being responsible for ensuring that the Board works in an efficient manner (ibid).

The main task of the NC is to prepare and present proposals for the election and salary of the members of the BoD and auditors, as well as to make proposals for the salary of the other elected representatives (Lantmännen 2020). The NC chooses a chairman from among its members. Related to the status and future direction of Lantmännen, the NC evaluates the suitability of the composition of the BoD in

terms of collective expertise (ibid). The NC also proposes a candidate for each position to be filled. Elections must be conducted openly and transparently, and through the structured NC process (Lantmännen 2020). Specifically, the main task of the district NC is to nominate delegates for the next DC, and the main task of the NC is to elect delegates for the next GA.

The Council of Trustees (CT) plays an integral role in communication and information between members, districts, and the board (Lantmännen 2020). The CT consists of the chairmen of the districts and other members. The main task of CT is to give advice to and discuss important issues with the Lantmännen BoD, and guarantee the positive development of it (ibid).

Its audit consists of an external audit and an internal audit. The external audit consists of four external members who are responsible for auditing the annual report, financial statements, etc. The auditors are all elected by the GA for a term of one year each (Lantmännen 2020). One is the authorized auditor and the other three are the member representative auditors (ibid). The internal audit is an independent and objective function responsible for assessing, recommending and monitoring improvements in the efficiency of risk management, internal controls and control processes across the organization (Lantmännen 2020:68).

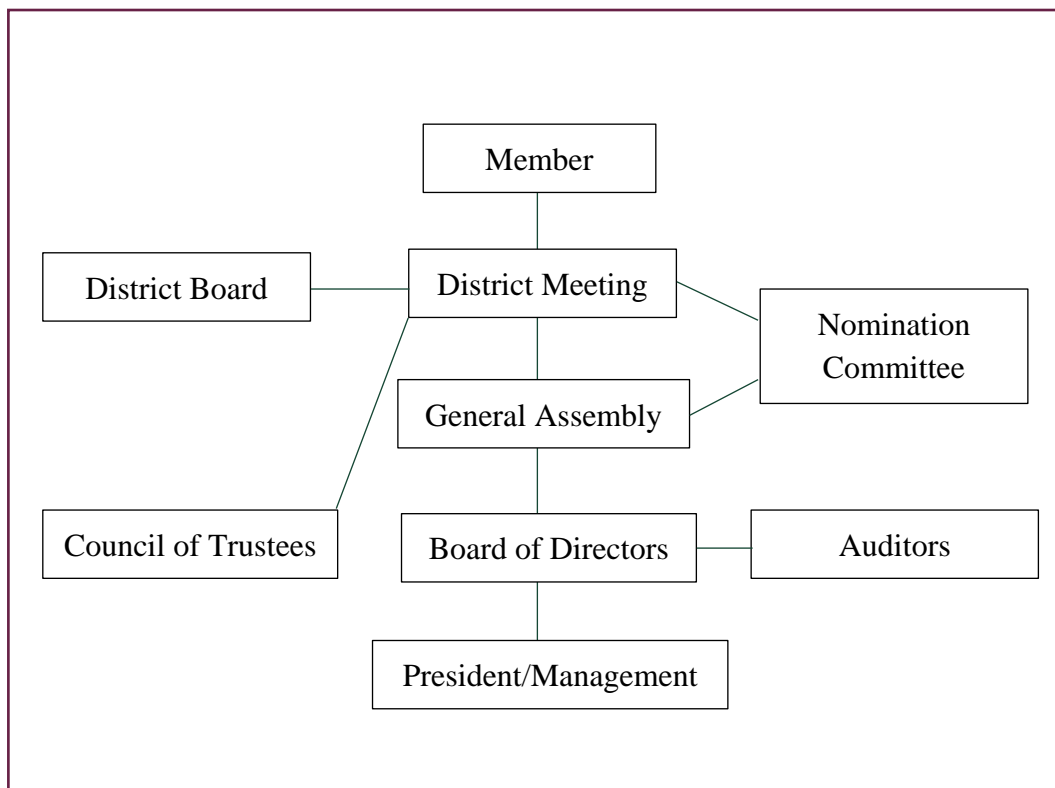


Figure 4 Internal governance structure of Lantmännen (Lantmännen Annual Report with Sustainability Report 2020:14)



## 4.2 Södra

Södra was founded in 1938 and has continued to merge with neighboring forestry cooperatives as it has grown (Södra 2020). Currently, it is the largest forestry cooperative in Sweden. Södra presently has 52,921 individual members, who are both forest owners and members of the economic cooperative (ibid). The requirement to become a member of Södra is to own at least five hectares of forest land in one of its 36 forestry districts(Södra 2020). The principle of one member, one vote is followed, irrelevant of the contributed capital and the size of the forest land (ibid).

It is a company that focuses on sustainability, improving profitability and resource utilization. It creates more value for its members and ensures a long-term return of no less than 10% on their capital. It has four business areas: (1) Södra Skog, the main tasks are to buy forest products from members, to trade timber abroad, to develop precision forestry and to look after their forests for members; (2) Södra Cell is a well-known pulp producer and a major supplier of raw materials for biofuels, green power and district heating; (3) Södra Wood, the main business is sawn timber and building systems, and it also provides related by-products; (4) Södra Innovation focuses on innovation in the industry, the development of subsidiaries and new partners, and on the marketability of products with potential (Södra 2020).

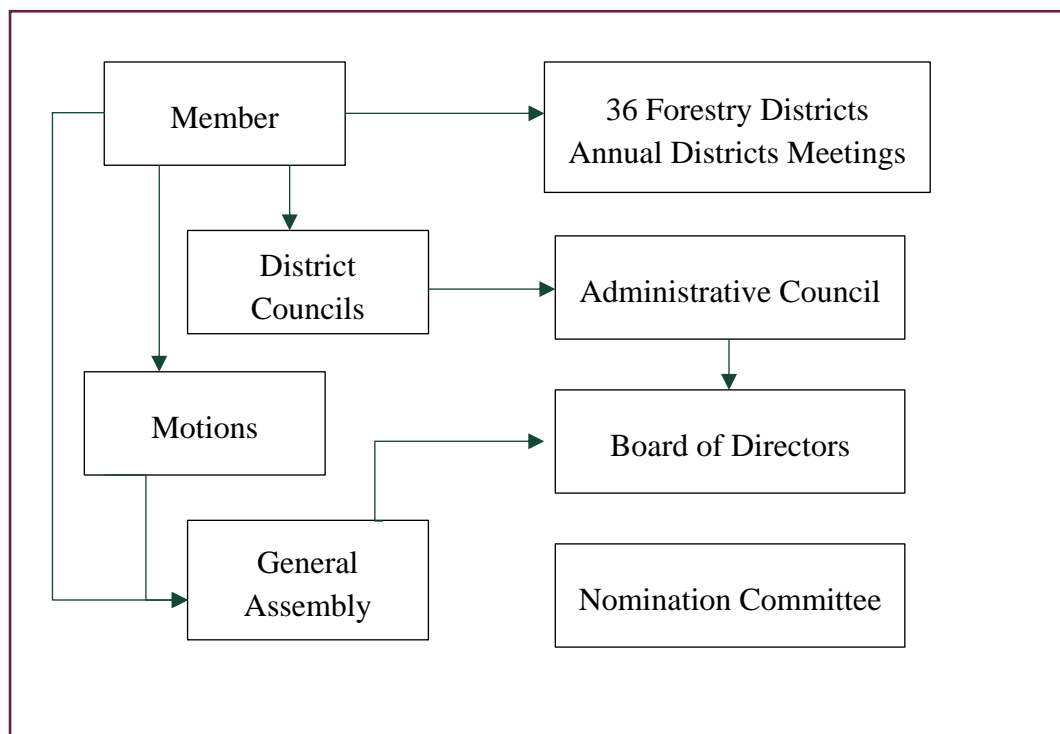


Figure 5 Internal governance of Södra (Södra Annual and Sustainability Report 2020:143)

#### 4.2.1 Internal governance structure

As shown in Figure 5, the members of Södra are located in 36 forest districts (Södra 2020). Each forest district needs to appoint the DC and the NC at the annual district meeting (ibid). Usually, the DC consists of 12 members while the BoD consists of 10 members and 3 employee representatives (Södra 2020). Members have the greatest opportunity for personal influence in their own district (ibid). The annual district meetings also need to appoint delegates to the GA. Södra Annual and Sustainability Report (2020:142) mentioned that the annual district meetings is held no later than three months after the end of the financial year.

All members have the right to submit motions. For members, they have two ways to submit the motion: (1) Member could submit motions to the annual districts meeting, which will decide whether to submit them to the GA (Södra 2020) and (2) the member also has the possibility to skip the annual districts meeting and submit motions directly to the GA (ibid).

The DC is elected by the annual district meeting. The responsibility of the DC is to monitor local business policy in the district, organize programs of training and member activities (Södra 2020). It is also responsible for communicating with local members of the district. Generally speaking, it can have no less than five and no more than twelve members (ibid).

The Administrative Council is an advisory body to the BoD and the GA. It is composed of the chairmen of 36 DC (Södra 2020). To help the cooperative's strategies and decisions gain the support of its members is also the task of the administrative council (ibid).

The GA is the most important decision-making body of Södra (Södra 2020). It is made up of 200 delegates from 36 annual district meetings (ibid). Each delegate has one vote. The GA is responsible for reporting the annual financial statements and profits distribution and appointing the members of the BoD, the auditors, and the NC (Södra 2020). Also, the GA needs to deal with motions from 36 districts (ibid). Generally, the GA is held in the first half of the year.

The main tasks of the NC are as follow: (1) to submit proposals to the meeting of the National Board of the Federation of Swedish Farmers (LRF) regarding the directors, auditors, and the representative of Södra, and (2) to make recommendations concerning the fees of the members of the BoD and the administrative board, the delegates of the GA, the selected representative, and the auditors (Södra 2020). It is generally composed of five to seven members, and its composition shall represent the membership of the organization (ibid).

### 4.3 Arla Foods

Arla is a cooperative owned by dairy farmers in Sweden, Denmark, Germany, UK, Belgium, Luxembourg, and Netherlands (Arla Foods 2021). Before 1975, the Swedish cooperative was established in 1880 and called Stockholms Mjölkförsäljningsaktiebolag. In 1975 the name was changed to Arla, which merged with the Danish cooperative MD Foods in 2000 to become Arla Foods. It has 8,956 dairy farmers and 20,617 employees (ibid). To ensure that each owner has a voice, Arla's cooperative governance is based on democratic principles (Arla Foods 2021).

The business model of Arla is shown in Figure 6. The mission of Arla is to ensure the highest value of farmers' milk as well as to create opportunities for their growth (ibid). 8956 farmer-owners are responsible for more than one and half million cows (Arla Foods 2021). Due to efficient and sustainable production, each kilogram of milk emits only 1.15 kilograms of carbon dioxide (ibid). Farmers produce high-quality milk in a responsible way according to the Arla farm<sup>15</sup> requirements, ensuring the sustainability of the dairy industry in the future. Each year, Arla collects about 13.6 billion kilograms of raw milk from the owners in several countries (Arla Foods 2021). It has sixty sites for production and processing, producing 6.8 million kilograms of dairy products each year (ibid). These products are sold to 152 countries. Arla increases the value of its dairy products through innovation, branding and marketing to create more profit for its farmer owners (Arla Foods 2021). It focuses on the life cycle and is committed to providing nutrition to millions of people while reducing negative impacts on the environment (ibid). Arla returns most of the profit to the farmer through the delivered price of milk. The milk price increased from the previous 1.0 EUR per kilogram to 1.5 EUR per kilogram (ibid).



Figure 6 Business model of Arla (Arla Foods Consolidated Annual Report 2021:13)

<sup>15</sup> The Arla farm is a quality program launched by Arla to ensure the highest level of animal care, sustainability, safety, etc., it is called Arlagården in Swedish.

### 4.3.1 Internal governance structure

As shown in Figure 7, Arla's internal governance structure includes the DC, regions, Board of Representatives (BoR), Area Councils and the BoD. The details are as follows:

The owners consisted of 8956 milk producers from seven different countries (Arla Foods 2021). Each one has the opportunity to give his/her opinion and influence significant decisions. It is worth noting that the number of owners has been on the decline in recent years for various reasons (ibid).

Each year, farmers/owners hold the DC in four regions: Denmark, Sweden, UK and the Central Europe (Germany, Belgium, the Netherlands and Luxembourg). The main function of the DC is to ensure their democratic influence on Arla's decisions (Arla Foods 2021). Democratically elected representatives in the DC to participate in the BoR.

The BoR has five components: 77 Danish representatives, 50 Swedish representatives, 23 Central European representatives, 25 British representatives and 12 employee representatives (ibid). The BoR is the supreme decision-making body of Arla (Arla Foods 2021). The owner representatives are selected every other year (Arla Foods 2021:48). It is primarily responsible for the annual profit distribution and the election of the BoD.

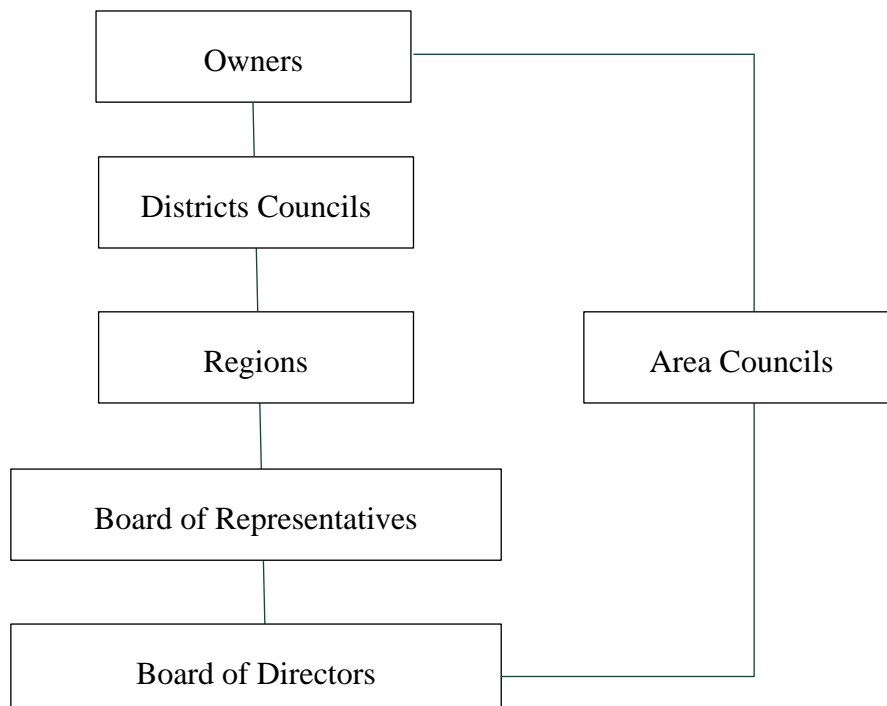


Figure 7 Internal governance structure of Arla (Arla Foods Consolidated Annual Report 2021:47)

The BoD is appointed by the BoR and responsible for decisions related to long-term strategy, major investments (Arla Foods 2021). The BoD also needs to ensure that Arla's management is in line with the farmer owners' maximum profitability. Similar to the BoR, the BoD is composed of 15 farmer owner representatives and three employee representatives (ibid).

There are four Area Councils (ACs) in Arla. The ACs are sub-committees of the BoD and consist of members of the BoD and the BoR (Arla Foods 2021). The task of the ACs is to deal with problems of special interest to local farmers (ibid).

#### *Chapter summary*

All three cooperatives follow the principle of one member, one vote, and each member has the potential to influence the activities of the cooperatives. They share a similar internal governance structure. Such as the GA in Lantmännen and Södra is called the BoR in Arla, but the function is the same. The main differences are as follows: (1) Södra has an administrative committee, whose main role is to advise the BoD and the GA; (2) Arla has four ACs, which are used to solve problems for local members.

## 5. Results

*The first half of this chapter focuses on presenting the results of the interviews in the Swedish case. The later part discusses the findings of other scholars in four areas: internal governance, heterogeneity, commitment, and social capital.*

### 5.1 Results of three cases

This section explores the impact of aging on internal governance by interviewing members of the nominating committees or board members of the three cooperatives. Details about the interviews are provided in Table 2, with the following results.

*Table 2 The details of interviews*

Interviewee	Cooperative	Position	Interview Date	Length of interview
Jenny Bengtsson	Lantmännen	Director of the Nation Board of Director	May 11, 2022	30 min
Ingemar Thorstensson	Södra	Chair of the Nomination Committee	May 10, 2022	60 min
Alf Johansson	Arla	Chair of the Nomination Committee	May 9, 2022	60 min

#### 5.1.1 Result of Lantmännen

Jenny has a farm with dairy cows, cattle, grain production and grazing fields. She has been the director of the BoD for one year, before that she was a member of the district board for six years.

When talking about commitment, she said many members trade with competitors, but the degree of this depends on the number of local competitors (Jenny Lantmännen). Members are interested in the additional investment in Lantmännen because of the objective return on it (ibid). However, many members are hesitant to make decisions because money is needed for the operation of the farm (Jenny Lantmännen).

Regarding social capital, since it has a large number of members, conflicts among members are inevitable. For example, the grain growers want a high grain price while the farmer having livestock want the low price on the forage and fodder (Jenny Lantmännen).

Jenny said that in her district, Halland, the participation rate in district meetings was very low. She believes there are three reasons for this situation: (1) there are many small local cooperatives, not associated with Lantmännen, while few farmers have farms mainly producing grain; (2) Lantmännen gives its members high profits, so that members think they do not need to participate in district meetings; (3) district meetings are always far from members' farm (Jenny Lantmännen).

For her, Jenny accepted the nomination to the BoD because she wanted to learn more while developing her social network. In addition, she thought the position would increase her potential to influence Lantmännen's activities.

Regarding the requirements to become a board member, she says that being a board member takes a lot of time, so you need to get away from your farm. At the same time, she believes that two characteristics are needed to be a good board director: (1) to understand the business carried out by Lantmännen, and (2) respect and listen to members' opinions (Jenny Lantmännen).

### **5.1.2 Result of Södra**

Ingemar has 350 hectares of forest, and he has been a member of Södra for 35 years and has been active in the Administrative Council of Södra, where he now is the chair.

He said that each member has a possibility to influence Södra (Ingemar Södra). While this requires commitment as well as knowledge about forestry and Södra (ibid). Regarding member commitment, when members believe that the cooperative is offering a low price, the member breaks the commitment to trade with someone else in the market to get a higher return. The chair also said that most of these members will always trade with others (Ingemar Södra).

It is worth mentioning that 75-80% of the members are faithful to Södra (Ingemar Södra). Ingemar pointed out that the experience of members working with the cooperative through difficult times increases members' trust in the cooperative (ibid). For example, the storms Gudrun in 2005 and Per in 2007. In the first example, Södra stabilized the negative impact of the storm by setting a market price, and in the second example, Södra balanced the economic losses of its members by

providing financial subsidies for damaged trees (Ingemar Södra). These methods contribute to the faithfulness of members to Södra.

When it comes to the way members communicate with Södra, this is mainly through digital meetings and web pages (Ingemar Södra). Members have frequent contact with cooperative staff. The Chair said that the main aim is to understand what members want the cooperative to do for their forests and what aspects Södra needs to improve (ibid). It is important to listen to members.

The cooperative provides forest management services to members, but only for members with more than 200 hectares (Ingemar Södra). Specially to help members who do not live in their forests, to avoid affecting the surrounding members' forests (i.e., insect problems) and to make the best possible economic situation. The Chair thinks that also members with less than 200 hectares should be eligible to use the service.

According to Ingemar, there are divisions in the member group. There is a part of the members whose forest holdings, values, and views on Södra are constantly changing (Ingemar Södra). The main reason for this situation is that the main income of this part of members does not come from their forest.

About the meetings, it is not possible to expect all members to participate. The main reasons for members' absence from meetings are that these members do not live at their forest property, some of them even live abroad (Ingemar Södra).

Regarding the election as a regional director, members are very willing to accept. For them, it's an interesting task, as well as meaning status and prestige. Ingemar said it as an honorary position, receives the respect of other members. Södra has a goal of having 40-60% female directors on the board. However, younger, and female members are unwilling to participate in the election. The main reason is that their knowledge level about cooperatives, forestry and Södra is low. So that Södra provides an opportunity for younger and female members to learn about cooperatives, forestry, Södra and other related topics. While it is good to increase the diversity of board members, it is even more important that board members possess experience and wisdom (Ingemar Södra).

For the NC, it is important to think about whether a candidate meets the requirements in the following three aspects (Ingemar Södra):

- Knowledge about the cooperative association, Södra, forestry, the forest trade and forest industry.



- Knowledge of and interest in the industry, the market, and the innovation around the world.
- Knowledge of economic thinking, financial aspects, leadership experience and capacity, and knowledge about Södra as an organization.

Of course, in addition to assessing the above three aspects, soft values are equally important. For example, intelligence, ability to work in a team, commitment, etc.

### 5.1.3 Result of Arla Foods

Alf began raising dairy cattle in 1981 and formed an operation with five surrounding farmer families. The operation owns 220 hectares of fields and 132 hectares of grazing land. At the same time, he also owns the forest (i.e., he is also a member of Södra).

Milk is the main product that Arla buys from its members. Regarding the cooperative members' products, he said that members in Sweden are allowed to sell 50% of their milk to other cooperatives or companies (Alf Arla). Members in Denmark are allowed to sell 20 percent to others, while in other countries it is 0 percent (ibid). In addition, Arla has the idea to buy solar power from members

In addition to paying for the milk, Arla pays its members twice a year (Alf Arla). One-third of the money kept in the cooperative is held in individual members' accounts, and two-thirds are transferred to collectively owned equity capital (ibid).

Member commitment expressed by participation in meetings increased when members think the price of milk is too low (Alf Arla). In addition, when the meeting includes food and drink is also a motivation for members to participate in the meeting (ibid). Based on the view of Alf, the willingness of members to participate in internal governance is positively related to commitment. When the purchase price is low, members want to get the cooperative to raise the milk price by participating in meetings and expressing member commitment. He also believes that because dairy is the main source of income for most members, they need a higher level of commitment (Alf Arla). In other words, members need to be more actively participating in meetings.

In Arla, it is possible that each member can influence the decision-making in cooperative. Alf gave an example concerning how manure is allowed to be spread. this decision was initiated by the members.

About the communication with members, he thinks this is very important. The Arla farm is a quality program launched by Arla to ensure the highest level of animal care, sustainability, safety, etc. (Arla Foods 2021). Cooperatives need to

communicate with their members so that they understand the importance of this principle and are concerned about what it involves. The efficiency of communication with members has been significantly improved. Whereas before Arla would have newsletters distributed to members, now members are notified by web and messages, and paper documents are sent to members four times a year (Alf Arla).

The composition of the BoD is characterized by a lack of young directors on the one hand and a low percentage of female directors on the other. For the NC, it is very difficult to find younger members to become directors, especially those below 45-50 years old (Alf Arla). He believes there are two main reasons why younger members are reluctant to accept nominations: (1) Younger members are just starting their dairy production/farm and have loan pressure, and younger members may be newly married and have small children, so they are reluctant to spend a lot of time on becoming a director; (2) Younger members lack experience and feel they are not up to the task. However, for members who are over 45-50 years old, they are more willing to accept becoming a director (ibid).

The Chair of Arla NC said that the NC of Arla uses 10 competence criteria to evaluate the candidates:

- The level of passion for cooperative activities
- Business acumen/insight
- Communication skills
- International mindset
- Trademarks
- Digitalization
- Leadership skills
- Risk awareness
- Financial competence
- Aspects of candidate identity and judgment

The above ten criteria are followed in both the director self-assessment and the interview of the NC to directors (Alf Arla). An external member will also be added to conduct the interview (ibid). Based on these three steps a ranking is made and the NC suggests who should sit on the board. When the board lacks knowledge in a specific area, an outside expert is brought in as a director as a way to fill the gap.

## 5.2 Other studies' results

The first and second parts of this section focus on the perspectives of scholars in the study of participatory motivation in internal governance and member

heterogeneity, respectively. The third and fourth parts discuss scholars' research on commitment and social capital.

#### *Internal governance*

In terms of the drivers of pro-active member participation in internal governance, Cechin et al. (2013b) divided the drivers into three types as follows: endowments, economic motivations and cooperative ideology. In terms of endowment, such as the duration of membership, and that members are more likely to actively participate (Cechin et al. 2013b). While risk aversion and conservatism among older directors are detrimental to collaborative performance and regulation, older directors need more information and more accurate estimates of the value of information when making decisions (ibid). On the economic motivations side, better prices and technical assistance can motivate members to participate in the GA (Cechin et al. 2013b). Economic motivation might add additional decision-making cost, but if ideology is more important than economic motivation, then decision-making costs no longer matter (ibid). about cooperative ideology, it increases the likelihood of active participation but does not enable non-participating members to participate (Cechin et al. 2013b). Compared to economic motivation, endowment and ideology are more important drivers (ibid).

The motivation to participate in the internal governance can be divided into individualism versus collectivism, or the seeking of self-interest versus altruism (Birchall & Simmons 2004). Most of the scholars choose to study the motivation of the BoD members and a few scholars focus on the DC members (Morfi et al. 2018). Based on 113 responses from 28 districts in the case cooperative, Morfi et al. (2018) found that the DC members are mainly driven by personal incentives, not collectivistic incentives. Despite the dominance of personal motivation, representatives work for the benefit of all members (ibid). For the DC members, the main factors for becoming and continuing as a DC member are the acquisition of relevant knowledge, contributing to the development of the cooperative, valuable for his or her own business and developing personal network (Morfi et al. 2018). For the DC chairman, personal development and status and prestige are more important (ibid).

Birchall and Simmons (2004) think that individualism has a motivating effect on participation motivation, but the motivation of the collectivistic incentives is more important. In their study, 60% of the members were willing to participate for the collective benefit and 36% were willing to participate for both the collective and individual benefit (Birchall & Simmons 2004). The factors that drive member participation in governance may vary somewhat when the types of cooperatives studied are different. The consumer cooperatives in the UK that Birchall and

Simmons studied were collectively owned, while the ones Morfi et al. studied were run on a commercial model.

### *Heterogeneity*

Kalogeras et al. (2009) focus on the heterogeneity of member preferences and find that most members have the similar preference for strategic attributes but differed on internal governance attributes by data from 120 cooperative members. The member who has large scale and less risk-averse prefer to involve the professional manager in corporate and decision-making, while the member who has a small scale farm and is more risk-averse prefer to give the decision-making to their representatives (ibid). At the same time, Kalogeras et al. (2009) pointed out that the structure of member preferences may be multidimensional and interactive. This means that studying economic activity within cooperatives is more difficult and requires more careful study, compared to the IOF

Member preferences are more specific than the three levels of heterogeneity (see Figure 8). On the one hand, it is one of the dimensions of member heterogeneity, and on the other hand, it is also a consequence of the above member heterogeneity (Höhler & Kühl 2018). Based on the literature reviews, Höhler and Kühl (2018) summarized the member preferences into six types: patronage, governance structures, strategy, investment, time and risk. Heterogeneity changes the amount of patronage, the amount of investment in the cooperative, and the length of time members are willing to spend on internal governance. Heterogeneity can lead to diversity in members' risk preferences and strategic preferences, such that older members prefer risk-averse and conservative strategies, while younger members hold different views (Ullah et al. 2015). In addition, heterogeneity can lead to different perceptions of internal governance structures among members, with older members preferring member control of the cooperative to control by the board of directors compared to younger members (Österberg and Nilsson 2009).

The effects of heterogeneity can be divided into effects on monetary and non-monetary variables. Monetary variables are the ability to measure impact in monetary terms and typically include cooperative performance and costs. While non-monetary variables are not measured monetarily and include mainly commitment, satisfaction and governance structure. At the same time, non-monetary may influence the monetary variables (Höhler & Kühl 2018). For example, commitment can reduce the transaction cost, once it is low, could lead to higher costs and lower profits (Fulton 1999).

Age is a common farmer-level indicator used in heterogeneity studies (Höhler & Kühl 2018). Elliott et al. (2018) believe that an increase in the mean age of

cooperative members in a region leads to a decrease in the number of cooperatives. However, aging can bring internal problems for cooperatives, such as free rider, control problem and organization cost increase (ibid). Aging can make collective decision-making more difficult (Elliott et al. 2018). But for the members, aging can increase member asset value and greater value-added at the farm-level (ibid).

As members are not only patrons but also investors, cooperative performance needs to be measured by both objective and subjective indicators (Grashuis & Cook 2021). The same needs to be true for the impact of member heterogeneity. Researchers have generally used member satisfaction as a subjective indicator (ibid). Based on the farm-level and farmer-level heterogeneity analysis of 1061 questionnaires, Grashuis and Cook (2021) found a negative effect of heterogeneity on member satisfaction but lacked firm-level evidence.

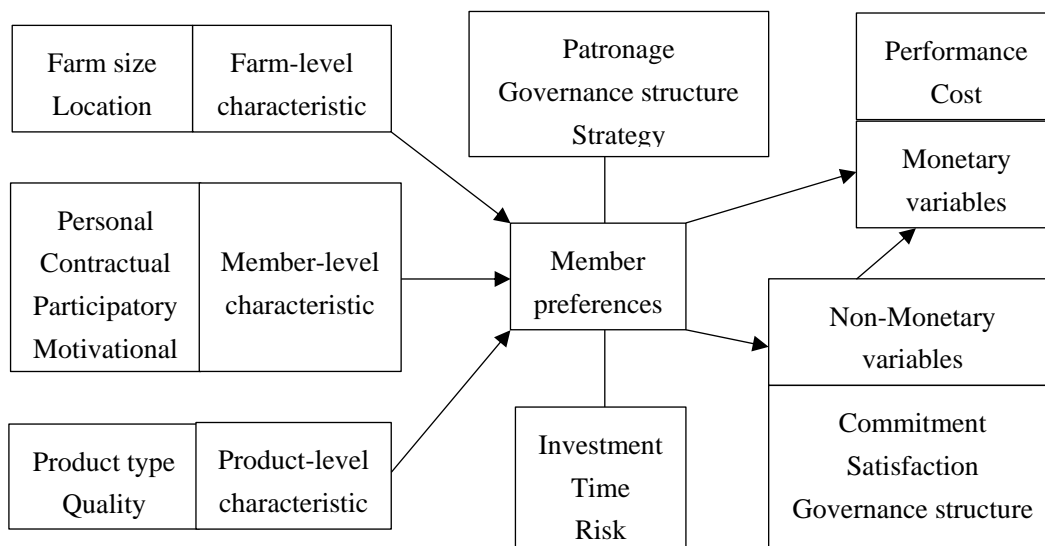


Figure 8 Dimensions and impact of heterogeneity (Höhler & Kühl 2018:706)

### Commitment

The research of Österberg and Nilsson (2009) found that commitment is high when cooperative members are satisfied with profits, but that does not mean that members trust the BoD. Because cooperatives have both economic and social aims, they cannot act as a company with only profit in mind. Therefore, the farmers who have large scale and focus on maximize personal benefits dislike and distrust the BoD. They also found that age cannot explain the commitment, but have a negative relationship with the trust in the BoD (Österberg & Nilsson 2009). In a study of changes in farmers' attitudes, Hakelius and Hansson (2016) found commitment increases when trust decreases. At the same time, member commitment can be influenced by member heterogeneity (Höhler & Kühl 2018), Bijman (2005) thinks

that the higher the heterogeneity the lower the commitment and heterogeneity can influence consensus in the democratic decision-making process.

### *Social capital*

Regarding social capital, Morfi et al. (2021) divided social capital into bridging and bonding social capital (see Table 3). Corresponding to that, professional and personal networks. They think that personal network with bonding social capital is more important than professional network with bridging social capital. But it does not mean professional network with bridging social capital is not important. developing personal networks is more important for members with ambition, but bridging social capital is more necessary for those who want to continue to be representatives (Morfi et al. 2018). Personal networks increase the opportunities for members to become representatives, while professional networks have no impact on this (ibid). The relationship between personal networks and the willingness of elected delegates persists over time (Morfi et al. 2021).

*Table 3 Definition of social capital and social networks (Morfi et al. 2021:267)*

Bridging Social capital	Refers to the relationship between people with different values, backgrounds, and experiences
Bonding social capital	Refers to relationship between people who hold common core value and similar backgrounds
Professional networks	Consists of other farmers, including unfamiliar ones
Personal networks	Consists of people who are familiar to farmers

## 6. Discussion

*The first two sections of this chapter discuss the effects of heterogeneity on internal governance in terms of age, education level, farm size, and geographic location. The next section discusses the effect of age on commitment and social capital and the effect of commitment and social capital on internal governance.*

### 6.1 Age

Age, as an easily measured individual-level heterogeneity characteristic, is used by many scholars as one of many research variables (Höhler & Kühl 2018). Based on Höhler and Kühl (2018), age affects individual preferences in heterogeneity studies. For cooperatives, such effects are reflected in (1) the time members are willing to spend on cooperative activities, (2) members' willingness to invest in the cooperative, (3) members' aversion to risk, (4) changes in the governance structure of the cooperative, (5) the existence of different preferences for strategy among members, and (6) changes in the patronage

Older farmers are more likely to spend time on non-agricultural activities, such as participating in the internal governance of the cooperative, when compared to younger farmers (Cechin et al. 2013b). As members get older, they are more willing to seek a political career, and cooperatives are a good platform to meet their needs. At Arla, members older than 45-50 are more likely to spend time on becoming directors (Arla). So, for a cooperative with a high proportion of middle-aged and elderly people, aging is beneficial for members to spend more time on the governance of the cooperative.

Risk preferences change with age, younger farmers are more willing to take greater risks than older farmers (Ullah et al. 2015). In the BoD, older directors tend to be reactive, risk-averse and unwilling to change. An older director's risk appetite will make him or her more inclined to choose old, low-risk and stable strategies (Cechin et al. 2013b). It will not be a problem for older members, but it will cause resentment for younger members who are willing to take high risks to earn high returns. However, there is no evidence of a relationship between age and risk preference in the cases.

Younger members lack knowledge about agricultural production and cooperatives compared to older members. This knowledge needs to be accumulated over time. Members in Södra are interested in serving as directors, but members with low knowledge levels are less willing to participate in elections and this is generally seen in younger members and female members (Ingemar Södra).

Older farmers trust cooperatives more than younger farmers. But it does not mean that farmers trust the management (Hakelius 1999). For older farmers, they are risk-averse and prefer to have the cooperative controlled by the cooperative members rather than by professional managers (Kalogeras et al. 2009; Österberg & Nilsson 2009). On the contrary, for younger, risk-seeking members, they prefer to have a professional manager manage the cooperative because it can create more economic benefits than controlled by members (Kalogeras et al. 2009). Swedish cooperatives provide members with more opportunities to participate in cooperative governance by establishing the DC, and at the same time can effectively improve internal governance efficiency.

## 6.2 Other heterogeneity factors

This section discusses the effects of heterogeneous variables other based on the case studies and previous research. The effects of educational level, farm size and geographical location on internal governance are discussed separately.

### *Educational level*

Educational level is also one of the main characteristics in heterogeneity studies. Like age, the educational level can also change values, risk preferences, etc. Although educational level does not have much effect on members' willingness to participate in internal governance (Cechin et al. 2013b). While the lower the level of education, the more likely the members are to be temporary supporters (ibid). As for the composition of the BoD, in order to reduce risk and improve efficiency, some cooperatives introduce external experts with high education levels as directors and supervisors (Bijman et al. 2012b). In the cases of this thesis, the BoD members of Lantmännen have two external directors out of twelve directors as a way to increase the level of knowledge of the BoD and reduce the risk of the dominance of managers (Lantmännen 2020). While Arla is different in that it brings in 2 external experts as external advisors rather than directors (Arla Foods 2021).

### *Farm size*

In cooperative internal governance, most cooperatives follow the democratic principle: one member, one vote. But in some cooperatives, the principle is not



followed. Instead, voting is proportional. Unlike one member, one vote, the number of individual votes cast in proportional voting is related to the value of the transaction between the member and cooperative or the value of the individual capital contribution (Bijman et al. 2012b). While farm size is one aspect of value. The larger the farm, the greater the value created. Therefore, in such cooperatives, farm size affects internal governance by proportional voting. But all three cases in this thesis follow the one-member-one-vote principle.

### *Geographic Location*

Höhler and Kühl (2018) point out that geographical location is also a characteristic of farm-level heterogeneity often considered by scholars. The climate varies from region to region, as do the crops suitable for cultivation and yields. Geographic location likewise affects the internal governance structure of cooperatives. At the beginning of cooperatives, the small size and few members eliminated the need for intermediate institutions for governance. But as the cooperative expanded further, the traditional internal governance structure meant inefficiencies. Arla, for example, has members in seven countries, and Lantmännen has members in all Sweden. In this regard, these cooperatives chose to introduce the DC as a way to alleviate the inefficient connection between members in each district and the BoD due to geographical distance. Also, the DC can provide more effective advice and assistance to local members and organize training and member activities (Lantmännen 2020; Södra 2020). In Södra, one of the main reasons members do not participate in meetings is that members do not live near their forest or live abroad. At district meetings of Lantmännen, members may not participate because the meeting location is too far away. The distance of members' houses from the farm or forest and the meeting place can affect members' willingness to participate in internal governance.

## 6.3 Commitment

Commitment, as a non-monetary variable, is influenced by member heterogeneity on the one hand. On the other hand, it can affect the performance of cooperatives. High heterogeneity implies low commitment (Bijman 2005). While based on the views of Österberg and Nilsson (2009), age change has no significant influence on commitment. Although age is not directly significantly related to commitment, differences in frequency of participation in internal governance due to age differences significantly influence commitment. The older member is more willing to spend time on internal governance (Cechin et al. 2013b). The more frequently the members are participating in internal governance the more commitment they have. In addition, the experience of having worked for the BoD significantly affects commitment (Österberg & Nilsson 2009). In other words, member commitment has

a positive relationship with his or her years of work experience. In the case of Arla, there is a negative correlation between milk price and commitment. At the same time, the high commitment resulting from the low price of milk will motivate members to participate in internal governance (Alf Arla). As with Arla, Lantmännen provides high profit to its members, so that they lack the incentive to participate in the meeting. In Södra, the experience of members facing a crisis together can increase commitment and reduce the likelihood of dealing with others.

## 6.4 Social capital

Social capital is a key to the formation of the cooperative (Apparao et al. 2019), because cooperatives need financial capital while financial capital is based on social capital (Nilsson et al. 2012). But the social capital of cooperatives is decreasing as cooperatives grow (ibid). While individual social capital is different from cooperative social capital. Individual social capital grows with use (Woolcock 1998). As stated earlier, individual social capital has positive impact on willingness to participate in internal governance. Relationships and networks in social capital can help members get support from other members more easily. Compared to younger members, older members are more likely to get a high number of votes in elections. So that, older members are more likely to become representatives than younger members (Hakelius 1996). This is confirmed by the case of Arla, where young people have to spend their time on family and agriculture, because of the high debt and small children, while older people prefer to spend their time on the internal governance of the cooperative. Another reason why Arla's younger members are unwilling to become directors is that lack of experience and poor social network do not give them an advantage in the election. At the same time, status and prestige as social capital are significant motivations on the willingness of those who want to continue as representatives (Morfi et al. 2021). For members of Södra, district directors mean status and prestige, and they accept to be elected to the district board. This means that for the member, social capital increases the likelihood of becoming a representative while the status and prestige that being a representative bring to a member increase the willingness of the member to continue as a representative.

## 7. Conclusions

*This chapter answers the research questions of the thesis based on the results and discussion. It also reflects on the study, pointing out the shortcomings in the study and ideas for future research.*

### 7.1 Effects of aging

Aging is an issue that cannot be overlooked in membership characteristics. Based on case studies and literature reviews, this chapter contributed to the aim and question of the research, which was to find the link between the age structure of members and cooperative internal governance. The link between age structure and internal governance is specified as follows:

- Older members are willing to spend more time on the internal governance of the cooperative than younger members. That is, as members grow older, the more time they spend on internal governance.
- Younger members are less willing to be elected due to high debt, small children, and lack of knowledge of agriculture and cooperative.
- Personal social capital increase with age and older members have an advantage over younger members in the election.

In summary, heterogeneity can influence internal governance not only directly, but also indirectly through social capital and commitment (Apparao et al. 2019). Based on the three Swedish cases, aging is beneficial for members to participate in internal governance. Aging cannot indirectly influence internal governance through commitment but can by social capital.

### 7.2 Limitations and future research

The primary data for this thesis were derived from representatives of the cooperatives, and in future studies, interviews with cooperative members of different age groups will allow for more representative data. On the other hand, age as an individual characteristic makes it difficult to study only its effect on internal governance. Because individual characteristics interact with each other, it is possible that the conclusions drawn in this thesis are the result of the interaction of

multiple heterogeneous characteristics. To obtain more accurate results quantitative studies should be used to investigate the specific effects of age on internal governance through regression analysis.

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## Popular science summary

This thesis studies the link between aging and governance within cooperatives. Age is a personal characteristic and as you get older, your values, hobbies, thoughts, etc. change. And when all these aspects of members within the same group start to change, then conflicts may arise within the group. It's like a family, as the number of children increases, the parents need to spend more time taking care of each child and caring about their feelings. But there will always be a child who feels that his or her parents do not love him or her enough. And in a cooperative, this problem can manifest itself in internal governance. Because of increased heterogeneity, cooperatives have difficulty meeting the needs of all members at the same time, which can lead to a reluctance to participate in “family meetings”. But increasing age also means having a greater voice in the “family meeting”. As members grow older, the more time they spend on internal governance. It means that as a family member, you are more willing to spend time maintaining family harmony as you get older.

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# Appendix 1 Interview guide

## *Questions for Lantmännen*

### 1) Background questions

- How many hectares of grain growing land do you have?
- What additional branches of production are there on your farm?
- For how long have you been a member Lantmännen?
- Which roles/positions have you held in Lantmännen?
- Is the grain production your main source of income? If not – which additional sources of income do you have?

### 2) Questions regarding commitment

- What is your opinion about Lantmännen, as a cooperative firm – in terms of the governance system (i.e., the democratic structure)?
- Which level of interest exists among members to join member-meetings, and also to become a director, and sit in other groups in the cooperative?
- Would you say that members frequently trade with other actors on the market, when they think the price the cooperative offers is too low?
- Are members interested in investing 'extra' sums of money in Lantmännen, i.e., to invest more money than the member-fee?

### 3) Questions regarding so-called 'social capital', i.e., that the trust existing in the member-group leads to/generates a smooth collaboration in the cooperative – including the governance system

- In terms of trust, how would you describe the relation between the member group and Lantmännen?
- What do you think influences the trust between the members and the cooperative the most? What factors influence the trust positively and negatively, respectively?
- How is information concerning Lantmännen's activities and what is happening on the markets distributed to members?
- Do the members of Lantmännen help each other, when some have problems, related to their grain production? If so, which type of problem is common and how do they help each other? If not, why do you think this is not happening?

- Are there any internal conflicts in Lantmännen? If so, what is the source/issue of the conflict/conflicts? If not, why do you think this is the case? How do you handle internal conflicts in the cooperative?
- 4) Questions regarding the internal governance system
- What factors do you think influence a member to attend member meetings, and accept to be nominated as a director, respectively?
  - Are there differences regarding factors influencing members' willingness to attend member meetings, and accept being nominated as director, respectively, depending on what board/steering group he/she is nominated to?
  - Do you think it is important that boards should have directors who are of different ages/age categories? Why/why not?
  - Which factors do you think are the most important/most central for the nomination committee of Lantmännen?
  - To what degree do you think that the board in your cooperative listen to the opinions of members?
  - Do you experience that there are differences between different age groups in the member group, concerning the governance system of Lantmännen?
  - Do you experience that there are differences between different age groups in the member group, concerning the willingness to take part in the governance system of Lantmännen?

*Questions for Södra skogsägarna and Arla Foods*

1) Background questions

- How many dairy cows/hectares of forest do you have?
- What additional branches of production are there on your farm?
- For how long have you been a member (in Arla or Södra)?
- Which roles/positions have you held in the cooperative?
- Is the dairy production/forest your main source of income? If not – which additional sources of income do you have?

2) Questions regarding commitment

- What is your opinion about Arla/Södra, as a cooperative firm – in terms of the governance system (i.e., the democratic structure)?
- Which level of interest exists among members to join member-meetings, and also to become a director, and sit in other groups in the cooperative?
- Would you say that members frequently trade with other actors on the market, when they think the price the cooperative offers is too low?
- Are members interested in investing 'extra' sums of money in your cooperative, i.e., to invest more money than the member-fee?

- 3) Questions regarding so-called 'social capital', i.e., that the trust existing in the member-group leads to/generates a smooth collaboration in the cooperative – including the governance system
- In terms of trust, how would you describe the relation between the member group and the cooperative?
  - What do you think influences the trust between the members and the cooperative the most? What factors influence the trust positively and negatively, respectively?
  - How is information concerning the cooperative's activities and what is happening on the markets distributed to members?
  - Do the members of the cooperative help each other, when some have problems, related to their dairy production/forestry? If so, which type of problem is common and how do they help each other? If not, why do you think this is not happening?
  - Are there any internal conflicts in the cooperative? If so, what is the source/issue of the conflict/conflicts? If not, why do you think this is the case? How do you handle internal conflicts in the cooperative?
- 4) Questions regarding the internal governance system
- What factors do you think influence a member to attend member meetings, and accept to be nominated as a director, respectively?
  - Are there differences regarding factors influencing members' willingness to attend member meetings, and accept being nominated as director, respectively, depending on what board/steering group he/she is nominated to?
  - Do you think it is important that boards should have directors who are of different ages/age categories? Why/why not?
  - What are the factors that you in the nomination committee focus on when you search for candidates for the board?
  - Which factors are the most important/most central?
  - To what degree do you think that the board in your cooperative listen to the opinions of members?
  - Do you experience that there are differences between different age groups in the member group, concerning the governance system of your cooperative?
  - Do you experience that there are differences between different age groups in the member group, concerning the willingness to take part in the governance system of your cooperative?



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