

Why do next generation farmers decide to invest in farm businesses?

- a means-end chain analysis of young Swedish farmers' underlying values to invest in farm businesses

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/ Johan Löfgren & Sebastian Olsson

Abstract

The growing world population will lead to an increased demand for food in the future. Feeding the population is considered to be the main function of agriculture. Previous literature has concluded that the share of young farmers in Sweden is too low, this is referred to as the *Young farmer problem*. This can partly be explained by the barriers hindering the next generation farmers from investing in farm businesses. To increase the production in the agriculture sector, young farmers need to invest in farm businesses since they are considered to be more productive and efficient than older farmers. Despite the need of young farmers, there is no previous research regarding *why* young farmers invest in farm businesses. We argue it is important to increase the understanding of why young farmers invest in farm businesses to emphasize the values of being a farmer and attract more young farmers to the agriculture sector.

This study aims to identify the underlying end-values of young Swedish farmers when deciding to invest in farm businesses to increase the understanding of *why* young farmers in Sweden invest in farm businesses. To identify the end-values, the Means-end chain (MEC) theory is used together with laddering interviews. This approach is used to identify the young farmers' cognitive structures regarding farm business investments among the 30 interviewed young Swedish farmers. The cognitive structures consist of attributes, consequences, and values. Further, the Personal value theory is used as a complement to the MEC theory to categorize the identified end-values into value-types and thereby achieve a more comprehensive analysis of the young farmers underlying values concerning farm business investments.

The results of this study indicate that the studied young farmers invest in farm businesses due to seven underlying end-values; *Well-being, Satisfaction, Freedom, Safety, Pride, Self-fulfillment, and Confirmation*. The young farmers decide to invest in farm businesses mainly since they want to be self-employed, have an interest in farm business, and think the work is enjoyable. They see an opportunity to make money, control their own time, and develop as a person. Well-being is the most common end-value and are mainly linked to Thrive, Close to nature, and Energizing. The most common ladder is Self-employment leading to Empowerment and then to Freedom as the end-value. Freedom is mentioned by the young farmers in the context of being able to “*control my own time*” and “*make my own decisions*”. This ladder can thereby be seen as the main reason why young farmers decide to invest in farm businesses, but it is of course not the sole reason.

Young farmers' behavior may be misrepresented if assuming all young farmers' decisions are solely based on profit maximization since the young farmers' decisions are affected by several different value-types. Based on the Personal value theory, *Hedonism* is the most common value-type among the studied young farmers. We can thereby conclude that the young farmers' underlying values, when deciding to invest in a farm business, derives from the need of pleasure related to the satisfaction of enjoying life and achieve certain goals.

The results from this study can be used to improve existing decision-making models and contribute to a deeper understanding of young farmers' cognitive structures and behavior. Further, the results can also be useful to policymakers as a basis when developing new policies concerning young farmers. Thereby, this study can contribute to reducing the barriers connected to farm business investments among young farmers. Finally, the results can be used to communicate a brighter picture of the Swedish agricultural sector. The interviewed young farmers have a strong belief in the future. By marketing the results of this study, young entrepreneurial individuals may be attracted to the agriculture sector, resulting in a reduced impact of the Young farmer problem.

Sammanfattning

Den växande världsbefolkningen medför en ökad efterfrågan på livsmedel. Det är jordbrukets huvudfunktion att försörja befolkningen med livsmedel, vilket är en utmaning. Tidigare studier har konstaterat att andelen unga jordbrukare i Sverige är för låg. Detta kan delvis förklaras av att det finns flera barriärer som hindrar nästa generations unga jordbrukare att investera i jordbruksföretag. För att öka produktionen i jordbrukssektorn behövs det unga jordbrukare som investerar i jordbruksföretag, eftersom unga jordbrukare anses vara mer produktiva och effektiva än äldre jordbrukare. Trots att andelen unga jordbrukare behöver öka, finns det i dagsläget ingen tidigare forskning som besvarar *varför* unga jordbrukare beslutar att investera i jordbruksföretag. Vi hävdar att det är viktigt att undersöka varför unga jordbrukare investerar i jordbruksföretag för att kunna belysa fördelarna med yrket och därmed attrahera fler unga jordbrukare till branschen.

Denna studie syftar till att identifiera de underliggande värdena hos unga jordbrukare i Sverige gällande beslutet att investera i ett jordbruksföretag. Detta för att öka förståelsen kring varför de har beslutat att investera i ett jordbruksföretag. För att identifiera de underliggande slutvärdena har vi använt oss av Means-end chain (MEC) teorin i kombination med ladderintervjuer. Den här ansatsen används för att identifiera kognitiva strukturer hos 30 unga svenska jordbrukare. De kognitiva strukturerna består av attribut, konsekvenser och slutvärden. Vidare har Personal value teorin använts som ett komplement till MEC teorin, för att få en mer omfattande analys av de unga jordbrukarnas underliggande slutvärden.

Resultatet från studien visar att de studerade unga jordbrukarna investerar i jordbruksföretag på grund av sju slutvärden; *Välmående*, *Tillfredsställelse*, *Frihet*, *Trygghet*, *Stolthet*, *Självuppfyllelse* och *Bekräftelse*. De unga jordbrukarna beslutar att investera i jordbruksföretag främst eftersom de vill vara egenföretagare, har jordbruksintresse och att tycker arbetet är roligt. De ser möjligheter till att tjäna pengar, styra sin egen tid och personlig utveckling. Välmående är det vanligast förekommande slutvärdet och är kopplat till att trivas, vara nära naturen och få energi. Den vanligast förekommande stegen går från att vara egenföretagare, vidare till att kunna styra sin egen tid och slutligen till Frihet som slutvärde. Frihet nämns av de unga jordbrukarna i samband med att ”styra min egen tid” och ”fatta egna beslut”. Denna steg kan därigenom ses som huvudanledningen till varför de unga jordbrukarna beslutar att investera i jordbruksföretag, men är inte den enda anledningen.

Unga jordbrukares beteende kan missbedömas om de uteslutande antas vara vinstmaximerande, eftersom de unga jordbrukarnas beslut påverkas av flera olika värdetyper. Baserat på Personal value teorin är *Hedonism* den vanligast förekommande värdetypen. Det innebär att de unga jordbrukarnas underliggande värden, när de beslutar att investera i ett jordbruksföretag, främst härrör från behovet av välmående kopplat till tillfredsställelsen av att styra sitt egna liv och nå uppsatta mål.

Resultaten från denna studie kan användas för att förbättra existerande beslutsmodeller och därmed bidra till en djupare förståelse för unga jordbrukares kognitiva strukturer och beteende. Vidare så kan resultaten vara användbara som underlag för beslutsfattare när nya policys utvecklas gällande unga jordbrukare. Således kan denna studie bidra till att minska barriärerna kopplade till att investera i jordbruksföretag för nästa generation unga jordbrukare. Avslutningsvis kan resultaten bidra till en mer positiv bild av att vara verksam i det svenska jordbruket. De intervjuade unga jordbrukarna har en stark framtidstro. Genom att marknadsföra resultaten av denna studie kan unga potentiella jordbrukare lockas till branschen och på så vis öka andelen unga jordbrukare, och därmed trygga framtidens livsmedelsproduktion.

Abbreviations

CAP:	Common agricultural policy
CEJA:	European council of young farmers
DGIP:	Directorate-General for Internal Policies
EC:	European Commission
ENDR:	European network for rural development
EU:	European Union
FAO:	Food and Agriculture Organization of the United Nations
GSS:	Götalands södra slättbygder (Götaland's southern plains)
HVM:	Hierarchical value map
MEC:	Means-end chain
SJV:	Statens Jordbruksverk (Swedish Board of Agriculture)
SLU:	Sveriges Lantbruksuniversitet (Swedish University of Agriculture Sciences)
UAA:	Utilized agriculture area
UN:	United Nations
USDA:	United States Department of Agriculture

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1 Introduction

In this first introducing chapter, the problem background is presented to introduce the reader to the *Young farmer problem*. Thereafter, the empirical and theoretical problem is stated to substantiate the aim of this study, which is to identify the underlying values of young Swedish farmers when deciding to invest in farm businesses. To fulfill the aim, the research question, delimitations, and structure of this thesis are presented to give the reader an understanding of the study.

1.1 Problem background

The world population is growing and was nearly 7,6 billion in year 2017, and it is projected to reach 8,5 billion by 2030 (www, UN, 2017). The growing population will lead to an increased demand for food, and thereby the food production in the world needs to increase (FAO, 2009; www, Harvard Business Review, 2016). Feeding this growing world population is the main function of agriculture, and it is considered to be a significant challenge (Chavas, 2001; FAO, 2009). Young farmers are considered to be more productive and efficient than older farmers (Hamilton *et al.*, 2015; Zagata & Sutherland, 2015). Therefore, young farmers play a key role in the future agricultural sector.

Since Sweden joined the European Union (EU) in year 1995, the competition within the agricultural sector has increased (SJV, 2003). Commodities are traded on a world market, leading to more volatile price fluctuations, lower margins, and a deterioration in profitability (EC, 2015a; FAO, 2018). These factors are some of the reasons why farm businesses have grown bigger, i.e., to benefit from economies of scale. The average amount of hectares per business have increased and can thereby partly explain why the number of Swedish farm businesses, in which the farmers work full-time, have decreased from 21 914 in year 2003 to 15 479 in year 2016 (SJV, 2017; www, SJV, 2019a). Despite the decreased amount of farm businesses, production volumes in Sweden have only decreased marginally or are relatively unchanged (SJV, 2018). In year 2017, the Swedish Government adopted the *Swedish food strategy*, with the overall goal to create a competitive food chain where the total food production increases (www, Regeringen, 2017). To increase production in the agricultural sector, Sweden needs young individuals who are willing to invest in farm businesses, otherwise, the production in Sweden will decrease over time (Agrifood, 2006).

Despite the need for young farmers, the average age of farmers is increasing. The results of an agricultural study conducted in 2010 revealed that 30 % of the farms in the EU had a holder older than 65 years (Eurostat, 2011). Among Swedish farmers, the average age was 58 years in 2013 (www, SJV, 2013). Between 1996 and 2016 the share of farmers in Sweden younger than 44 decreased from 28 % to 17 %, which includes the share of farmers younger than 34 years which decreased from 8 % to 5 % (www, SJV, 2019b). Even though there are no available statistics concerning the age among full-time farmers, Figure 1 indicates the increase of Swedish farmers older than 65 years and the decrease of farmers between 25-34 years old.

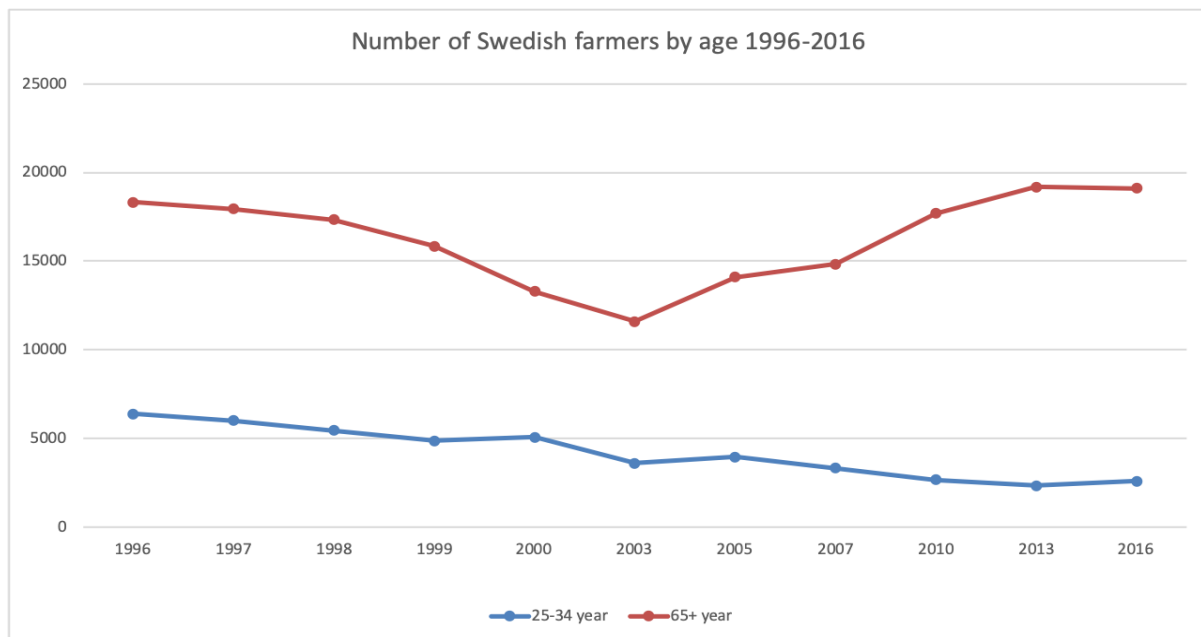


Figure 1, Number of Swedish farmers by age 1996-2016 (Own illustration based on SJV, 2019b).

The decreasing share of young farmers and increasing share of old farmers correlates with the statistics from Eurostat (2011), suggesting that older farmers do not transfer their farms to the next generation of farmers at a sufficient replacement rate (Zagata & Sutherland, 2015; EC, 2017a). Even though an established standard for an ideal ratio of young farmers do not exist, the European Commission estimates the share of young farmers to be too low and therefore stated that there is a shortage of young farmers (DGIP, 2012). This shortage of young farmers in Europe is called the *Young farmer problem* in recent literature, and the problem is defined by the assumed economic loss that the shortage of young farmers causes (Hamilton *et al.*, 2015; Zagata & Sutherland, 2015). The age of farmers can be seen as an important factor affecting the economic performance of the farm business since young farmers on average operate more economically robust farm businesses than older farmers (Van Passel *et al.*, 2007; Koteva *et al.*, 2009; Zagata & Sutherland, 2015). Several studies and reports state that young farmers are more entrepreneurial, more open to both technical and technological change, more innovative, and have a different attitude to risk (EC, 2012; Hamilton *et al.*, 2015; Zagata & Sutherland 2015). Young farmers can contribute to greater efficiency and innovation, which in turn will increase agricultural production and economic development (Zagata & Sutherland, 2015). Therefore, young farmers are needed for the long term viability in the agricultural sector (Hamilton *et al.*, 2015). A shortage of young farmers will, therefore, limit the economic potential of the agriculture sector (Zagata & Sutherland, 2015) and is even considered as detrimental (Caskie *et al.*, 2002).

The common agricultural policy (CAP) is a policy framework designed to solve economic, environmental and territorial challenges in the EU (EC, 2013a). The latest reform between 2014 and 2020 especially targets young farmers for increased support and are focused on more effective policy instruments to improve the competitiveness and the sustainability of the European agricultural sector in the long term (EC, 2013a; Hamilton *et al.*, 2015). The problem of an aging farming population is why EU has designed several programmes to encourage young individuals to invest in farm businesses. These programmes consist of funding through CAP and practical support such as training to simplify for young farmers to start and develop their agriculture businesses (www, EC, 2019a). The support is available for farmers who are 40 years or younger at the time when applying and can then be granted for up to five years after

entering the agricultural sector. The young farmers' economic support consists of an additional bonus of 25 % maximum on their direct payments from national authorities (www, EC, 2019b). In addition, young farmers also have priority when fundings from the national reserve are paid out. By supporting the next generation of farmers, the EU aims to enhance the future competitiveness of European agriculture and guarantee Europe's food supplies in the future.

1.2 Problem statement

Several earlier studies have identified a number of barriers connected to farm succession and to attracting new entrants to the agricultural sector (Mazorra, 2000; Bika, 2007; Ingram & Kirwan, 2011), i.e., investing in farm businesses. The European Commission conducted a study among young Swedish farmers in 2015 where the main identified barriers were; availability of land to buy, availability of land to rent, access to credits, and qualified labor (EC, 2015b). The demand for agricultural land has resulted in an increased land price in Sweden. Between 2014 and 2017, the average price in Sweden increased by 24 % to an average price of 83 900 SEK per hectare (www, SJV, 2019c). However, in the agricultural areas of south Sweden (GSS), the average price of one hectare was 241 200 SEK in 2017. The increased land prices have resulted in a more capital intensive agriculture sector, making it harder for young farmers to access enough credits to invest in farm businesses (Williams, 2006; Bika, 2007; Ingram & Kirwan, 2011; EC, 2015c). When agriculture land becomes available, new entrants compete with existing farmers who want to benefit from economies of scale. In addition, young farmers often have inadequate information about their farm business profitability and cost situation since they have a lack of experience compared to older farmers (Agrifood, 2006). These barriers exacerbate the young farmer's situation on the agricultural land market. Further, the older farmers' emotional and time investment in their farm businesses are identified as a common barrier (Mazorra, 2000; Ingram & Kirwan, 2011). Agricultural land can also be seen as a form of pension for older farmers (Moragues-Faus, 2014), resulting in that older farmers are reluctant to sell their land and to give away significant control to the next generation farmers (Mazorra, 2000; Bika, 2007; Ingram & Kirwan, 2011). Even though the barriers mentioned above hinder young farmers to invest in farm businesses, there still are young farmers that decide to invest in farm businesses.

Decisions made by farmers to invest in farm businesses and decisions regarding farm successions have received a lot of attention in the agricultural economics literature (Pietola *et al.*, 2003; Davis *et al.*, 2009; Ingram & Kirwan, 2011). Research demonstrates that young individuals today are increasingly being given the freedom to decide whether or not to invest in a farm business (Villa, 1999; Kinsella *et al.*, 2000; Rossier, 2010). According to a Norwegian case study conducted by Villa (1999) farmers in the 1950s and 1960s only had a small chance to decide on their own whether or not to continue the farm business. Young farmers who have decided to invest in farm businesses more recently are considered to make an active decision based on financial opportunities and lifestyle expectations (Villa, 1999; Zagata & Sutherland, 2015). To make a decision the farm holder needs to evaluate alternative investments, determine whether the investments are profitable or not and then decide whether the investments present an acceptable return considering the risk (Gloy & LaDue, 2003). Larger farms are often more sensitive to financial risk since they have a higher capital intensity of production (EC, 2017b). It is the farm-level decisions regarding shut-down or investment that controls how the produced volumes within the country develop over time (Agrifood, 2006). Therefore, the young farmer's willingness to invest in farm businesses is vital. Many existing agricultural decision-making models assume that all farmers are rational profit maximizers (Edwards-Jones, 2006). In addition, economic literature often states that profit maximization is equal to utility maximization and this may lead to a misunderstanding of farmers' behavior since farmers'

decision-making are affected by both social and economic values (Howley *et al.*, 2015). These values can be seen as goals, needs, satisfactions, or desirable end states that farmers want to achieve (Costa *et al.*, 2004; Peter & Olson, 2010). Values can also be seen as life goals and often involve feelings or emotions (Peter & Olson, 2010). Building on Schwartz (2012) and Tey *et al.* (2015), farmers' desire to achieve certain values drives their decision-making processes. Therefore, to understand why young farmers decide to invest in farm businesses, the underlying values behind the decision need to be known.

1.3 Aim, research question and contributions

The aim of this study is to identify the underlying end-values of young Swedish farmers when deciding to invest in farm businesses to increase the understanding of *why* young farmers in Sweden invest in farm businesses. To fulfill the aim we sought to answer the following question;

Which end-values underlies the decision to invest in farm businesses among young Swedish farmers?

We argue that there is a gap in existing literature regarding *why* young farmers decide to invest in farm businesses. Previous research has for a long time focused on *how* the decision-making process works. We argue there is a need for shifting focus to the underlying end-values behind the decision to answer *why* young farmers decide to invest in farm businesses. Earlier academic literature has failed to isolate young farmers as a targeted group (Zagata & Sutherland, 2015). In addition, Zagata and Sutherland (2015) suggest that more detailed research on young farmers could be beneficial for the debate about the future of European agriculture. By accounting for the heterogeneity among farmers and isolate young farmers as a targeted group, this study can contribute to a deeper understanding of young farmers' cognitive structures and their behavior.

By identifying the underlying end-values of young Swedish farmers, policymakers can perceive a deeper understanding of why young farmers invest in farm businesses. Young farmers' underlying values can help to explain their behavior and thereby help policymakers understand and predict young farmers' response to policy changes (USDA, 2004; Howley *et al.*, 2015). Building on Howley *et al.* (2015), the design of policies aimed to encourage investments in farm businesses ought to be guided by a better understanding of the underlying values of young farmers to tailor incentives for maximum effectiveness and greater adoption rates. This study can thereby contribute to the development of policies within the agricultural sector. Policymakers can use the results from this study to customize future policies, minimize the barriers, and simplify for young farmers to invest in farm businesses. Thereby, young farmers can be attracted to the agricultural sector. Further, a larger share of young farmers results in a more competitive Swedish agriculture sector and drives rural development (Agrifood, 2006).

1.4 Delimitations

An existing problem is that there is no unambiguous definition of a young farmer. In this thesis, the definition used derives from Council Regulation (EC) No 1698/2005 on support for rural development. The definition states that a young farmer is "*under 40 years of age, possessing adequate occupational skills, setting up on an agricultural holding for the first time, the farmer is established as the head of the holding*" (EC, 2013b). Therefore, this study is limited according to this definition. In addition, a delimitation regarding the young farmers' work-time is introduced. The selected young farmers must work fulltime in the farm business and get their

livelihood from the company. This limitation entails that the investigated respondents are economically dependent on the farm business. The study will also be limited by the time of the investment. The investment must have been made during the recent nine years, to ensure that all respondents have had the same prerequisites according to the EU regulations. Thereby, all respondents have had the opportunity to apply for the young farmers' CAP support 2014-2020. By "invest in farm businesses" we mean that the young farmer becomes the head of the holding through monetary means. By interviewing young farmers in different geographical locations in Sweden, the validity of the study is increased and results in a broader picture of the situation. No limitations regarding the type of production or business form are introduced.

1.5 Structure of the thesis

This section will give the reader a structural overview of the thesis, see Figure 2. The first chapter introduces the reader to the problem, aim, and research question. Chapter 2 starts with a literature review of existing literature, which is followed by a theoretical framework consisting of used theories. Chapter 3 explains the methodological approach, course of action, method discussion, and ethical principles and considerations. Chapter 4 presents the results and analysis. Chapter 5 includes a discussion which is followed by contributions, suggested future studies, and conclusions.

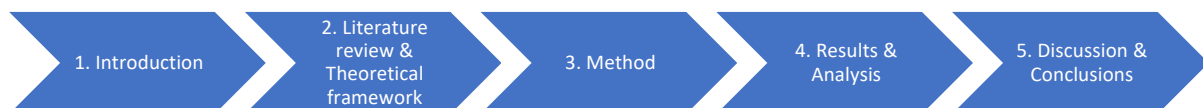


Figure 2, Structure of the thesis (Own illustration).

2 Literature review and theoretical framework

This chapter presents previous literature connected to the subject. Thereafter, the theoretical framework consisting of the Means-end chain theory and the Personal value theory are presented. The theoretical framework explains how the theories will be used to fit the aim of this study and how they are used to analyze collected data.

2.1 Literature review

This section gives an overview of existing literature regarding the Young farmer problem, barriers connected to farm business investments and values connected to farming which can be seen as reasons underlying the decision to invest in farm businesses. The Young farmer problem can partly be explained by barriers to enter the agricultural sector. By presenting important barriers connected to the young farmers' decision to invest in farm businesses, the reader gets a better understanding of the young farmers' situation and background context affecting their values. Underlying values can explain *why* young farmers decide to invest, despite these barriers, since farmers' attitudes and perceptions regarding non-pecuniary benefits have importance to farmers' decision-making. The literature was mainly collected through the SLU-library and the databases Primo and Google Scholar. Key words used are Decision-making, Investment, Laddering, Means-end chain, Personal value theory, and Young farmers.

2.1.1 The Young farmer problem

The *Young farmer problem* has had considerable attention within the academic literature, connecting the growing issue of an aging farming population and the future structure of farming (Hamilton *et al.*, 2015; Zagata & Sutherland, 2015). Zagata and Sutherland (2015) assess the evidence for the Young farmer problem in Europe through an investigation of recent literature and Eurostat statistics. Statistics from Eurostat indicate that the low representation of young farmers in Europe limits the agricultural economic potential since young farmers' economic efficiency is generally above the European average. Further, young farmers appear to be more efficient than older farmers. Zagata and Sutherland (2015) calculate a ratio between old and young farm holders based on figures from Eurostat (2011) to describe the age structure in each EU-country. If the share of farmers older than 65 years exceeds the share of farmers younger than 35 years, the Young farmer problem exists according to the definition by Zagata and Sutherland (2015). The Young farmer problem does not exist in all countries in the EU, although it exists in Sweden (Zagata & Sutherland, 2015). Zagata and Sutherland (2015) contribute with several interesting conclusions. Their first conclusion considers the inconsistent definitions of young farmers, conflating intergenerational farm successors with new entrants in Eurostat statistics which affect researchers and policymakers assessment regarding young farmers in the EU. The second conclusion concerns the aging population of farmers, which needs to be conceptualized more thoroughly to understand how the farm businesses are operated and by whom.

Hamilton *et al.* (2015) investigate the business performance and entrepreneurial behavior among young farmers in England. Some evidence is found regarding that young farmers are more entrepreneurial than older farmers. In addition, evidence is found suggesting that young farmers have higher productivity and profitability. Further, young farmers tend to have higher loans and debt, which can be seen as evidence of higher investments. Academic literature also suggests that young farmers have stronger economic motivations than older farmers (Van

Passel *et al.*, 2007; Koteva *et al.*, 2009). Young farmers appear to be more focused on business diversification and farm profitability (Grubbström *et al.*, 2014; Hamilton *et al.*, 2015). Hamilton *et al.* (2015) argue, in conformity with Zagata and Sutherland (2015), that young farmers entering the agricultural sector through intergenerational succession need to be differentiated from new entrants from outside farming in future statistics since they are conflated today. This makes it hard to estimate how widespread the Young farmer problem truly is.

There are also several studies suggesting that the age of farmers have an important factor for farm business decision-making, although the age should not be used as the only indicator of farm performance or management practice (Comer *et al.*, 1999; Vanslebrouck *et al.*, 2002; Burton, 2006; Van Passel *et al.*, 2007; Lobley *et al.*, 2009; Zagata & Sutherland, 2015). However, previous research has failed to isolate young farmers as a prior group and instead focused on farmers in general (Zagata & Sutherland, 2015). Thereby, we argue research regarding young farmers' underlying values needs to be conducted.

2.1.2 Barriers connected to investments in farm businesses

Barriers connected to entering the agricultural sector can partly explain why young farmers decide not to invest in farm businesses (Dumas *et al.*, 1995). Therefore, the barriers can help to understand the complexity regarding the decision to invest in a farm business. In previous literature, the main identified barriers regarding investments in farm businesses are; the agricultural sector is capital intensive, difficulties to get access to credits, difficulties to get access to agricultural land and older farmers are reluctant to give away control to the next generation (Mazorra, 2000; Bika, 2007; Goeller, 2007; Lobley *et al.*, 2010; Ingram & Kirwan, 2011; Moragues-Faus, 2014; EC, 2015b). The agricultural sector is capital intensive, which causes economic barriers for young farmers (Williams, 2006; Ingram & Kirwan, 2011). The start-up costs are high, and the expected rates of return are low (Williams, 2006). Despite low rates of return in the agricultural sector, land prices remain high and young farmers investing in farm businesses have to compete with existing farmers and landowners to acquire land (Bika, 2007; Ingram & Kirwan, 2011). In 2007 only 8 % of the utilized agriculture area (UAA) in Europe was farmed by farmers younger than 35 years old (EC, 2012). Increased land prices have led to difficulties for young farmers to access enough credits to make investments in farm businesses.

The most common way for young farmers to enter the agriculture sector is still through intergenerational farm succession (Ingram & Kirwan, 2011; Zagata & Sutherland, 2015). Farm succession can be seen as an internal barrier (Grubbström *et al.*, 2014). Older farmers are often reluctant to give away control to the next generation (Lobley *et al.*, 2010; Moragues-Faus, 2014). One of the reasons may be that older farmers are emotionally attached to the agricultural land and together with the incentive to retain land ownership to receive CAP payments (Mazorra, 2000; Moragues-Faus, 2014). This complicates for young farmers to get access to agricultural land (Mazorra, 2000; Williams, 2006; Moragues-Faus, 2014). Farm succession is considered to be a time-consuming process and not a single event (Goeller, 2007). This process consists of both transferring and managing different business assets. Historically, it was common that the farm businesses were inherited for generations. Today it is not necessarily someone within the family who invest in the farm business when the older generation decides to retire (Villa, 1999). Earlier literature has mainly focused on intergenerational farm succession, but lately, there has been a shift in the discussion towards "new entrants" into the agricultural sector (Williams, 2006).

Studies of young individuals considering to invest in farm businesses indicates that young farmers are identifying themselves as entrepreneurs (Vesala & Vesala, 2010; McDonald *et al.*, 2014; Stenholm & Hytti, 2014). It is more likely for farm succession to occur on profitable farms (Lobley *et al.*, 2009). Based on the statistics available from Eurostat it is not possible to determine if young farmers entering the agricultural sector are new entrants or successors taking over the farm through intergenerational farm succession (Zagata & Sutherland, 2015).

2.1.3 Values connected to farmers' decision-making

Values, goals, beliefs, and attitudes have an important role in farmers' decision-making (Darnhofer *et al.*, 2005; Howley *et al.*, 2015). Economic theories regarding decision-making often state that decisions are made based on the individual's expected change of well-being or welfare (Edwards-Jones, 2006). The level of well-being or welfare is often explained by the term utility in the literature (Howley *et al.*, 2015). However, the utility is a difficult concept to measure, which has led to simplified assumptions by economists regarding that money can be a substitute for the utility. Thereby, many previous decision-making models within the agricultural literature assume that all farmers are rational utility maximizers and profit maximizers. More recent literature states that this assumption may not reflect farmers' decision-making, suggesting that farmers' decision-making behaviors are affected by a multiplicity of values and goals (Willock *et al.*, 1999; Vanclay, 2004; Pannell *et al.*, 2006; Grubbström *et al.*, 2014; Howley *et al.*, 2015). Profit maximization might be a more or less important goal to farmers, but it is not considered to be the sole value or goal for farming (Howley *et al.*, 2015). According to Howley *et al.* (2015), there is strong evidence from multiple studies showing different categories of farmers; some are more driven by economic goals and some more driven by social, lifestyle or family goals and values. However, decisions that farmers make are rarely based on a single category of values or goals. If assuming all farmers' decisions are based on profit maximization, farmers' behavior may be misrepresented (Howley *et al.*, 2015).

Previous research has stated that farmers' attitudes and perceptions regarding non-pecuniary benefits have importance to farmers' decision-making (Howley *et al.*, 2015). Despite this, few studies have investigated their empirical impact on farmers' behavior. These non-pecuniary benefits are often connected to the farmers' underlying values. Earlier studies have identified values connected to farming, such as independence and pride to own a farm business (Key, 2005; Key & Roberts, 2009). "*Farming is a more rewarding job in terms of quality of life, independence, lifestyle, than it is in terms of money*" (Howley *et al.*, 2015, p 189). Dumas *et al.* (1995) studied factors that influence the next generation farmers' decision to take over the family farm business despite the barriers connected to farming. Mentioned values are; love of the lifestyle, high-quality of life, flexible hours, contact with nature, and a close connection between family and work life. These non-monetary benefits can be interpreted as compensation to farmers even if they could get higher expected rates of return on alternative investments.

By identifying young farmers' underlying end-values, we will be able to develop an understanding of young farmers' cognitive structures and thereby answer why young farmers decide to invest in farm businesses. Cognitive structures can be seen as a model over the mental processes used by individuals to process and understand information (Scott, 1969; Olson & Reynolds, 2001; Peter & Olson, 2010). To explain why individuals behave in a certain manner or decide to do as they do, literature often refers to attitudes, beliefs, traits, or norms (Schwartz, 2012). These concepts are different from values since they vary on another scale and measured differently. Values work as guiding principles in life and underlie the attitudes, which are the basis for the evaluations. Values are motivators of behaviors and attitudes (Schwartz, 2012) and may differ among individuals depending on social structure and experiences (Schwartz, 1992).

Other factors that can affect individuals values are gender, age, or education. Therefore, we argue it is important to take these factors into consideration when analyzing young farmers' underlying values.

2.2 Theoretical framework

In this section, we present the Means-end chain theory (Gutman, 1982) and the Personal value theory (Schwartz, 1992) in their original form and how they have been further developed to fit the aim of this study. We sought to use the above mentioned theories and models together to be able to analyze the results and answer the research question; *Which end-values underlies the decision to invest in farm businesses among young Swedish farmers?* The theoretical framework is mainly adapted from the MEC theory (Gutman, 1982) and the Personal value theory (Schwartz, 1992). By using the MEC approach and the Personal value theory as a compliment, we will be able to identify underlying end-values and then categorize them into value-types and thereby answer why young farmer decide to invest in farm businesses. These theories have been used together in earlier studies, but not with the aim to identify young farmers' underlying end-values regarding the decision to invest in farm businesses. This study will thereby contribute to the existing literature by increasing the understanding of young farmers' underlying values and their cognitive structure when considering to invest in farm businesses.

2.2.1 Means-end chain theory

The Means-end-chain (MEC) theory is a framework for understanding the links consumers make between products attributes, consequences, and values (Leppard *et al.*, 2003). The original form of the theory states that consumers base their decisions depending on attributes, consequences attached to the attributes, and how the consequences can lead to personal desired end-values (Gutman, 1982). The theory identifies a hierarchy of attributes, consequences, and values and thus explains how values affect farmers' decision-making (Hansson & Kokko, 2018). Building on Peter and Olson (2010) the attributes and consequences related to the farm business investment can be seen as means and the personal values as ends. Therefore, the theory is useful in this study.

The MEC theory provides an understanding of the links between attributes of investing in a farm business, the consequences linked to the attributes and which personal values the young farmer want to achieve by investing in a farm business. The young farmers' perceived attributes concerning the farm business investment are selected as a start. The MEC theory is used to identify hierarchical links in the young farmers' cognitive structures about the attributes regarding the farm business investment, the consequences that arose from the attributes and the values perceived from the consequences. Therefore, the MEC theory can help us explain *why* young farmers decide to invest in farm businesses by identifying the underlying end-values affecting their decision. In this study, we argue that the young farmers can be seen as consumers and the farm business as the product they decide to invest in.

Attributes can be explained as characteristics of products that are preferred by consumers (Botschen *et al.*, 1999) and can be concrete or abstract. Concrete attributes are the physical characteristics of a product such as the price (Vriens & Hofstede, 2000; Lin, 2002) and abstract attributes can be intangible characteristics (Botschen *et al.*, 1999) such as interest. Botschen *et al.* (1999) state that it is not the attribute itself that explains *why* individuals invest in a product, a service, or engage in any activity. Instead, the attributes are assumed to be important due to

the consequences they entail (Olsson & Reynolds, 2001). Although, it is important to notice that attributes cannot have direct consequences by themselves since it requires a performed behavior from the young farmer. In the context of this study, possible attributes could be favorable land consolidation. The consequence of favorable land consolidation could be that the young farmers become more time efficient. But to receive the consequence of the attribute the young farmer needs to perform a behavior, i.e., invest in the farm business.

Consequences are defined by Gutman (1982) as any results affecting the consumers directly or indirectly from their behavior and can be desirable or undesirable. Lin (2002) describes consequences as the feeling after consuming a product. The main function of the MEC theory is that consumers decide actions that result in desirable consequences and minimizing undesirable consequences (Gutman, 1982). Even though consequences can vary in level of abstraction, Olson and Reynolds (2001) state that two levels of consequences are sufficient for most analyzes. Immediate and tangible consequences of consumption are called *functional consequences*. These can, in turn, lead to a higher level of abstraction and more personal *psychosocial consequences*. An experienced consequence is dependent on both the product attribute and the consumer's behavior. As mentioned before, a functional consequence of investing in a farm business with favorable land consolidation could be time efficiency. The psychosocial consequence could in this example be that the farmer feels less stressed, which is on a higher level of abstraction closer to the end-values. The end-values are often life goals or personal values that the consumer wants to achieve.

Personal values are defined as beliefs and relatively stable cognitions that have a strong emotional impact, such as happiness and security (Vriens & Hofstede, 2000). Values can be divided into two categories, instrumental values and terminal values (Rokeach, 1973). *Terminal values* are the goals we seek in life, for example, prosperity and peace (Veludo-de-Oliveira *et al.*, 2006). Terminal values are the most abstract level in the means-end chain. *Instrumental values* can be described as the behavior leading to terminal values, for example, ambition. Rokeach (1973) argues that an individual's values are derived from culture, personality, and society. A value related to good land consolidation could be that the farmer wants to feel good, hence feeling less stressed. The different types of attributes, consequences, and values are summarized in Figure 3.



Figure 3, The six levels of the mean-end-chain (Own illustration based on Olson & Reynolds (2001), pp.13).

The fundamental idea of the MEC theory is that individuals choose how to act and behave depending on which outcome they want to achieve (Olsson & Reynolds, 2001). In the MEC theory, respondents are described as goal-oriented decision makers behaving in a way that most likely lead to their desired end-values (Costa *et al.*, 2004; Peter & Olsson, 2010). The MEC theory does not only identify the values underlying the decision which are important to the farmer, but also explains *why* the underlying values are important and therefore the MEC theory goes beyond the traditional economic theory (Olson & Reynolds, 2001; Veludo-de-Oliveira *et al.*, 2006). Based on Costa *et al.* (2004) the MEC theory can provide a greater understanding of the young farmers' different decision motives by mapping how their perceived attributes are linked to their consequences and end-values in a hierarchical value map (HVM). The HVM displays the links between experienced attributes, consequences, and values (Gengler *et al.*,

1995; Leppard *et al.*, 2004). By aggregating these links, it is possible to identify patterns related to the decision (Gengler *et al.*, 1995). Veludo-de-Oliveira *et al.* (2006) suggest that the MEC theory can be applied to a variety of qualitative research projects. Hansson and Lagerkvist (2015) have in previous research used the MEC approach to identify underlying values which control dairy farmers' decisions. The MEC theory can also be used to understand farmers' behavior and decision-making (Hansson & Kokko, 2018). Thereby, we argue that the MEC approach will suit this study well.

2.2.2 Personal value theory

Schwartz's (1992) Personal value theory is used in the analysis to categorize the identified underlying values the farmers consider when deciding to invest in a farm business. Schwartz and Bardi (2001) have shown that values are important to understand various socio-psychological phenomena. The Personal value theory will be used as a complement to the MEC theory to categorize the young farmers' underlying end-values. Personal values are strongly connected to peoples' behavior and can be seen as standards which affect peoples' decisions and behaviors through selections, thoughts, and evaluations (Roccas *et al.*, 2002; Bardi & Schwartz, 2003). Values reflect what is important to people (Bardi & Schwartz, 2003), and can be defined as *“desirable, transsituational goals, varying in importance, that serve as guiding principles in peoples' lives”* (Schwartz & Bardi, 2001, p. 269).

The Personal value theory can be used to categorize personal values (Schwartz, 1992). The theory is based on the values from Rokeach (1973) value survey and has then been further developed by Schwartz and Bilsky (1987; 1990). Schwartz's (1992) Personal value theory is a revised version of Schwartz's and Bilsky's (1987;1990) theories with numerous modifications and extensions and includes ten types of values that are distinguished by their motivational goals. By categorizing the young farmers' identified values into ten value-types in conformity with Schwartz (1992), this theory contributes to both theoretical and practical advantages making it possible to get a better overview of identified values (see Figure 4). Schwartz (1992) claims that these ten motivational values capture all essential values that can be identified in different cultures all over the world.



Figure 4, Theoretical structure of relations among motivational types of values. (Own illustration based on Schwartz, 1992, p. 14).

Based on Schwartz's (1992) ten various value-types, we have compiled a brief presentation of the value-types to give the reader a better understanding of which values are included:

1. *Self-direction* – The goal of this value-type is that the farmer has independent thought and action to choose. Included values are freedom, creativity, independent, choosing own goals, curious and self-respect.
2. *Stimulation* – Values connected to the farmers' desire for stimulation and variety, this to maintain an optimal level of activation. Included values are excitement, daring, novelty, variation, and challenges in life.
3. *Hedonism* – This value-type includes values derived from the need of pleasure related to the satisfaction of enjoying life or achieve a certain goal.
4. *Achievement* – The defining goal of this value-type is that the farmer will reach personal success by demonstrating competence according to social standards. This value-type includes perceived values connected to being seen as, e.g., influential, intelligent, ambitious, capable, or successful.
5. *Power* – This type of values include social power, wealth, authority, preserving a public image, and social recognition. As a farmer, it could be values connected to having control over resources or people and get social status or prestige.
6. *Security* – The goals of this value-type can be both national or family security. This value-type includes values connected to the young farmers' sense of belonging, social order, and being healthy.
7. *Conformity* – The goals of this value type are a restraint of actions, inclinations, and impulses that are against social norms and can harm or upset others. Thereby, the young farmers would act obedient, self-disciplined, polite, and honor parents and elders to avoid confrontation.
8. *Tradition* – Included values in this value-type can be respect, commitment, and acceptance of the culture imposed on the individual related to common experiences or fate. The young farmers' values related to this category can be; respect for tradition, humbleness, devoutness, and moderation.
9. *Benevolence* – The goal of this value-type is to preserve and enhance the welfare of the people around you. Thereby, the young farmers' values to be helpful, loyal, responsible, honest, and forgiving are included in this category.
10. *Universalism* – The goals of this value-type are to understand, appreciate, and protect the welfare of *all* people and nature. This results in a broader focus compared to the value-type Benevolence. Important values connected to this category are equality, unity with nature, wisdom, social justice, and protecting the environment.

The ten above mentioned values-types are combined with the MEC theory in this study to identify and categorize young farmers' underlying values. According to Schwartz (1992), there are relationships between the ten different value-types, partly explained by their placement in Figure 4. The closer the different value-types are in the figure, the closer the relationship is. Some value-types may have psychological, practical, or social consequences that may conflict or be compatible with more than one value-type (Bardi & Schwartz, 2003). Therefore, it can be

difficult to categorize young farmers' values since they may fit more than one certain value-type. Bardi and Schwartz (2003) stress that values have to be considered when developing an understanding of a socio-psychological phenomenon, such as understanding why young farmers decide to invest in farm businesses. The cognitive structure can explain why young farmers behave or decide to do as they do in a certain situation based on how they perceive the world. Thereby, the Personal value theory together with the MEC theory will suit this study to understand young farmers' cognitive structure and therefore be able to identify the underlying end-values and answer why young farmers decide to invest in farm businesses.

3 Method

In this chapter, we will describe the underlying methodology, describe the study design, and motivate the chosen method. The chapter also includes a method discussion, containing weaknesses and strengths with the chosen method. Finally, ethical principles and considerations are discussed.

3.1 Choice of approach

A qualitative research approach includes various strategies for systematic collection, organization, and interpretation of material acquired by talking with people (Malterud, 2001; Bryman & Bell, 2015). A qualitative approach is often considered useful “*to investigate the meaning of social phenomena as experienced by the people themselves*” (Malterud, 2001, p. 398) and is applicable in studies of human behaviors and decisions (Allwood, 2004; Robson, 2011; Bryman & Bell, 2015). The qualitative approach emphasizes words rather than numbers and focuses on the interpretation and understanding of the studied phenomena in social reality (Bryman & Bell, 2015). The choice of approach should be suited to the aim of the study (Trost, 2010; Bryman & Bell, 2015). Thereby, the descriptive qualitative approach suited this study since it aimed to identify the underlying end-values of young Swedish farmers when deciding to invest in farm businesses. This study intends to interpret and understand how the young farmers’ social reality is constructed and how it affects their behavior. In addition, the study explains the respondents’ view of the world and the behavior observed. In this study, data was collected by talking and listening to young farmers that have invested in farm businesses and then analyzed what they said. Through qualitative interviews, the researcher can understand other’s experiences (Rubin & Rubin, 2005; Trost, 2010; Bryman & Bell, 2015). Qualitative interviews thereby suit studies aiming to explain social processes, i.e., why decisions are made and understanding the young farmers’ cognitive structures.

Criticism that has been pointed out against the qualitative research approach is that it can be subjective (Bryman & Bell, 2015). Qualitative research is interpretive and opens for subjective interpretation, which can make the researcher affect the results (Bryman & Bell, 2015). This leads to that the accuracy and objectivity are dependent on the researcher. The qualitative analysis is mainly formed by the researchers’ interpretation and analyzation of the data (Charmaz, 2006). Therefore, building on Bryman and Bell (2015), data analysis requires a systematic approach to handle the process of reading, organizing, analyzing, reflecting, coding, categorizing, generalizing and validating the collected data. The researcher is thereby the main instrument for collecting the data, which means that objectivity and trustworthiness are dependent on the criteria that the researcher has established (Bryman & Bell, 2015). To minimize the risk of affecting the results, we followed the criteria presented later in this chapter.

3.2 Course of action

This section presents the course of action in the used method. It includes a description of how respondents were selected, telephone interviews, the laddering technique, an explanation of the interview process, problems that can occur during laddering interviews and how the analysis of the collected data was conducted.

3.2.1 Selection of respondents

To find Swedish young farmers that met the criteria mentioned in section 1.4 Delimitations, the Federation of Young Swedish Farmers was contacted. Elected persons within the Federation of Young Swedish Farmers came up with 60 names that they knew of and that we were advised to contact. Of these, we chose to interview the first 30 young farmers that fulfilled the criteria and were willing to participate based upon the information they were given about the study. According to Reynolds and Gutman (1988), 30 respondents is a suitable number when performing a soft laddering technique. Rubin and Rubin (2005) state that respondents should have experience and knowledge within the research area. Thereby, it was crucial to find young farmers that have invested in farm businesses, and that met the criteria to increase the authenticity and achieve trustworthy results. The credibility of the research improves if the researcher can find respondents with a variety of perspectives (Bryman & Bell, 2015). Therefore, interview respondents across Sweden were contacted that had invested in different types and sizes of farm businesses to increase the credibility of this study. The aim of this study is not to generalize the results, but instead, contribute to a realistic picture and a deeper understanding of the studied young farmers' underlying values when deciding to invest in farm businesses. The reason why we chose to study young farmers that *have* invested in a farm business was motivated by earlier studies in behavioral finance. Individuals seem to overestimate their ability to estimate risk aversion and how they would act in a hypothetical situation (Shleifer, 2000).

3.2.2 Interviews by telephone

Interviews make it possible for the respondents to express themselves by using their own words, and thereby, the researcher can obtain knowledge from respondents' behavior (Kvale & Brinkmann, 2014). Given the prerequisites of this study telephone interviews were conducted. Telephone interviews are often discounted in qualitative research (Novick, 2007; Bryman & Bell, 2015) due to the lack of personal contact and visual communication (Vogl, 2013). This may lead to a loss of contextual and non-verbal data (Novick, 2007). Non-verbal data are thought to improve the richness of the collected data and also the interpretation (Sturges & Hanrahan, 2004). Although the non-verbal data may not always be helpful since it is easily misinterpreted. However, telephone interviews have several benefits, and recent research indicates that there are no big differences between face-to-face interviews and telephone interviews (Sturges & Hanrahan, 2004; Vogl, 2013). Sturges and Hanrahan (2004) suggest that telephone interviews can be used successfully in qualitative research. Bryman and Bell (2015) state that telephone interviews are more cost-efficient than face-to-face interviews. In addition, Vogl (2013) argues that telephone interviews are more time efficient. Sturges and Hanrahan (2004) state that telephone interviews enable respondents over a wider geographical area. Another advantage is that telephone interviews can be more effective when discussing sensitive questions since the respondent may feel less distressed when the interviewers are not physically present (Bryman & Bell, 2015). Vogl (2013) states that telephone interviews can lead to an increased feeling of control of the communication process among the respondents since it is easier to terminate a phone call than a visit at someone's house.

Both of us participated in the phone interviews. One of us talked to the respondents, and one wrote down key words and phrases during the interview. This gave an opportunity to double check with the respondent if the interpretation was correct. The interviews were, after asking the respondents, audio recorded to be able to reduce misunderstandings by listening to the interviews again. Thereby, the credibility of the study was increased. The telephone interviews were conducted in Swedish to make the respondents feel safe and comfortable.

3.2.3 The laddering technique

To collect data from respondents, an interview technique named laddering was used. Laddering is an in-depth interview technique where the researcher and respondent talk one-on-one (Reynolds & Gutman, 1988). Briefly explained laddering is a semi-structured interview technique where the respondents are allowed to speak freely about what is important to them (Olson & Reynolds, 2001). The main goal of laddering is to determine sets of links between key elements consisting of attributes, consequences, and values, i.e., means-end chains. These links can then be graphically presented in a hierarchical value map (Reynolds & Gutman, 1988). In this thesis, laddering was used to receive data about young farmers' attributes, consequences, and values regarding farm business investments and why these elements are important. This is the first time laddering has been used in this context. The laddering technique provides a deeper understanding of the underlying values that are connected to investing in farm businesses. Although laddering has its origin in psychology it has grown to several fields such as including advertising and marketing (Peter & Olson, 2010), and studies of mental models and farmers' decision-making (Hansson & Lagerkvist, 2015; Hansson & Kokko, 2018).

The laddering technique consists of three main steps (Breakwell, 2004). First, attributes are elicited. Second, the elicited attributes are ladderized to produce attribute-consequence-value chains. Finally, the results from the laddering interview are analyzed. There are several techniques to elicit attributes (Bech-Larsen & Nielsen, 1999). We chose to apply the direct elicitation technique since Bech-Larsen and Nielsen (1999) argues that direct elicitation is suitable for exploratory studies of new areas of behavior. In the direct elicitation technique, the respondent generates important attributes when they are thinking about the product, i.e., the farm business investment. A good feature of direct elicitation is that the researcher affects the respondent minimally, and therefore, the produced attributes can be seen as more important to the respondent compared to other elicitation techniques. To elicit the attributes, we told the respondents during the first phone call to reflect on why they decided to invest in a farm business and to write down five main reasons underlying their decision. In addition, we sent an e-mail with a description of the study and a reminder to write down five main reasons underlying the decision to invest in a farm business. The e-mail was sent about two weeks before the laddering interviews were conducted to give the respondents time to reflect over their underlying reasons. In general, the number of elicited attributes will be a result of the complexity of the problem and the elicitation technique (Breakwell, 2004).

When the attributes had been elicited the laddering interview started. The laddering interview consisted of several "Why is *that* important to you?"-questions regarding every elicited attribute. By doing this, the respondent had to climb along a mental ladder, and eventually, the respondent could not motivate why something was important to them (Hansson & Lagerkvist, 2015). This is the end-value according to the MEC theory and is a value connected to a specific behavior or decision. Laddering is a complex technique where the researchers need to be aware of the main functions of the MEC theory, the logic of laddering and be able to determine which comments to follow up and which to ignore (Olson & Reynolds, 2001). Reynolds and Gutman (1988) argue the importance of informing the respondents that there are no right or wrong answers and that the respondent is the expert. Therefore, we mentioned the lack of right or wrong answers to the respondents both the first and second time we called them. In addition, we wrote it in the e-mail they got before the interview.

Soft laddering and hard laddering are the two main types of laddering (Grunert & Grunert, 1995; Costa *et al.*, 2004). Hard laddering forces the respondent to produce attribute-consequence-value chains one by one, in other words, it is the respondent who creates the ladders (Breakwell, 2004). However, soft laddering was used in this thesis since it is considered

to be a better choice when the sample size is smaller than 50-60 respondents (Costa *et al.*, 2004). Soft laddering does not constrain the respondent's speech, but rather encourage the respondent to speak freely, and the interview is more comparable to a dialogue. Thereby it is important how the questionnaire is constructed to avoid leading questions and ensure the validity of the study (Bryman & Bell, 2015). The ladders were then constructed afterward or partly during the interview. Breakwell (2004) states that in contexts where the respondents have good knowledge about the investigated subject, soft laddering can result in a more comprehensive and deeper conceptualization of the issue. Another benefit with soft laddering is that it allows the respondent to explain several different reasons why one particular attribute is important to them or why two attributes are important concerning the same consequence (Costa *et al.*, 2004). This was one of the main reasons why we chose this method. In other words, soft laddering allows the respondents to move between ladders compared to hard laddering, which instead focuses on one ladder at the time. Soft laddering fits this study since investment in a farm business is a complex phenomenon. We argue that it was suitable for this study to allow the respondents to speak freely and explain several reasons why they invested in the farm business since this provided a deeper and more comprehensive understanding of the underlying values.

Olson and Reynolds (2001) discuss several different techniques that researchers may use during the laddering interviews to receive deeper and more high-quality data. The first technique is to make the respondent think of the situational context since it is easier to provide associations while thinking of a realistic example. The second technique is to ask the respondent how it would be *not* to have an object or feel a certain way. The third is to move the respondent backward in time and thereby encourage the respondent to think critically and make them speak of their feelings and decisions. The fourth technique is called "third-person probe" and imply that the researcher can ask how other persons in the respondent's network may feel or think in a similar situation. The last technique for the researcher is to use silence to make the respondent to precise the answers and also to repeat what the respondent said to clarify the answers. These techniques were used based on our assessment during the interviews. For example, we asked the question "Did you ever consider *not* to invest in a farm business?" and "Can you tell more about your thoughts regarding the farm business investment, before the investment was made?" Despite these techniques, there are situations where means-end chains are difficult to produce. Therefore, to practice these techniques, we interviewed several colleagues before conducting the real interviews.

Laddering interviews can be recorded in several different ways (Breakwell, 2004). Graphical recording, textual recording, or using an audio recorder are three different methods. Breakwell (2004) states that there is no evidence of that one method is better than another, although textual recording and the use of an audio recorder is preferable in soft laddering since it is less structured and that the ladders are created after the interview. Therefore, all phone interviews were both audio recorded and textual recorded during the interviews. In the textual recording, the starting element was followed by a line to separate it from additional responses which were written below.

3.2.4 Coding and analysis of collected data

The analysis of the collected data starts with a content analysis (Olson & Reynolds, 2001; Breakwell, 2004). In the content analysis, the interview data were categorized in attributes, consequences, and values according to Breakwell (2004). This gives the researchers an overview of the different elements elicited (Olson & Reynolds, 2001). We used the questionnaire (see Appendix 1) to write down every element deriving from the respondents during the interviews. In addition, to get a better overview of the collected data, we wrote all

the elements deriving from the interview questionnaire into Excel and at the same time categorized them into attributes, consequences, or values. The next step of the content analysis was to develop content codes (Breakwell, 2004). These content codes are words or phrases derived from the laddering interview and summarize equal responses from the respondents. Bech-Larsen and Nielsen (1999) state that the idea of this step is to group similar responses and give them a single content code (see Appendix 2). There is no enunciated technique regarding how the categorization through content codes should be conducted, rather than the use of common sense from the researcher (Breakwell, 2004). Although it is difficult to generalize the content codes enough to be able to create an implication matrix. On the other hand, if content codes are too general, different elements may be conflated into the same content code, and valuable meaning can get lost (Reynolds & Gutman, 1988). To avoid conflation, we asked the respondents if we had interpreted the data right when there were difficulties in understanding the context during the interviews. Olson and Reynolds (2001) state the importance of relating the analysis to the aim of the study and to remember that it is the relationship between elements that is important and not the elements themselves. The third step for the researcher is to discuss with another rater and assign content codes to similar elements (Reynolds & Gutman, 1988). Since we were two authors writing this thesis, we discussed and assigned the content codes together. Reynolds and Gutman (1988) state that if disagreement exists, it should be discussed until all responses are categorized. The answers were analyzed in Excel and then discussed what the respondents had meant and in which context they used specific words. This was a time-consuming process, even though several of the respondents had similar answers. However, the information still needed to be generalized to create an interpretable HVM. Therefore, content codes were generated based on the answers in Excel and ended up with 60 different elements. We used the respondents' expressions as much as possible to minimize the risk of affecting the data. This also improves the confirmability of this study. During this coding process, it was helpful to listen to the interviews again to understand the young farmers' context.

When the content analysis was done, and every relevant element had a content code, a summary matrix was created in a computer program called LadderUX building on Reynolds and Gutman (1988), and Olson and Reynolds (2001). Every content code was given a specific number as suggested by Breakwell (2004). The ladders were written as a chain of content codes for every respondent and then drawn from left to right in the summary matrix (see Figure 5). The rows in the summary matrix represent the ladders, and the columns represent the number of elements in each ladder (Olson & Reynolds, 2001). Therefore, the number of columns is equal to the number of content codes in the longest ladder. This relatively quantitative analysis of qualitative data makes laddering unique. This matrix is the foundation when LadderUX identifies pathways, patterns, and links between the key elements.

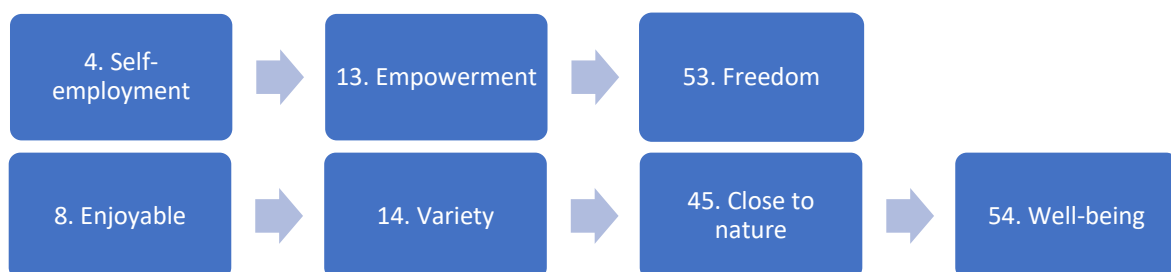


Figure 5, Example of two ladders consisting of content codes in a summary matrix (Own illustration).

The next step in the analysis was to create an implication matrix and finally a HVM, building on Breakwell (2004). LadderUX was used to construct both the implication matrix and the HVM and has previously been used by Hansson and Lagerkvist (2015). The use of LadderUX

increased the confirmability of this study since we did not construct the links in the HVM ourselves. The main feature of the HVM is to display the dominant links deriving from the interview data in an interpretable way (Breakwell, 2004). It is therefore important to decide if both direct and indirect links should be displayed in the HVM or only the direct links. Breakwell (2004) suggest that both types of links should be displayed to retain links that are often indirectly linked but have different intermediate content codes. However, we chose to display only the direct links in the HVM on the basis of the complexity of the subject and to keep the HVM interpretable. Another important issue concerning the HVM is to decide the cut-off level. The cut-off level implies how many times the content codes have to be linked to each other to be displayed in the HVM, i.e., how many respondents that mentioned the same links. A lower cut-off value implies a richer and more detailed HVM. Reynolds and Gutman (1988) state that several cut-off levels should be tested, resulting in several different HVMs. The researchers should then decide which HVM that best describes the interview data. We compared several HVMs with cut-off values from 0 to 7 and chose to use a cut-off value 4 in the analysis, which follows the guidelines given by (Reynolds & Gutman, 1988). The decision concerning which cut-off value to use was a trade-off between keeping as much data as possible in the HVM but still keeping it interpretable and displayable. The HVM with a cut-off value 4 gave the best balance between complexity and data. Further, to display how strong the links in the HVM are, different thicknesses of the lines are drawn where thicker lines indicate stronger links. After the HVM was analyzed the end-values, i.e., the terminal values, was categorized into the ten different value-types from the Personal value theory.

Since all interviews were conducted in Swedish, we had to translate the content codes from Swedish to English. The translation process of interview data is argued by Xian (2008) to be a construction of the social reality since the translator interacts with the data and interprets social concepts and meanings. Xian (2008) identifies three main issues connected to translating interview data; linguistic, sociocultural, and methodological. The linguistic issue arises when the respondent uses words which have no equivalent in English. The sociocultural issue includes translation of idioms or proverbs that rely on socio-historical knowledge. The contextual understanding is important for the translation to be successful. The methodological issue regards the involvement of the translator affecting the underlying culture. To conclude, Xian (2008) states that translation is a process involving knowledge, social background, and personal experience. Since laddering interviews are quite structured, and the interpretation of interview data involves key elements rather than a translation of a life story, many of these translation issues can be minimized. To get a better understanding of the social context, we asked the respondents if we had interpreted their reasoning correctly after they reached an end-value. However, some values in Swedish does not necessarily have an exact English equivalent. Therefore, we stress the awareness of that we may have affected the data to some extent since it has been interpreted and translated.

3.2.5 Problems and considerations regarding the laddering technique

Two common problems of laddering are discussed by Olson and Reynolds (2001), who states that an understanding of these problems is necessary for using the laddering technique. The first problem arises when asking the respondent why some attribute or consequence is important, and the respondent does not know the answer. This can be dealt with through negative laddering, i.e., investigating the reasons why the respondent does not do a certain thing or does not feel a certain way. Another way of dealing with this is by giving the respondent time to reflect regarding the topic before the main interview. When the respondents were contacted for the first time, we controlled that they fulfilled the requirements to participate in the study. If they did, we agreed upon a time for the interview and asked them to reflect about five main

reasons why they decided to invest in a farm business. In addition, we sent an email with information regarding the interview and reminded them to think about the five main reasons. Even though all respondents did not write down five main reasons before the interview, every respondent had thought about different reasons underlying the decision to invest in a farm business. Thereby, we avoided the “I don’t know”- issue to some extent. Despite this, we encountered the problem a few times during the interviews. To manage the situation, we reformulated the question in a similar way or got back to it at the end of the interview. We also asked the question, “What do you appreciate with your profession?” to make the respondent think more freely if the respondent hesitated to answer.

The second problem emerges when the respondent moves up the ladder to more abstract levels, and the interview becomes more personal. The continuous flow of “why is that important to you?” questions can make the respondent talk around the problem, become silent or say “I don’t know” since the information may become too sensitive. Olson and Reynolds (2001) suggest three techniques to handle the problem and which also were adopted in this study. The first technique is to move the conversation to a third-person context. The second is that the interviewer tells a relevant personal fact, making the respondent feel less inhibited. Third, is to make a note and come back to the problem later during the interview. We informed the respondents that the interview technique could be a bit annoying and repetitive and that they were free to call us off if they felt exposed. However, none of the respondents did. In general, we did not have any problems with respondents being withdrawn.

Further, one problem encountered in this study is the absence of recent literature and suggestions regarding what is considered to be the difference between attributes, consequences, and values in the farm business investment context. Therefore, we had to interpret the answers arriving from the respondents. Thus, the presented attributes, consequences, and values in this study are our interpretations.

An additional problem encountered during the interviews was when the respondents jumped between attributes and consequences. This resulted in inconsistent ladders that did not follow any structure suggested by the literature. Therefore, we had to interpret similar answers due to their context and create working ladder structures. Another issue was that several young farmers stated the same answers but with different words, leading to a lot of different attributes and consequences, meaning the same thing. To solve this problem we had to code similar answers to content codes that covered the meaning of all the answers. This was perhaps the hardest part of the analysis and took a lot of time since we needed to understand the young farmers’ context. The coding table can be found in Appendix 2.

3.3 Ethical principles and considerations

When conducting research involving people’s concerns connected to ethical issues and dilemmas need to be considered (Troost, 2010; Kvale & Brinkmann, 2014; Bryman & Bell, 2015). Ethical issues are important to consider since it might affect the respondent during the interview and thereby also the results (Kvale & Brinkmann, 2014). The respondents have to agree to participate in the study and be aware of the purpose of the study (Rubin & Rubin, 2005; Bryman & Bell, 2015). When the young farmers were contacted for the first time, they were asked if they wanted to participate, based on a brief introduction about the study. Thereby, all respondents chose to contribute voluntarily. If questions become too sensitive respondents might avoid answering (Olson & Reynold, 2001; Breakwell, 2004). Therefore, we informed the respondents that the laddering technique could be perceived as repetitive. Further, we told the respondents that if the questions became too sensitive, they were allowed to abrupt us during

the interview or decide not to answer. However, this never happened during the interviews. To make the respondents feel protected and comfortable, all information about the respondents is confidential. All respondents were informed before the interview that no right or wrong answers exist, also to make them feel more comfortable and relaxed in conformity with Reynolds and Gutman (1988). They were informed about who had access to the interview material before they agreed to participate. Thereby, the anonymity aimed to get deeper and more personal answers on the questions regarding why the respondents decided to invest in a farm business. Information about the young farmers that were considered specific and traceable was not included in the results to protect the respondents and ensure anonymity (Kvale & Brinkmann, 2014). All personal data have been deleted from the files containing material from the interviews.

4 Results and analysis

This chapter starts with a brief background presentation and statistics of the respondents. Thereafter the results are presented in the HVM. The results are then analyzed and discussed based on the MEC theory and the Personal value theory. The HVM gives the reader an overview of why young farmers decide to invest in farm businesses and the analysis answers which end-values underlies the decision.

4.1 Background and overview of the respondents

Table 1 presents the geographical location of the young farmers' farm businesses and the number of respondents from each region. Twenty-eight men and two women were interviewed, some of the respondents had invested together with their partner. Nine of the respondents had started their businesses by themselves and are to be considered as new entrants. Twenty-one of the respondents had started through intergenerational succession by taking over parts of the family business or the whole business.

Table 1, Number of respondents from each region.

Region	Number of respondents
Dalarna	3
Halland	3
Jämtland	3
Norrbottn	1
Skåne	9
Småland	2
Södermanland	2
Uppland	2
Västergötland	1
Östergötland	4
n = 30	

Table 2 presents additional statistics about the respondents. The mean year of the investment is 2016 with a standard deviation of two years. The mean age when investing is 27 years among the respondents with a standard deviation of four years. Twenty-two of the interviewed young farmers have additional education after high school. However, all of them have experience from farming before investing in their farm businesses. The additional education varies from six months to five years, with a mean of two years. The mean size of the farm businesses are 238 hectares in farmland area, with a mean of 28 % of the farmland owned by the farmers, and the rest is leased. Since there are big differences in farmland area and turnover among the respondents, the standard deviation is relatively high for both, i.e., 176 hectares in farmland area and 3 676 823 SEK in turnover.

Table 2, Statistics of the 30 interviewed respondents.

	Mean	Median	Standard deviation
Year of investment	2016	2015	2 years
Age when investing	27 years	26 years	4 years
Education after high school	2 years	2 years	2 years
Farmland area	238 ha	200 ha	176 ha
Share of farmland area owned	28 %	-	-
Turnover	5 945 000 SEK	5 100 000SEK	3 676 823 SEK

Table 3 presents the main production of the respondents' farm businesses. Half of the respondents have crop production as the primary part of their turnover. Different types of crop production occur among the respondents. Although, the most common crops are grain, potatoes, and sugar beets. The other half of the respondents have different types of animal production as the primary part of their turnover, where the most common is milk production followed by beef production. Several of the businesses are diversified in different ways and have several sources of income, for example, machinery contracting.

Table 3, Main production and percentage of respondents.

Main Production	Crop production	Milk production	Beef production	Pig production	Lamb production	Hatching egg production
Number of respondents	15	6	4	3	1	1

4.2 Results

After the coding was done, we wrote all 215 ladders consisting of 60 different MEC elements into LadderUX, consisting of 12 attributes, 36 consequences, and 12 values. We received an average of 7,17 ladders per respondent and an average of 3,64 elements per ladder. The number of ladders from each respondent can be seen as different reasons underlying the decision to invest in a farm business. The high number of ladders per respondent also indicates the complexity regarding the decision to invest in a farm business in conformity with Breakwell (2004). However, the ladders often interlaced with each other at the higher levels of abstraction. The total amount of links between the elements was 1097, consisting of 567 direct links and 530 indirect links. Through LadderUX, we received the HVM with the cut-off value 0 (Appendix 3) and the implication matrix (Appendix 4). To make the HVM more displayable and get a better overview of the results we chose to use the cut-off value 4 in the analysis (see Figure 6), following the guidelines by Reynolds and Gutman (1988). This HVM contains 320 direct links which are equal to 55 % of the total amount of links in the HVM with cut-off value 0. The HVM consists of totally 30 elements allocated as follows; four concrete attributes, four abstract attributes, five functional consequences, eight psychosocial consequences, two instrumental values, and seven terminal values. The terminal values are to be considered as end-values.

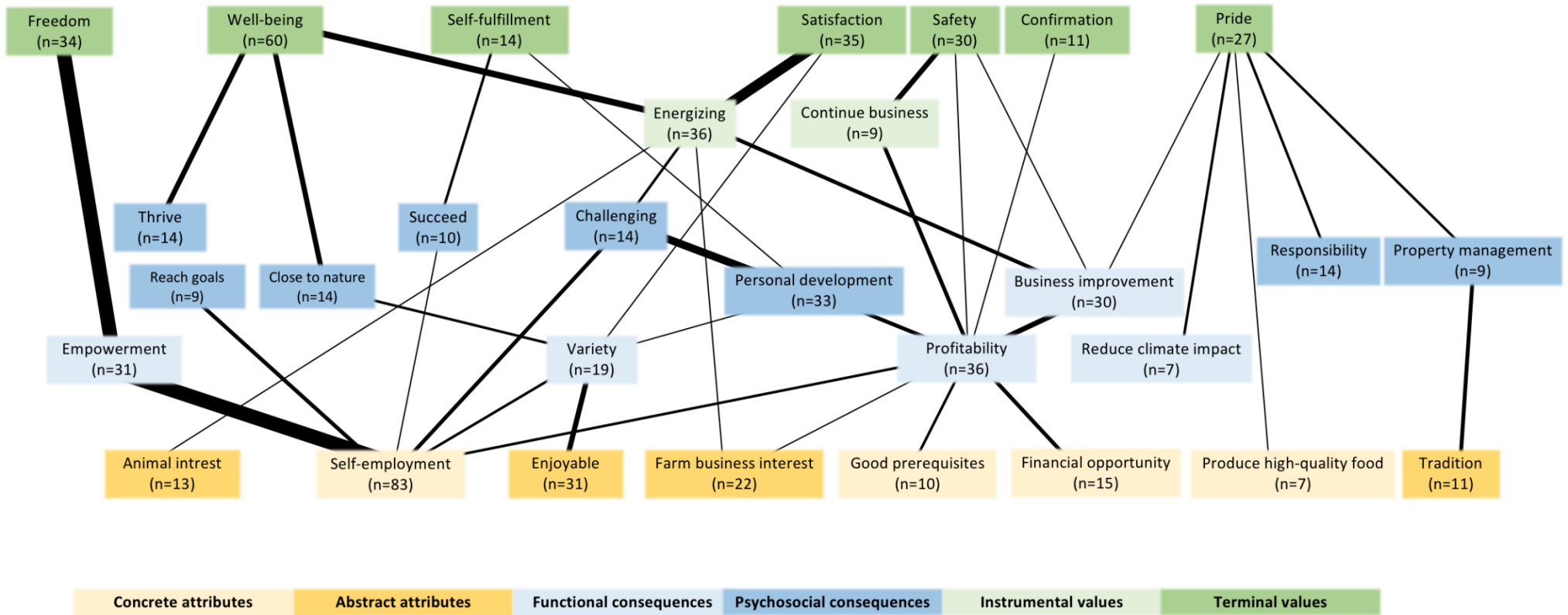


Figure 6, Hierarchical value map with cut-off value 4 (Own illustration, based on LadderUX).

4.3 Analysis of the HVM

The number presented in each square in Figure 6 is equal to how many times the element has been mentioned by the respondents. In addition, thicker lines in the HVM indicates stronger links between the elements. The HVM consists of three levels of elements and should be read from the bottom to the top, i.e., from attribute, via consequence to value.

Based on the HVM (Figure 6), we can conclude that the most common attributes mentioned by the young farmers are *Self-employment*, *Enjoyable*, and *Farm business interest*. However, all attributes are assumed to be important due to the consequences they entail (Olsson & Reynolds, 2001). Therefore, the attributes partly answer why young farmers decide to invest in farm businesses. The most frequently mentioned consequences are *Profitability*, *Personal Development*, and *Empowerment*. Further, the most common end-values are *Well-being*, *Satisfaction*, and *Freedom*. To see what is included in each MEC element, see Appendix 2.

Since the HVM should be read from the attributes to the end-values, the analysis is structured the same way. The analysis starting point is the most common attribute, *Self-employment*. Thereafter, the analysis follows the links to the consequences and finally to the end-values. If an attribute is linked to several consequences, the links will be analyzed from left to right in the HVM (Figure 6). The same applies if a consequence is linked to several end-values. When the links to the end-values have been analyzed, the analysis continues with the second most common attribute, etc. This type of analysis allows the reader to receive a greater understanding of the end-values since the context in which the young farmers talked about the different elements in the HVM are described.

Self-employment is by far the most common attribute, mentioned 83 times during the interviews. One reason explaining why *Self-employment* is mentioned frequently is because it links to six different consequences which are displayed in the HVM. In addition, *Self-employment* is the only attribute linked, through the six different consequences, to all end-values in the HVM. Therefore, *Self-employment* is a central element when analyzing the cognitive structures of the respondents. *Self-employment* is often used in the context of being your own boss, making your own decisions and controlling your own time, which is referred to as *Empowerment* in the HVM. *Empowerment* is mentioned 31 times by the respondents. The end-value in this ladder is *Freedom*, which is mentioned 34 times and thereby is the second most common end-value. *Freedom* is more frequently mentioned than *Empowerment*, even if *Empowerment* is the only consequence linked to *Freedom*, which may seem strange. However, this is due to the cut-off value 4. Consequences mentioned less than four times linked to *Freedom* are therefore not displayed in the analyzed HVM. In summary, the respondents state that *Self-employment* entails a possibility to *Empowerment*, which gives a feeling of *Freedom*. This ladder has the strongest link of all ladders in the HVM and is therefore considered to be the main reason underlying the young farmers' decision to invests in farm businesses.

Further, *Self-employment* also links to *Reach* goals. Several respondents state the importance of setting up goals and evaluating these. This is in conformity with the MEC theory, which describes the respondents as goal-oriented decision makers (Costa *et al.*, 2004; Peter & Olsson, 2010). However, the ladder is not complete in the HVM with cut-off value 4 since *Reach* goals is not linked to a specific end-value more than four times.

The next consequence linked to *Self-employment* is *Succeed*. Several respondents mention *Succeed* in the context of managing the barriers connected to farm business investments

mentioned by Lobley *et al.* (2010) and Ingram and Kirwan (2011). One respondent mention Succeed in the context of:

“Prove to the bank that it is possible to make money.”

This can be related to the barrier concerning access to credits discussed by Moragues-Faus (2014). Further, Succeed links to the end-value Self-fulfillment. To sum up, the respondents feel Self-fulfillment because they have managed different barriers and Succeed as self-employed.

The next link is between Self-employment and Challenging. Several respondents state that it is Challenging to be self-employed, for example, if a machine breaks down or if the weather is unfavorable. As self-employed in a farm business, you have to solve a variety of problems which is considered to be Challenging. Further, Challenging links both to the consequence Personal development and to the instrumental value Energizing.

The respondents feel like they develop and learn new things when solving different problems. Therefore, Challenging links to Personal development. Further, Personal development links with the end-value Self-fulfillment, deriving from the development when learning new things. Challenging and Personal development is also considered to be important for Profitability. In addition, Challenging links to Energizing which the respondents mentioned in the context of being motivated and stimulated. When the respondents manage to solve different problems, they get energized. As one of the respondents described:

“To solve problems makes me get up in the morning.”

Further, Energizing links to the end-values Satisfaction and Well-being. However, it is important to stress that the considered challenges often cause an increased amount of work for the young farmers. Although, they state that managing and solving more difficult problems generates a greater feeling of Satisfaction or Well-being.

The next consequence that links to Self-employment is Variety, which includes both different work tasks and working in different seasons. One respondent stress:

“One day I can sit at my office, and the next day I’m changing the oil in my tractor.”

Several respondents want to avoid the feeling of restlessness. Therefore, they consider Variety to be important. Further, Variety links to both Close to nature and Personal development. The respondents stated that working outside and Close to nature makes them feel Well-being, which is the end-value in this ladder. Next, the respondents stress that being self-employed includes many different work tasks which are developing. Further, Personal development also links to Challenging, which is followed by Energizing, and then Well-being or Satisfaction. Although these links are already analyzed in the context of Self-employment above.

The last consequence linked to Self-employment is Profitability, which is mentioned 36 times, and related to four different attributes. Therefore, Profitability is considered to be the most important consequence in the HVM. Profitability first link is to Personal development, continuing earlier analyze. However, Profitability and Personal development are linked since the respondents consider that if you get better at your job, you will earn more money. Further, the respondents stress that Profitability is vital to Continue business. One respondent mention Profitability as:

“The cornerstone of the farm business, affecting almost every decision.”

In addition, Continue business links to the end-value Safety. The respondents considered Safety in the context of knowing that they will be able to work in the farm business following years as well. However, Profitability is also linked directly to Safety in the HVM. Furthermore, Profitability is also important for the young farmers to get Confirmation on that you are “*doing a good job*” and “*the right thing*”. Several respondents mentioned Profitability similar to a receipt, confirming their perception.

The next link is between Profitability and Business improvement, which includes investing in both value-enhancing measures and new technology. Profitability is necessary for the respondents since they will not be able to invest in their farm businesses unless it is profitable. Further, Business improvement links to the end-value Pride. The respondents feel Pride as self-employed when improving the business. This is in confirmation with Key and Roberts (2009) who identified values connected to farming such as independence and pride to own a farm business.

Enjoyable, Farm business interest and Animal interest are commonly mentioned attributes underlying the decision to invest in the farm business. Thereby, the respondents stress the importance of being interested in what you work with and having fun while working due to the many working hours needed in farm businesses during the first few years after the investment. Enjoyable is the second most common attribute and only linked to Variety. Therefore, it can be concluded that Variety is considered to be Enjoyable among the respondents.

Farm business interest and Animal interest links directly to Energizing. Therefore, the implication is that the interest is considered to energize the respondents. Further, Energizing links with Well-being and Satisfaction. The conclusion is that the respondents get energized when working with something they have interest in and therefore feel Well-being or Satisfaction. In addition, Farm business interest links to Profitability as well, indicating that interest is important to achieve Profitability.

Financial opportunity and Good prerequisites are other attributes mentioned more than four times, both links to Profitability only. Several respondents stated that they identified an opportunity to earn money by starting a farm business. Good prerequisites is mentioned in the context of having the practical conditions, having the right timing considered to intergenerational succession, or having the possibility to buy farmland to a reduced price. These Good prerequisites all lead to a greater chance of Profitability.

Some elements do not follow the regular laddering structure. An example is the attribute Produce high-quality food which links directly to the end-value Pride (see Figure 6). The respondents state that you feel proud when producing a high-quality product, i.e., high-quality food. This is the only ladder starting at the attribute level and then links directly to an end-value. When the young farmers are reasoning about Pride, they often refer to doing something for someone else. They feel like they play an important role in the bigger picture, supplying the population with high-quality food and doing something good for the environment, i.e., Reducing climate impact.

The last attribute is Tradition, and refers to that the farm has been within the same family for several generations. Therefore, Tradition is linked to the consequence Property management. Further, the respondents feel proud when managing the property where earlier generations have worked and lived.

Several different attributes lead to Thrive, Reduce climate impact and Responsibility but none of the attributes links to these consequences more than four times. Therefore, no links are displayed in the HVM with the cut-off value 4. Despite this, Thrive has more than four links to Well-being. Therefore, this link is displayed in the HVM. The same situation occurs when analyzing Reduce climate impact and Responsibility. The respondents mention Thrive in the context of Animal interest, Self-employment, Farm business interest, Tradition, and Enjoyable, even though none of these attributes links with Thrive more than four times. The respondents state that Responsibility relates to Self-employment, Animal interest, Produce high-quality food, and Tradition. Reduce climate impact is mentioned in relation to Self-employment, Produce high-quality food and Financial opportunity. For all links, see Appendix 3, and to read the direct and indirect links between all elements in numbers, see the implication matrix in Appendix 4.

The respondents mentioned Profitability 36 times, and thereby, the element plays a central role connected to the decision to invest in a farm business. However, Profitability is considered to be a consequence and thereby partly answer why young farmers decide to invest in farm businesses. Profitability contributes to the young farmers' ability to continue the business, improve the business, and in the end contribute to making the young farmers feel safe. The results indicate that Profitability is important for the young farmers when deciding to invest in a farm business, but economic values are not the main reason behind the decision. In general, the respondents who did not start their farm business through intergenerational succession had a greater focus on Profitability. However, this may depend on the capital intensity in the agriculture sector, and to continue the business Profitability is vital. This is in conformity with Howley *et al.* (2015) claiming farmers' decision-making are affected by both social and economic values. By taking the respondents gender, age, and education into consideration as described by Schwartz (1992), we cannot notice any differences in their answers when analyzing the collected data.

4.4 Analysis based on the Personal value theory

According to the Personal value theory, which is presented in chapter 2, all end-values can be divided into ten value-types (Schwartz, 1992). Three of the seven identified end-values underlying the young farmers' decision to invest in a farm business are categorized into *Hedonism*, which thereby is the most common value-type (see Table 4). Other identified value-types are *Stimulation*, *Self-direction*, *Security*, *Universalism*, *Benevolence*, and *Achievement*.

Table 4, Identified end-values and value-types.

Identified End-Values	Value-type
Well-being (n=60)	Hedonism
Satisfaction (n=35)	Stimulation / Hedonism
Freedom (n=34)	Self-direction
Safety (n=30)	Security
Pride (n=27)	Universalism / Benevolence
Self-fulfillment (n=14)	Hedonism
Confirmation (n=11)	Achievement

Hedonism includes values derived from the need of pleasure related to the satisfaction of enjoying life or achieve a certain goal (Schwartz, 1992). When the young farmers talked about

Well-being, Satisfaction, and Self-fulfillment, they often referred to “*working for myself*”. Their work makes them feel Well-being since they Thrive and work Close to nature. The work includes Variety and is considered to be Challenging. This entails that the respondents experience their work as Energizing and contributes to their feeling of Satisfaction since their work is Enjoyable. The challenging work can also contribute to Personal development and when you Succeed to Self-fulfillment. Self-fulfillment can thereby be seen as a result of achieving a certain goal.

Some end-values are, in conformity with Bardi and Schwartz (2003), harder to categorize and may fit more than one value-type. An example of an end-value that can be categorized into more than one value-type is Satisfaction, which can be categorized both as Hedonism and Stimulation. Stimulation includes values connected to the young farmers’ desire for stimulation and variety to maintain an optimal level of activation (Schwartz, 1992). Some of the young farmers talked about Satisfaction in the context of “*There is always something to do*”, which can be interpreted as they have a desire for stimulation and variety. Another example of an end-value that can be categorized into more than one value-type is Pride since the farmers talked about it in different contexts. Some of the respondents talked about Pride in the context of being proud of managing the family farm and transfer it over to the next generation in a better condition than when they took over it, which they see as a Responsibility and thereby act loyal. In that case, Pride would be categorized as Benevolence since the goal of this value-type is to preserve and enhance the welfare of the people around you. Other respondents talked about Pride in the context of Produce high-quality food for the population and reduce the climate impact, and thereby Pride rather would be categorized as Universalism where the goals are to appreciate and protect the welfare of all people and nature. Important values included in Universalism are unity with nature and protecting the environment. Universalism thereby results in a broader focus compared to the value-type Benevolence.

By analyzing the context of when the young farmers talked about Freedom, it would be categorized as Self-direction since the goal of this value-type is that the farmer has independent thoughts and the action to choose by themselves (Schwartz, 1992). When the young farmers talked about Freedom, it was mainly in the context of being self-employed since “*I control my own time*” and “*No one tells me what to do*”. By investing in a farm business, the young farmers feel free, can be creative, independent, and choose their own goals.

The young farmers often mentioned Safety in the context of being profitable and thereby create stability for themselves and their families. Hence, Safety is categorized into the value-type Security according to the definition of Schwartz (1992). The goals of this value-type can be both national and family security, but in this context, the focus was mainly at the family security. By being profitable, the young farmers could build capital to invest and improve the farm business or to be able to “*handle bad years*” and thereby reduce the risk and continue the business in the long-run. Another end-value linked to Profitability is Confirmation, which the young farmers talked about in the context of “*get a receipt, confirming that what I do is correct*”. Thereby, Confirmation will be categorized as Achievement since the defining goal of this value-type according to the Personal value theory is that the farmer will reach personal success by demonstrating competence according to social standards. And thereby the young farmers feel capable or successful.

5 Discussion and Conclusions

This chapter starts with a summary of the problem, the aim, and the research question. Thereafter, the identified end-values are discussed together with a critical reflection, and the contributions of the study are presented followed by suggestions for future studies. Further, the main conclusions are presented.

5.1 Discussion

Feeding the growing world population is the main function of agriculture and is considered to be a significant challenge in the future (Chavas, 2001). Young farmers are considered to be more productive and efficient than older farmers (Zagata & Sutherland, 2015). Therefore, young farmers play a key role in the future agricultural sector since they can contribute to greater efficiency and innovation, which in turn can increase agricultural production and economic development. Previous research has failed to isolate young farmers as a prior group and instead focused on farmers in general (Zagata & Sutherland, 2015). However, we have in this study managed to isolate young Swedish farmers as a prior group and identified their underlying end-values connected to the investment in their farm businesses. Therefore, we argue the importance of this study to understand why young farmers in Sweden decide to invest in farm businesses. We sought to answer the following question;

Which end-values underlies the decision to invest in farm businesses among young Swedish farmers?

The identified end-values in this study are *Well-being*, *Satisfaction*, *Freedom*, *Safety*, *Pride*, *Self-fulfillment*, and *Confirmation*. In conformity with Schwartz and Bardi (2001), we can state that values are important to understand various socio-psychological phenomena, as to why young farmers decide to invest in a farm business. Building on Schwartz and Bardi (2001; 2003), young farmers' end-values reflect what is important to them and can be seen as desirable goals, varying in importance, and serve as guiding principles in their lives.

Well-being is the most frequently mentioned end-value in this study and is thereby considered to be the most important one. Consequences linked to *Well-being* are Thrive and Close to nature. In addition, the instrumental value Energizing is strongly linked to *Well-being* (see Figure 6). Building on Schwartz's (1992) Personal value theory, *Well-being* is categorized into the value-type Hedonism since it includes values derived from the need of pleasure related to the satisfaction of enjoying life or achieve a certain goal.

Satisfaction is the second most common end-value and is also categorized into the value-type Hedonism of the same reason as mentioned above. This can be interpreted as these end-values are closely connected since both *Well-being* and *Satisfaction* are considered to be Energizing to the young farmers. However, we have chosen to separate those two end-values since the cognitive structures underlying the end-values differ (see Figure 6 and Appendix 2).

Freedom is the third most frequently mentioned end-value among the respondents. Making your own decisions and controlling your own time are fundamental aspects for the studied young farmers. Empowerment is the only element linked to *Freedom*, indicating that it is Empowerment that generates the feeling of *Freedom*. The basis of Empowerment is to be self-employed. Although Self-employment is linked to several other elements, the link to Empowerment and further to *Freedom* are the strongest links in the entire HVM. Therefore, we

consider this ladder to be the main underlying reason why young farmers decide to invest in farm businesses. However, the high number of ladders per respondent confirms the complexity of the decision to invest in a farm business in conformity with Breakwell (2004). Thereby, we claim it is important to consider all elements in the HVM since they all partly answers why the young farmers decided to invest in a farm business. Despite this, thicker lines in the HVM indicates stronger links between the elements and thereby display the importance of the different elements. Freedom is the only end-value categorized into the value-type self-direction, according to the definition of the Personal value theory (Schwartz, 1992). The young farmers have independent thoughts and are able to make decisions by themselves. However, this might not be unique for young farmers but rather connected to being self-employed.

Profitability is the only consequence linked to the end-value *Confirmation*, and refers to that the respondents are “*doing the right thing*” and “*doing a good job*”. In addition, Profitability is also strongly linked to *Safety* and categorized into the value-type Security (Schwartz, 1992). Therefore, we can conclude that Profitability is an important consequence underlying the decision to invest in a farm business. A good economy is vital for the respondents to continue and improve their businesses. The young farmers’ focus on Profitability can be referred to Van Passel *et al.* (2007) and Koteva *et al.* (2009), who suggest that young farmers have stronger economic motivations than older farmers. In addition, the results from Grubbström *et al.* (2014) and Hamilton *et al.* (2015) indicates that the next generation farmers appear to be more focused on farm profitability. The results confirm that young farmers have strong economic motivations. However, we cannot conclude that young farmers have stronger motivations or are more focused on profitability than older farmers. To draw these conclusions, a more comprehensive study is needed to compare farmers’ underlying values in different ages. In addition, the young farmers mentioned Profitability in the context of seeing a Financial opportunity. This emphasizes that young farmers who have decided to invest in farm businesses more recently make an active decision based on financial opportunities and lifestyle expectations, in conformity with the study performed by Villa (1999).

Another interesting aspect of this study is the respondents’ approach to the CAP support. None of the respondents stated that the CAP support was an underlying reason to invest in a farm business, but rather welcomed support, making it possible to expand the business at a faster rate. The respondents stress that they would have invested even if they did not get any economic support. This can be seen as a contradiction to Profitability, which is seen as the most important consequence in the HVM. However, all respondents have applied for economic support and, if granted, invested it to expand the business. Therefore, the existing agricultural decision-making models assuming that all farmers are rational profit maximizers described in Edwards-Jones (2006) may partly correspond with the respondents’ cognitive structures. This is due to that profitability is vital to improve and continue the business, but it is not the single underlying reason why the respondents invested in their farm businesses. Although several respondents state that they would not have invested if they did not believe in a profitable business. Building on Howley *et al.* (2015), economic literature often states that all farmers are rational profit maximizers, this may lead to a misunderstanding of the respondents’ behavior since their decision-making are affected by several different value-types. Thereby, Profitability may be a vital part of the investment decision, but it is not the sole reason underlying the decision to invest in farm businesses.

Pride, the fifth most frequently mentioned end-value, have strong links to the consequences Reduce climate impact, Responsibility, and Property management. In addition, Pride links directly to the attribute Produce high-quality food. Pride is also identified by Key (2005), and Key and Roberts (2009) among farmers, in the context of being proud to own a farm business. In this study, Pride was often mentioned in the context of managing the farm property and

improve the farm business to be able to transfer the farm in greater condition to the next generation in the future. But also in a larger context in terms of reducing the climate impact with Responsibility towards humanity. Thereby, Pride can be categorized into both Universalism and Benevolence according to the definition of Schwartz (1992).

Self-fulfillment is mainly linked to Succeed. It is when the respondents Succeed as a self-employed that they feel Self-fulfillment since they have managed several barriers connected to investing in a farm business. For example, the agricultural sector is capital intensive, which causes economic barriers for young farmers (Williams, 2006; Ingram & Kirwan, 2011). Further, the start-up costs are high, and the expected rates of return are low (Williams, 2006). Self-fulfillment is categorized into the value-type Hedonism, according to Schwartz (1992) since it derives from the need of pleasure related to the satisfaction of enjoying life or achieve a certain goal.

Dumas *et al.* (1995) studied factors that influence the next generation farmers' decision to take over the family farm business despite the barriers connected to farming. Identified values in their study were, for instance, love of the lifestyle, high-quality of life, flexible hours, contact with nature, and a close connection between family and work life. Their results are closely connected to the results of this study. Hence we can claim that it increases the trustworthiness of this study. If other respondents had been selected, the answers might have been different since the study can be considered to be relatively small. However, since the results from the studied young farmers are recurrent and partly in line with the results of Dumas *et al.* (1995), we argue these identified values can be seen as a value-system that applies to more than the studied young Swedish farmers.

5.1.1 Critical reflection

We claim the results of this study are trustworthy since a similar method have been proven to be successful in earlier similar academic studies (Hansson & Lagerkvist, 2015; Hansson & Kokko, 2018). The 30 interviews resulted in a lot of collected data, 215 ladders consisting of 60 different MEC elements. We received an average of 7,17 ladders per respondent and an average of 3,64 elements per ladder. In addition, 55 % of all data is displayed in the HVM, which is considered to be good at the cut-off value 4. However, one should be aware that the study is relatively small. It is important to emphasize that the aim of this study is not to generalize the conclusions for all young farmers, but rather contribute to the understanding of the studied young farmers' cognitive structures and associations between mentioned attributes, consequences and end-values. Another critical reflection worth mentioning is that the study is dependent on our interpretation of the collected data. When performing the phone interviews, the different young farmers used the same word in different contexts. Thereby, the coding process was dependent on our ability to interpret the collected data as mentioned in Chapter 3. Several of the attributes, consequences and underlying values to why the young farmers decided to invest in a farm business were recurrent, which increase the trustworthiness of the results.

5.1.2 Contribution

By using the results of this study to develop simplified mental models further, this study can contribute to a deeper understanding of young farmers' cognitive structures and their behavior. Thereby, it is possible to improve existing decision-making models since most of today's decision-making models are assuming that farmers are profit and utility maximizers (Edwards-

Jones, 2006). Hence, we argue there is a need for greater integration of the young farmers' underlying values in economic models, to increase the understanding of their cognitive structures and thereby better predict young farmers' responses to, e.g., policy changes.

From a policy perspective, this study can be useful to policymakers by providing greater insights for which end-values underlies young farmers' decisions when investing in farm businesses. Since the young farmers' end-values are not solely economic or social values, the conclusions of this study can contribute as a basis when developing new policies targeting young farmers. If policymakers are able to develop policies, e.g., to increase the safety for young entrepreneurial individuals willing to invest in farm businesses, the barriers to enter the agricultural sector and the economic impact of the Young farmer problem can be reduced.

The results of this study also contribute to a brighter picture of the agricultural sector. Based on the interviews and the HVM, we can conclude that the young farmers have a strong belief in the future. Several of the respondents stated that their work in the agricultural sector is Enjoyable and that they saw a Financial opportunity and therefore invested in a farm business since it is possible to make money. We argue that this picture of the Swedish agriculture is not sufficiently communicated to young entrepreneurial individuals today. By communicating the results of this study in marketing of the agricultural sector, this study can contribute to attracting young entrepreneurial individuals to invest in farm businesses in the future and thereby reduce the impact of the Young farmer problem.

5.1.3 Future studies

Based on the discussion, we argue it would be of interest to perform a more comprehensive study with a quantitative methodology and a hard laddering method as a complement to this study. By interviewing more respondents, the validity would increase further, and the results would be more generalizable. To verify the results of this study, a similar study could also be conducted among the same respondents in the future. Another interesting study could be to perform similar studies within the EU-countries and investigate if the young farmers' cognitive structures differ among the countries.

We cannot notice any differences in the respondents' answers when taking the respondents gender, age, education, or type of production into consideration when analyzing their underlying values. Hence, it would be of interest to perform more comprehensive studies, identifying the underlying end-values of farmers based on their gender, age, education, or type of production.

5.2 Conclusions

The identified end-values which underlies the decision to invest in farm businesses among the interviewed young farmers are *Well-being*, *Satisfaction*, *Freedom*, *Safety*, *Pride*, *Self-fulfillment*, and *Confirmation*. The studied young farmers decide to invest in farm businesses mainly since they want to be self-employed, have an interest in farm business, and think the work is Enjoyable. They have the opportunity to Profitability, Empowerment, and Personal development. These attributes and consequences lead to the most common underlying end-values of the young farmers; *Well-being*, *Satisfaction*, and *Freedom*.

Based on the analysis, we can conclude that the most common ladder that was identified and mentioned by almost every respondent is Self-employment leading to Empowerment and then

to Freedom as the end-value. This ladder can thereby be seen as the main reason why young farmers decide to invest in farm businesses, but it is of course not the sole reason. Freedom was mentioned 34 times mainly linked to Empowerment, i.e., the young farmers emphasized the importance of being able to “*control my own time*” and “*make my own decisions*”.

Well-being is the most common end-value, mentioned 60 times by the respondents and are mainly linked to Thrive, Close to nature, and Energizing. Thereby, Well-being can be interpreted as the most important end-value underlying the decision to invest in farm businesses among the young farmers in this study.

Building on Howley *et al.* (2015), we argue young farmers’ behavior may be misrepresented if assuming all young farmers’ decisions are solely based on profit maximization since the young farmers’ decisions are affected by several different value-types. Based on the Personal value theory, *Hedonism* is the most common value-type among the studied young farmers. Well-being, Satisfaction, and Self-fulfillment are categorized into this value-type. We can thereby conclude that the young farmers’ underlying values, when deciding to invest in a farm business, derives from the need of pleasure related to the satisfaction of enjoying life and achieve certain goals in conformity with the Personal value theory (Schwartz, 1992). Hence, we argue it is crucial to include social values in economic decision-making models, to get a true picture of the young farmers’ cognitive structures.

References

Articles and Publications

- Allwood, C. M. (2004). *Perspektiv på kvalitativ metod*. Studentlitteratur, Lund, pp. 9-35.
- Bardi, A. and Schwartz, S.H. (2003). Values and behavior: strength and structure of relations. *Pers. Soc. Psychol. Bull.*, vol. 29, pp. 1207–1219.
- Bech-Larsen, T. and Nielsen, N.A. (1999). A comparison of five elicitation techniques for elicitation of attributes of low involvement products. *J. Econ. Psychol.*, vol. 20, pp. 315–341.
- Bika, Z. (2007). The territorial impact of the farmers' early retirement scheme. *Sociologia Ruralis*, vol. 47(3), pp. 246-272.
- Botschen, G., Thelen, E. M. and Pieters, R. (1999). Using means-end structures for benefit segmentation an application to services. *European Journal of Marketing*, vol. 33, pp. 38-58.
- Breakwell, G. (2004). *Doing social psychology research*. 1st ed. Oxford, UK: The British Psychological Society and Blackwell Publishing Ltd.
- Bryman, A. and Bell, B. (2015). *Business Research Methods*. New York: Oxford University Press Inc.
- Burton, R.J.F. (2006). An alternative to farmer age as an indicator of life-cycle stage: the case for a farm family age index. *J. Rural Stud.*, vol. 22, pp. 485-492.
- Caskie, P., Davis, J., Campbell, D. and Wallace, M. (2002). *An Economic Study of Farmer Early Retirement and New Entrant Schemes for Northern Ireland*. Queen's University Belfast.
- Charmaz, K. (2006). *Constructing Grounded Theory*. London: Sage Publications.
- Chavas, J.P. (2001). *Structural change in agricultural production: economics, technology and policy*. Taylor Hall, University of Wisconsin, Madison.
- Comer, S., Ekanem, E., Muhammad, S., Singh, S. and Tegegne, F. (1999). Sustainable and conventional farmers: a comparison of socio-economic characteristics, attitude, and beliefs. *J. Sustain. Agric.*, vol. 15, pp. 29-45.
- Costa, A.I.A., Dekker, M. and Jongen, W.M.F. (2004). An overview of means-end theory: potential application in consumer-oriented food product design. *Trends Food Sci. Technol.*, vol. 15(7-8), pp. 403–415.
- Darnhofer, I., Schneeberger, W. and Freyer, B. (2005). Converting or not converting to organic farming in Austria: farmer types and their rationale. *Agric. Hum. Values.*, vol. 22(1), pp. 39–52.
- Davis, J., Caskie, P. and Wallace, M. (2009). Economics of farmer early retirement policy. *Appl. Econ.*, vol. 41, pp. 35–43.

Dumas, C., Dupuis, J. P., Richer, F. and St.-Cyr, L. (1995). Factors That Influence the Next Generation's Decision to Take Over the Family Farm. *Family Business Review*, vol. 8(2), pp. 99-120.

Edwards-Jones, G. (2006). Modelling farmers' decision-making: concepts, progress and challenges. *Anim. Sci.*, vol. 82, pp. 783–790.

Gengler, C.E., Klenosky, D.B. and Mulvey, M.S. (1995). Improving the graphic representation of means-end results. *Int. J. Res. Mark.*, vol. 12, pp. 245–256.

Gloy, B. A. and LaDue, E. L. (2003). Financial management practices and farm profitability. *Agricultural Finance Review*, vol. 63(2), pp.157-174.

Goeller, D. J. (2007). Barriers to Farm/Ranch Business Succession. *Cornhusker Economics*. 336.

Gorton, M., Dourain, Douarin, E., Davidova, S. and Latruffe, L. (2008). Attitudes to agricultural policy and farming futures in the context of the 2003 CAP reform: a comparison of farmers in selected established and new member states. *J. Rural Stud.*, vol. 24, pp. 322-336.

Grubbström, A., Stenbacka, S. and Joosse, S. (2014). Balancing family traditions and business: gendered strategies for achieving future resilience among agricultural students. *J. Rural Stud.*, vol. 35, pp. 152-161.

Grunert, K. and Grunert, S. (1995). Measuring subjective meaning structures by the laddering method: theoretical considerations and methodological problems. *International Journal of Research in Marketing*, vol. 12, pp. 209-225.

Gutman, J. (1982). A means-end chain model based on consumer categorization processes. *Journal of Marketing*, vol. 46, pp. 60-72.

Hansson, H. and Lagerkvist, C.J. (2015). Identifying use and non-use values of animal welfare: evidence from Swedish dairy agriculture. *Food Pol.*, vol. 50, pp. 34–42.

Hansson, H. and Kokko, S. (2018). Farmers' mental models of change and implications for farm renewal – A case of restoration of a wetland in Sweden. *Journal of Rural Studies*, vol. 60, pp. 141-141.

Hamilton, W., Bosworth, G. and Ruto, E. (2015). Entrepreneurial younger farmers and the “young farmer problem” in England. *Agriculture & Forestry*, vol. 61(4), pp. 61-69.

Howley, P., Buckley, C., Donoghue, C. O. and Ryan, M. (2015). Explaining the economic ‘irrationality’ of farmers' land use behaviour: The role of productivist attitudes and non-pecuniary benefits. *Ecological Economics*, vol. 109, pp. 186–193

Ingram, J. and Kirwan, J. (2011). Matching new entrants and retiring farmers through farm joint ventures: Insights from the fresh start initiative in Cornwall, UK. *Land Use Policy*, vol. 28, pp. 917-927.

- Key, H. (2005). How much do farmers value their independence? *Agric. Econ.*, vol. 33, pp. 117–126.
- Key, N., Roberts, M.J. (2009). Nonpecuniary benefits to farming: implications for supply response to decoupled payments. *Am. J. Agric. Econ.*, vol. 91(1), pp. 1–18.
- Kinsella, J., Wilson, S., de Jong, F. and Renting, H. (2000). Pluriactivity as a livelihood strategy in Irish farm households and its role in rural development. *Sociol. Rural.*, vol. 40, pp. 481–496.
- Koteva, N., Bachev, H., Rissina, M. and Mladenova, M. (2009). Assessment of impact of EU CAP on Farms. *Agric. Econ. Manag.*, vol. 54, pp. 16–25.
- Kvale, S. and Brinkmann, S. (2014). *Den kvalitativa forskningsintervjun*. 3rd ed., Studentlitteratur, Lund. ISBN: 9789144101675.
- Leppard, P., Russell, C.G. and Cox, D.N. (2004). Improving means-end-chain studies by using a ranking method to construct hierarchical value maps. *Food Qual. Prefer.*, vol. 15, pp. 489–497.
- Lin, C. (2002). Attribute-consequence-value linkages: A new technique for understanding customers' product knowledge. *Journal of Targeting, Measurement and Analysis for Marketing*, vol. 10(4), pp. 339–352.
- Lobley, M., Butler, A. and Reed, M. (2009). The contribution of organic farming to rural development: an exploration of the socio-economic linkages of organic and non-organic farms in England. *Land Use Policy*, vol. 26, pp. 723–735.
- Lobley, M., Baker, J., Whitehead, I. (2010). Farm Succession and Retirement: Some International Comparisons. *Journal of Agriculture, Food Systems, and Community Development*, pp. 49–64.
- Malterud, K. (2001). The art and science of clinical knowledge: evidence beyond measures and numbers. *The Lancet*, vol. 358, pp. 397–400.
- Mazorra, A. (2000). Analysis of the evolution of farmers' early retirement policy in Spain. The case of Castille and Leon. *Land Use Policy*, vol. 17, pp. 113–120.
- McDonald, R., Macken-Walsh, A., Pierce, K. and Horan, B. (2014). Farmers in a deregulated dairy regime: insights from Ireland's new entrants Scheme. *Land Use Policy*, vol. 41, pp. 21–30.
- Moragues-Faus, A. (2014). How is agriculture reproduced? Unfolding farmers' interdependencies in small-scale Mediterranean olive oil production. *J. Rural Stud.*, vol. 34, pp. 139–151.
- Novick, G. (2007). Is there a bias against telephone interviews in qualitative research? *Research in Nursing & Health*, vol. 31, pp. 391–398.
- Olson, C.J and Reynolds, J.T. (2001). *Understanding consumer decision making: the means-End approach to marketing and advertising strategy*. Mahwah, New Jersey: Lawrence Erlbaum Associates.

- Pannell, D.J., Marshall, G.R., Barr, N., Curtis, A., Vanclay, F. and Wilkinson, R. (2006). Understanding and promoting adoption of conservation practices by rural landholders. *Aust. J. Exp. Agric.*, vol. 46, pp. 1407–1424.
- Peter, J. P. and Olson, C. J. (2010). *Consumer Behavior & Marketing Strategy*. 9th ed., New York: McGraw-Hill/Irwin.
- Pietola, P., Väre, M. and Lansink, A. (2003). Timing and type of exit from farming: farmers' early retirement programmes in Finland. *Eur. Rev. Agric. Econ.*, vol. 30, pp. 99–116.
- Reynolds, T.J. and Gutman, J. (1988). Laddering theory, method, analysis, and interpretation. *Journal of advertising research*, vol. 28(1), pp. 11-31.
- Robson, C. (2011). *Real World Research: a resource for user of social research methods in applied settings*, 3rd ed., John Wiley and Sons Ltd.
- Roccas, S., Sagiv, L., Schwartz, S. H. and Knafo, A. (2002). The big five personality factors and personal values. *Personality and social psychology bulletin*, vol. 28(6), pp. 789-801.
- Rokeach, M. (1973). *The nature of human values*. New York: Free Press.
- Rossier, R. (2010). *Farm succession Switzerland: from generation to generation (Chapter 5)*. In: Lobley, M., Baker, J.R., Whitehead, I. (Eds.), *Keeping it in the Family. International Perspectives on Succession and Retirement on Family Farms*. Ashgate, Aldershot, pp. 75-92.
- Rubin, H. J. and Rubin, I. S. (2005). *Qualitative Interviewing – The art of hearing data*. 2nd Ed., Thousand Oaks, California: Sage Publications, Inc.
- Schwartz, S. H. (1992). Universals in the content and structure of values: Theoretical advances and empirical tests in 20 countries. In: M. P. Zanna (Ed.), *Advances in experimental social psychology*. New York. Academic Press. vol. 25, pp. 1-65.
- Schwartz, S. H. (2012). An Overview of the Schwartz Theory of Basic Values. *Online Readings in Psychology and Culture*, vol. 2(1).
- Schwartz, S.H. and Bardi, A. (2001). Value hierarchies across cultures: Taking a Similarities Perspective. *Journal of Cross-cultural Psychology*, vol. 32 (3), pp. 268-290.
- Schwartz, S. H. and Bilsky, W. (1987). Toward a psychological structure of human values. *Journal of Personality and Social Psychology*, vol. 53, pp. 550-562.
- Schwartz, S. H. and Bilsky, W. (1990). Toward a theory of the universal content and structure of values: Extensions and cross-cultural replications. *Journal of Personality and Social Psychology*, vol. 58, pp. 878-891.
- Scott, W. A. (1969). Structure of natural cognitions. *Journal of Personality and Social Psychology*, vol. 12(4), pp. 261-278.
- Shleifer, A. (2000). *Inefficient Capital Markets: An Introduction to Behavioral Finance*. OUP Oxford. ISBN: 9780191606892.

- Stenholm, P. and Hytti, U. (2014). In search of legitimacy under institutional pressures: A case study of producer and entrepreneur farmer identities. *Journal of Rural Studies*, vol. 35, pp. 133-142.
- Sturges, J.E., and Hanrahan, K.J. (2004). Comparing telephone and face-to-face qualitative interviewing: A research note. *Qualitative Research*, vol. 4, pp. 107–118.
- Tey S.Y., Arsil P., Brindal, M., Shamsudin, N.M., Radam, A., Hadi A., Rahendran, N. and Lin C.D. (2015). A means-end chain approach to explaining the adoption of good agricultural practices certification schemes: The case of Malaysian vegetable farmers. *Agricultural environment ethics*, vol. 28, pp. 977-990.
- Trost, J. (2010). *Kvalitativa intervjuer*. Lund, Studentlitteratur.
- Van Passel, S., Nevens, F., Mathijs, E. and Van Huylenbroeck, G. (2007). Measuring farm sustainability and explaining differences in sustainable efficiency. *Ecol. Econ.*, vol. 62, pp. 149-161.
- Vanclay, F. (2004). School principles for agricultural extension to assist in the promotion of natural resource management. *Aust. J. Exp. Agric.*, vol. 44, pp. 213–222.
- Vanslembrouck, I., Van Huylenbroeck, G. and Verbeke, W. (2002). Determinants of the willingness of Belgian farmers to participate in agri-environmental measures. *Journal of Agricultural Economics*, vol. 53(3), pp. 489-511.
- Veludo-de-Oliveira, T. M., Ikeda, A. A. and Campomar, M. C. (2006). Discussing laddering application by the means-end chain theory. *The Qualitative Report*, vol. 11(4), pp. 626-642.
- Vesala, H.T. and Vesala, K.M., (2010). Entrepreneurs and producers: Identities of Finnish farmers in 2001 and 2006. *J. Rural Stud.*, vol. 26, pp. 21-30.
- Villa, M. (1999). Born to be farmers? changing expectations in Norwegian farmers' life courses. *Sociol. Rural.*, vol. 39, pp. 328-342.
- Vogl, S. (2013). Telephone versus face-to-face interviews: mode effect on semi-structured interviews with children. *Sociological Methodology*, vol. 43(1), pp 133–177.
- Vriens, M. and Hofstede, F. T. (2000). Linking attributes, benefits, and consumer values. *Journal of Marketing Research*, vol. 12(3), pp. 4-10.
- Williams, F. (2006). *Barriers facing new entrants to farming – an emphasis on policy*, Royal Geographical Society – IBG Annual Conference, London, UK. pp. 1–10.
- Willock, J., Deary, I.J., McGregor, M.M., Sutherland, A., Edwards-Jones, G., Morgan, O., Dent, B., Grieve, R., Gibson, G. and Austin, E. (1999). Farmers' attitudes, objectives, behaviors, and personality traits: The Edinburgh study of decision making on farms. *Journal of Vocational Behavior*, vol. 54(1), pp. 5-36.
- Xian, H. (2008). Lost in translation? Language, culture and the roles of translator in cross cultural management research, *Qualitative Research in Organizations and Management: An International Journal*, vol. 3, pp. 231 – 245.

Zagata, L. and Sutherland, L. (2015). Deconstructing the ‘young farmer problem in Europe’: Towards a research agenda. *Journal of Rural Studies*, vol. 38, pp. 39-51.

Reports

Agrifood, (2006). *Lantbruket & konkurrenskraften*. Rapport 2006:4. Livsmedelsekonomiska institutet. Available:

http://www.agrifood.se/Files/SLI_Rapport_20064.pdf [2019-02-06]

DGIP – Directorate-General for Internal Policies, (2012). *EU Measures to Encourage and Support New Entrants*. In: Policy Department B Structural and Cohesion Policies. Agriculture and Rural Development. Available:

[http://www.europarl.europa.eu/RegData/etudes/note/join/2012/495830/IPOL-AGRI_NT\(2012\)495830_EN.pdf](http://www.europarl.europa.eu/RegData/etudes/note/join/2012/495830/IPOL-AGRI_NT(2012)495830_EN.pdf) [2019-02-11].

EC – European Commission, (2012). *Agricultural Economic Briefs - Generational Renewal In EU Agriculture: Statistical Background* Available:

https://ec.europa.eu/agriculture/sites/agriculture/files/rural-area-economics/briefs/pdf/06_en.pdf [2019-02-17]

EC – European Commission, (2013a). *Overview of CAP Reform 2014-2020*. Available:

https://ec.europa.eu/agriculture/sites/agriculture/files/policy-perspectives/policy-briefs/05_en.pdf [2019-02-08]

EC – European Commission, (2013b). *Regulation (EU) No 1305/2013 of the European Parliament and of the council of 17 December 2013 on support for rural development by the European Agricultural Fund for Rural Development (EAFRD) and repealing Council Regulation (EC) No 1698/2005*. Available:

<https://eur-lex.europa.eu/legal-content/EN/TXT/HTML/?uri=CELEX:32013R1305&from=en> [2019-02-13]

EC – European Commission, (2015a). *Price developments and links to food security - price level and volatility*. EU Agricultural Markets Briefs, No. 5. Available:

https://ec.europa.eu/agriculture/sites/agriculture/files/markets-and-prices/market-briefs/pdf/05_en.pdf [2019-02-21]

EC – European Commission, (2015b). *Young farmers’ needs in Sweden*. Available:

<https://ec.europa.eu/agriculture/sites/agriculture/files/external-studies/2015/young-farmers/country-reports/annex-i.27-sweden.pdf> [2019-02-06]

EC – European Commission, (2015c). *Needs of young farmers*. Report I of the Pilot project: Exchange programmes for young farmers. Available:

https://ec.europa.eu/agriculture/sites/agriculture/files/external-studies/2015/young-farmers/final-report-1_en.pdf [2019-02-14]

EC – European Commission, (2017a). *Young farmers in the EU – structural and economic characteristics*. Agricultural and Farm Economics Briefs No 15, Oct 2017. Available:

https://ec.europa.eu/agriculture/sites/agriculture/files/rural-area-economics/briefs/pdf/015_en.pdf [2019-02-13]

EC – European Commission, (2017b). *Study on risk management in EU Agriculture*, EUR 2017.1740 EN. Available:

<https://ec.europa.eu/agriculture/sites/agriculture/files/external-studies/2017-risk-management/report-study-on-risk-management-eu-agri.pdf> [2019-02-06]

Eurostat, (2011). *Agricultural Census 2010 - Main Results*. Available:

https://ec.europa.eu/eurostat/statistics-explained/index.php?title=Archive:Agricultural_census_2010_-_main_results#Agricultural_holdings [2019-02-06]

FAO – Food and Agriculture Organization of the United Nations, (2009). *Global agriculture towards 2050*. Available:

http://www.fao.org/fileadmin/templates/wsfs/docs/Issues_papers/HLEF2050_Global_Agriculture.pdf [2019-02-20]

FAO – Food and Agriculture Organization of the United Nations, (2018). *The State of Agricultural Commodity Markets 2018*. Agricultural trade, climate change and food security. Rome. Available: <http://www.fao.org/3/I9542EN/i9542en.pdf> [2019-02-21]

Regeringen, (2017). *En livsmedelsstrategi för Sverige – fler jobb och hållbar tillväxt i hela landet*. Kortversion av regeringens proposition 2016/17:104. Available:

https://www.regeringen.se/4908a0/contentassets/89c5b3e5d23f473d843d12f12379d07b/livsm edelsstrategin_kortversion_170130.pdf [2019-02-06]

SJV – Jordbruksverket (Swedish board of Agriculture), (2003). *Hur går det för svenskt jordbruk – en jämförelse med några konkurrentländer*. Rapport 2003:7. Available:

https://www.jordbruksverket.se/download/18.7502f61001ea08a0c7fff102457/1370042873254/Rapport2003_7.pdf [2019-02-19]

SJV – Jordbruksverket (Swedish board of Agriculture), (2017). *Full-time farming in Sweden 2016*. JO 65 SM 1701. Available:

https://www.jordbruksverket.se/webdav/files/SJV/Amnesomraden/Statistik,%20fakta/Foretag%20och%20foretagare/JO65/JO65SM1701/JO65SM1701_ikortadrag.htm [2019-02-20]

SJV – Jordbruksverket (Swedish board of Agriculture), (2018). *Animalieproduktion*. Års- och månadsstatistik 2018:12. Available:

<http://www.jordbruksverket.se/webdav/files/SJV/Amnesomraden/Statistik,%20fakta/Animalieproduktion/JO48SM1902/JO48SM1902.pdf> [2019-02-19]

USDA – United States Department of Agriculture, (2004). *Decoupled payments in a changing policy setting*. Agricultural Economic Report No. AER838, USDA, Washington, DC. Available: <http://ageconsearch.umn.edu/bitstream/33981/1/ae040838.pdf> [2019-03-07]

Internet sources

EC – European Commission, (2019a). *The common agricultural policy at a glance*. Available:

<https://ec.europa.eu/info/food-farming-fisheries/key-policies/common-agricultural-policy/cap-glance> [2019-02-14]

EC – European Commission, (2019b). *Young farmers*. Available: https://ec.europa.eu/agriculture/cap-funding/young-farmers_en [2019-01-30]

Harvard Business Review, (2016). *Global Demand for Food Is Rising. Can We Meet It?* Available: <https://hbr.org/2016/04/global-demand-for-food-is-rising-can-we-meet-it> [2019-02-06]

Regeringen, (2017). *Sveriges första livsmedelsstrategi har klubbats i riksdagen*. Available: <https://www.regeringen.se/pressmeddelanden/2017/06/sveriges-forsta-livsmedelsstrategi-har-klubbats-i-riksdagen/> [2019-02-19]

SJV – Jordbruksverket (Swedish Board of Agriculture), (2013). *Statistics, average age Sweden*. Available: <https://jordbruketisiffror.wordpress.com/2013/06/25/heltidsjordbrukarnas-medelalder-ar-55-ar/> [2019-01-29]

SJV – Jordbruksverket (Swedish Board of Agriculture), (2019a). *Statistics, Antal jordbruksföretag och areal åkermark efter driftsinriktning och heltid/deltid, riket. År 2003-2016*. Available: http://statistik.sjv.se/PXWeb/pxweb/sv/Jordbruksverkets%20statistikdatabas/Jordbruksverkets%20statistikdatabas_Jordbruksforetag_Heltidsjordbruket%20i%20Sverige/JO0109D3.px/?rxid=5adf4929-f548-4f27-9bc9-78e127837625 [2019-01-29]
Excel: <http://statistik.sjv.se/PXWeb/sq/7fd2fed0-47a0-4de0-b4c1-d512798ed8a9>

SJV – Jordbruksverket (Swedish Board of Agriculture), (2019b). *Statistics, Farmers in Sweden by age 1996 – 2016*. Available: http://statistik.sjv.se/PXWeb/pxweb/sv/Jordbruksverkets%20statistikdatabas/Jordbruksverkets%20statistikdatabas_Jordbruksforetag_Jordbruksforetagare/JO0106F5.px/chart/chartViewLine/?rxid=5adf4929-f548-4f27-9bc9-78e127837625 [2019-02-22].

SJV – Jordbruksverket (Swedish Board of Agriculture), (2019c). *Statistics, price of tillable land*. Available: http://www.jordbruksverket.se/webdav/files/SJV/Amnesomraden/Statistik,%20fakta/Priser%20och%20prisindex/JO38/JO38SM1801/JO38SM1801_ikortadrag.htm [2019-02-05]

UN – United Nations, (2017). *World Population Prospects. The 2017 Revision*. United Nations, Department of Economic and Social Affairs, Population Division. New York: United Nations. Available: https://population.un.org/wpp/Publications/Files/WPP2017_KeyFindings.pdf [2019-02-06]

Appendix 1 – Questionnaire

Part 1

Name?

Age?

Background/ Education?

Region?

Year of investment in a farm business? First time?

Have applied for or have you received any young farmers support through CAP?

Did you inherit (Intergenerational succession) or buy (New entrant) the farm business?

Farmland area? (hectare)

Owning or leasing the land?

Turnover last fiscal year?

Main type of production?

Part 2

Why did you decide to invest in a farm business?

//Why was ...X... important to you?//

//Can you develop?//

//More reasons underlying the decision to invest in a farm business?//

Can you tell more about your thoughts regarding the farm business investment, before the investment was made?

//Why was ...X... important to you?//

What do you appreciate with your profession?

//Why is ...X... important to you?//

Did you ever consider not to invest in a farm business? If not, why? What made you change your mind?

//You said ...X... was important to you, why is that?//

Appendix 2 – Coding table

Attributes

Animal interest	Animal interest Fun to work with animals
Self-employment	Self-employment Want to run my own business Not to be employed Work for myself Want to lead a farm business
Enjoyable	Enjoyable Work with what I think is enjoyable Fun
Farm business interest	Farm business interest Interest in agriculture machines Farm business is enjoyable Interest in what you work with
Good prerequisites	Good prerequisites Good practical prerequisites Buy the farm to reduced price Good timing for the farm succession
Financial opportunity	Financial opportunity High demand for milk Opportunity for good income Lower farmland prices Opportunity to improve parents farm business
Produce high-quality food	Produce high-quality food Produce a good product
Tradition	Tradition Family farm Born and raised on the farm

Consequences

Empowerment	Empowerment Control my own time Control my own situation Make decisions on my own Work on my terms
Variety	Variety Different work every week Work in the office and outside

	Seasonal work Never being bored
Profitability	Profitability Opportunity to earn money Take out a good salary Good economy in business Good economic result Can afford to do things Can afford leisure time
Business improvement	Business improvement Improve the production Develop business for the future Invest in value-enhancing measures Invest in new technology
Reduce climate impact	Reduce climate impact Invest in more eco-friendly techniques Do something good for the climate
Thrive	Thrive Thrive with what you are doing
Reach goals	Reach goals Work towards goals Goals and feedback
Close to nature	Close to nature Work close to nature Being outside close to nature
Succeed	Succeed Proving something to the bank
Challenging	Challenging Problem solving
Personal development	Personal development Learn more Become better Get better at your job Grow as an individual
Responsibility	Responsibility Economical responsibility Social responsibility Historic responsibility
Property management	Property management Manage previous generations work on the farm Manage farmland and forest

Love to the location of the farm

Values

Energizing

Energizing
Motivating
Stimulating
Create incentives
Gives a kick
Makes me get out of bed in the morning

Continue business

Continue business
Continue to exist
Survive

Freedom

Freedom
No limits
Be able to do whatever you want
Freedom with responsibility

Well-being

Well-being
Feel good
Get a good feeling
Positive feeling

Self-fulfillment

Self-fulfillment
Be happy with yourself

Satisfaction

Satisfaction
Have a good life
Stimulating

Safety

Safety
Be able to handle bad years
Feel safe

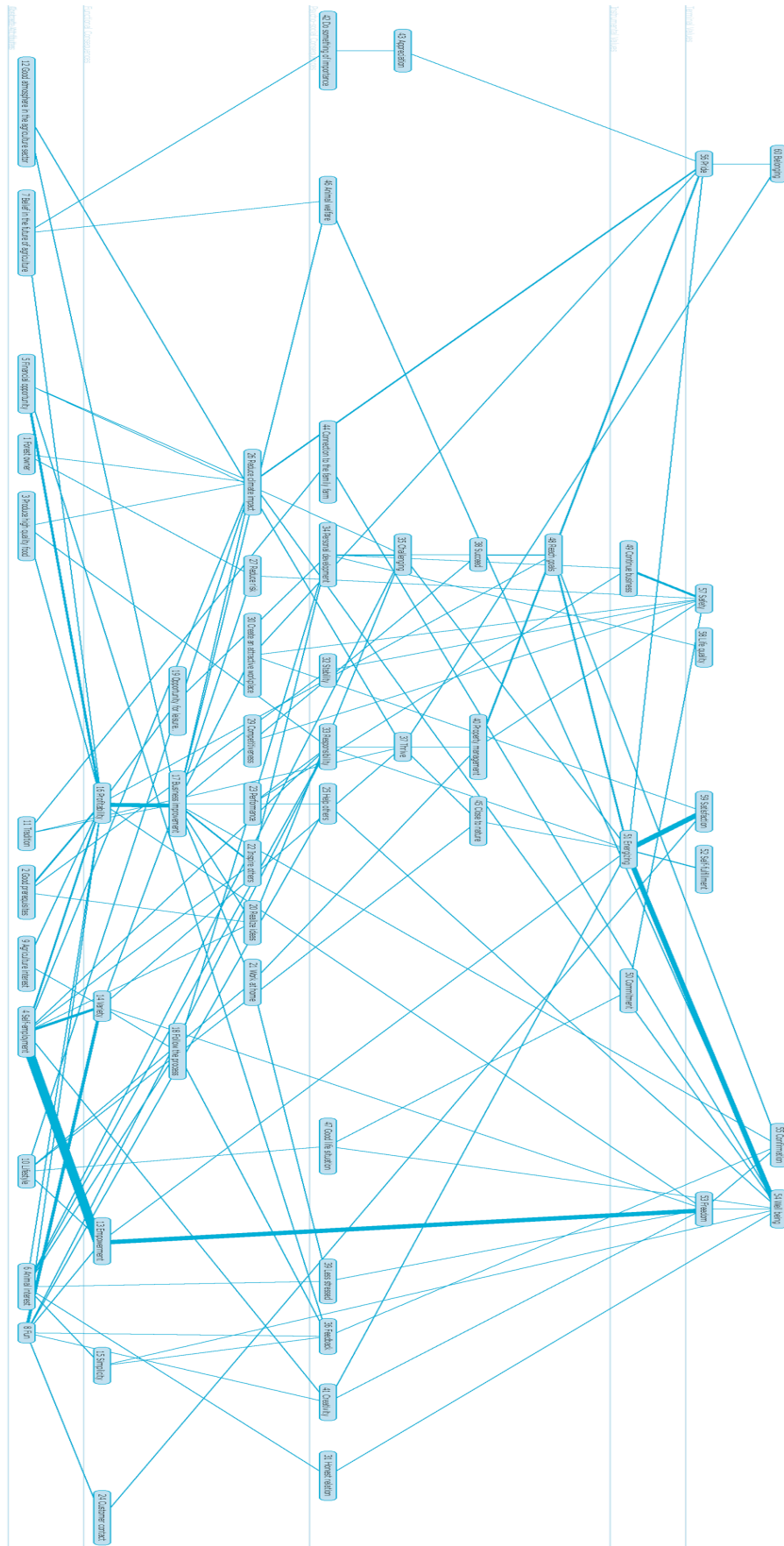
Confirmation

Confirmation
Receipt on that you do the right thing
Receipt on that you are doing a good job

Pride

Pride
Feel proud

Appendix 3 – HVM, Cut-off value 0



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[illegible]