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Convergent or divergent attitudes towards Swedish agricultural business development

- An attitude survey among Swedish farmers and LRF
representatives

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- An attitude survey among Swedish farmers and LRF representatives

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The raison d'etre or reason for existence, of LRF and how well the association can represent Swedish agriculture has been questioned due to LRF's development into a large organisation with a heterogeneous member base. The idea of investigating LRF's representation of their farm members sprouted when I read that LRF had lost farm members, but nevertheless continuously improved their membership numbers. I found this somewhat confusing and counter intuitive, hence my interest to examine effects of this organisational change.

The paper has given me great insights into the organisational challenges an association such as LRF might face, and correspondingly, how attitudes coincide between farmers and their LRF representatives - insights that presumptive readers hopefully find enjoyable as well.

Greatest of gratitude goes out to the farmers and LRF representatives who took their time and endured the questionnaire. Without your effort this study would never have been possible. I am also thankful to my supervisor Helena Hansson, who throughout the writing process kept me on track and gave guidance regarding theoretical underpinnings and academic methodology. I am indebted to Magnus Bäckström, who led me into the promised land of statistics and Stata. Daniel Kvist should also be mentioned as he introduced me to Netigate. Without knowledge of these tools the collection and analysis of data would have been even more time consuming than it already was. Last, but definitely not least, my deepest appreciation to Erik Kundu for his invaluable help concerning structure and language.

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Abstract

Swedish farmers are disposed to institutional risks, where changes in the agricultural policy landscape are regular. To a great extent, the importance of a well functioning farm lobby association is eminent when policy decisions are decided in Brussels. Swedish farmers are supposed to be represented by their lobbying organisation, Swedish Farmers Association (LRF). During the last 17 years, LRF has increased their member base even though the number of Swedish farmers has decreased by 28 % during the same period. Due to the factual development of an increasingly heterogeneous member base, organisational changes in LRF are inevitable. Problems with representation, portfolio problems and diffusion of goals may affect the utility of LRF membership for farmers.

This thesis is based on the notion that farm members in LRF must be certain that they share attitudes concerning Swedish agriculture with their representatives within LRF, in order to be assured that their interests are being safeguarded in both national and international agricultural policy negotiations. The manifested question this study is built upon is whether Swedish farmers and LRF representatives have convergent or divergent attitudes regarding Swedish agricultural business development?

By piecing together parts of the Principal-agent theory, Public Choice theory and literature within the field of organisational sciences, a conceptual framework is established, with attitudes taking a central role. Attitudes in this study are viewed as influential to behaviour and decision-making, hence it is of great importance that farmers and LRF representatives have coinciding attitudes towards Swedish agricultural business development. To measure attitudes at an itemised level, the constant sum approach was used and incorporated into a web-based questionnaire. The questionnaire was distributed to 250 Swedish farmers and 131 LRF representatives. 63 farmers and 63 LRF representatives completed the questionnaire, providing a response rate of 33 %.

Mann-Whitney tests were used to statistically analyse the collected data. The analysis reveals that farmers and LRF representatives assess the stated answer alternatives both convergently and divergently. However, significant differences in attitudes were displayed between farmers and LRF representatives concerning e.g. the use of new methods and taxation of inputs to improve sustainability, whether Swedish agricultural production should be characterised by specialisation or differentiation, and the importance of agricultural associations.

LRF must rethink how they communicate their importance and how they market themselves by highlighting what usefulness they contribute to the individual farmer. Hence, the significance and *raison d'être* of LRF must be clearly communicated. Without a lobby organisation Swedish agriculture would risk to diminish on the political agenda and attain little notice in the fast moving media noise. Nonetheless, the take-home message for LRF is to continuously have a dialogue with the association's original members (the decreasing amount of Swedish farmers) in order to develop a stronger association with coinciding attitudes. If LRF does not share common ground with their farm members the association might become an overgrown organisation with diminished importance for Swedish agriculture.

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1 Introduction and Problem Background

“The European agricultural policy is a factor that clearly affects the [Swedish] farmer and the [Swedish] agriculture.” (Nordström Källström, 2002, p. 53).

The European common agricultural policy (CAP) is continuously analysed and debated from a wide array of entry points, e.g. regarding cost effectiveness, environmental effects, global market impacts, biodiversity, rural development, land use and impact on farmers livelihood. To build an understanding of the effects of CAP, and to get acquainted with the policy programme, an extensive venture into the complexity of political decisions and comprehensive regulations is required. This paper will not undertake such an endeavour, but in brief summary, CAP was introduced in 1962, however according to Ackrill (2000), the history of CAP starts previous to the 1957's "Treaty of Rome" - during which the common market and general objectives of CAP were established. Instruments to control and alter the common market, such as import tariffs and state interventions through support prices and buying, had already been adopted by the member states, therefore CAP was derived from the former national policies (*Ibid*). Initial goals were food security, farm income and efficiency, but during the 50 years that have passed, both European food production and European farmers have changed, and with it, so has the common agricultural policy. The CAP incessantly undergoes alterations that are more or less influenced by the member states interests (Larsson, 2004). Fearne's (1997) study, concerning the relationship between CAP and the member states, reflects that an individual nation's decision-making in agricultural issues are to a larger extent dependent on the impact of the financial transfers between member states rather than the fulfilment of CAP objectives. "The importance of these transfers are in turn largely a function of the importance of the agricultural sector in each member state, or more explicitly, the political influence of the farm lobby" (Fearne, 1997, p. 40).

Swedish agriculture is characterised by agriculture cooperatives, and these cooperatives can be conducting lobbyism (Nilsson & Björklund, 2003). A report from the Swedish Competition Authority stated that representatives and board members in these cooperatives and in the Swedish Farmers Association (LRF) did not have enough insight regarding the EU, and acted passively after Sweden entered the union (Nilsson, 2011). Hamstringed by the thinking of the old Swedish agricultural policy and insufficient understanding about the impact of market forces made the Swedish farmers organisations ineffective (*Ibid*). However, the agricultural organisations in Sweden have maintained their members and the members have had great confidence in their organisations.

Agricultural crisis have nonetheless been a prominent feature of the Swedish agricultural policy landscape, and Swedish farmers seems yet again to be dependent on their lobbying organisations to affect policy-makers. Figure 1 below illustrates data from the Swedish Board of Agriculture, which emphasises the diminishing number of milk and pig producers in Sweden since year 2000 (www, Sjv 1, 2015). This decrease of farmers, which is due to low profitability and structural changes, has been known in the national agricultural media as the "pig-crisis" (www, ATL 1, 2014) and the "milk-crisis" (www, ATL 2, 2014).

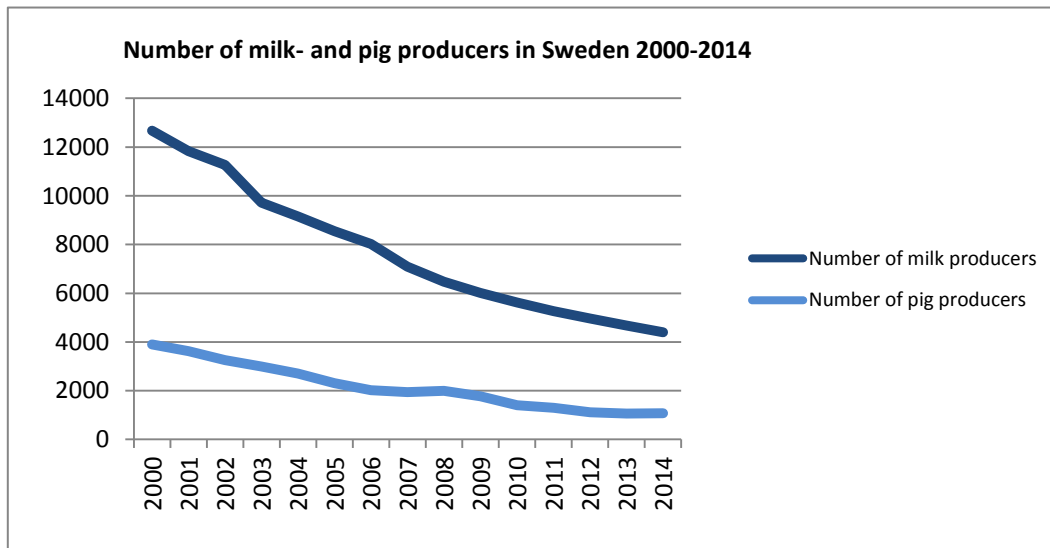


Figure 1. Number of milk- and pig producers in Sweden 2000-2014 (own creation).

A statement by the finance minister at that time states that “Swedish agriculture has no future as an industry” (www, SVT, 2014) and a the statement by one of the government parties expressing the aim for Swedish agriculture to transform into 100 % organic has also stirred up the farming organisations (www, UNT, 2014). The trend of increasing organic production in Sweden is diminishing (www, Sjö 2, 2013), evident by the fact that during 2013 only 16,5 % of all arable land in Sweden was used to produce organic labelled products. Another frequently debated topic is strict Swedish agriculture legislation, which affects Swedish producers effectiveness compared to other EU countries (www, ATL 3, 2013), e.g. the Swedish animal welfare laws tend to be stricter compared to the rest of EU member states legislations (Bock & van Huik, 2008). A study by Hoffman *et al.* (2010) states that stricter animal laws can directly and indirectly affect production costs for livestock producers, and consequently the competitiveness and profitability. Therefore it is essential for the role of the Swedish farm lobbyists to emphasize the importance of Swedish agriculture and represent all their members’ interests in the policymaking arena.

Previous research in Sweden from the late 1980’s and early 1990’s about agricultural policymaking and how state and private interactions developed, considered policy agendas to be set by an “iron triangle” (Vail, 1994, p. 63). This iron triangle, consisting of LRF, the farm bureaucracy and the today non-existing “Agriculture Committee” was argued to undermine the public interest (*Ibid*). LRF strongly opposed the Swedish agricultural deregulation in 1990, which led to more market interventions instead of state influence (Daugbjerg, 1997). The deregulation era however did not last, as Swedish agriculture was re-regulated through EU membership and prices on agricultural products within the European union have not reflected the actual supply and demand price-mechanisms for a long time (Ackrill, 2000). Nevertheless, during the last decade changes have occurred. Swedish farmers can actively trade their commodities and international markets set prices. Consequently, it is of great importance that farm associations are in accordance with their members when conducting lobbying concerning market orientation and deregulation initiatives.

In 1990 Micheletti wrote the book “*The Swedish farmers movement and government agricultural policy*”, where she describes that both the Swedish agricultural policy as well as the organisation LRF are experiencing transformations. This portrayal of the Swedish agriculture arena is still, 25 years later, contemporary. This is due to continual progress of EU regulations and alternations in the CAP that defines the framework for Swedish agricultural policies, accompanying with the development of a more diverse LRF, who have increased their number of members in 17 consecutive years (www, LRF, 2014), even though the number of farmers in Sweden has reduced in size by 28 % between 1996-2013 (www, Sjö 3, 2015).

The decline of farm numbers and the widening gap within the farm population leads to challenges for agricultural cooperatives and associations, since they have to serve an increasingly heterogeneous member base (Henehan & Anderson, 1994). Various member groups within the farm organisations have diverse interests, and the divergent groups are differently affected by the management’s decision-making. Lack of understanding for the heterogeneous members deviating requirements may hinder suitable and efficient decision-making (*Ibid*), and the farm association’s possibility to represent their member’s interest may be questioned. The Swedish farmers must be certain that their lobby organisation can represent their interests and affect policymaking, even though the agricultural agenda is decided in Brussels and their organisation has become more heterogeneous.

1.1 Problem Statement

Larsson (2004, p. 83) mention in his synopsis that the empirical material indicates that farmers do not consider themselves as exercising a significant influence on the agricultural policy decision-making process, either as individuals or through their representative organisations. The results from LRF’s yearly “Satisfied Member Report” (Rapport Nöjd Medlem) illustrates this problem to be prevalent, and that LRF has to improve members possibilities to affect LRF activities and that members request more support as well as consulting (www, LRF 2, 2014). The most dissatisfied members are the ones who live and work fulltime at a farm with 20 hectares or more. The report illuminates that member’s confidence in LRF, regarding advocacy and promotion for Swedish agriculture in the political arena and to the public opinion, has been diminishing for the last 5 years (*Ibid*).

Micheletti (1990b, p. 256) expresses the need for more systematic attention to organisational questions, such as organisational policy definition and how well interest organisations represents the interests of their members. These organisational questions are advantageously addressed in the context of heterogeneous and encompassing interests organisations (*Ibid*). LRF can be said to have an interest-aggregating role, as an “encompassing organisation” (Micheletti, 1990b, p. 255), which refer to the need for large, heterogeneous interest organisations to acknowledge public responsibility when defining their demands and actions. Micheletti (1990b, p. 257) argues that “the most serious problem” for Swedish interest organisations is to aggregate their various members’ interests and encompass these with their demands and actions. The necessity of the interest-aggregating organisation is lost, if organisational goals can’t be formed and the aggregation of interest can’t be upheld.

There seems to be a risk of conflicting interests between farmers and policymakers, and this problem may be due to a perceived distance to policymakers. This necessitates a well functioning farm lobby organisation. The problem of perceived distance becomes enlarged if the farmers do not share common ground with LRF about e.g. agricultural resource use, agricultural markets, and the production itself, since LRF as the farmers main lobbying association are supposed to bridge the gap between farmers and policymakers. The increased heterogeneity among the members of LRF may lead to internal disagreement when defining the objectives of the organisation (Micheletti, 1990b), therefore decreasing farmers sense of influence even further. Studies of attitudes have had profound implications when it comes to decision-making and representatives leadership roles (Lunneryd & Öhlmer, 2009; Nilsson, 1994). This paper will further elaborate on these studies and the conceptual ideology behind attitudes, however the importance of the study of attitudes is vital in understanding the decisions made by farmers and the representatives of LRF, and to what extent there attitudes coincide or differ. Through a questionnaire this study will examine if Swedish farmers can be a part of a restructured “iron triangle” or if there are divergent attitudes concerning the situation assessment and future visions regarding Swedish agriculture among the farmers and their representatives in LRF, which may instead hinder farmers to affect policymaking.

1.2 Aim and Objectives

The paper intends to make a contribution to literature about member representation; closing the knowledge gap regarding how well a farm association with heterogeneous member base can represent their farm members. By assessing farmers and LRF representative’s attitudes is the aim to investigate how well Swedish farmers interests are represented by LRF. Cultivating awareness regarding the problem statement, and highlighting the current situation of how well farm members and their representatives attitudes coincide should be of great importance and concern for both farmers and their representatives within LRF.

The defined research question is intended to function as a research vehicle, to enable delimitations of the wider background and study interest into a specific research focus. As previously described is this thesis ambition to explore whether there are divergent attitudes among Swedish farmers and their lobbying organisation, LRF, regarding the situation assessment and future visions of Swedish agricultural business development. The objective is not to question the *raison d'etre* of LRF, but to raise the question if the organisation shares common ground with, and thus can perform efficient lobbying for, its original members – the farmers.

1.2.1 Research Question

- Do Swedish farmers and LRF representatives have convergent or divergent attitudes regarding Swedish agricultural business development?

2 The Swedish Farmers Association

This chapter gives a brief introduction to the Swedish Farmers Association (LRF), and concentrates on previous studies, focusing on the association.

2.1 The Beginning of LRF and LRF as a Professional Interest Group

LRF was established in 1971 during a time when a “revolutionary atmosphere” was prevalent among the Swedish farmers (Flygare & Isacson, 2003, p. 238). The new agricultural policy’s aim was to reduce the surplus production, causing the income goal for the farmers to become diminished. Hence the farmers protested and wanted to re-establish confidence as well as future visions in Swedish agriculture. LRF, as the main agrarian organisation in Sweden that exerts political influence, currently have more than 170 000 members, a turnover of about 2 400 million SEK, and an advocacy agenda for Swedish agriculture, which is fulfilled by the organisations ambition to affect consumers, officials and politicians (www, LRF, 2014).

Micheletti (1990) had a similar objective as this paper, but a wider historical focus on how LRF developed and how the organisation managed to represent its members and protect member’s interests. During the late 1980’s agricultural policy objectives and regulations was wildly debated and widespread criticism grew, due to the government’s financial position (*Ibid*). The Ministry of Finance was active to push for changes and increase cost effectiveness through deregulation and reduced governmental control. The influence from farmers in policymaking was fading because of LRF’s weakened position, while consumer interest groups were prevailing according to Micheletti (1990, pp. 94-97).

Beyond formal policymaking institutions are interest groups, which strongly influence policymaking at a national and international level. Such an interest group is defined as “any group, or set of actors, that has common interests and seeks to influence the policy-making process in such a way that their interests are reflected in public policy outcomes” (Chari & Kritzinger, 2006, p. 30). The different interest groups that influence policymaking are either characterized as “Economic groups”, “Professional groups” or “Public interest groups” (Chari & Kritzinger, 2006, p. 30), depending on their different methods and motivations for exerting political pressure. Professional groups are those who represent interests of those working in a specific area, e.g. farmers. The “Committee of Agricultural Organizations” and the “General Committee for Agricultural Cooperation” (COPA-COGECA) represent farmers and agricultural cooperatives by pursuing influence at various EU institutions, thus affecting formulation and developments of the CAP (Chari & Kritzinger, 2006, p. 34). LRF as a professional interest group in Sweden, and as a member of the COPA-COGECA, has an office in Brussels to monitor and influence the international policymaking agenda (www, LRF 3, 2015). LRF has also historically exerted much effort to influence domestic policymakers, and this contact with government officials and parliamentarians is in general termed as “lobbying” (Micheletti, 1990, p. 168).

Policymaking is a game of compromises, and in the late 1980s farmers were disturbed because LRF seemed to give more than it took in policy proposals negotiations (Micheletti, 1990). Significant changes on the Swedish agricultural policymaking arena, due to the involvement and integration of other ministries and agencies into larger businesses and policy setting, required LRF to alter the organisation’s lobbying activities (Micheletti, 1990, pp. 168-169). Changes also occur today on policymaking arenas and institutions. For example the “Ministry of Agriculture”

developed into the “Ministry of Rural Affairs”, but were then integrated into the “Ministry of Enterprise, Energy and Communications”, and since the entry in the EU, national policies are affected by decisions in Brussels. LRF has therefore established their presence internationally, nonetheless the organisation must probably continuously adapt to national changes as well because of the diminishing amount of farmers.

2.2 Problems of Representation and Member Heterogeneity in LRF

“A high organizational density lends legitimacy to the interest organization” (Micheletti, 1990, p. 85), hence traditionally high membership rates are viewed as essential for an organisations possibility to be influential. Micheletti (1990) argues that member recruitment is of great importance for LRF, since “too few members may mean that the representative monopoly of the LRF may be questioned” (Micheletti, 1990, p. 144). The importance to maintain high member rates seems to be prevalent in today’s organisation of LRF as well.

In 1987 an appointed committee discussed the organisations increasing heterogeneity, which resulted in the LRF having full-time farmers as the “principle group of members” (Micheletti, 1990, p. 150). Today the LRF declares on their homepage “You don’t have to be a farmer to be a member of LRF”, and additionally the organisation aims to build a strong social movement with as many members as possible to affect policymaking at both the EU, national, and regional levels (www, LRF 4, 2015). LRF clearly emphasises that recruitment of members are not restricted to farming individuals, but instead that LRF members should have their “heart at the countryside” and interest in “the green industry” (*Ibid*). This demonstrates that LRF has changed its approach from previous decisions focusing primarily on farmers.

Today LRF stresses that the association has two types of members, the individual members and the cooperative business members, e.g. trade associations such as “Lantmännen” and “Arla Foods” (www, LRF 5, 2015). Micheletti (1990, p. 139) also described the member base of LRF as two general groups when she conducted her research about LRF two decades ago, but the individual members were then only referred to as farmers. The heterogeneity of members and representation difficulties, that were studied by Micheletti (1990), concentrated on the disparities of the individual farmers and concluded that heterogeneity was due to factors such as whether they were small-scale or large-scale farmers, part-time or full-time farmers, geographical differences, production specialisation and how party politics differed between the Swedish farmers.

Extension of the recruitment strategy to involve non-farming members will affect LRF’s objective of member representation, as expansion of the membership base increases member heterogeneity (Micheletti, 1990). Recruitment of members among individuals who are passionate about the countryside and those who works within green industries, has increased member rates, and should therefore lead to higher influential status of the LRF. However findings by Micheletti (1990, p. 145) states that farming members views the recruitment of rural residents and non-farmers as problematic, since this may lead to an diffuse organisation, as well as difficulties for LRF to aggregate and represent various demands within the heterogeneous member groups, thus member heterogeneity may lead to organisational disruption (Micheletti, 1990b, p. 272).

The member base of LRF has obviously changed since the creation of the organisation, and member recruitment focus has changed as well, from farmers to individuals with interest in rural development and the green industry. The heterogeneity of LRF has therefore increased since Micheletti (1990) wrote her book, and thus the difficulty to represent all members have aggravated due to the fact that problems with representation increases “once the membership of an organization becomes more heterogeneous” (Micheletti, 1990, p. 139). This factual development of membership heterogenisation in LRF is also an issue of attitudes among the members, as the farmers anticipate that the association should represent all branches of agricultural specialisation and share common ground and interest with them (Micheletti, 1990, p. 85).

Micheletti (1990, p. 85) assumes that heterogeneity within the member base affects farmer’s attitudes towards LRF and their representatives within LRF. Farmers questioning to what extent LRF can represent their interests, and measuring how well farmers attitudes coincide with the attitudes of LRF representatives regarding the Swedish agricultural sector, can shed some light upon whether Swedish farmers can gain from their LRF membership. To facilitate this comparison of attitudes is it essential to determine what attitudes are and how they can be measured.

3 Conceptual Framework of the Thesis

The following chapter aims partially to build an understanding of attitudes, and furthermore focuses on trying to construct a broader understanding concerning the importance of lobbying, organisational change, and the farmer's involvement and influence within it. This conceptual framework intends to bridge literature concentrating on cooperatives as well as unions, since the scope of previous studies on farm lobbying associations, such as LRF, is limited. The chapter begins by introducing the concept of attitudes and the two main theories that together, with the reviewed literature, form the conceptual framework, upon which subsequent analysis of the study's findings will be based.

3.1 The Concept of Attitudes

What are attitudes? Why are they interesting? As previously mentioned, Micheletti (1990, p. 85) describes that the knowledge about farmer's attitudes is essential in an increasingly heterogeneous association such as LRF, and sharing the same values can be seen as a prerequisite for the representatives ability to represent their farm members interests. In the literature regarding cooperative studies, Nilsson (1994, p. 156) underlines that the relation between members and their association are basically dependent on norms and values, and when members' norms coincide with the cooperative values, there is a greater chance of successfully managing the association in line with members' interest. When representatives are considering which actions to take and deciding the agenda for LRF attitudes are immensely important, since attitudes provide the basis for making strategic decisions (Lunneryd & Öhlmer, 2009).

Attitudes can in general be perceived as the assessments summarisation of objects, and thus represented in terms of feelings of liking, disliking or indifference (Ajzen, 1991). The attitude-object may be an idea, concept or physical object (Willock *et al.*, 1999). Attitudes are something that individuals hold about practically everything, and Churchill and Iacobucci (2009, p. 232) emphasises that attitudes represents individual's predispositions, are persistent over time, are latent variables that influences behaviour and attitudes indicates preferences, as well as individuals evaluation of objects. Therefore, an attitude can be defined as "representing a person's ideas, convictions, or liking with regard to a specific object or idea" (Churchill & Iacobucci, 2009, p. 232). The formation of attitudes is based upon what an individual perceives to be true, and this opinion can be based both on information, knowledge, feelings, beliefs and behaviours, or based on emotional reactions alone (Willock *et al.*, 1999, pp. 287-288). Farmers' attitudes towards business and environment are influenced by their farming and business situation, e.g. whether their goal is profit maximisation, family succession, conservation of the land or a mix of the given examples (*Ibid*).

Attitudes in relation to behaviour, with reference to whether attitudes can explain or predict behaviour or decision-making has been studied in socio-psychological and agricultural research (Burton, 2004). Scholars have long debated over the relationship between attitudes and behaviour, and Ajzen (1991) revised an earlier behaviour approach model and developed "Theory of Planned Behaviour" (TPB) (Burton, 2004, p. 364). TPB illustrates how attitudes, subjective norms, and perceived behaviour control, can influence each other, and how together with other factors, such as self-identity, moral obligation and habit, form the basis for an intention. This then leads to the actual behaviour (Ajzen, 1991). Therefore attitudes alone cannot explain behaviour, but attitudes can indicate individual's preferences. An assessment of attitude difference or

accordance between LRF representatives and Swedish farmers could therefore give insights into how well Swedish farmers can be represented by LRF.

3.2 Principal-Agent Theory

Principal-agent theory (or Agency theory) is a descriptive organisational theory, which emphasises organisations governance and control mechanism problems (Jensen & Meckling, 1976). The main focus is individuals and stakeholder groups, and the foundation of the theory is that principals assign agents to work on behalf for them. However, both the principals and agents are maximising utility and both parties' actions are based upon self-interest, therefore generating information asymmetry and organisational problems. An individual's imperfect knowledge and limited ability to process information is known as "bounded rationality", and this bounded rationality is not equally distributed among the two parties of principals and agents, since the agents are supposedly professionals with experience in organisational governance (Eisenhart, 1989). Information asymmetry and bounded rationality are therefore in favour of the agents, due to their ability to exclude the principals from governance. This increases the risk for agents to take part in opportunistic behaviour because of their benefit at the principal's expense. Figure 2 below illustrates the basic idea of the Principal-agent theory.

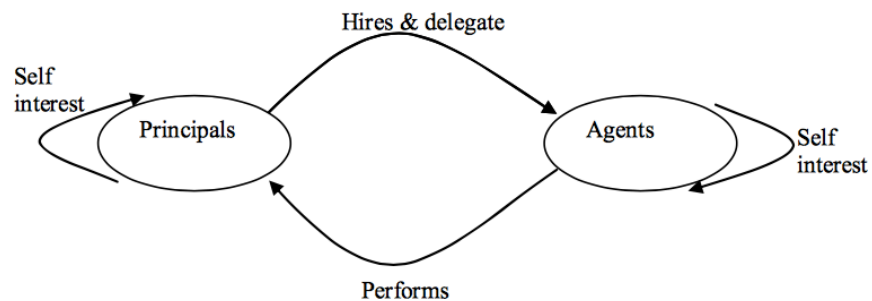


Figure 2. Model of Principal-agent theory (Abdullah & Valentine, 2009, p. 90)

The basic assumption behind the theory are opportunistic behaviour, bounded rationality and individualistic utility maximisation and agency problems arise when the two cooperating parties do not share the same goals or have the same relation towards risk (Eisenhart, 1989). In an organisation where members (the principal) chose their representatives (the agent) and entrust their representatives to work for the interests of the organisation, is the risk for an agency problem eminent, due to the above-mentioned assumptions. LRF must have management and representatives, because of the individual members inability to govern such a large and complex organisation. A majority of members are therefore separated from the governance, only connected to the management through their representatives, and these two parties are supposed to govern the organisation on behalf of the members. The principal-agent theory is commonly used in the cooperative organisational context, since the possibilities for members to review the organisations performance are limited and information asymmetry can be exploited by the management, thus obstructing members to influence governance of the organisation (Nilsson & Björklund, 2003).

Different perceptions among management and members regarding the organisations objectives lead to agency problems according to Eisenhart (1989, p. 59). Agency dilemmas can also become aggravated if the objectives and goals of an organisation are indistinct or diffusive, and

cooperative associations emphasises frequently that they contribute usefulness to members (Nilsson & Björklund, 2003, p. 85). Nonetheless, there is no general definition of usefulness to members, and to clarify or operationalize the term seems problematic (*Ibid*). Principal-agent theory is adequate for this paper and the research question, since divergent or convergent attitudes within LRF enlightens whether farm members as principals, and LRF representatives as agents, share the same viewpoints concerning Swedish agriculture. Convergent attitudes between the agents and the principals would be positive for the degree of usefulness to farm members in LRF.

3.3 Public Choice Theory and Rent-seeking Behaviour

Public choice theory assumes that individuals involved in collective decision-making do make some consideration for others, but whether they are voters, lobbyists, politicians or bureaucrats, it is their own self-interest that is their main concern (Schmitz *et al.*, 2002). As in the Principal-agent theory is Public choice theory derived from the notion that principals give agents governance responsibilities, and maximisation of personal utility is the foundation of the theory. In the case of politicians and representatives for organisations is the interpretation that the main goal is to be re-elected. This can be described as a “rent-seeking behaviour”, defined as when individuals decide to support certain policies as an attempt to be re-elected (Schmitz *et al.*, 2002, p. 45).

McChesney and Shughart (1995, p. 8) state that legislative and policy decision-making are in large extend influenced by well-organised interest groups and that everyone involved in the decision-making process is trying to match the output to their own organisations agenda and maximise personal welfare. Activities to influence the policy decision-making process to obtain or avoid specific outcomes are also categorised as rent-seeking behaviour (Schmitz *et al.*, 2002). Political forces resulting from the behaviour of individual farmers and their associations, such as trying to “obtain from the state, through economic policy, that which they cannot obtain from the market alone” (Guyomard *et al.*, 1993, p. 8) are fundamental to the public choice approach (Guyomard *et al.*, 1993). Governmental interventions are believed to correct market imperfections and operate in the public interest, but are often nonetheless disposed to lobbyism and rent-seeking behaviourism (Schmitz *et al.*, 2002).

LRF representatives and management are supposed to work on the behalf of the members, but since the member base has become more heterogeneous the question is, which member’s agenda are the leaders representing? Surveying the relationship between convergent or divergent attitudes between Swedish farmers and their representatives in LRF could answer to what extent the representatives can represent farm members when lobbying to affect political decision-making. Is it possible for LRF to represent their farm members, or has the organisation become too heterogeneous? Divergent attitudes may indicate that the representatives have fallen under the domain of public choice theory, and whether Swedish farmers benefit from LRF’s rent-seeking behaviour can be questioned.

3.4 Institutional Risk and Importance of Lobbying

“Institutions are the rules of the game in a society or, more formally, are the humanly devised constraints that shape human interaction. They are made up of formal constraints (e.g., rules, laws, and constitutions), informal constraints (e.g., norms of behaviour, conventions, and self-imposed codes of conduct), and their enforcement characteristics. In consequence, they structure incentives in human exchange, whether political, social, or economic” (North, 1990, p.3).

North’s (1990) reflection describes how institutions are perceived in political science and economics. Institutions are created by society and can be difficult to alter, as well as give rise to risks. Institutional risks can include domestic and foreign politics, and institutional organisations that constitute laws, rules and regulations represent a major risk for farmers (Hardaker *et al.*, 2004). New rules and regulations may impact profitability and survival of production development. New laws and regulations concerning EU subsidies, taxes and restrictions on different agricultural activities can have varying effect, but poses major risks, and may alter the agricultural situation significantly (*Ibid*). It is therefore of great importance for farmers to have lobbying organisations that influences and represents their interest on the policy-making arena.

The definition given by the OECD about the exertion of political pressure is; “Lobbying, the oral or written communication with a public official to influence legislation, policy or administrative decisions...” (OECD, 2010, Annex, principle 3.) Sweden as an example when studying lobbying activities is interesting since much of the political exchange occurs through media, where interest groups addresses both policymakers and the public (Micheletti, 1990). Interest organisations in Sweden are also said to participate in the formation, as well as execution, of public policy, due to corporatism within the political system in Sweden (Öberg, 1994). Therefore interest organisations have a significant function when representing their member’s interests in Swedish legislative decision-making. To the LRF, which have a monopoly status granted by the government, the high degree of membership heterogeneity is an issue, since LRF is required to aggregate the members interests in a “predictable, responsible, and decisive way” (Micheletti, 1990b, p. 269), in order to maintain their corporatist credibility.

The above reasoning concerning political influence from organisations are in line with the critical organisational theories, e.g. the Principal-agent theory and Public choice theory, which highlight that no organisation is a value-neutral institution, consequently are organisations considered to be political arenas themselves, where exercises of power in different ways are conducted (Alvesson & Deetz, 2000). The capacity of management in organisations has also according to critical organisational theorists become unquestioned through the “managerialization of the world” (Alvesson & Deetz, 2000, p. 209). The background to this study is derived from the notion that Swedish farmers must be able to rely on their lobbying organisations, and the capacity of the management in these organisations. Since organisations are not value-neutral, farmers must be certain that the management do not have divergent attitudes, regarding Swedish agriculture, which may intervene with successful lobbying.

3.5 Organisational Change in Farm Associations

A farm association, such as LRF, can be said to encompass the aggregated interests of the associations individual members interests. How well an interest is encompassed is determined by the interest groups organisational structures, which define the member base that are to be represented (Schmitter & Streeck, 1999, p. 58). Organisational change and member base alterations will affect a member's ability to influence decision-making and the utility of membership, as well as eventually give rise to organisational conflicts when member's experience that their own preferences or demands are not fully considered (Micheletti, 1990b).

3.5.1 Member Control and Influence

"Can Cooperatives Cope with the Competition? On Market Orientation in the Agrifood Sector" by Nilsson and Björklund (2003) is obviously concerned about the cooperative as a business model. Findings in the report are highly interesting, as it gives insights about diverse organisational problems that are beneficial for this study, even though the study by Nilsson and Björklund (2003) concentrated on cooperatives and investor-owned firms in the dairy and meat processing industry. The report links the problems with upholding member control and influence of the principal-agent theory (Nilsson & Björklund, 2003, p. 97).

Nilsson and Björklund (2003, p. 97) cite the book *"Zur Soziologie des Parteiwesens in der Modernen Demokratie. Untersuchungen über die Oligarchischen Tendenzen des Gruppenlebens"* (The Sociology of the Party system in Modern Democracy. Studies on the Oligarchic Tendencies of Group living) by Robert Michels, where Michels (1911) seeks to explain the difficulty of maintaining member control in commonweal organisations. Michels (1911, p. 12) emphasises in the introduction that there are "...immanent presence of oligarchic traits in any common good purpose organisation", and that organisations with a common good objective inevitably lose democratic values and end up as an oligarchy, hence the term "the iron law of oligarchy". Oligarchisation is the concentration of power controlled by a minority of members, and bureaucratisation is explained as a form of oligarchisation (Zald & Ash, 1966, p. 328). Members of the organisation lose control and influence as the organisation grows and becomes more complex, while a power elite is shaped.

The approach by Michels (1911), regarding organisational change, predicts that organisations will transform into a conservative nature and that the initial objectives of the organisation will be displaced by the goal of organisational maintenance. This goal transformation may occur in different ways, but one form of goal transformation is the "diffusion of goals" (Zald & Ash, 1966, p. 327). The management of the organisation replaces unattainable objectives with diffuse goals; hence enable the organisation to pursue a wider set of objectives. Goal transformation is said to always occur en route to greater conservatism, and alteration of an organisations objectives is always in line with "the dominant societal consensus" (Zald & Ash, 1966, p. 327). If the dominant societal consensus is not beneficial for the agricultural sector, farm members must be certain that their LRF representatives work for well-defined, agricultural friendly objectives.

Nilsson and Björklund (2003, p. 97) and Zald and Ash (1966, p. 327) accentuate that the work by Michels (1911) describes how organisations characteristics convert. First the organisation has to grow to achieve the original aims, but then the objectives alter as the size of organisation changes. Instead of being a mean to an end, the organisations existence and endurance becomes a top priority for the leaders, and the leaders interests comes first since they have all resources.

“Outwardly, the organisation becomes toothless and inwardly the organisation becomes bureaucratic. The gap between leaders and members widens as the bureaucracy grows” (Nilsson & Björklund, 2003, p. 97). The “Iron law of oligarchy”, where the leaders in the organisation control influence, is due to the distance between the principal and the agent. The distance is therefore part of an agency problem. Divergent attitudes among the farm members and their representatives in LRF could imply Michels (1911) theory of oligarchy, and that LRF has decreased in importance for the individual farmers.

Rydén (2005) cites the study “*Member democracy in large agricultural cooperative associations*” by Utterström (1982), which investigated member’s influence and democracy in Swedish agricultural cooperatives. Utterström (1982) conducted a series of attitude surveys at the end of the 1970s, and the majority of the respondents were satisfied with their agricultural associations, however 10-15 % was still dissatisfied (Rydén, 2005, p. 83). This figure can be compared to the latest “Report Satisfied Member” from LRF, which conclude that 6 % of the association’s members are dissatisfied (www, LRF 2, 2014, p. 4). Comparisons and assessments regarding these two surveys are of course difficult to conduct, since both scope and methods of the two surveys differed and a lot has happened during the last 30 years regarding Swedish agriculture and the investigated associations. The results from both studies illustrates that members in Swedish farm associations regard their possibilities and abilities to affect decision-making as limited (www, LRF 2, 2014; Ryden, 2005). Rydén (2005, p. 83) summarises the study by Utterström (1982) by stating, “It was clear that the distance between management and members increased”.

Larger organisations lead to wider gaps between leaders and members, and Swedish farm associations have experienced problems with perceived distance between management and members for 30 years according to the above reviewed literature. LRF has grown since the start, but the number of dissatisfied members in LRF has been limited to 5-6 % during the last decade (www, LRF 2, 2014, p. 4). These 5-6 % dissatisfied members however mainly involves the young members, the ones who live and work at the farm, the ones who have their main source of income at the farm, and the ones who farm 20 hectares or more (*Ibid*). Even though young fulltime farmers are seen as the dissatisfied members in LRF, the question remains whether the perceived distance between farmers and management can be due to divergent attitudes concerning Swedish agriculture and Swedish farmers business development opportunities.

3.5.2 Representation and Portfolio Problems due to Member Heterogeneity

The “unwritten democratic rule and a strong moral value” (Ljung & Emmelin, 2000, p. 8) in a cooperative organisation is that everyone is supposed to be represented and that all different groups within the organisation can make their interests and rights heard (Ljung & Emmelin, 2000). Managers and elected officials tend to represent diverse interest groups when working within cooperatives, and this would imply a functioning representative democracy where all members’ interests are taken into consideration, but this can however also lead to polarisation and strategic behaviour (*Ibid*). Member heterogeneity enlarges the issue of representation, and divergent interests among members and may lead to management consequences.

Heterogeneity among the member base increases organisations portfolio problems as well (Nilsson & Björklund, 2003). Firms and organisations differentiate resources across their businesses as a precaution to reduce the risk factor for their investors. Investing members in a

cooperative however have divergent risk preferences, therefore complicating the creation of a portfolio that is favourable for all members (*Ibid*). Members in LRF invest through their membership fee. The members can expect to receive benefits from their investment, e.g. discounts, newspapers, access to business education, beneficial lobbying for the green industries and political influence (www, LRF 6, 2015). The portfolio problem aggravates through member heterogeneity, but the problem also increases when the association's business portfolio becomes heterogeneous (Nilsson & Björklund, 2003). The diversification of the portfolio increases the probability that some of the businesses are "outside many members sphere of interest" (Nilsson & Björklund, 2003, p. 87), and conflicting viewpoints between members and management concerning portfolio composition can result in economic losses. LRF has become more diversified since the organisation started as an association for farmers. New enterprises and subsidiaries may therefore conflict with the farm member's sphere of interest.

Portfolio problems and ownership relations can become even more complicated in federations such as LRF compared to cooperatives, since LRF produce collective goods (Nilsson, 1994, p. 160). Members appreciate the produced collective goods and the actions taken by LRF, but members may be reluctant to pay the price and therefore this increases the risk for the free-rider phenomena. A heterogeneous member base requires that the organisation includes and motivates members to participate in order to minimise the risk for "free-riders". Another problem facing LRF is that the association receives weak control signals from their member organisations, which may have differing objectives (Nilsson, 1994, p. 164). This leads to consequences where the management of LRF to a large extent act on their own incentives, resulting in a larger association than necessary in relation to the members requirements, and "their work tasks do coincide with the demands; there are conflicting aims, and ineffective work" (Nilsson, 1994, p. 164).

Offe and Wiesenthal (1980) explore the dilemma between a heterogeneous member base and the ability to create a collective identity within a union, which entails the problems of diversity between members and the diversity that exists within the members themselves. Heterogeneity among members in a union, concerning member's occupations, interests and opinions, tends to increase as the size of the union increases (Offe & Wiesenthal, 1980). Therefore unions are confronted with the undertaking to organise an entire spectrum of needs that the members in the union have, and to optimise all demands into a suitable strategy. The increased heterogeneity aggravates the difficulties to formulate general objectives and to organise a common willingness to cooperate, "a notion of shared, collective identities and mutual obligations of solidarity" (Offe & Wiesenthal, 1980, p. 81).

Offe and Wiesenthal (1980, p. 83) raise the question how internal processes of organisation, communication and decision-making differ in business associations, which are an opposed force against the union. The authors emphasises that formal business associations are a defensive response to the formation of unions and to state-interventionism, as well as a collective action of capital (Offe & Wiesenthal, 1980, p. 83). Business associations have limited sanctioning power, since the individual firms within the association remain their own decisive power over strategic choices. Consequently, this is the problem of creating and maintaining unity among members, as well as mobilising members resources, but it is less problematic for the business association compared to the union (*Ibid*). The authors state this reasoning to be just, despite the divergence of heterogeneous and conflicting interest among the business association's members, e.g. in the case of LRF the divergences between small- and large-scale farmers and farms divergent market

orientation or specialisation. Offe and Wiesenthal (1980, p. 83) nonetheless mention that the difficulties to maintain unity among members are not absent from the internal dynamics of business associations.

Public choice theory, in the context of trade unions, assume how the unions representatives will "maximise the utility of the median voter in order to be re-elected" (Booth, 1995, p. 112). Booth (1995) illustrates by the simplistic model of the median voter, how members in a trade union are only concerned with wages and employment, but the union representatives are concerned about wages, employment and increasing the probability of re-election. The model explains how union managers choose to satisfy the median union member, since the only propositions that are preferred by the median voters will pass a vote. The probability of re-election will diminish if the trade union management chooses to ensue propositions with outcomes other than the preferred ones by the median voters (*Ibid*). Heterogeneous members will still join the union if they expect that the obtained utility of membership exceeds the choice of abstaining (Booth, 1995). This reasoning would implicate that LRF representatives tend to represent the "median" farmers in Sweden, but that LRF still can attract heterogeneous members if they receive a certain amount of utility.

As earlier described increased heterogeneity is often associated with an increase in the size of the organisation, and there may be numerous sources of member based heterogeneity. Diversity regarding members e.g. businesses, interests, age and gender may have significant impact on the utility that members perceive they can derive from a cooperative (Fulton & Giannakas, 2001). Member heterogeneity increases the difficulty for cooperatives to demonstrate that they operate in the best of interest of all members, and members are unlikely to recognise a correlation between the success of the cooperative and the success of their own business. Fulton and Giannakas (2001, p. 1264) argue that this lack of connection is more likely to arise when particular members or managers are perceived to have a disproportionate influence over the cooperatives operations. This problem is more eminent in large, multipurpose and centralised cooperatives, where the development of member commitment is dependent on the cooperatives "reputation as an effective agent for the members" (Fulton & Giannakas, 2001, p. 1264). This problem enlarges as member heterogeneity increases, thus reducing the organisations possibility to demonstrate that their operations are beneficial for all members. The heterogeneity within an organisation such as LRF, with the multipurpose to represent the "green industry", rural residents and communities as well as farmers, could therefore become a problem when LRF aims to achieve a reputation as an effective agent.

Nilsson *et al.* (2009) had similar findings as Fulton and Giannakas (2001), concerning difficulties with member commitment, as well as control and trust in cooperatives that have expanded into complex and heterogeneous organisations. As the cooperative imitates the business structure of investor-owned firms, in order to preserve competitiveness, the relation between management and members becomes more complicated, and member commitment diminishes as member's ability to influence the cooperative decreases (Nilsson *et al.*, 2009). Discontent among the members result in trust issues regarding the management's ability to govern the cooperative and keep it functioning well. The distance between managers and members may increase if members do not understand how the cooperative operates and if they cant control or influence their assigned agents, who govern the association. This distance can lead to dissatisfied and uncommitted members who become free-riders (*Ibid*). Uninvolved members and increased

organisational complexity may lead to further power concentration and greater efforts by the management to maintain their position - according to the assumption within the principal-agent and public choice theories regarding opportunistic behaviour.

Micheletti (1990) describes that the consequences of member heterogeneity in LRF was that different guilds (intresseföreningar) or subgroups were organised within the organisation, that initiated organised criticism, internal lobbying as well as protest groups. Some of the protest groups that were created because of disapproval of LRFs development during the 1980s, considered LRF as a “bureaucratic organization for large farmers, anti-environmental and dominated by the cooperative businesses” (Micheletti, 1990, pp. 140-141), and that LRF had lost the direct democracy values. Discontent with their organisations decision-making and representation among farm members in LRF may be derived from low understanding of how the association is governed and operates. Divergent attitudes between farm members and their representatives in LRF, regarding Swedish agriculture, would imply that the association needs to restructure and self-examine whether they can represent their original members properly or not.

3.5.3 Incentives, Communication and Usefulness to Members

Oligarchic regimes, or the “Iron law of oligarchy” as described previously, in decision-making has been acknowledged in trade unions, but associational decision-making is complex and difficult to understand (Knoke, 1986). The “minimal definition of an association is a formally organized named group, most of whose members – whether persons or organisations – are not financial recompensed for their participations” (Knoke, 1986, p. 2). Examples of associations are labour unions, churches, political parties, professional societies, business and trade associations and cooperatives. The conventional assumption is that members join these types of associations, such as LRF, to collectively produce a public good, which are defined as a “good or service from whose consumption no group member can be excluded regardless of the level of an individuals contribution towards the provision of that good” (Knoke, 1986, p. 5). This may however lead to the familiar problem of free-riding, so consequently, the implementation of incentive systems are highly important for associations to attain and keep their members.

Mismatch between the supply from the organisation and the demand by the members may disrupt the association’s economy, thus reduce the association’s ability to achieve defined objectives (Knoke, 1986). The need for associations to assure consistent flow of funds and resources may lead the management to implement incentive systems that attracts the necessary numbers of members, but the wider recruitment strategy may attract new members with scant interests in the associations primary objectives. Knoke (1986, p. 10) illustrates this with the American Farm Bureau Federation’s and the recruitment of urban members, who were mainly attracted by cheap insurances and tires, and not by the association’s agricultural interests. Complex incentive systems enable resource growth from an expanding membership base, this should however necessitate differentiation of the association’s internal structure. Mixed-incentive systems have probable effects on the association’s longevity and survival possibilities, corresponding to this are membership heterogeneity and this “may become an unwelcome source of friction over the goals and directions the group should take” (Knoke, 1986, p. 11). The expanded recruitment strategy of LRF, to involve non-farmers as members, will increase the demands of clear communication and well-defined utility for membership.

Echeverris (2006) study “*Beyond Ideology and Economy: Agricultural Cooperative, Member influence and Strategic development in change*”, is based upon members perspectives on ownership and views of the cooperative movement, as well as its development. The investigated cooperatives are “Milko”, “Swedish Meats” and “Lantmännen”. The study indicates that the perceived degree of member influence and the view of the cooperative as an effective business model are differentiated among different member groups. Existence of divergent attitudes within the member base requires diverse strategies when communicating internally about organisational development, since the individual members interprets and processes proposals “in complete different ways” (Echeverri, 2006, p. 44). The ability to embrace organisational change and internal communication is reliant on the individual member’s acknowledgement of his or hers possibility to influence the organisation.

The study by Echeverri (2006) illustrates an unsolved tension between new market oriented business development ideas and old cooperative ideals. Members in the three examined cooperatives expressed different viewpoints about the cooperative characteristics, and Echeverri (2006, p. 42) describes that one member group underlines the confidence and importance of cooperatives as preserving cooperative values. Members in this group highlight the importance of LRF to position it self to safeguard the values and principles that the members stresses are important such as “welfare”, “opinion-forming”, “pass on the legacy” etc. (*Ibid*). These attitudes express a regressive viewpoint of the cooperative model and critics characterises this line of progress as contrary to the market oriented business development and “religious” (Echeverri, 2006, p. 42).

The challenge for the farm cooperatives and associations to include and combine member’s attitudes to fit the organisations business development strategies is undeniably of great importance. If the management ignores the divergent attitudes and viewpoints among their member base, this can lead to failure when the management is trying to assemble the organisation for a joint objective (Echeverri, 2006). Communication strategies are crucial to appeal to the members and to build a common understanding for the organisations goals and visions. The “collective understanding of the importance of the institution” (Micheletti, 1990, p. 146), and that all members accept the organisational saga is what every interest association strives for. LRF have used metaphors such as “pull in the same direction” (dra åt samma håll), “A New Grip – Togheter” (Nya tag – tillsammans) (Micheletti, 1990, pp. 146-148) and “Sweden is larger then the city” (Sverige är större än storstan) (www, LRF 4, 2015) to achieve this. However, when such type of linguistic tactics fail to achieve this, it “becomes merely a leadership strategy that aims to defend the status quo existence and politics of the organisation” (Micheletti, 1990b, p. 262), which can be related to the individualistic rent-seeking behaviour of the public choice theory. Both internal and external communication must converge with the demands and actions taken by the organisation, to avoid loss of solidarity, as well as grant legitimacy of power to the management (Micheletti, 1990b, p. 264).

Membership heterogeneity tends to raise the level of disagreements concerning the exact organisational goals and undertakings, as well as the risk that certain member groups are given higher priority than others (Micheletti, 1990b, p. 269). As a result may the management decide to give in to “interest inarticulation” (*Ibid*). Interest inarticulation is defined as the formulation of vague organisational objectives and imprecise preferences, which enlarges the problems with expectation. This goal ambiguity are said to be inevitable for encompassing organisation, and

LRF must rely on superordinate goals to define the organisations purpose, these types of goals tend however to be inoperative (Micheletti, 1990b, p. 270). Instead seem superordinate goals together with ambiguous objectives to function as a tool for management to lower member's eventual disappointments and expectations. If members do not know what to expect from a membership, why be a member?

Micheletti (1990, p. 148) highlights a LRF survey from 1983, were members felt distance from their leaders, due to the larger size of the organisation and loss of solidarity. LRF coined the metaphor "usefulness to members" in the early 1980s to stress the importance of LRF as an institution (Micheletti, 1990, p. 151). The term usefulness to members was, and is still, supposed to summarise the reasons and benefits of membership in the cooperatives and LRF. Usefulness to members combine collective and selective incentives, and emphasises that membership cannot entirely be based on material, immaterial or short-term considerations (*Ibid*). To overcome the gap between management and members, as well as the sense of less solidarity, clear communication about the usefulness to members is of the essence. Capable and enthusiastic leadership, which reflect member's viewpoints and the composition of the member base, are crucial when agriculture is becoming more deregulated (Micheletti, 1990).

Increased member base heterogeneity and organisational change within the LRF, due to transformations in Swedish agriculture, increases the difficulties with communicating usefulness to members. Divergent attitudes regarding business development between management and farm members would imply that the usefulness for farmers to be members in LRF has decreased.

3.6 Model of the Conceptual Framework

Agency relationships are said to be omnipresent, constantly present in social exchange and in organisations (Shapiro, 2005, p. 282). Both Principal-agent theory and Public choice theory pinpoints the need for consideration when selecting agents, designing incentive systems between principals and agents, and the prerequisite for coinciding preferences between the two parties to enable a profitable relationship. The reviewed literature and theories accentuates the problems that can occur in such an organisation as LRF, if farmers and their representatives do not have corresponding attitudes regarding the goal orientation of LRF. Since LRF is supposed to conduct lobbying for Swedish agriculture farmers and LRF representatives must have convergent attitudes concerning Swedish agricultural business development. Otherwise the agency costs are too high and the need of LRF is diminished, or as Shapiro (2005, p. 282) expresses it "[principals] simply throw up their hands and decide not to delegate at all".

The importance of understanding attitudes is due to the fact that attitude constructs are explained to be antecedent to both people's behaviour (Hansson & Lagerkvist, 2014), as well as decision-making (Lunneryd & Öhlmer, 2009). LRF representatives are supposed to represent their farm members, as well as making decisions on behalf of them. Divergent attitudes between the two groups would then illustrate the risk of LRF representatives having a behaviour and decision-making opinion that might not be beneficial for the farm members.

Figure 3 illustrates the model of the thesis' conceptual framework, which incorporates the reviewed literature and theories. This paper's intention is to contribute to the existing knowledge about member heterogeneity and representation problems in cooperatives and unions by adding how well attitudes coincide within a farm lobby association as LRF. The model highlights the central role of attitudes regarding Swedish agricultural business development between farmers and LRF representatives, since these attitudes are the foundation of a well functioning farm lobby organisation. If these attitudes are divergent the utility for farmers may decrease and organisational problems might aggravate.

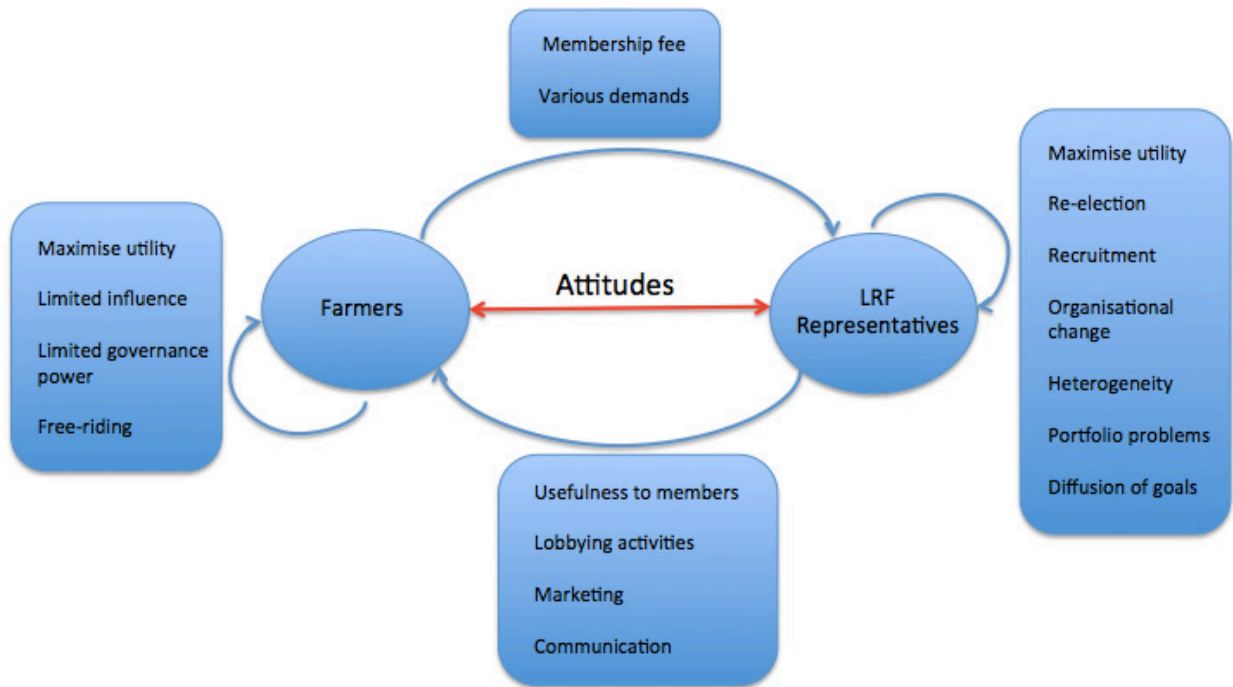


Figure 3. Model of the conceptual framework (own creation)

4 Methods and Material

This chapter will describe the selected methodological approach and the units of analysis to achieve the aim and objectives of this study. Statistical methods used in this study are presented, and the chapter ends with a discussion about the required delimitations for the study.

4.1 Assessment of Attitudes and Unit of Analysis

The assessments of attitudes are facilitated by attitudes characteristic evaluative attribute, a pro-con/positive-negative dimension (Ajzen, 1991, p. 200). This is due to the standard attitude scaling method, which locates the respondent on an evaluative continuum in relation to the object (Ajzen, 1991, p. 193). Attitude measurement instruments often use the concept of distance in order to portray the degree of variability between individual's attitudes (Cooper & Schindler, 2013, p. 36). Attitudes should be treated as hypothetical constructs when they are analysed from measurement data and not from actual observations, due to their complex linkages with behaviour (Cooper & Schindler, 2013, p. 270). The question is whether the measurement model reflects the latent construct of attitudes or if the measurement indicators form the latent construct of attitudes, since attitudes have been viewed as constant predispositions or independently formed at any given moment (Fazio & Olson, 2003). This paper does not intend to further investigate that question, or outline farmers and LRF representative's specific attitude constructs, but instead the idea is to study respondent's attitudes at an itemised level. The individual farmers answers on the measurement indicators can eventually reflect the latent attitude construct for farmers, as individual answers from LRF representatives can reflect the latent attitude construct for the whole group of LRF representatives. Comparisons between farmers and LRF representatives will however, as mentioned, be based on the convergent or divergent attitudes at item level by using an appropriate measurement scaling method. Reason for this is previous studies findings, where Hansson and Lagerkvist (2014, p. 54) emphasises that reflective measurement models recognises correlation between measurement indicators and attitude constructs.

Measurement of attitudes can be indirect or direct, and researchers should be aware of that respondent's response on explicit measurement indicators might not reflect actual opinions (Fazio & Olson, 2003). This can be due to various reasons, such as expressing negative viewpoints that might collide with social norms. Respondents in this study may answer what they believe would be most beneficial for their own situation, in order to either undermine LRF or to improve the associations reputation. However, this study assesses respondent's explicit attitudes at item level.

The units for observation in this paper are Swedish farmers and LRF representatives. Blaikie (2000, p. 164) emphasises different levels of analysis; the "natural social settings" are individuals analysed in the "micro-social phenomena", while organisations are analysed in the "meso-social phenomena". Levels of analysis in the "semi-natural setting" are individuals as informants and individuals as representatives. It is in the semi-natural setting where individuals are asked to report on their attitudes (*Ibid*). The unit of analysis in this study is the individual farmers and representatives from LRF, with regards to their attitudes concerning the situation assessment and future visions of Swedish agriculture.

4.2 Data Collection and Questionnaire Configuration

Social research data is defined as primary, secondary or tertiary (Blaikie, 2000, p. 163), and this thesis will obtain primary data to answer the specific research question. The collection of empirical data will be conducted through a questionnaire. The questionnaire in this study will be used as a measurement tool, defining measurement as “the assignment of numbers to objects” (Churchill & Iacobucci, 2009, p. 234). To assign numbers to properties different types of scales are used, depending on what the research is aiming to investigate. Comparative judging scales are used when the aim is to involve relative judgement, and respondents are therefore asked to judge each object with direct reference to the other stated objects, options or statements (Churchill & Iacobucci, 2009). The “constant sum scaling method” is such an approach, and is designed to indicate respondent’s relative preferences, since the assignment for the respondents is to allocate a fixed amount of points between different options or statements in the questionnaire (Brace, 2013; Churchill & Iacobucci, 2009). The use of the constant sum method also illustrates the relative importance of the different options for the respondents (Brace, 2013, p. 73).

The constant sum approach in this questionnaire will assign the respondents to allocate a total sum of 100 points to the different statements, thus judging the importance of the specific statements. Theoretically, if the respondent allocates 50 points to statement A, and 50 points to statement B, these statements are to be judged and weighted as equally important, while the remaining statements are seen as not important at all. Compared to Likert scales, where respondents also grade objects, opinions or statement, the constant sum approach illustrates the trade-offs that the respondents has to make and eliminates the risk of respondents grading all options as equal importance (Cooper & Schindler, 2013, p. 284; Brace, 2013, pp. 63-65; Netzer & Srinivasan, 2011, p. 6; Churchill & Iacobucci, 2009, p. 246). Constant sum scales produces interval data, and are often used to assess attitudes (Cooper & Schindler, 2013, p. 284) The advantage with constant sum scales is also that it is compatible with percent, which simplifies data analysis. The risk for extreme or abnormal answers, also know as “outliers” (Grandin, 2002, p. 13-14), are eliminated by the constant sum method because of the pre set answer scale.

Large interest organisations, such as LRF, might overcommit in diverse actions and claim that all interests and demands are of equal importance in an attempt to satisfy the various demands from their heterogeneous member base (Micheletti, 1990b, p. 270). In order to address this problem of equal importance the use this of the constant sum method is appropriate. Because this method forces all respondents to assess the given response alternatives in comparison to each other, this displays their relative preferences and prohibits over commitment.

Constant sum scales can be perceived as complicated, since the respondents have to make sure that the total sum of points, credits or numbers, that they assign to the different statements, do not exceed the fixed amount (Cooper & Schindler, 2013; Brace, 2013, Churchill & Iacobucci, 2009). This problem can be solved by using an online survey, which is programmed to make sure that the fixed amount of points are not exceeded (Churchill & Iacobucci, 2009). Web-based surveys also can secure that the respondents have answered all questions before handing in the survey (Fan & Yan, 2010). It is also important to limit the amount of statements that the respondents should evaluate, approximately there should be no more than 10 statements per question be presented, since both participants precision and patience may decline if too many options are incorporated in the constant sum approach (Cooper & Schindler, 2013, p. 284; Netzer & Srinivasan, 2011, p. 6).

Using a web-based survey can be beneficial when collecting large set of data, however there are some challenges. A bias problem can arise if some of the respondent's do not have internet access (Fan & Yan, 2010), and it is also likely that some respondents may not answer a web-based survey if they do not use internet or computers on a regular basis. Respondent's willingness to hand-in surveys is however, not only based upon their technical background or access to Internet, but instead because some do prefer paper surveys (Shih & Fan, 2007). Response rates should also be considered when deciding between a paper or web-based survey, since low response rates may lead to non-response bias and therefore resulting in misrepresentative information (Fan & Yan, 2010; Shih & Fan, 2007). Governmental and academic sponsored surveys tend to have higher response rates than commercial surveys (Fan & Yan, 2010). Response rates for web-based surveys are higher initially but generally tend paper surveys to have 10-23 % higher overall response rate compared to a web-based surveys (Fan and Yan, 2010; Shih & Fan, 2007; Frazee *et al.*, 2003; Wingenbach & Raven, 2002).

As described above there are both advantages and disadvantages with web-based surveys, however this is the choice in this study, due to the fact that web-based surveys can be helpful when using the constant sum approach. Five farmers, two LRF representatives, two other people in the agribusiness sector and my supervisor were handed a draft of the questionnaire questions prior to the start of the data collection, and were asked about how they perceived the questions and the constant sum method. This was done to assure validity, reliability and reproducibility. After this evaluation of the questionnaire some alterations were made, and some questions were withdrawn. A time schedule for the questionnaire has been used to which ensured that all respondents had five weeks to hand in the questionnaire. Three weeks into the timetable of the questionnaire there was a reminder sent out to all respondents, resulting in improved response rate of 23,8 %.

4.3 Selection and Number of Respondents

Deciding the source of data collection is one of the most critically stages when conducting research according to Blaikie (2000, p. 23). Individual respondent can be studied as representatives and informants from different factions to examine beliefs, values, norms and motives (Blaikie, 2000, p. 167). The number of respondents is crucial, too few respondents can lead to unreliable and invalid conclusions, but too many respondents can lead to problems with the interpretation and understanding of big data collections. It is therefore necessary to choose a sampling method where samples from the population are adequate, since these samples should be able to represent the whole population in the analysis (Blaikie, 2000).

There are a wide range of different probability sampling methods, such as "simple random", "systematic", "stratified" and "cluster" (Blaikie, 2000, p. 199). This study used a stratified sampling method when making the sample from the population of Swedish farmers. The primarily reason for using this method was due to the fact, that the method ensures that a particular category in the population (e.g. dairy farmers) are represented in the sample in the same proportion as in the whole population of Swedish farmers (Blaikie, 2000, p. 200). The sample of farmers used in this study is randomly drawn to represent Sweden's agriculture geographically in terms of the eight different production areas (see Appendix B for a map over the production areas). The sample also represents the various production sectors in Sweden, such as crop production with small and large areas of arable land, forestry and animal husbandry in cattle, sheep, swine, poultry or egg production. Gender and age, equivalent to the Swedish farmer

population, are also included in the sample criteria's. Numbers of farmers in these above mentioned variables in the sample are proportionate to the whole agricultural population in Sweden. The used method enables the possibility to determine whether different categorises of Swedish farmers have divergent attitudes, or if Swedish farmers are in accordance. However Blaikie (2000, p. 202) emphasises the need for high response rates when estimating population parameters from samples.

To ensure statistical power the number of respondents and the size of the samples are of great value. "Sample size decisions are always a compromise between the ideal and the practical, between the size needed to meet technical requirements and the size that can be achieved with the available resources" (Blaikie, 2000, p. 212). Since this research do not involve precise measurement, but instead is intended to measure attitudes, a greater number of respondents would be preferable to a smaller sample size. A greater number of respondents would justify generalisations and 10,000 respondents would be ideal, however is this not manageable and Blaikie (2000, p. 212) states that 500 respondents might be enough when resources are limited.

As described above the selections of respondents are not totally randomised, but instead the selection was to follow established criteria's, so that the selected farmers represent different production sectors and production areas, as well as age intervals and both sexes. There are no prerequisite that the farmers in this study should be members of LRF, instead all famers were asked to indicate whether they are members of LRF or if they have been. The 150 delegates that form LRF's National Association Meeting composed the secondary population, who were also asked to answer the questionnaire. The reason for this choice was due to their influence over the organisations management and the organisations political exertion agenda, since the yearly National Association Meeting is LRF's highest governing body, and the 150 delegates assembles to select the board of directors and decide on next year's activities (www, LRF 5, 2015).

4.4 Statistical Methods

The answers from the questionnaire have been aggregated into a data set by using the software Stata 12.0. The questions and different answer variables has been accumulated into tables, presented in chapter 6. The resulting tables illustrate farmers and LRF representative's assessments of the answer variables by mean values, with corresponding standard deviations. These results can be seen under the columns "Mean value Farmers", "Std. Dev. Farmers", "Mean value LRF Rep." and "Std. Dev. LRF Rep.". The results indicate variables with a standard deviation greater than the mean, which implicate large variability among the respondents, presence of outliers or skewed data (Grandin, 2002). Large standard deviation necessitate caution when drawing conclusions, since large variation among the respondents exists, and it also implies cautiousness when deciding what statistic analysis method to undertake.

4.4.1 Testing the Assumption of Normality

The first analytical step of the obtained data set is to determine whether the data is normally distributed or not. This step is important since it defines which statistical test is appropriate to apply in order to compare the answers from farmers and LRF representatives. The normal distribution has a central role in statistics and probability theory because of its relation to the central limit theorem (Grandin, 2002, p. 7). A normal random variable often assumes values close to the average, and large deviation are rare. The significance of normal distribution is shown by the central limit theorem, according to which the sum of a large number of independent random

variables is approximately normally distributed under certain general conditions, regardless of the distribution these variables had from the beginning. However if data is on an ordinal scale level or can't be assumed to be normal distributed even after transformation, nonparametric tests are appropriate (Grandin, 2002, p. 25)

Even though large standard deviation has been acknowledged a skewness and kurtosis test has been conducted on the data set to test the assumption of normality. The hypothesis of normal distributed data is rejected if the result from the skewness and kurtosis test are below 0.05. The results indicated that the test almost exclusively rejected the assumption of normally distributed data in all variables in the data set, which can be seen in the result tables under the columns "Sktest Farmers" and "Sktest LRF Rep."

4.4.2 Mann-Whitney Test

Mann-Whitney test (or Wilcoxon rank-sum test) is a non-parametric test that enables the comparison of two groups by using medians rather than averages of the more familiar t-test (Grandin, 2002, p. 25). The Mann-Whitney test is suitable when data is not normally distributed and the test ranks all the observations from lowest to highest, regardless of which group they belong to (farmers or LRF Representatives). Multiple observations with the same value are given an average rank. After all values have been ranked the ranks are summed in each of the two groups. Large difference between these amounts indicates that the two groups differ. The Stata software tests the null hypothesis; that there is no difference between the ranks of farmers and the ranks of LRF representatives. The null hypothesis is rejected if the P-value is lower than 0.05.

A low P-value indicates that the two samples being compared have different medians. A P-value greater than the significance level of 0.05 says that one can't conclude that the populations are different however Grandin (2002, p. 25) emphasises that this is not the same as saying that the two samples are equal. However in this study, a P-value greater than 0.05 would indicate that the respondent's attitudes are more coinciding than differentiating.

4.5 Delimitations

This study about farmers and LRF representative's attitudes has faced some limitations due to the various approaches regarding the problem statement, but also because of the framework of the master thesis course at SLU. The empirical part of this study has undergone some delimitation; the number of respondents was limited to 500 farm members and 150 representatives, due to restricted available resources. The length of the questionnaire has been adjusted to enhance the response rate, given the fact of spring planting and immense agricultural activity during the data collection period. This modification restricted the extent of aspects and parameters in the questionnaire.

5 Empirical Background and Questionnaire Development

Appointed by the former government have Annerberg *et al.* (2015) have conducted a competitiveness investigation in order to review the possibilities for future viable agricultural and horticultural production in Sweden. The investigation illustrates that Sweden has good conditions for a competitive and sustainable agricultural production, however Swedish agriculture has lost market shares after entering the EU (Annerberg *et al.*, 2015, p. 9). The empirical basis for this thesis are the respondent's attitudes concerning the aspects emphasised in the investigation by Annerberg *et al.* (2015), hence how the respondents assess the competitiveness and future possibilities for Swedish agricultural business development. The aspects of investigation have been accumulated into three overall topics, "Resource and Input Use", "Market Interventions and Ambitions" and "Production". The questionnaire, see Appendix B, is built upon these topics, and the following presents the background and importance of these focus areas.

5.1 Resource and Input Use

The government in Sweden is in an agreement to implement taxation on mineral fertilisers and to increase the current tax level on plant protection pesticides, as a precaution to reduce use, and thus environmental and health impacts (www, Regeringen 1, 2014). Tax exemption on FAME (biodiesel from rapeseed) is also supposed to decrease. The former government in Sweden raised the tax on carbon dioxide and diesel fuels, as well as reducing the repayment of carbon dioxide tax on diesel used in agricultural machinery (www, Regeringen 2, 2009). These measures will have effects on the agricultural sector in Sweden according to the reviewed literature in this chapter. The developments of input use in Swedish agriculture are illustrated in figure 4 and 5 below (Statistics Sweden, 2014a; 2014b).

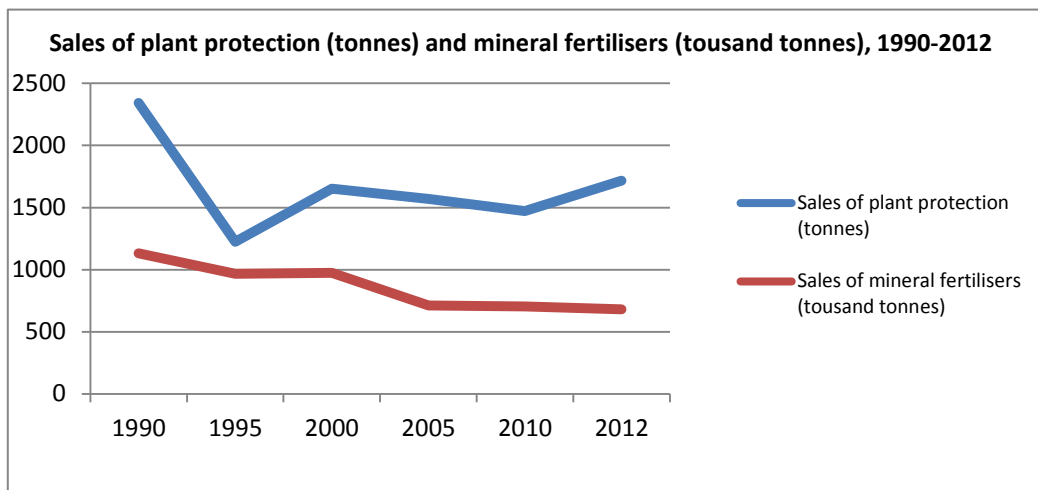


Figure 4. Sales of plant protection (tonnes) and mineral fertilisers (tousand tonnes), 1990-2012 (own creation).

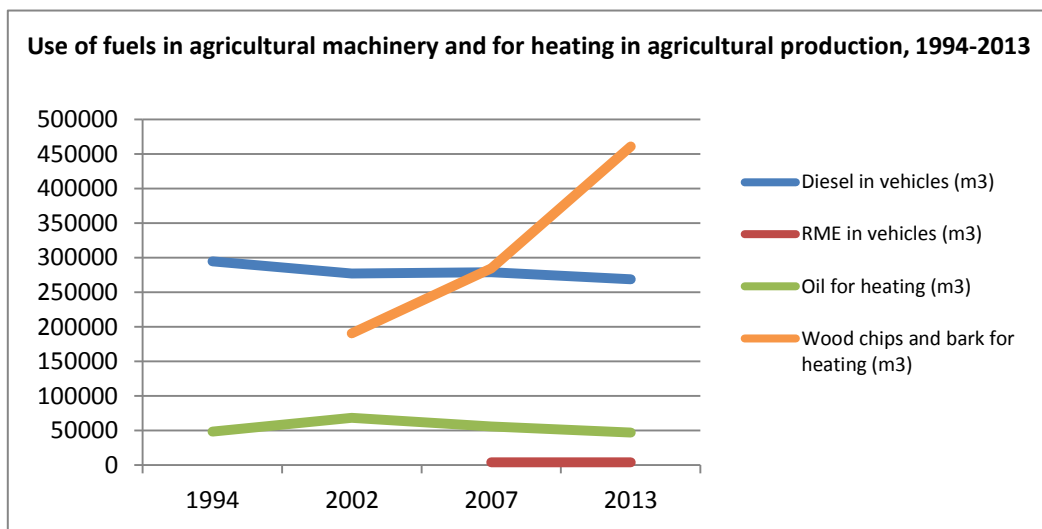


Figure 5. Use of fuels in agricultural machinery and for heating in agricultural production, 1994-2013 (own creation).

Figure 4 indicates increasing sales of plant protection, but this is a hamstring effect due to new regulation in 2012 (Statistics Sweden, 2014a, p. 148). New regulations prohibited the sale of certain pesticides and farmers therefore decided to buy more during the years before the new regulations were implemented (*Ibid*). Figure 5 above demonstrates that the use of renewable fuels, biodiesel (RME), wood chips and bark for heating, has increased and has been used as substitutes to fossil fuels. The data behind both figures indicate declining trends for use of diesel, oil, pesticides and mineral fertiliser in agricultural production since the 1990s. Global food production is though dependent on the availability of fertilisers and the demand for mineral fertilisers is expected to increase, due to the growing population and the transition to a more animal and resource intensive diet worldwide (Cordell, 2010). Growth is limited without nitrogen, phosphorous and potassium, which compose the ingredients in mineral fertilisers and these components are in short supply in nature.

The use of mineral fertilisers in Sweden has declined from the mid of 1980s, mainly because reduced grain production and increased efficiency of nitrogen use, but nevertheless eutrophication and greenhouse gas emissions from the use and production of mineral fertilisers excess socio-economic optimum (Brännlund *et al.*, 2014). Sweden can't produce mineral fertilisers, and phosphorous is a limited resource, therefore the aim is to make Swedish agriculture more resilient by adopting better practices to reduce the need of mineral fertilisers. Livestock manure is not a perfect substitute for mineral fertilisers, since the composition of manure is rarely optimal for the crop, and mineral fertilisers are of higher quality and the quantity and nutrient uptake can be adjusted based on crop requirements (*Ibid*). The results from the study by Brännlund *et al.* (2014, p. 71) show that a fertiliser tax can cost effectively reduce the input of mineral fertilisers on arable land in Sweden. The study emphasises that a tax could increase the effects of policy instruments, the practise of recycling nutrients (e.g. through catch crops and phosphorous ponds), and enable optimisation of fertilisers and substitutes for mineral fertilisers, since these measurements would become more attractive to farmers when the cost of using mineral fertilisers increases (Brännlund *et al.*, 2014, p. 65).

Taxation of mineral fertilisers has been implemented in Sweden before. In 1995 there was a tax introduced based on the nitrogen and cadmium content in agricultural fertilisers, and the tax represented approximately 20 % of the price that Swedish farmers had to pay for their fertilisers (Statskontoret, 2011; Rougoor *et al.*, 2001). The tax on fertilisers was planned to work as an economic instrument to reduce emissions of nitrogen and cadmium, but the tax had a low controlling effect and was removed in the beginning of year 2010 (*Ibid*). The former Ministry of Agriculture, today existing under The Ministry of Enterprise, Energy and Communications, anticipated that the tax removal would improve Swedish grain producer's competitiveness (Statskontoret, 2011), and the removal of fertiliser taxation led to a long-term price reduction on fertilisers for Swedish farmers (Statskontoret, 2011; Rougoor *et al.*, 2001).

By the results from their study, Nam *et al.* (2007, p. 281) conclude that the tax regulations in Sweden contributes to an increased tax burden on agriculture production factors and hence Swedish farmers, compared to their competitors in other EU countries that have no affliction of fertilisers or pesticides taxation. Taxation and regulations on input use seems to be inflexible or as having high transaction costs, due to the design of control methods (Nam, *et al.*, 2007). These measures would require in-depth information about the individual farms and their scope of pollution to be functional at an optimum, and the environmental effects of mineral fertilisers and pesticides are strongly dependent on their contents heterogeneity and the applied application technique (*Ibid*). Another study also discusses tax on pesticides and fertilisers as an economic instrument by comparing Sweden and other EU countries, and the author's viewpoint is that taxation of fertilisers alone as an instrument to reduce nitrogen problems is not sufficient, but as a part of a policy mix taxation can be effective to reduce nitrogen leakage (Rougoor *et al.*, 2001, p. 885).

Ekman and Gullstrand (2006, p. 33) refers to a study conducted by LRF in 2005, where the results show that Swedish farmers have 8 % higher crop production costs in general compared to the Danish farmers, and this difference is derived from the costs for inputs. The costs for fuel are one aspect that greatly differs between the countries, and this is because of higher tax on diesel (*Ibid*). The study by Nam *et al.* (2007) also implies that national energy taxes influences agricultural competitiveness and that further input taxes would have negative impacts on Swedish farmer's competitiveness in the European agricultural sector, were there already is increasing competition. The authors propose more coordination and uniform taxes in the EU, thus enabling mitigating "distorting competitiveness effects of various national tax regimes". (Nam, *et al.*, 2007, p. 269).

According to the reviewed literature, the reason behind higher taxes on agricultural inputs is to reduce the use of mineral fertilisers and pesticides, and thus attain environmental and health benefits (Brännlund *et al.*, 2014; Nam *et al.*, 2007; Rougoor *et al.*, 2001). Swedish farmers have already higher input costs compared to other EU countries (Nam *et al.*, 2007; Ekman & Gullstrand, 2006), and taxation on agricultural inputs can therefore lead to dilemmas. Fuel for machinery and production are essential in modern agriculture and Swedish farmers can reduce their dependency on fossil fuels by e.g. replace these with biodiesel, however the incitements have been weakened since the cost for production and use of renewable fuels have become more expensive due to alterations in tax legislation. The minerals in fertilisers are essential for crop production (Cordell, 2010), and the application of pesticides can be indispensable for some crops or regions and therefore will high taxes reduce farm income (Skevas *et al.*, 2012), as well as

farmer's competitiveness (Statskontoret, 2011). New methods, such as LEAN agriculture and integrated pest management (IPM) are marketed as possible solutions to enhance Swedish agricultures sustainability and profitability (www, LRF 8, 2014). Repayment or compensation to farmers from tax revenues is essential to uphold farm incomes (Rougoor *et al.*, 2001).

The resource and input use in Swedish agriculture is evidently significantly influenced by national restrictions and tax regulations. Changes in national policies alter the production costs for Swedish farmers, thus affecting the competitiveness for Swedish farm production. Swedish agriculture has nonetheless reduced the use of pesticides, mineral fertilisers and fossil fuel over time, and the trend seems to be continuous. Questions and aspects to consider for the respondents under the topic "Resource and Input Use", derived from the above reviewed literature, are presented in table 1 below.

Table 1. Questions and aspects incorporated in the questionnaire under the topic "Resource and Input Use"

Aspects to consider	Points (total of 100 in each question)
<i>Q1. To what extent do you think the following aspects reduce Swedish agricultures competitiveness?</i>	
Taxation of fossil fuels	
Taxation of mineral fertilisers	
Taxation of plant protection	
<i>Q2. To what extent do you think the following aspects will help to reduce Swedish agricultures environmental impact?</i>	
Taxation of fossil fuels	
Taxation of mineral fertilisers	
Taxation of plant protection	
<i>Q3. To what extent do you think the following aspects are able to contribute to increasing sustainability of the resource use, from an environmental perspective?</i>	
Taxation of inputs	
Increased restrictions on the use of inputs	
New methods (eg. LEAN and IPM)	
Increased use of renewable fuels	
Increased awareness of environmental impact	
Increased regulations (eg. protection zones)	

5.2 Market Interventions and Ambitions

The classical Heckscher-Ohlin theorem is a model that explains international trade. Globalisation and market liberalisation will favour sectors and firms that have established comparative advantages, thus decreasing their opportunity cost. Firms develop these advantages by using available factor assets more intensely and efficiently than their international competitors. Farm resource management and efficient resource use are essential for competitive agriculture (Manevska-Tasevska & Rabinowicz, 2014). Both input and output perspectives must be observed, in order to obtain cost-minimisation and profit-maximisation. There are however country specifics and national policies that differentiates Swedish farmers from their competitors in the EU, as described in the resource and input use section of this chapter, which undermines Swedish farmers competitiveness possibilities. The following review will give some insights to how market interventions affect Swedish farmers competitiveness, and raises the question of

possible market ambitions.

5.2.1 Effects of CAP Subventions

Farm income and efficiency objectives are fundamental principles within EUs agricultural policy (Ackrill, 2000). The instrument to drive farm efficiency is income support subsidisation, and this income support has both positive and negative impacts on farm efficiency (Manevska-Tasevska & Rabinowicz, 2014). Whether income subsidies have positive or negative influences on farm efficiency is dependent upon a number of factors, such as country specifics, production specialisation and organisational structures (Manevska-Tasevska & Rabinowicz, 2014, p. 43), but subsidy dependency has in general, negative impacts on farm efficiency (Manevska-Tasevska *et al.*, 2013, p. 25). In the case of Sweden the technical efficiency is relatively high and income support subsidies generate positive impacts depending on the specialisation of the farm, where farms concentrated on dairy production (Manevska-Tasevska *et al.*, 2013) and crop production (Zhu & Lansink, 2010) are positive affected, but farms with beef production are affected negatively (Manevska-Tasevska *et al.*, 2013).

The farm income objective as an essential part of the European agricultural policy has been questioned, since according to statistics, European farmers have the same level of income as the rest of the society (Brady *et al.*, 2009, p. 5). The authors emphasises that the farm income objective therefore should be coordinated with social policies on a national level instead of being part of a common policy (Brady *et al.*, 2009, p. 6). Environmental subsidies are another frequently debated topic, which often undergoes evaluations and changes. Environmental subventions are implemented as a tool to compensate for disparities due to different regions potential for agricultural production and to support agricultural practices that enhances the environment (Manevska-Tasevska & Rabinowicz, 2014, p. 43). The policy impacts of environmental subsidies have largely positive effects on the efficiency aspects of Swedish agriculture (Manevska-Tasevska *et al.*, 2013, p. 27).

CAP subventions generate generally positive impacts for Swedish farm efficiency, but the system with CAP subsidies also affects agricultural land prices, and the lower the land price, the higher the impact (Ciaian *et al.*, 2010). Increasing land prices lead to higher risk for farmer's indebtedness, and the disbursement of subsidies within CAP appears to constrain farm exit and increase part-time farming. This land price effect of CAP varies across the European nations, but Sweden is one of the countries mentioned where the effect can be substantial.

5.2.2 Deregulation and Swedish Farm Competiveness

The different regional compensation levels within the CAP system are intended to become more homogenous, which will lead to lower remunerations for a large part of Swedish farmers. Increased deregulation and new rules on the agricultural market also have effects on Swedish agricultural production. The latest development within the EU is the abolition of milk quotas.

National milk quotas have been limiting the raw milk production in each member state in the EU since the 1980's (www, European Commission, 2014). This market intervention has been in place to reduce surplus production and regulate milk prices, even if the price mechanism of the milk quotas has been limited and only affected the price indirectly (Theuvsen, 2012). Swedish policymakers has been opposed to the milk quota system, and campaigned to dismantle the system during the Agenda 2000 negotiations (Benjamin *et al.*, 1999). The campaign was

unsuccessful, but 15 years later the milk quota regime has come to an end, and Swedish farmers are going to be affected.

The latest data illustrates that Sweden only used 78,3 % of the national quota in 2012/2013 and 78,6 % in 2013/2014 (www, European Commission, 2014). Other countries within the EU, such as the Netherlands, Denmark, Ireland and Poland, have exceeded their quotas. Lips and Rieder (2005) analysed the effects of the abolition of milk quotas, and through the study they observed a great increase in raw milk output in Ireland, Denmark, Luxembourg and the Netherlands. Sweden, Germany, Greece and Portugal are going to experience the greatest decrease in production, and the milk price within the EU will decline with approximately 22 % (*Ibid*). The study therefore strongly displays a reallocation of the milk production in the EU. Sckokai (2012, p. 13) argues in line with the findings by Lips and Rieder (2005) that the milk production will probably increase in those countries that have exceeded their quota, and that Swedish production output will be reduced. The production of milk within the EU will move to the most favourable areas for production, and the greatest risk for farm abandonment and corresponding reforestation are in northern Sweden and eastern Finland (Keenleyside & Tucker, 2010).

The deregulation of the market also increases farmer's exposure to price and currency fluctuations, as well as to other market policy changes (Sckokai, 2012). There will be an immense price pressure on less competitive farmers (Keenleyside & Tucker, 2010, p. 40). Allowing the world market prices influence the European market and keeping domestic prices at a sustainable level for farmers in the EU is the trade off faced by the policymakers (Sckokai, 2012). Hence, due to deregulations in Sweden and the EU, Swedish farmers are exposed to global market forces and Swedish farmers global competitiveness is of the essence.

“The agricultural sector's ability to strengthen its competitiveness in the international market is dependent on the existence of viable, low-cost orientated and productive industries.” (Manevska-Tasevska & Rabinowicz, 2014, p. 26). Until 1990, Sweden's primary production and subsequent processing was adapted for the domestic market and regulated by negotiations between the politicians and the representatives from the agricultural sector (Annerberg *et al.*, 2015). The Swedish agricultural sectors existence, with higher production costs than the international competitors, and so was thereby safeguarded. After Sweden's entry into the European Union, the situation changed for Swedish farmers. The review by Annerberg *et al.* (2015, p. 23) notes that the higher costs for Swedish farmers regarding taxes on resources and inputs, such as labour, fertilisers and plant protection, as well as stricter legislation concerning the production itself has “ha[d] a major impact on the competitiveness” (Annerberg *et al.*, 2015, p. 23).

5.2.3 Consumer Demands and Swedish Farmers Market Orientation

The issue of consumers' willingness to pay (WTP) extra for farm animal welfare (FAW) has been addressed in several studies, but Lagerkvist and Hess (2011, p. 72) argue that the “economics literature on WTP for FAW, according to our literature sample, appears much smaller than public attention to this topic would suggest”. Consumer's age and income seems to be variables that determine consumers WTP for FAW (Lagerkvist & Hess, 2011). Trust in agricultural production is also an important issue when consumers choose to pay for animal welfare (Nocella *et al.*, 2010). Information about the conditions of and for animals in agricultural production alters the WTP for FAW (Lagerkvist & Hess, 2011; Nocella *et al.*, 2010). When FAW are suggested to be required by legislation consumers WTP decreases (Lagerkvist & Hess, 2011), and since animal

welfare legislation applies to all domestic production in Sweden, is it difficult to obtain a price premium for the animal welfare aspects that are regulated, even though many Swedish consumers would be willing to pay a higher price premium (Hoffman *et al.*, 2010, p.7).

Consumer's demands can be an alternative to legislation to increase animal welfare in agricultural production, and at the same time profitable for Swedish farmers. How do the representatives from LRF and the farmers assess animal welfare aspects, in terms of increased production costs and how FAW add value to the Swedish production? Which aspects do the respondents perceive is most important when consumers buy products produced by Swedish farmers?

The cost efficiency of the CAP subventions system is questioned, since a large part of the EU budget is used for this purpose. Continuous modifications within the CAP regulate and affect Swedish farmers business development opportunities. What opinions concerning the CAP subsidy system are there among farmers and their lobbying representatives? How do they value the importance of the system? Which comparative advantages do Swedish farmers have? How can the competitiveness of Swedish farm production develop? To what extent are self-sufficiency targets and market restrictions important in relation to trade-openness?

Organic production attains a lot of media attention, and projections about the future market share of organic products differ between lobby organisations, politicians and food retailer businesses. For example, the market for organic milk is still expanding (Theuvsen, 2013). New models between farmers and retailers are aiming to expand on niches to develop market concepts. The share of organic sales in 2014 in Sweden amounted to 5,6 percent of the total food sales value, which is an increase from 4,3 percent in 2013 (www, LRF 7, 2015, p. 5). The statement by one of the government parties expressing the aim for Swedish agriculture to transform into 100 % organic has stirred up some of the farming organisations (www, UNT, 2014), since only 16,5 % of all arable land in Sweden during 2013 was used to produce organic labelled products and the trend of increased amount of organic production in Sweden is diminishing (www, Sjö 2, 2013). What are the market possibilities for Swedish farm production according to the respondents? What forecasts do the farmers make about the future market share of organic products, and do it differ from what their representatives in LRF think? What importance do the agricultural associations have? These questions and the ones previous mentioned originated from the reviewed literature has been integrated into the questionnaire. Questions together with aspects to consider for the respondents under the topic "Market Interventions and Ambitions" are presented in table 2 on the following page.

Table 2. Questions and aspects incorporated in the questionnaire under the topic "Market Interventions and Ambitions"

Aspects to consider	Points (total of 100 in each question)
<i>Q4. To what extent do you think the following aspects are able to strengthen the Swedish agricultural production?</i>	
National security directives (self-sufficiency)	
Regional support schemes	
Import restrictions	
Harmonisation between Swedish legislation and CAP	
Total liberalisation of the agricultural sector	
<i>Q5. To what extent do you think the following aspects represent the different market segments development in the next decade?</i>	
Premium goods position on the Swedish food market will be strengthened	
The development potential of premium goods is uncertain due limited demand	
The demand for Swedish goods will decrease as a result of international competition	
The demand for Swedish goods will increase due to increased interest in Swedish produced products in general	
<i>Q6. How do you value the development of the organic goods market segment over the next decade?</i>	
What is the market share of organic products in 2025	
<i>Q7. To what extent do you think the following aspects will help to increase consumer willingness to choose Swedish-produced food?</i>	
Continued high animal welfare ambitions	
Ambition of continual improvement of Swedish agricultural environmental impact	
Highlighting the Swedish agricultures environmental services	
Law on origin labelling of all foods	
The price of Swedish food should be in parity with imported goods	
<i>Q8. To what extent do you think the following aspects describe the importance of the agricultural associations?</i>	
Agricultural associations contributes with significant marketing	
Agricultural associations lead Swedish production to the necessary national and international markets	
Farmers will in a larger extend avoid associations and instead themselves sell directly to the end consumer	
Agricultural associations have grown too large, which have made them diminish in importance to the individual farmer	

5.3 Production

Agriculture, since the beginning, has been under the influence of efficiency and rationalisation, to continuously improve and produce more output with fewer inputs (Tauger, 2011). The “Green Revolution” increased agriculture productivity due to new input factors from the industry, such as machinery, pesticides, phosphorous, and improved fertilisers (Tauger, 2011, p. 138). The use of new and highly productive inputs has led to increases in output within the agricultural sector. However, agricultural developments have had massive effects on the environment, raising the question whether agricultural production can be maximised at both the output and environmental level.

5.3.1 Structural Developments

Manevska-Tasevska and Rabinowicz (2014, p. 30) calculate and compare the total factor productivity of Swedish farms and other selected EU competitors with data from 1990-2009. This productivity measurement clarifies the farms ability to generate more outputs with fewer inputs. The results from the study illustrate that there are high input costs in relation to the value of the production in Sweden, and that the total factor productivity is lowest in Sweden and Finland (Manevska-Tasevska & Rabinowicz, 2014, p. 31). Swedish farmers, relative to their competitors in the EU, are disadvantageous due to high production costs (e.g. feed costs, labour costs), high capital investments and stricter production regulations. Swedish agriculture is however “benefiting from an efficient input use/output production” (Manevska-Tasevska & Rabinowicz, 2014, p. 39). The continuous aim for efficiency and rationalisation in agriculture is part of structural developments within the sector, where young farmers are a driving force since they improve efficiency with farm investments and adaption of new technology (Manevska-Tasevska & Rabinowicz, 2014).

Rationalisation, technological development and intensification are important to improve productivity as well as to reduce production costs (Manevska-Tasevska & Rabinowicz, 2014; Kumm, 2014). The importance of new technologies and production processes to reduce agricultural impacts on the environment is also a great concern. High level of farm specialisation is predicted to lead to higher degree of efficiency and labour productivity (*Ibid*), thus improving competitiveness. How do the respondents evaluate the importance of new technology and farm specialisation? What is the future of Swedish food production?

5.3.2 Production Characteristics

With higher production costs than Denmark, Germany and the Netherlands, Sweden can be termed as a country with high production costs (Ekman & Gullstrand, 2006, p. 65). Farmers in these countries do not have higher prices, but rather they have higher revenues per unit and are thus better equipped to meet the assumed increased competition from low cost countries, both within and outside the European Union borders (Ekman and Gullstrand, 2006). Swedish agricultural production competitiveness is dependent on the possibility to attain higher revenues, and this is possible due to marketing of Swedish farmers lesser environmental impact compared to their international competitors.

The environmental aspects of agriculture are essential, and the seemingly eternal debate regarding organic farming versus conventional affects policymakers. There is however other aspects of Swedish farm production that also attracts a lot of attention, e.g. farm animal welfare as previously described. Stricter Swedish animal welfare laws, e.g. prohibitions against use of antibiotics, beak trimming in poultry production, tail docking and sow fixation in pig production, and the pasture legislation in dairy production, have positive impacts on animal welfare but increases the production costs for most Swedish farmers (Hoffman *et al.*, 2010). Appropriate compensation to farmers with increased production costs, due to the unique Swedish animal welfare legislation, is necessary to satisfy domestic demands and a presumption for Swedish farmers existence (Kumm, 2014). The use of GM-crops could be a factor to reduce production costs, and if some countries do not allow their farmers to use GM-crops this will reduce their farmer’s competitiveness compared to farmers that are allowed to use GM-crops (Ekman & Gullstrand, 2006). Which legislation adds additional value in greatest extent to the production, and which legislation are the most expensive in terms of production costs?

The need of development, education and good agricultural advisors to improve the competitiveness of Swedish agricultural production is eminent (Annerberg *et al.*, 2015). How do the respondents think business development in Swedish agriculture progresses? Is it through research, advisors, entrepreneurial attitudes of the farmers themselves or through new technology? The previous literature examination is the foundation of the “Production” topic in the questionnaire, and the following two tables, table 3a and table 3b, presents questions and aspects within this topic in the questionnaire.

Table 3a. Questions and aspects incorporated in the questionnaire under the topic "Production"

Aspects to consider	Points (total of 100 in each question)
<i>Q9. To what extent do you think the following aspects may reduce agricultural production costs?</i>	
Reducing the tax burden relating to inputs	
Lower labour costs	
Simplified regulatory framework and reduced number of controls	
Allow the use of GM crops	
Increased efficiency and rationalisation	
New methods (e.g. LEAN production)	
<i>Q10. To what extent do you think the following aspects will help to increase the added value of Swedish agricultural production?</i>	
Bait Requirements	
Ban on GM crops	
Prohibition of sow fixation	
Low use of antibiotics	
Animal transport regulation of maximum 8 h	
Restricted access to pesticides	
Prohibition of beak trimming	
Prohibition of tail docking	
Requirements for sewage sludge spreading	
<i>Q11. To what extent do you think the following aspects contribute to increased production costs for Swedish agricultural production?</i>	
Bait Requirements	
Ban on GM crops	
Prohibition of sow fixation	
Continued low antibiotic use	
Animal transport regulation of maximum 8 h	
Restricted access to pesticides	
Prohibition of beak trimming	
Prohibition of tail docking	
Requirements for sewage sludge spreading	

Table 3b. Questions and aspects incorporated in the questionnaire under the topic "Production"

Aspects to consider	Points (total of 100 in each question)
<i>Q12. To what extent do you think the following aspects describe what the future Swedish agricultural production should be characterised by?</i>	
Increased specialisation and rationalisation	
Increased differentiation and niche production	
Increased organic farming	
Increased use of technology (N-sensor, GPS, fixed tracks, etc.)	
<i>Q13. To what extent do you think the following aspects apply to future Swedish agricultural production?</i>	
Bulk production of goods for domestic consumption	
Bulk production of goods for export	
High quality production of goods for domestic consumption	
High quality production of goods for export	
Raw material production for the production of renewable fuels	
<i>Q14. To what extent do you think the following aspects describe how business development in Swedish agriculture progresses?</i>	
Through research	
Through practical advice	
Through entrepreneurial attitude in the farming community	
Through the use of new technologies	
Through education obtained by the agricultural associations	

6 Results

The following chapter presents results from the questionnaire, and the statistical analysis that has been conducted in order to illustrate the differences in attitudes among farmers and LRF representatives.

6.1 Obtained Sample Size and Response Rates

The sample obtained from SCB of 500 farmers contained email addresses of 208 farmers, of which 186 email addresses were functional. To improve the sample size the remaining 292 farmers were contacted by telephone, of which 69 did not answer. Of the remaining 223 farmers only 64 email addresses were obtained. This was due to the fact that 37 farmers declined to participate in the study, 102 farmers stated that they did not have any email address or computer access, 17 of the telephone numbers in the sample were not functional and 3 answered that they no longer had any farm business and were consequently removed from the sample. Thus the link to the questionnaire was sent to 250 farmers.

Contact information of the 150 LRF representatives from last years National Association Meeting was acquired through the use of the search engine Google, and 131 fully functional email addresses were obtained. In total the questionnaire was distributed to 381 individuals, and 175 out of the 381 began the questionnaire, however only 126 successfully completed the questionnaire. Throughout the questionnaire some respondents did misjudge the constant sum approach, due to allocation of more or less than the fixed amount of 100 points per question, and these answers were removed from the resulting data. 92 farmers and 83 LRF representatives completed the first question of the questionnaire, resulting in a response rate of 46 %. 63 farmers and 63 LRF representatives completed the last question of the questionnaire, providing a response rate of 33 %.

From the obtained sample sizes the responses rates were in line with what could be expected, however it would have been desirable with a greater amount of answers from farmers. It is notable that 102 farmers, out of the total sample size of 500 farmers, stated that they did not have access to email or a computer. This is of course problematic since it complicates the possibility to create a full understanding of whether farmers and LRF representative's attitudes coincide. The bias problem due to the choice of using a web-based survey (Fan & Yan, 2010) is therefore eminent and should be considered when conclusions from the results are drawn. A full picture of the divergent attitudes at item level within the population of Swedish farmers is also difficult to create. The obtained sample of 500 farmers from SCB was generated by established statistical criteria's to represent the farm population of Sweden, but since the questionnaire was sent to only 250 farmers out of the 500, the results can't claim to be representative of the whole population.

Table 4 on the forthcoming page presents demographic information about the 63 farmers that fulfilled the questionnaire.

Table 4. Table presenting the responding farmers demographic information

Demographic variables											
LRF member	Yes	No	No, but have been member								Total
	48	6	9							63	
Gender	Female		Male								
	14	49								63	
Age	18-30	31-40	41-50	51-60	61-						
	2	5	20	23	13					63	
Education	Non higher education		Higher education								
	42	21								63	
Production area ¹	Gss	Gmb	Gns	Ss	Gsk	Ssk	Nn	Nö			
	3	7	12	9	18	5	7	2		63	
Production specialisation	Crop	Forestry	Milk	Beef	Pig	Sheep	Poultry	Egg	Other		
	21	8	8	12	2	4	0	0	8	63	
Main income from farming operations	Yes		No								
	34	29								63	

Table 4 illustrate that the 63 farmers who completed the questionnaire were mainly male farmers with LRF membership. This illuminates the gender unbalance within the Swedish agricultural sector. It is beneficial for this study that the main part of the respondents are members within LRF, since the objective with the analysis is to determine whether there is attitude differences between LRF representatives and the farmers that they should represent. Age distribution in the table reveals that most respondents are between the age of 40 and 60, with only two respondents under the age of 30. This should result in reduced differences when analysing the answers, as younger farmers supposedly are dissatisfied to a greater extent with LRF then older members (www, LRF 2, 2014, p. 4).

The factual loss of respondents along the way during the questionnaire indicates that the scope of the questionnaire was overwhelming, or that the use of the constant sum method was too challenging as some researchers have pointed out (Cooper & Schindler, 2013; Brace, 2013, Churchill & Iacobucci, 2009). Out of the total number of respondents the ones with some sort of higher education completed the questionnaire in a higher degree than the ones with no higher education. Table 4 also illustrates educational level of the respondents, where higher education included studies after high school.

Table 4 discloses regional differences in response rates; predominantly it is Gsk (Götalands

¹ The map illustrating the classification of production areas in Sweden is found in Appendix B

skogsbygder) that stands out with 28,5 % of the total number of respondents. All production areas are represented, however there were only two respondents from Nö (Övre norrland). Most respondents have crop production as their farm specialisation, as table 4 illustrates. No respondent stated that they had poultry or egg production, and 8 respondents stated that they have other specialisation than the stated alternatives. These ones reported that they specialise in tourism, recreation or horses.

Size of the respondents farm operation ranged from 9 hectares of arable land to over 600, from 10 milk cows to 220, and from 17 hectares of forestry production to over 1500. These examples demonstrates the variety of the respondents, but table 4 shows that a slight majority of the respondents are fulltime farmers, with their main income from their farming operations. LRF are supposed to meet the demands from a wide spectrum of farmers, and as described fulltime farmers with 20 hectares or more are the ones who are most dissatisfied with LRF (www, LRF 2, 2014, p. 4). Due to the variety of farmers who responded and the fact that the majority are full time farmers, the analysis should reveal variances among farmers as well as differences between the sample of farmers and the sample of LRF representative's.

6.2 Presentations and Analysis of the Results

The presentation and analysis is structured after the three topics, “Resource and Input Use”, “Market Interventions and Ambitions” and “Production”. These three topics are divided into tables that display the measurement indicators, or variables, and the obtained answers to these variables. This papers analysis concentrates on the results from the Mann-Whitney test with a significance level of 5 % ($\alpha = 0.05$), which is presented by the column “P-value H0”. The null hypothesis (H0) and the alternative hypothesis (H1) are as follows:

H0; there is no difference between the ranks of farmers and representatives

H1; there is a difference between the ranks of farmers and representatives

The analysis concentrates on the most prominent coinciding or differentiating results from the test variables, which underscore convergent or divergent attitudes between farmers and LRF representatives. Table 5 on the next page presents the results from the questions corresponding to the topic “Resource and Input Use”.

Table 5. Table illustrating results from the topic "Resource and Input Use"^{2 3}

Variable (Aspect from the Questionnaire)	Mean value Farmers	Std. Dev. Farmers	Sktest Farmers	Mean value LRF Rep.	Std. Dev. LRF Rep.	Sktest LRF Rep.	P-value H0
Q1. To what extent do you think the following aspects reduce Swedish agricultures competitiveness?							
Taxation of fossil fuels	44.11	22.55	0.06	44.12	20.82	0.03	0.99
Taxation of mineral fertilisers	33.45	15.69	0.00	36.41	16.36	0.01	0.08
Taxation of plant protection	22.45	15.01	0.17	19.48	13.71	0.00	0.18
Q2. To what extent do you think the following aspects will help to reduce Swedish agricultures environmental impact?							
Taxation of fossil fuels	36.01	23.81	0.00	37.35	26.67	0.01	0.95
Taxation of mineral fertilisers	30.49	15.41	0.03	24.11	16.73	0.01	0.09
Taxation of plant protection	33.5	19.7	0.02	38.54	25.28	0.01	0.44
Q3. To what extent do you think the following aspects are able to contribute to increasing sustainability of the resource use, from an environmental perspective?							
Taxation of inputs	8.49	12.04	0.00	2.15	3.92	0.00	0.00
Increased restrictions on the use of inputs	8.81	11.65	0.00	2.87	5.12	0.00	0.00
New methods (eg. LEAN and IPM)	19.62	15.51	0.00	35.28	23.23	0.00	0.00
Increased use of renewable fuels	29.44	22.56	0.00	29.69	19.33	0.52	0.39
Increased awareness of environmental impact	24.66	21.43	0.00	22.48	15.13	0.23	0.79
Increased regulations (eg. protection zones)	8.97	9.78	0.00	7.53	16.25	0.00	0.01

Table 5 reveals that the results from the Mann-Whitney test suggest that there is no statistically significant difference in assessments of how taxation of fossil fuels affects the competitiveness of Swedish agriculture (in relation to taxation on mineral fertilisers and taxation on plant protection) between farmers and LRF representatives ($p = 0.99$). The results illustrate that farmers and LRF representatives are generally in accordance regarding how taxation of inputs affects competitiveness and how taxation reduced Swedish agricultures environmental impact.

Results from question three suggest that there are statistically significant differences between how farmers and LRF representatives assess the aspects contribution to increasing sustainability of the resource use, from an environmental perspective. However, both farmers and LRF representatives are in accordance regarding the importance of increased awareness of resources environmental impact, as well as the significance of using renewable fuels.

Respondent's attitudes differ concerning the relative importance of taxation, restrictions, new methods and regulations. Noticeable difference is that farmers do not perceive new methods as meaningful to the same extent as LRF representatives ($p = 0.00$). Farmers have instead more positive attitudes towards taxation, restrictions and regulations as instruments to increase the sustainability of resource use compared to LRF representatives.

² Mean values are respondent's average allocation of 100 points within each question.

³ H0; there is no difference between the ranks of farmers and representatives. H0 is rejected when the P-value is below 0.05.

The “Market Interventions and Ambitions” topic has been accumulated into two tables, due to the greater amount of variables.

Table 6a. Table illustrating results from the topic "Market Interventions and Ambitions" ^{4 5}

Variable (Aspect from the Questionnaire)	Mean value Farmers	Std. Dev. Farmers	Sktest Farmers	Mean value LRF Rep.	Std. Dev. LRF Rep.	Sktest LRF Rep.	P-value H0
Q4. To what extent do you think the following aspects are able to strengthen the Swedish agricultural production?							
National security directives (self-sufficiency)	29.36	24.14	0.02	34.51	22.46	0.32	0.14
Regional support schemes	13.27	15.53	0.00	13.68	13.32	0.01	0.51
Import restrictions	33.07	29.55	0.03	10.35	13.75	0.00	0.00
Harmonisation between Swedish legislation and CAP	17.82	24.12	0.00	29.72	23.06	0.03	0.00
Total liberalisation of the agricultural sector	6.48	14.81	0.00	11.74	20.49	0.00	0.09
Q5. To what extent do you think the following aspects represent the different market segments development in the next decade?							
Premium goods position on the Swedish food market will be strengthened	30.03	21.3	0.15	34.86	18.93	0.17	0.21
The development potential of premium goods is uncertain due limited demand	14.3	18.77	0.00	11.39	16.28	0.00	0.40
The demand for Swedish goods will decrease as a result of international competition	21.17	24.18	0.00	10.83	12.17	0.01	0.04
The demand for Swedish goods will increase due to increased interest in Swedish produced products in general	34.5	28.91	0.05	42.92	21.85	0.47	0.01
Q6. How do you value the development of the organic goods market segment over the next decade?							
What is the market share of organic products in 2025	29.28	23.78	0.00	23.99	16.79	0.00	0.36

Statically significant differences in attitudes between farmers and LRF representatives can be noticed regarding import restrictions and harmonisation between Swedish legislation and CAP according to table 5a ($p = 0.00$; $p = 0.00$). Farmers assess import restrictions to be highly important in order to strengthen Swedish agricultural production, something that LRF representatives do not assess as important. This can be due to LRF representative’s knowledge about the unlikely possibility of such restrictions, since it most likely would necessitate Sweden to exit the EU. The LRF representatives assess the harmonisation of legislation between Sweden and the rest of EU as a better alternative to strengthen Swedish farm production. Both farmers and LRF representatives emphasise the importance of clear national self-sufficiency directives.

⁴ Mean values are respondent’s average allocation of 100 points within each question.

⁵ H0; there is no difference between the ranks of farmers and representatives. H0 is rejected when the P-value is below 0.05.

Both farmers and LRF representatives reflect positive attitudes towards premium goods, however both groups state that the potential of premium goods is uncertain. Attitude differences are noticed regarding the demand for Swedish products. LRF representatives have a more positive attitude towards the future of Swedish products market strength, but farmers tend to be more negative about future prospects of Swedish products strength compared to internationally produced goods. Farmers and LRF representatives are in accordance concerning the future market shares of organic products ($p = 0.36$). They assess that it will have grown from today's 5,6 % to 29 % and 24 % respectively in year 2025.

Table 6b. Table illustrating results from the topic "Market Interventions and Ambitions" ^{6 7}

Variable (Aspect from the Questionnaire)	Mean value Farmers	Std. Dev. Farmers	Sktest Farmers	Mean value LRF Rep.	Std. Dev. LRF Rep.	Sktest LRF Rep.	P-value H0
<i>Q7. To what extent do you think the following aspects will help to increase consumer willingness to choose Swedish-produced food?</i>							
Continued high animal welfare ambitions	27.32	18.72	0.00	25.06	14.42	0.04	0.45
Ambition of continual improvement of Swedish agricultural environmental impact	14.44	9.72	0.36	14.63	10.57	0.05	0.85
Highlighting the Swedish agricultural environmental services	17.08	14.89	0.00	19.83	12.33	0.80	0.07
Law on origin labelling of all foods	24.21	19.33	0.00	25.57	18.49	0.00	0.63
The price of Swedish food should be in parity with imported goods	16.95	23.97	0.00	14.91	23.17	0.00	0.42
<i>Q8. To what extent do you think the following aspects describe the importance of the agricultural associations?</i>							
Agricultural associations contribute with significant marketing	15.94	13.6	0.12	35.37	18.95	0.95	0.00
Agricultural associations lead Swedish production to the necessary national and international markets	14.18	12.14	0.16	30.04	16.39	0.31	0.00
Farmers will in a larger extent avoid associations and instead themselves sell directly to the end consumer	29.76	20.07	0.01	15.82	15.31	0.01	0.00
Agricultural associations have grown too large, which have made them diminish in importance to the individual farmer	40.21	23.87	0.03	18.76	20.25	0.02	0.00

Table 6b illustrates that the attitudes of farmers and LRF representatives are in great extent convergent regarding the aspects that may help consumer's willingness to choose Swedish-produced food. Both groups consider animal welfare ambitions and law on origin labelling of all foods as highly important ($p = 0.45$; $p = 0.63$). Farmers and LRF representatives' attitudes towards the importance of agricultural associations are however greatly divergent. Statistically significant differences are found in all variables concerning the question how the respondents perceive agricultural associations ($p = 0.00$). Most prominent result is farmer's negative attitudes to agricultural associations, and they stand in clear contrast against LRF representative's attitudes.

⁶ Mean values are respondent's average allocation of 100 points within each question.

⁷ H0; there is no difference between the ranks of farmers and representatives. H0 is rejected when the P-value is below 0.05.

Farmers assess in a greater extent that the associations have grown too large and diminished in importance, and that farmers in the future will avoid the associations when promoting and marketing their products. Results from the topic “Production” has also been structured into two tables, and starts with the three first questions within the topic in table 7a below.

Table 7a. Table illustrating results from the topic "Production" ^{8 9}

Variable (Aspect from the Questionnaire)	Mean value Farmers	Std. Dev. Farmers	Sktest Farmers	Mean value LRF Rep.	Std. Dev. LRF Rep.	Sktest LRF Rep.	P-value H0
Q9. To what extent do you think the following aspects may reduce agricultural production costs?							
Reducing the tax burden relating to inputs	24.38	15.39	0.44	22.97	13.49	0.00	0.36
Lower labour costs	11.97	13.86	0.01	13.49	10.65	0.08	0.25
Simplified regulatory framework and reduced number of controls	31.17	25.02	0.00	24.54	14.99	0.00	0.15
Allow the use of GM crops	5.38	8.13	0.00	6.97	7.06	0.01	0.07
Increased efficiency and rationalisation	15.34	16.91	0.00	17.36	11.52	0.00	0.04
New methods (e.g. LEAN production)	11.77	13.47	0.00	14.75	11.33	0.00	0.03
Q10. To what extent do you think the following aspects will help to increase the added value of Swedish agricultural production?							
Bait Requirements	14.61	12.92	0.01	13.75	12.88	0.00	0.65
Ban on GM crops	11.66	11.86	0.00	7.49	7.87	0.01	0.04
Prohibition of sow fixation	10.7	6.87	0.12	8.65	6.89	0.01	0.04
Low use of antibiotics	23.64	16.23	0.00	29.51	19.99	0.00	0.06
Animal transport regulation of maximum 8 h	10.41	7.67	0.18	8.42	10.93	0.00	0.01
Restricted access to pesticides	6.52	8.15	0.00	3.37	6.37	0.00	0.01
Prohibition of beak trimming	6.66	5.56	0.08	9.54	7.58	0.06	0.05
Prohibition of tail docking	9.13	6.14	0.92	13.35	6.69	0.46	0.00
Requirements for sewage sludge spreading	6.69	12.07	0.00	5.95	6.28	0.01	0.34
Q11. To what extent do you think the following aspects contribute to increased production costs for Swedish agricultural production?							
Bait Requirements	18.34	18.43	0.00	18.11	11.72	0.04	0.38
Ban on GM crops	12.41	11.25	0.00	12.06	9.78	0.00	0.96
Prohibition of sow fixation	10.11	8.99	0.00	13.19	8.26	0.41	0.04
Continued low antibiotic use	13.36	10.45	0.00	9.16	13.16	0.00	0.00
Animal transport regulation of maximum 8 h	9.33	7.39	0.25	10.51	15.53	0.00	0.32
Restricted access to pesticides	12.95	11.36	0.00	16.51	14.61	0.00	0.25
Prohibition of beak trimming	6.92	13.64	0.00	4.33	5.12	0.04	0.24
Prohibition of tail docking	6.45	6.63	0.00	5.59	6.07	0.02	0.38
Requirements for sewage sludge spreading	10.13	15.98	0.00	10.56	9.76	0.00	0.26

⁸ Mean values are respondent's average allocation of 100 points within each question.

⁹ H0; there is no difference between the ranks of farmers and representatives. H0 is rejected when the P-value is below 0.05.

Results from the Mann-Whitney test presented in table 7a indicate that farmers and LRF representatives have more or less convergent attitudes regarding the influence of taxation, labour costs, simplified regulation and GM crops to reduce production costs ($p = 0.36$; $p = 0.25$; $p = 0.15$; $p = 0.07$). LRF representatives however tend to have more positive attitudes than farmers towards increased rationalisation and the use of new methods.

Questions 10 and 11 in table 7a contain 9 measurement variables each, which is close to the proposed limit of 10 answer variables (Cooper & Schindler, 2013, p. 284; Netzer & Srinivasan, 2011, p. 6). Therefore these questions may have been acknowledged as difficult, however no respondent quit the questionnaire during these questions. Statically significant differences between farmers and LRF respondents have been found concerning how they value the given aspects possibilities to increase the added value of Swedish agricultural production. Farmers assess ban on GM crops, prohibition of sow fixation, animal transport regulations and restricted access to pesticides more important. Where LRF representatives assess prohibition of tail docking as more important compared to farmers. Farmers and LRF representatives seem to have convergent attitudes regarding the much debated bait requirement ($p = 0.65$). Both groups emphasises low use of antibiotics as the most important aspect to increase the added value of Swedish agricultural production.

When answering the questions to what extent the 9 given aspects contribute to increased production costs, farmers and LRF representative's exhibited quite convergent attitudes. Bait requirements, ban on GM crops, restricted access to pesticides and requirements for sludge spreading are all contributing to increased production costs according to the respondents. Both farmers and LRF representatives assess bait requirements as the most influential variable. Statically significant differences are discovered regarding the influence on production costs by prohibition of sow fixation and continued low antibiotic use ($p = 0.04$; $p = 0.00$). LRF representatives assess prohibition of sow fixation more influential to production costs compared to farmer's assessment, and farmers evaluate continued low antibiotic use as more influential compared to what LRF representatives think.

Table 7b on the forthcoming page illustrates the respondent's attitudes towards what future Swedish agricultural production should be characterised by. The results from the Mann-Whitney test reveal statically significant differences in three of the given answer variables ($p = 0.00$; $p = 0.04$; $p = 0.02$). Farmers tend to emphasise increased level of production differentiation and organic production, where LRF representatives instead underlines increased level of specialisation and rationalisation. No statically significant differences in medians are found concerning the importance of new technology, but LRF representatives assess this variable as the most important (mean value of 31.02), where farmers consider this variable only to be moderately important compared to the other given aspects (mean value of 23.52).

Table 7b. Table illustrating results from the topic "Production" ^{10 11}

Variable (Aspect from the Questionnaire)	Mean value Farmers	Std. Dev. Farmers	Sktest Farmers	Mean value LRF Rep.	Std. Dev. LRF Rep.	Sktest LRF Rep.	P-value H0
<i>Q12. To what extent do you think the following aspects describe what the future Swedish agricultural production should be characterised by?</i>							
Increased specialisation and rationalisation	20.21	17.15	0.13	29.97	19.13	0.12	0.00
Increased differentiation and niche production	29.11	17.88	0.07	22.27	11.84	0.08	0.04
Increased organic farming	27.16	25.83	0.00	16.75	17.07	0.00	0.02
Increased use of technology (N-sensor, GPS, fixed tracks, etc.)	23.52	16.32	0.68	31.02	19.01	0.01	0.06
<i>Q13. To what extent do you think the following aspects apply to future Swedish agricultural production?</i>							
Bulk production of goods for domestic consumption	15.32	13.79	0.01	20.43	16.44	0.01	0.13
Bulk production of goods for export	7.38	8.41	0.03	11.32	10.14	0.00	0.03
High quality production of goods for domestic consumption	39.05	18.17	0.00	33.46	14.77	0.00	0.10
High quality production of goods for export	22.71	12.52	0.77	17.79	11.05	0.29	0.02
Raw material production for the production of renewable fuels	15.54	11.73	0.15	17.00	10.59	0.08	0.34
<i>Q14. To what extent do you think the following aspects describe how business development in Swedish agriculture progresses?</i>							
Through research	17.57	12.13	0.15	17.84	12.47	0.01	0.88
Through practical advice	19.02	12.57	0.00	20.56	11.86	0.00	0.38
Through entrepreneurial attitude in the farming community	35.33	18.87	0.26	35.32	19.84	0.04	0.87
Through the use of new technologies	20.24	11.59	0.46	18.37	9.17	0.05	0.39
Through education obtained by the agricultural associations	7.84	9.21	0.00	7.92	7.27	0.05	0.48

The stated question of how the respondents conceive to what extent future agricultural production should be concentrated on bulk or high quality, on domestic consumption or export and on raw material for renewable fuels are also presented in table 6b. The results reveal that both groups highlight high quality production of goods for domestic consumption as most important for future production. Statically significant differences are shown on how farmers and LRF representatives assess export possibilities. Farmers tend to assess export of high quality products as more prominent, where LRF representatives tend to assess export of bulk products as more plausible.

Results presented in this chapter are further discussed in the succeeding chapter, by using the established conceptual framework of the thesis.

¹⁰ Mean values are respondent's average allocation of 100 points within each question.

¹¹ H0; there is no difference between the ranks of farmers and representatives. H0 is rejected when the P-value is below 0.05.

7 Discussion and Concluding Remarks

By assessing farmers and LRF representative's attitudes was the aim with this paper to answer the question whether Swedish farmers and LRF representatives have convergent or divergent attitudes, concerning Swedish agricultural business development. The answer is both. Coinciding and differentiating attitudes between farmers and LRF representatives has been acknowledged.

The analysis reveals that farmers and LRF representatives have convergent attitudes regarding the following aspects:

- Awareness of resources environmental impact and use of renewable fuels in order to increase sustainability
- Importance of self-sufficiency targets to strengthen Swedish agricultural production
- Premium goods as a market segment will increase, however with an uncertain demand
- High quality production should characterise Swedish agriculture
- The future market share of organic products
- Aspects that decide whether consumers choose Swedish produced products or not
- The importance of entrepreneurial attitudes within the farm community for business development

The analysis reveals that farmers and LRF representatives have divergent attitudes regarding the following aspects:

- The use of new methods and taxation of inputs to improve sustainability
- Importance of import restrictions and harmonisation between CAP and Swedish agricultural legislation to strengthen Swedish agricultural production
- The effects of international competition on the demand for Swedish products
- Whether Swedish agricultural production should be characterised by specialisation or differentiation
- Importance of agricultural associations

The presented results indicate large variance among how respondents assess the questionnaire's variables, thus accentuating that no organisation is value neutral (Alvesson & Deetz, 2000), and that LRF representatives must acknowledge the large spectrum of demands that they should represent. Increased heterogeneity among members and enlarged objectives to recruit, as well as not only farmers represented, have effects on the principal-agent relationship. Changes among the principals necessitate alterations among the agents, which then influence the associations operations and create portfolio problems. These problems arise when LRF must respond and represent a wider set of needs and demands. Consequently, the organisation might lose focus on their original members and the question should be raised whether LRF has become what Micheletti (1990, p. 145) described some farmers in the late 80's feared - a diffuse rural organisation?

Diffusion of goals, “interest inarticulation”, and mixed-incentive systems seem to be the response associations take to tackle portfolio problems in order to satisfy a heterogeneous member base. LRF emphasises that the association represents the countryside, green industries, and farmers, and LRF has developed an incentive system with various discounts, education packages, and magazines to attract members. LRF’s main objective is to monitor agricultural policies and exert political pressure that is beneficial for their members. With an increasingly heterogeneous member base this objective can become complicated, since favourable outcomes for one member might for another be undesirable. This reasoning accentuates the assumption from the Public Choice theory and Booth (1995), that principals will tend to represent the “median member” to increase the probability of re-election. However, the attained results in this study indicate that answers from LRF representatives have large standard deviations, which suggest variation among LRF representatives and that they as a group do not aim to represent the median farmer, but to represent all farmers.

Results from LRF’s own report, concerning their member’s satisfaction with the association, indicates that younger members tend to be more dissatisfied. The results from this study does not give any support to those findings, as no extraordinary variations are shown by the answers from the two respondents in the age spectrum of 18-30. It should be noted that LRF representatives are to large extent farmers themselves, which is highly important in order to create credibility when they represent the association’s farm members. The problem of dissatisfied members, that give rise to organisational trust issues, is more likely a result of organisational growth. The increased size of LRF requires more administration, where agents with no direct connection to the principals day-to-day operations manage the organisation. Following the reasoning of the “iron law of oligarchy” (Michels, 1911), in the case of LRF, the risk is that farm members lose influence and bureaucrats in Stockholm guide the association without distinct directions from their principals – the farmers.

The assumption of utility maximisation in Principal-agent theory and Public Choice theory suggest that both farmers and LRF representatives are trying to maximise their output from LRF. Loss of farm members in LRF is expected if farmers perceive that the usefulness of membership decreases, and because farmers can benefit from LRF’s lobbying activities at the policy-making arena without being a member, the problem of free-riding is eminent. This necessitates an incentive system that attracts farm members, if solidarity alone can’t keep farmers to pay their membership fee. Reduction of membership rates reduces LRF’s influence as a lobby organisation, and would result in reduced income for the association. The importance of LRF representatives would also diminish; hence mixed-incentives systems are the best option for LRF to attract farm members and for LRF representatives to maintain their position. Nevertheless, mixed incentive-systems attract a wider member base, which increases heterogeneity. This inflames the spiral where heterogeneity leads to representation difficulties, where representation difficulties lead to problems of maintaining members, where problems of maintaining members lead to mixed-incentive systems. Because of this risk, it is therefore eminent that LRF divert their focus from lobbying to instead solve organisational problems. Membership heterogeneity has become a source of unwelcomed friction (Knoke, 1986), and the need for coinciding attitudes is of the essence for LRF to maintain their status as the collective voice of Swedish farmers.

Results from the analysis indicate divergent attitudes regarding the importance of agricultural associations. LRF representatives emphasises that agricultural associations are necessary for Swedish farm products to reach their markets, but the analysis of the answers from farmers clearly indicates that farmers consider that the associations have grown to large and diminished in importance for the individual farmer. Swedish agricultural cooperatives and associations, such as LRF, must rethink how they communicate their importance and how they market themselves by highlighting what usefulness they contribute to the individual farmer.

Divergent attitudes concerning market interventions, deregulations, and possibilities in order to strengthen Swedish production has been acknowledged in the analysis. This underlines the findings by Echeverri (2006), where tensions between new market oriented business development ideas and old cooperative ideals was found. In order to serve their farm members LRF is required to constantly keep their business intelligence up to date and adapt to fluctuating market factors. This is key in the new world order of globalisation and just-in-time production, where free markets set prices.

Another aspect to highlight is that some respondents emphasised what Lagerkvist and Hess (2011) describe about animal legislation's effect on consumers willingness to pay for animal welfare. Respondents stated that they considered the bait requirement to increase production costs, but that the requirement does not provide added value since the law stipulates it. However, if bait requirement was optional, farmers could claim higher prices from their cooperatives, due to the fact that consumers then would be able to choose whether they are willing to pay for farmer's additional efforts or not.

The results from the last question, how the respondents assess the aspects concerning the progression of business development in Swedish agriculture, displays that farmers and LRF representatives are in accordance. No statically significant differences were found, and both groups underlined the entrepreneurial attitude in the farming community as most important for business development. It seems therefore important to safeguard the entrepreneurial attitude of farmers in order to achieve desired development as Annerberg *et al.* (2015) requests.

The significance and *raison d'etre* of LRF must be clearly communicated. Without a lobby organisation Swedish agriculture would risk to diminish on the political agenda and probably attain little notice in the fast moving media noise. LRF serves Swedish agriculture by gathering information, developing and sustaining political networks, as well as gaining public attention to challenges Swedish agriculture faces today. Nonetheless, the take-home message for LRF is to continuously have a dialogue with the association's original members (the decreasing amount of Swedish farmers) in order to develop a stronger association with coinciding attitudes. Problems with representation arise if LRF does not share common ground with their farm members, the association might become what Nilsson and Björklund (2003, p. 97) describes as a bureaucratic and toothless organisation.

Lessons learned from this paper is that the constant sum might be suitable when measuring attitudes at an itemised level, but that it can be perceived as complicated and that the amount of questions is a success factor for attaining high response rates. A reminder of generalizability is also here by given, since findings and conclusions in this paper are concentrated to a specific association and in a specific production sector validity may be questioned. The study contributes however to raise the question whether member heterogeneity increases problems with representation and that member recruitment strategies in sector specific organisation should be designed carefully. The limited amount of farmers responding to the questionnaire also affects generalizability of the results, but farmers with LRF membership and LRF representatives might find the results intriguing. Since consequences of divergent attitudes might be crucial it is important that LRF representatives strive to coincide with the attitudes within the population of Swedish farmers. Implications of this study for farm members in LRF are that they should consider to what extent their interests are represented by LRF and whether their collective voice give echoes in Brussels.

There was great variation among the answers from farmers when analysing results from the questionnaire, and this was expected since the farming community in Sweden covers a wide array of farmers. Further studies could use this study as a stepping stone by adding to what extent attitudes differ among farmers, and observe whether age, gender, production area, farm size etc. are explanatory factors to convergent or divergent attitudes. This papers intention to measure attitudes at an itemised level may also catalyst the interest for future researchers to examine what latent attitude constructs these attitudes at item level reflects. Furthermore, future studies should continue to concentrate on organisational structures of lobby associations, in order to add knowledge and extend the vast literature about principal-agent relationships in cooperatives and unions.

References

Internet

ATL, Lantbrukets affärstidning, <http://www.atl.se>

1. *Griskris sprider oro*, 2014-02-12, 2015-01-21
<http://www.atl.nu/lantbruk/griskris-sprider-oro>
2. *Mjölkkris debatteras med LRF*, 2014-10-15, 2015-01-21
<http://www.atl.nu/lantbruk/mj-lkkris-debatteras-med-lrf>
3. *Särreglerna slår ut svenska produkter*, 2013-04-26, 2015-01-21
<http://www.atl.nu/ledare/s-rreglerna-sl-r-ut-svenska-produkter>

European Commission, <http://www.ec.europa.eu>

Milk Quotas 2013/2014, 2015-11-19, 2015-03-25

http://ec.europa.eu/agriculture/milk-market-observatory/pdf/eu-milk-quota-figures_en.pdf

LRF, Swedish Farmers Association, <http://www.lrf.se>

1. *Verksamhetsberättelse*, 2013, höst 2014, 2015-01-20
<http://www.lrf.se/globalassets/dokument/mitt-lrf/bestall-material/lrf-och-de-gronaringarna/lrfs-verksamhetsberattelse-2013.pdf>
2. *Rapport Nöjd Medlem*, 2014-05-08, 2015-02-20
<http://www.lrf.se/globalassets/dokument/mitt-lrf/nojd-medlem/totalrapportnojd-medlem.pdf>
3. *LRF internationellt*, 2015, 2015-03-24
<http://www.lrf.se/om-lrf/lrf-internationellt/>
4. *Varför ska man bli medlem?*, 2015, 2015-03-13
<http://www.lrf.se/om-lrf/bli-medlem/varfor-medlem/>
5. *Riksförbundsstämman*, 2015, 2015-02-20
<http://www.lrf.se/om-lrf/organisation/riksforbundsstamman/>
6. *Medlemsförmåner* 2015, 2015-03-19
<http://www.lrf.se/medlemsformaner/mer-om-dina-medlemsformaner/>
7. *Ekologisk livsmedelsmarknad* 2015, 2015-05-21
<http://www.lrf.se/globalassets/dokument/mitt-lrf/nyheter/2015/marknadsrapport-2015-01-22-klar-23-jan.pdf>
8. *LRF Skåne Årsberättelse*, 2014, 2015-05-21
http://www.lrf.se/globalassets/dokument/mitt-lrf/regioner/skane/stamma/arsberattelse_2014_low.pdf

Regeringen, <http://www.regeringen.se>

1. *Skatteförslag i budgetpropositionen 2015*, 2014-12-01, 2015-02-26
<http://www.regeringen.se/sb/d/19563>

2. *Regeringens proposition 2008/09:162, 2009, 2015-03-04*
<http://www.regeringen.se/content/1/c6/12/27/78/4ce86514.pdf>

Sjv, Jordbruksverket, <http://www.sjv.se>

1. *Statistikdatabasen - Företag med husdjur efter län/riket och djurslag. År 2000-2014, 2015-03-20*
http://statistik.sjv.se/PXWeb/pxweb/sv/Jordbruksverkets%20statistikdatabas/Jordbruksverkets%20statistikdatabas_Husdjur_Antal%20foretag%20med%20husdjur/JO0103G1.px/?rxid=5adf4929-f548-4f27-9bc9-78e127837625
2. *Organic farming, 2013, 2015-01-20*
<http://www.jordbruksverket.se/webdav/files/SJV/Amnesomraden/Statistik,%20fakta/Area%20ler/JO10/JO10SM1403/JO10SM1403.pdf>
3. *Statistikdatabasen - Jordbruksföretagare i riket efter ålder. År 1996-2013, 2015-01-21*
http://statistik.sjv.se/PXWeb/pxweb/sv/Jordbruksverkets%20statistikdatabas/Jordbruksverkets%20statistikdatabas_Jordbruksforetag_Jordbruksforetagare/JO0106F3.px/?rxid=5adf4929-f548-4f27-9bc9-78e127837625%20?

SVT, Sveriges Television, <http://www.svt.se>

Borguttalande upprör lantbrukare, 2014-03-17, 2015-01-21

<http://www.svt.se/nyheter/val2014/borguttalande-uppror-bonder>

UNT, Uppsala Nya Tidning, <http://www.unt.se>

Bara ekologiskt är inte bra för miljön, 2014-10-04, 2015-01-21

<http://www.unt.se/asikt/debatt/bara-ekologiskt-ar-inte-bra-for-miljon-3397030.aspx>

Literature and Publications

Abdullah, H. and Valentine, B. 2009 Fundamental and Ethics Theories of Corporate Governance, *Middle Eastern Finance and Economics*, 4:88-96.

Ackrill, Robert. 2000. *The common agricultural policy*, Sheffield Academic Press, Sheffield.

Ajzen, I. 1991. The Theory of Planned Behaviour, *Organizational Behaviour and Human Decision Processes*, 50:179-211.

Alvesson, M. 2003. Critical organization theory, (eds), Czarniawska, B. and Sevón, G., *The Northern Light – Organization theory in Scandinavia*, Malmö, Liber, 151-174.

Alvesson, M. and S. Deetz. 2000. *Doing Critical Management Research*, London, Sage Publications Ltd.

Annerberg, R., Holmberg, A., Holstein, H. and Jonzon, Y. 2015. *Attraktiv, innovativ och hållbar – strategi för en konkurrenskraftig jordbruks- och trädgårdsnäring*, Slutbetänkande av Konkurrenskraftsutredningen SOU 2015:15, Elanders Sverige AB, Stockholm.

- Benjamin C., Cohin A., Guyomard H. (1999), The Future of European Union Dairy Policy. *Canadian Journal of Agricultural Economics*, Vol. 47(5):91-101.
- Blaikie, N. 2000. *Designing Social Research*, Polity Press, Cambridge.
- Bock, B. and van Huik, M. 2008. Cattle Farmers and Animal Welfare: A case study of Beliefs, Attitudes and Behaviour of Cattle Producers across Europe, *Welfare Quality Report no 7*, Cardiff: Cardiff University.
- Booth, A. 1995. *The Economics of the Trade Union*, Cambridge University Press, New York.
- Brace, I. 2013. *Questionnaire design: how to plan, structure and write survey material for effective market research*, 3th ed., Kogan Page Publishers.
- Brady, M., Höjgård, S., Kaspersson, E. and Rabinowicz, E. 2009. The CAP and Future Challenges, *European Policy Analysis*, October Issue 11 – 2009. Swedish Institute for European Policy Studies
- Brinkmann, S. and Kvale, S. 2009. *Learning the craft of qualitative research interviewing*. SAGE Publications, London.
- Brännlund, R., Aronsson, T., Gren, I-M., Keskitalo, C., Leck, C. and Söderholm, P. 2014. *Miljö, ekonomi och politik 2014*, Konjunkturinstitutet, Stockholm.
- Burton, R. 2004. Reconceptualising the “behavioural approach” in agricultural studies: a socio-psychological perspective, *Journal of Rural Studies*, 20(3): 359-371.
- Chari, R. and Kritzinger, S. 2006. *Understanding EU policy making*, Pluto Press London.
- Ciaian, P., Kancs, d'.A. and Swinnen, J.F.M. 2010. *EU Land Markets and the Common Agricultural Policy*, CEPS Paperbacks.
- Cooper, D. and Schindler, P. 2013. *Business Research Methods 12th edition*, McGraw-Hill Higher Education, New York.
- Cordell, D. 2010. The Story of Phosphorus: Sustainability implications of global phosphorus scarcity for food security. *Tema water in nature and society*, Dissertation from Institution of Tema, University of Linköping, Linköping.
- Daugbjerg, C. 1997. Policy Networks and Agricultural Policy Reforms: Explaining Deregulation in Sweden and Re-Regulation in the European Community, *Governance: An International Journal of Policy and Administration*, 10(2):123-142.
- Echeverri, P. 2006. *Bortom Ideologi Och Ekonomi: Lantbrukskooperation, Medlemsinflytande Och Strategiutveckling i Förändring*, Research Report. Karlstad University: Karlstad, Sweden, pp. 44-45.

- Eisenhardt, K. 1989. Agency Theory: An Assessment and review, *Academy of management Review*, 14(1):57-74.
- Ekman, S. and Gullstrand, J. 2006. *Lantbruket och konkurrenskraften*, Rapport 2006:4, AgriFood Economics Center, Lund,
- Fan, W., and Yan, Z. 2010. Factors affecting response rates of the web survey: A systematic review, *Computers in Human Behavior*, 26:132–139.
- Fazio, R.H., and Olson, M.A. 2003. Attitudes: foundations, functions, and consequences. In: Hogg, M.A., and Cooper, J. (eds) *The Sage Handbook of Social Psychology*. Sage: London, UK.
- Fearne, A. 1997. The history and development of the CAP 1945-1990. In: Ritson, C., and Harvey, D.R. (eds) *The common agricultural policy*. CAB International. London.
- Flygare, I. and Isacson, M. 2003. *Det svenska jordbrukets historia. Band 5, Jordbruket i välfärdsstaten 1945-2000*, Natur & Kultur/LT, Stockholm.
- Fraze, S., Hardin, K.K., Brashears, M.T., Smith, J.H. and Lockaby, J.D. 2003. The effects of delivery mode upon survey response rate and perceived attitudes of Texas Agri-Science teachers, *Journal of Agricultural Education*, 44(2):27–37.
- Fulton, M. and Giannakas, K. 2001. Organizational commitment in a mixed oligopoly: Agricultural cooperatives and investor-owned firms. *American Journal of Agricultural Economics*, 83:1258-1265.
- Guyomard H., Mahé L.-P., Munk K.J. and Roe T.L. 1993. Agriculture in the Uruguay Round: Ambitions and realities, *Journal of Agricultural Economics*, 44: 245-263.
- Grandin, U. 2002. *Dataanalys och hypotesprövning för statistikanvändare*. Naturvårdsverkets handbok för Miljöövervakning, Naturvårdsverket, Stockholm.
- Hansson, H. and Lagerkvist, C.-J. 2014. Defining and measuring farmers' attitudes to farm animal welfare. *Animal Welfare*, 23:47-56.
- Hardaker, J.B., Huirne, R.B.M. and J.R Andersson, J.R. 2004. *Coping with risk in agriculture*. Wallingford: CAB International.
- Henehan, B. M. and Anderson, B. L. 1994. Decision Making in Membership Organizations: A Study of Fourteen U.S. Cooperatives, *Research Bulletin 94-5*, Department of Applied Economics and Managerial, Cornell University, Ithaca, New York.
- Hoffmann R., Höjgård S., Rabinowicz E. and Andersson H. 2010. Djurvälstånd och Lönsamhet - Var står vi idag? *Report 2010:4*, Agrifood Economics Centre, Lund.
- Iacobucci, D. and Churchill, G. 2009. *Marketing Research: Methodological Foundations*, 10th ed., Cengage Learning.

- Jensen, M.C. and Meckling, W.H. 1976. Theory of the firm: managerial behavior, agency costs and ownership structure, *Journal of Financial Economics*, 3(4):305–360.
- Keenleyside, C. and Tucker, G. 2010. *Farmland Abandonment in the EU: an Assessment of Trends and Prospects*, Report Prepared for WWF, Institute for European Environmental Policy, London/Brussels.
- Knoke, D. 1986. Associations and Interest Groups, *Annual Review of Sociology*, 12:1-21.
- Kumm, K-I. 2014. Achieving profitable, productive climate-neutral Swedish agriculture, *Outlook on Agriculture*, 43(4):247–252.
- Lagerkvist, C-J. and Hess, S. 2011. A meta-analysis of consumer willingness to pay for farm animal welfare, *European Review of Agricultural Economics*, 38(1): 55-78.
- Larsson, Anders. 2004. Landscape Planning by Agricultural Policies – a critical analysis of EU agro-environmental policies from a planner’s perspective. Doctoral dissertation, *Acta Universitatis Agriculturae Sueciae, Agraria* 442, Swedish University of Agricultural Sciences, Alnarp.
- Lips, M. and Rieder, P. (2005), Abolition of Raw Milk Quota in the European Union: A CGE Analysis at the Member Country Level. *Journal of Agricultural Economics*, 56:1–17.
- Ljung, M. & Emmelin, A. 2000. The Development of Farmers’ Dialogue: The Decision Making Process Behind a Facilitated Learning Process in Swedish Agriculture. *Proceedings from the 4th European Symposium on Farming and Rural Systems Research and Extension*, 3-7th April, 2000. Volos, Greece, pp. 259-273.
- Lunneryd, D. and Öhlmer, B. 2009. The influence of values on strategic choices: the choice of organic milk production by Swedish farmers, *Acta Agriculturae Scandinavica Section C, Food Economics*, 6:1–20.
- Manevska- Tasevska, G., Rabinowicz, E., Surry, R.Y. 2013. Policy impact on farm level efficiency in Sweden: 1998- 2008, *Working paper 2013:06*, Agrifood Economics Centre, Department of Economics, Swedish University of Agricultural Science, Lund.
- Manevska-Tasevska, G. and Rabinowicz, E. 2014. Competitiveness of Swedish agriculture: indicators and driving forces, *Agrifood Policy Memo*, LU-SLU 2014-04-16.
- McChesney, F.S. and Shughart, W.F., (ed). 1995. *The Causes and Consequences of Antitrust: the Public-Choice Perspective*, Chicago: University of Chicago Press.
- Michels, Robert. 1911. *Zur Soziologie des Parteiwesens in der Modernen Demokratie. Untersuchungen über die oligarchischen Tendenzen des Gruppenlebens*. Zweite vermehrte Auflage. Alfred Kröner, Leipzig.

- Micheletti, M. 1990. *The Swedish farmers movement and government agricultural policy*, Praeger, New York.
- Micheletti, M. 1990b. Toward Interest Inarticulation: A Major Consequence of Corporatism for Interest Organizations, *Scandinavian Political Studies*, 13(3):255-276.
- Nam, C. W., Parsche, R., Radulescu, D. M. and Schöpe, M. 2007. Taxation of fertilizers, pesticides and energy use for agricultural production in selected EU countries. *European Environment*, 17(4):267–284.
- Netzer, O. and Srinivasan, V. 2011. Adaptive Self-Explication of Multiattribute preferences, *Journal of Marketing Research*, 48(1):140-156.
- Nilsson, J. 1994. Co-operative issues in Nordic research, *Annals of Public and Cooperative Studies*, 65(1):149–178.
- Nilsson, J. 2011. *De lantbrukskooperativa företagens betydelse för konkurrensen inom livsmedelskedjan*. Konkurrensverket, Stockholm.
- Nilsson, J. and Björklund, T. 2003. *Kan Kooperationen klara konkurrensen?* Report, Swedish University of Agricultural Sciences, SLU, Department of Economics, Uppsala.
- Nilsson, J., Kihlén, A. and Norell, L. 2009. Are traditional cooperatives an endangered species? About shrinking satisfaction, involvement and trust, *International Food and Agribusiness Management Review*, 12:101–122.
- Nocella, G., Hubbard, L. and Scarpa, R. 2010. Farm Animal Welfare, Consumer Willingness to Pay, and Trust: Results of a Cross-National Survey, *Applied Economic Perspectives and Policy*, 32(2): 275-297.
- Nordström Källström, H. 2002. Att vara lantbrukare eller inte - En studie av förutsättningar för livskraftigt lantbruk i tre nedläggningsdrabbade områden i Sverige. *SJV Rapport 2002:10*, Statens Jordbruksverk, Naturvårdsverket, Riksantikvarieämbetet, Jönköping.
- North, D. C. 1990. *Institutions, Institutional Change and Economic Performance*, Cambridge University Press.
- OECD. 2010. *Recommendation of the Council on Principles for Transparency and Integrity in Lobbying*. Feb. 2010 – C (2010)16, available at: <http://acts.oecd.org/Instruments/ShowInstrumentView.aspx?InstrumentID=256&InstrumentPID=250&Lang=en&Book=False>
- Offe, C. and Wiesenthal, H. 1980. Two logics of collective action: theoretical notes on social class and organisation form, *Political Power and Social Theory*, 1:67 -115.
- Rougoor, C.W., Van Zeijts, H, Hofreither, M.F. and Bäckman, S. 2001. Experiences with

Fertilizer Taxes in Europe, *Journal of Environmental Planning and Management*, 44(6):877-887.
Schmitter, P. and Streeck, W. 1999. The organization of business interests: studying the associative action of business in advanced industrial societies, *Discussion Paper 99/1*, Max-Planck-Institut Für Gesellschaftsforschung.

Schmitz, A., Furtan, H. and Baylis, K. 2002. *Agricultural policy, agribusiness, and rent-seeking behaviour*, University of Toronto Press, Toronto.

Sckokai, P. 2013. *How will the balance between supply and demand be affected by market forces, organisational systems of the supply chain (in particular POs and IBOs) and policy measures, including market support mechanisms, in a non-quota regulatory framework?*, In Expert's Opinion Report: *DG Agri Analysis on future developments in the milk sector*, Conference "The EU dairy sector: developing beyond 2015", Brussels, September 24, 2013, available at: http://ec.europa.eu/agriculture/events/2013/milk-conference/ey-experts-opinion-reports_en.pdf

Shapiro, S.P. 2005. Agency Theory, *Annual Review of Sociology*, 31:263-284.

Shih, T-H. and Fan, X. 2007. Response Rates and Mode Preferences in Web-Mail Mixed-Mode Surveys: A Meta-Analysis, *International Journal of Internet Science*, 2:59-82.

Skevas, T., Stefanou, S.E. and Oude Lansink, A. 2012. Can economic incentives encourage actual reductions in pesticide use and environmental spillovers? *Agricultural Economics*, 43:267-276.

Statistics Sweden. 2014a. *Yearbook of agriculture statistics 2014 – including food statistics*, Statistics Sweden, Agriculture Statistics Unit, Örebro and Swedish Board of Agriculture, Jönköping.

Statistics Sweden. 2014b. *Energy use in the agricultural sector 2013*, ES 2014:07. Statistics Sweden, Agriculture Statistics Unit, Örebro and Unit for Energy Statistics, Swedish Energy Agency, Eskilstuna.

Statskontoret. 2011. *Priset på handelsgödsel efter kväveskatten: en utvärdering, Rapport 2011:31*, Stockholm.

Tauger, M.B. 2011. *Agriculture in World History*, Oxon, UK, Routledge.

Theuvsen, L. 2013. *How will the balance between supply and demand be affected by market forces, organisational systems of the supply chain (in particular POs and IBOs) and policy measures, including market support mechanisms, in a non-quota regulatory framework?*, In Expert's Opinion Report: *DG Agri Analysis on future developments in the milk sector*, Conference "The EU dairy sector: developing beyond 2015", Brussels, September 24, 2013, available at: http://ec.europa.eu/agriculture/events/2013/milk-conference/ey-experts-opinion-reports_en.pdf

Utterström, Carl, *Medlemsdemokrati i stora lantbrukskooperativa föreningar*, in Jeppe Als & Bjarne Mogelhoj (ed.), *Landbrukskooperationen i Norden: Medlems aktivitet—*

medlemsindflytelse, Esbjerg 1982. Cited in Rydén, R. (2005). *Marknaden, miljön & politiken: Småbrukarnas och ekoböndernas förutsättningar och strategier 1967-2003*, pp. 82-83, Historiska institutionen, Uppsala Universitet.

Vail, D. 1994. *Sweden's 1990 Food Policy Reform: From Democratic Corporatism to Neoliberalism*, in McMichael, P., ed., *The Global Restructuring of Agro-food Systems*. Ithaca, NY: Cornell University Press.

Willock, J., Deary, I. J., Edwards-Jones, G., Gibson, G. J., McGregor, M. J., Sutherland, A., Dent, J. B., Morgan, O. and Grieve, R. 1999. The Role of Attitudes and Objectives in Farmer Decision Making: Business and Environmentally-Oriented Behaviour in Scotland. *Journal of Agricultural Economics*, 50(2): 286–303.

Wingenbach, G.J. and Raven, M.J. 2002. Internet and paper based data collection methods in agricultural education research, *Journal of Southern Agricultural Education Research* 52(1):40-51.

Zald, M. N. and Ash, R. 1966. Social Movement Organizations: Growth, Decline and Change, *Social Forces*, 44(March): 327-40.

Zhu, X., Lansink, A.O., 2010. Impact of CAP Subsidies on Technical Efficiency of Crop Farms in Germany, the Netherlands and Sweden. *Journal of Agricultural Economics* 61:545- 564.

Öberg, P-O. 1994. *Särintresse och allmänintresse: Korporatismens ansikten*, Norstedts, Stockholm.

Appendix A

A translated version of the cover letter that invited the farmers and the LRF representatives to answer the web-based questionnaire.

Hi,

My name is Lucas Andersson and I am currently writing my master thesis at the Swedish University of Agricultural Sciences. My work with this thesis has led me to conduct a survey, and it is in this regard that I am seeking your help.

A brief background to this study is to clarify whether large organisations, whose members have different interests, can represent all their members' interests. The Federation of Swedish Farmers (LRF) has been selected as a case study to look at, because LRF has increased its membership 17 years in a row, however the number of farmers in Sweden during the same period has decreased by 28%.

I am asking you to answer this survey because you were one of the 150 councillors at LRF's last annual association meeting, or since you have been randomly selected among Swedish farmers to represent the agricultural population of Sweden. The survey seeks to examine whether there are differences in attitudes among Swedish farmers and their representatives in the LRF on the Swedish Agricultural Business development delimitations and opportunities. The aim of this survey is to result in an improved representation of your interests as a farmer, and promoting you in your position of trust as a LRF representative.

I would be very grateful if you could spare a few minutes to answer this survey because without your participation this study is impossible. All responses are made anonymously, and there is no way for me to trace any answers. The thesis will be published by SLU and be accessible online. If you have any questions feel free to contact me by email or telephone.

Please follow the link below to complete the survey:

[LINK TO THE QUESTIONNAIRE](#)

Kind Regards,

Lucas Andersson
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070-2028399

Appendix B

The following is a translated version of the questions and aspects that the respondents were asked to answer and consider. The questionnaire was designed based on three broad subject areas that affect Swedish agricultural business development. These three are the use of **Resources and inputs**, **Market interventions and ambitions**, and **Production**. The subject areas include sub headings, where the respondents were asked to evaluate the importance of a number of parameters. The valuation is constructed after the constant sum approach and 100 points within each sub-heading were asked to be allocated, more explicit explained in the methods chapter. The first questions are supposed to gather some background data, and to discern whether the respondent is a farmer or LRF representative.

Background data

Are you answering this survey as a councilor at LRFs last years national association meeting?

- Yes

- No

* If yes, the respondent was automatically redirected to the valuation questions

Are you a member of LRF?

- Yes

- No

- No, but I have been a member

Enter your sex

- Female

- Male

Choose your age

- 18-30

- 31-40

- 41-50

- 51-60

- 61-

Indicate your level of education

- Elementary school

- 2 years High school

- 3 years High school

- 4 years High school

- Vocational training

- College/University – individual courses

- College/University – degree

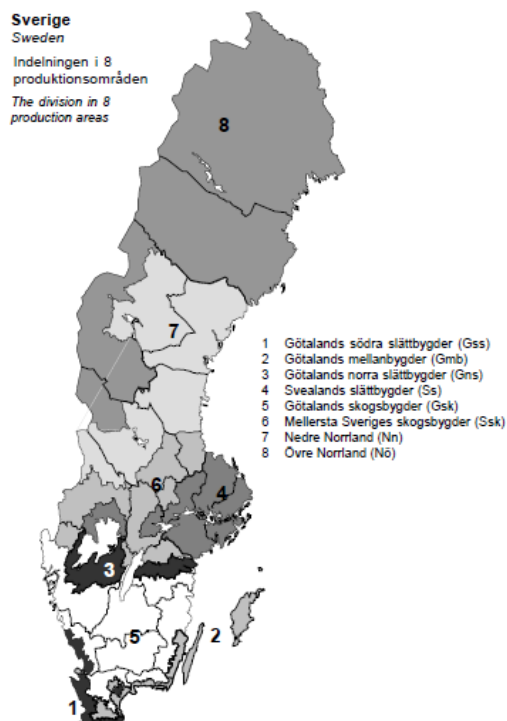
- College/University – Bachelor degree

- College/University – Master degree

- Other, please specify

Enter your production area (see map below of the production area classification)

- 1. Götalands södra slättbygder (Gss)
- 2. Götalands mellanbygder (Gmb)
- 3. Götalands norra slättbygder (Gns)
- 4. Svealands slättbygder (Ss)
- 5. Götalands skogsbygder (Gsk)
- 6. Mellersta Sveriges skogsbygder (Ssk)
- 7. Nedre Norrland (Nn)
- 8. Övre Norrland (Nö)



Enter the primary production specialisation on your farm

- Crop
- Forestry
- Milk
- Beef
- Pig
- Sheep
- Poultry
- Egg
- Other, please specify

Enter the size of your primary production, the number of hectares alt. livestock units

Do you get your main income from your farming operation?

- Yes
- No

Resource and input use

To what extent do you think the following aspects reduce Swedish agricultures competitiveness?

- Taxation of fossil fuels -
- Taxation of mineral fertilisers -
- Taxation of plant protection products -

To what extent do you think the following aspects will help to reduce Swedish agricultures environmental impact?

- Taxation of fossil fuels -
- Taxation of mineral fertilisers -
- Taxation of plant protection products -

To what extent do you think the following aspects are able to contribute to increasing sustainability of the resource use, from an environmental perspective?

- Taxation of inputs -
- Increased restrictions on the use of inputs -
- Increased use of renewable fuels and heating resources -
- New methods (e.g. integrated pest management, LEAN-production) -
- Increased awareness of the environmental impact from the use of resources -
- Increased regulations regarding environmental improvements (e.g. edge and protection zones) -

Market Interventions and ambitions

The European Common Agricultural Policy (CAP) controls the Swedish agricultural policy, but the Swedish agricultural regulations are in some respects even more restrictive.

To what extent do you think the following aspects are able to strengthen the Swedish agricultural production?

- National security directives, clear objective of self-sufficiency -
- Regional support schemes -
- Import restrictions, requirements that imported food must be produced in accordance with Swedish standards and laws -
- Harmonisation between the Swedish agricultural legislation and CAP -
- Total market adjustment by liberalising the agricultural sector -

The food market is divided into different market segments, often divided between the industry's volume goods and the premium products. The latter segment includes farm sales and organic products, but also various groups including volume goods such as meat cuts, eggs and fresh milk. The segment characterised based on volume, is the segment that meets the greatest competition from imported goods. They include: finished goods, restaurant ingredients, cheese, ground meat, some vegetables and cereal products.

To what extent do you think the following aspects represent the different market segments development in the next decade?

- Premium goods position on the Swedish food market will be strengthened -
- The development potential of premium goods is uncertain due limited demand -
- The demand for Swedish goods will decrease as a result of international competition -
- The demand for Swedish goods will increase due to increased interest in Swedish produced

products in general -

Organic goods now account for 5,6 % of the value of all the Swedish food sales at the consumer level. The development of organic goods market is forecasted differently and actors in the food market and the political arena appreciate the importance of the organic market segment differently.

How do you value the development of the organic goods market segment over the next decade?
Answer by sliding the measurement tool below to the right, which indicates your perception of the value of organic goods in Swedish food sales in year 2025.

To what extent do you think the following aspects will help to increase consumer willingness to choose Swedish-produced food?

Continued high animal welfare ambitions -

Ambition of continual improvement of Swedish agricultural environmental impact -

Highlighting the Swedish agricultures environmental services -

Law on origin labelling of all foods -

The price of Swedish food should be in parity with imported goods -

To what extent do you think the following aspects describe the importance of the agricultural associations?

Agricultural associations contributes with significant marketing -

Agricultural associations lead Swedish production to the necessary national and international markets -

Farmers will in a larger extend avoid associations and instead themselves sell directly to the end consumer -

Agricultural associations have grown too large, which have made them diminish in importance to the individual farmer -

Production

The Swedish agricultural production is classified as a “high cost production”.

To what extent do you think the following aspects may reduce agricultural production costs?

Reducing the tax burden relating to inputs -

Lower labour costs -

Simplified regulatory framework and reduced number of controls -

Allow the use of GM crops -

Increased efficiency and rationalisation -

New methods (e.g. LEAN production) -

To what extent do you think the following aspects will help to increase the added value of Swedish agricultural production?

Bait Requirements -

Ban on GM crops -

Prohibition of sow fixation -

Low use of antibiotics -

Animal transport regulation of maximum 8 h -

- Restricted access to pesticides -
- Prohibition of beak trimming -
- Prohibition of tail docking -
- Requirements for sewage sludge spreading -

To what extent do you think the following aspects contribute to increased production costs for Swedish agricultural production?

- Bait Requirements -
- Ban on GMO crops -
- Prohibition of sow fixation -
- Continued low antibiotic use -
- Animal transport regulation of maximum 8 h -
- Restricted access to pesticides -
- Prohibition of beak trimming -
- Prohibition of tail docking -
- Requirements for sewage sludge spreading -

To what extent do you think the following aspects describe what the future Swedish agricultural production should be characterised by?

- Increased specialisation and rationalisation -
- Increased differentiation and niche production -
- Increased organic farming -
- Increased use of technology (N-sensor, GPS, fixed tracks, etc.) -

To what extent do you think the following aspects apply to future Swedish agricultural production?

- Bulk production of goods for domestic consumption -
- Bulk production of goods for export -
- High quality production of goods for domestic consumption -
- High quality production of goods for export -
- Raw material production for the production of renewable fuels -

To what extent do you think the following aspects describe how business development in Swedish agriculture progresses?

- Through research -
- Through practical advice -
- Through entrepreneurial attitude in the farming community -
- Through the use of new technologies -
- Through education obtained by the agricultural associations -