



Value creation for sustainable rural development - perspectives of entrepreneurship in agriculture

Jennie Cederholm Björklund

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”Källa: Skara kommun, ur Skara Vision 2025, Vi främjar entreprenörskapet.”

“I’m no prophet. My job is making windows where there were once walls.”

Foucault

Acknowledgements

Not so very many years ago, I was not even considering a doctorate. After 15 years of working in management positions in the private agricultural sector, I began working within an advisory organisation, and through this I was introduced to research and the academic world. It is not an understatement to say that this was a head-on collision between completely different worlds. I have always had the utmost respect for all the people who take on small businesses - with the responsibility, the risks and the work it entails - and who at the same time manage to be good leaders with happy staff who thrive and develop in their work. Furthermore, being a farmer, and running a company in a sector that is constantly declining and, in addition, irrevocably located in the countryside with the high level of social responsibility this entails, imposes enormous demands on owners, managers and families. In 2011, I moved to a rural municipality and began to realise the difference between living and running businesses in the countryside as compared to in a city.

I am passionate about developing people, companies and communities in rural areas, so the choice of topic for my thesis simply reflects my interests. The beginning of this work was guided by the funding I had at the time however, via a scholarship, I was able to focus on what interests me, makes an academic contribution and at the same time is of practical use to both farmers and Swedish rural development. I have greatly appreciated being employed by the Rural Economy and Agricultural Society in Halland and thus not being in a position of dependency to anyone in the academic world. I especially wish to thank my CEO, Gun Olsson, who has meant a lot to me and who has supported, inspired and opened doors for me. She has always believed in me and my ability and sought my best in all situations. I would also like to thank my supervisors Jeaneth Johansson and John Lindgren, who guided me through the work of the thesis and contributed with valuable feedback and Maya Hoveskog who reviewed and provided valuable feedback during this process. In addition, I would like to draw attention to Jonas Gabrielsson, who is the best teacher I worked under - in all my master's or doctoral courses. Jonas, you possess tremendous theoretical knowledge and you have the ability to teach in a way that makes me both understand and find your subject interesting.

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I am extremely grateful for all the opportunities I have been given to collect my empirical data. A great thank you to all the farmers and individuals within the Swedish support system who I have been allowed to observe in different meetings and constellations, and for giving me your time for my interviews. It has been a privilege and a pleasure to become acquainted with your thoughts and reflections about your life, business, development, roles and organisations.

Jennie Cederholm Björklund
December 2019

Abstract

Entrepreneurship and innovation are regarded as key factors in the development of society - not least in the development of sustainable rural areas, where they are emphasised by both authorities and research. This thesis is situated in this field of inquiry and studies entrepreneurship in agriculture. It explores how we can further develop both agriculture and sustainable rural areas. Farmers have traditionally played a significant role in rural areas and rural development, and still do. However in pace with societal development and the reduced number of farms and farm production, their role has changed. Today, they are considered as raw material producers, being the first link in a food chain, and active in landscape conservation in the countryside. However, agriculture plays a significant role in rural development and in Sweden, authorities strive for development of sustainable rural areas by encouraging economic growth and innovation within and between companies (business models, value chains etc.). They work with economic growth strategies, but both their management and results are criticised (OECD, 2019). This thesis states that greater contextualized knowledge is required to facilitate sustainable rural and agricultural development. Against this background, the purpose of this thesis is to *explore entrepreneurship in agriculture from different perspectives, to find mechanisms affecting value creation for sustainable rural development*.

To meet the research purpose, Swedish agricultural entrepreneurship was studied from different perspectives and data was collected with different methods enabling significant triangulation of data. Studies of challenges in entrepreneurship and sustainable rural development were conducted from individual farmer and business perspectives as well as from the individual and organisational levels of actors within the support system, actors such as advisors, authorities, policy makers and officials. Thus, it was possible to explore perspectives on entrepreneurship in agriculture and identify mechanisms and structures affecting value creation for sustainable rural development. Mechanisms can be explained as underlying, invisible and sometimes unconscious and non-rational factors, feelings, norms, values or attitudes that affect behaviour in various ways.

The key theories and literature covered included the concept of entrepreneurship with the intertwined sub-concepts of innovation and management at individual, business, organisational and societal levels. The thesis probed under the surface of rural development, exploring agricultural development at business level by using the concepts of Sustainable Entrepreneurship, Business Model Innovation and Barriers to Sustainable Business Model Innovation when exploring the challenges farmers face. The concepts of Self-leadership, Emotional Intelligence and Entrepreneurial Orientation helped to explore how challenges are approached, by for example understanding mechanisms concerned with feelings and mind-set. Further, the thesis also studied how entrepreneurship was encouraged and supported by the agricultural support system, and, with help from the Complexity Leadership Theory, established the urgent need of adaption to environmental changes and the creation of innovation within the system. The concepts of Agricultural and Rural Entrepreneurship and Embeddedness helped in understanding and shed light on the importance of considering the mutual influence and interplay between farmers, actors within the support system, embeddedness in context and rural entrepreneurship.

This thesis makes several contributions. It extends knowledge about entrepreneurship in agriculture by highlighting the importance of understanding embeddedness and the concept of agricultural sustainability, and by this providing evidence of the importance of including agriculture in entrepreneurship research. Consequently, this thesis has another viewpoint than previous research which states that farmers are not entrepreneurial and has overlooked agriculture in entrepreneurship research.

Firstly, it shows that farmers, to a very considerable degree, contribute to sustainable rural development and also play the role of enabler for rural entrepreneurship. Second, by exploring the support system, and thereby providing insights into the challenges within the system, in the organisations and between the organisations, this thesis shows transparency and improved understanding of challenges in for example communication, trust, management and culture. Further, a model contributes suggestions for how to improve the system and create innovation to enable encouragement of entrepreneurship in agriculture. Third, this thesis contributes to business model research by illustrating the importance of including and reflecting on embeddedness in context and the understanding of agricultural sustainability in business model innovation. Hence, this thesis extends previous business model research which mainly considered agriculture as the first step in a food production chain, exposed to the same challenges as other non-agricultural companies further up the value chain. By providing insights about challenges to farmers' entrepreneurship, and how these challenges can be approached as well as how entrepreneurship can be encouraged and supported in agriculture, this thesis can contribute to policies and strategies shifting focus from primarily trying to transform farmers into traditional entrepreneurs to taking advantage of the enabling role played by farmers. This thesis contributes to show the diversity in entrepreneurship, by providing understanding of entrepreneurship in agriculture, where value creation extends far beyond individual companies and competitive advantages, and hence impacts sustainable rural development.

Sammanfattning

Entreprenörskap och innovation ses som nyckelfaktorer i samhällsutvecklingen – inte minst i utvecklingen av en hållbar landsbygd, där detta betonas av såväl myndigheter som forskning. Denna avhandling bygger vidare på detta, och studerar entreprenörskap i lantbruk genom att utforska hur vi ytterligare kan utveckla både lantbruk och hållbar landsbygd. Lantbrukare har traditionellt spelat en betydande roll på landsbygden och i landsbygdsutvecklingen, och gör så än idag. Dock har deras roll förändrats i takt med samhällsutvecklingen och en minskning av såväl antal gårdar som lantbruksproduktion. Idag betraktas deras roll huvudsakligen vara som råvaruproducenter, genom att vara första steget i en livsmedelskedja, samt naturvårdare på landsbygden där de håller landskapet öppet. Dock spelar lantbruk en betydande roll i landsbygdsutvecklingen, och därför även i denna avhandling. I Sverige strävar myndigheter efter hållbar landsbygdsutveckling genom att uppmuntra ekonomisk tillväxt och innovation inom och mellan företag (affärsmodeller, värdekedjor etc.). De tillämpar ekonomiska tillväxtstrategier, men både ledning och resultat kritiserar (OECD, 2019). Denna avhandling visar att större kontextuell kunskap krävs för att främja både hållbar utveckling av landsbygd och lantbruk. Mot denna bakgrund är syftet i denna avhandling att *utforska entreprenörskap i lantbruk ur olika perspektiv, för att hitta mekanismer som påverkar värdeskapande för hållbar landsbygdsutveckling*.

För att uppnå detta forskningssyfte, utforskades entreprenörskap i svenskt lantbruk ur olika perspektiv, och data samlades in med olika metoder, vilket möjliggjorde betydelsefull triangulering av data. Studier av utmaningar i entreprenörskap och hållbar landsbygdsutveckling genomfördes från såväl individuellt lantbrukarperspektiv och företagsperspektiv som på individuell- och organisationsnivå hos aktörerna i stödsystemet, dvs. med aktörer såsom rådgivare, myndigheter, policyskapare och tjänstemän på olika nivåer. Genom detta kunde olika perspektiv av entreprenörskap inom lantbruk utforskas, och mekanismer och strukturer identifieras, vilka påverkar värdeskapande för hållbar landsbygdsutveckling. Mekanismer kan förklaras som underliggande, osynliga och ibland omedvetna och icke-rationella faktorer, känslor, normer, värderingar eller attityder som påverkar beteende på olika sätt.

Nyckelteorier och litteratur fokuserade på entreprenörskapskonceptet med de underliggande begreppen innovation och management på individuell-, företags-, organisations- och samhällsnivå. Denna avhandling gick under ytan på landsbygdsutveckling, och utforskade utveckling av lantbruk på företagsnivå genom att utforska utmaningarna som lantbrukarna mötte i företagandet. Detta möjliggjordes med hjälp av koncepten Hållbart entreprenörskap, Affärsmodellsinnovation och Hinder till hållbar affärsmodellsinnovation. Koncepten Självledarskap, Emotionell intelligens och Entreprenöriell orientering hjälpte till att utforska agerande och tankesätt i bemötande av utmaningar, genom att till exempel förstå mekanismer kopplade till känslor och tankesätt. Avhandlingen studerade även hur entreprenörskap uppmuntrades och stöttades av stödsystemet inom lantbruk, och fastställde med hjälp av teorin om komplext ledarskap, det omedelbara behovet av anpassning till omvärldsförändringar och skapandet av innovation inom systemet. Koncepten Lantbruks- och landsbygdsentreprenörskap samt inbäddning (embeddedness), hjälpte till att förstå och belysa betydelsen av att beakta den ömsesidiga påverkan och samspelet mellan lantbrukare, aktörer inom stödsystemet samt inbäddning i kontexten och i entreprenörskap på landsbygden.

Denna avhandling ger flera bidrag. För det första, utökas kunskapen om entreprenörskap i lantbruk genom att belysa betydelsen av att förstå hur entreprenören deltar i den sociala kontexten genom pågående sociala relationer, nätverk och djupare band (embeddedness) och begreppet hållbarhet i

lantbruket tar sig uttryck, och genom detta bevisar betydelsen av att inkludera lantbruk i entreprenörskapsforskningen. Följaktligen har denna avhandling en annan syn än tidigare forskning som menar att lantbrukare inte är entreprenöriella och därmed inte inkluderat lantbruk i entreprenörskapsforskningen. Först och främst visar denna avhandling att lantbrukare i väldigt hög grad bidrar till hållbar landsbygdsutveckling och även spelar en roll som möjliggörare för entreprenörskap på landsbygden. För det andra, genom att utforska stödsystemet och att genom detta bidra med insikter om utmaningar inom systemet, både i organisationer och mellan organisationerna, skapar denna avhandling transparens och förståelse för dessa utmaningar som bland annat handlar om kommunikation, förtroende, ledning och kultur. En utvecklad modell bidrar med förslag till hur systemet kan förbättras och hur innovation kan skapas för att möjliggöra uppmuntran av entreprenörskap i lantbruket. För det tredje bidrar denna avhandling till affärsmodellsforskningen genom att visa betydelsen av att inkludera och reflektera över inbäddning i landsbygdskontexten (embeddedness) samt förståelse för betydelsen av lantbrukets hållbarhetsperspektiv i affärsmodellsinnovation. Därmed utökar denna avhandling tidigare affärsmodellsforskning som huvudsakligen betraktat lantbruk som första steget i en livsmedelskedja, och likställt lantbrukarnas utmaningar med de utmaningar som övriga företag utanför lantbruket, längre upp i värdekedjan möter. Genom att tillhandahålla insikter om lantbrukares utmaningar i entreprenörskapet, och hur dessa utmaningar kan mötas, samt även hur entreprenörskap kan uppmuntras och stöttas i lantbruk, kan denna avhandling bidra till att policy och strategier skiftar fokus från att huvudsakligen försöka transformera lantbrukare till traditionella entreprenörer – till att dra nytta av den möjliggörande roll som lantbrukarna spelar i landsbygdsutvecklingen och för andra entreprenörer på landsbygden. Denna avhandling bidrar till att visa entreprenörskapets mångfald, genom att skapa förståelse för entreprenörskap i lantbruk, där värdeskapande stäcker sig långt bortom individuella företag och konkurrensfördelar, och därför påverkar en hållbar landsbygdsutveckling.

List of appended papers

- Paper 1** **Cederholm Björklund, J.** (2018). Barriers to Sustainable Business Model Innovation in Swedish Agriculture. *Journal of Entrepreneurship, Management and Innovation*. 14(1): 65-90.
- Paper 2** **Cederholm Björklund, J.** (2018). The impact of crises on innovation and strategic management – learnings from the extreme drought in the summer of 2018. Reviewed conference paper. Presented at the Rural Entrepreneurship Conference June 17-19, Inverness, Scotland.
- Paper 3** **Cederholm Björklund, J., & Johansson, J.** (2019). Under the surface of the agricultural entrepreneurial support ecosystems: Through the lens of Complexity Leadership Theory. Book chapter accepted for publication in the RENT Anthology Book 2018. Edward Elgar Publishing.
- Paper 4** Ulvenblad, P., & **Cederholm Björklund, J.** (2018). A leadership development programme for agricultural entrepreneurs in Sweden. *The Journal of Agricultural Education and Extension*, 24(4), 327-343.
- Paper 5** **Cederholm Björklund, J., & Johansson, J.** (2019). Farming beyond food: Effect of embeddedness and governance structures on farmers' role in rural development. Submitted to Entrepreneurship and Regional Development.

Additional publications by the author, not included in the thesis:

Ulvenblad, P., Barth, H., **Cederholm Björklund, J.**, Hoveskog, M., Ulvenblad, P. O., & Ståhl, J. (2018). Barriers to business model innovation in the agri-food industry: A systematic literature review. *Outlook on Agriculture*, 47(4), 308-314.

Two articles have also been submitted to peer reviewed, high ranked journals and are included in review processes. One is about barriers in agri-business development and the other is about sustainable business model archetypes in agri-food industry.

Contents

1	Introduction.....	11
1.1	Value creation for sustainable development by managing entrepreneurship in agriculture	11
1.1.1	The Swedish agricultural context and support system.....	13
1.2	Research in agriculture	14
1.3	Research problem	15
1.4	Purpose and research questions	16
1.5	Guide for the reader.....	18
2	Exploring agricultural entrepreneurship.....	19
2.1	Entrepreneurship for sustainable development	20
2.1.1	Entrepreneurship	20
2.2	Value creation and embeddedness in rural context.....	24
2.2.1	Contextual embeddedness	25
2.3	The farmer and entrepreneurship in the agricultural business.....	28
2.3.1	Entrepreneurial Orientation (EO)	29
2.3.2	Self-leadership and Emotional Intelligence (EI)	30
2.3.3	Business Model Innovation.....	30
2.4	The support system for entrepreneurship in agriculture	32
2.4.1	The agricultural support system and its efforts for sustainable innovation	33
2.4.2	Complexity Leadership Theory (CLT)	35
3	Method.....	38
3.1	Research approach.....	38
3.2	Role as researcher and lessons learned from being both an insider and an outsider in the context	39
3.3	Research design	40
3.3.1	Case study as the chosen method	41
3.4	The sample.....	42
3.5	Data collection	43
3.6	Data analysis.....	45
3.6.1	Ethical considerations	45
3.7	Research quality	46
4	Summaries of appended papers	48
4.1	How the papers address the research questions.....	48
4.2	Challenges to farmers' entrepreneurship and how to approach them.....	48
4.2.1	Knowledge contribution on challenges and ways to approach them.....	51
4.3	Encouragement and support of agricultural entrepreneurship.....	51
4.3.1	Knowledge contribution on encouragement and support	54
4.4	Contextual embeddedness	54
4.4.1	Knowledge contribution on contextual embeddedness	56
4.5	Summary of key findings.....	56
5	Analysis and discussion	58
5.1	Entrepreneurship for sustainable development by understanding value creation and embeddedness in rural context.....	58
5.2	Entrepreneurship in agricultural businesses and the farmers – challenges and approaches.....	59

5.3	Encouragement of entrepreneurship by the support system.....	63
5.4	Exploring the interplay	66
5.4.1	Mechanisms affecting entrepreneurship in agriculture.....	67
6	Conclusions	69
6.1	Entrepreneurship in agricultural businesses and for farmers – challenges and approaches.....	69
6.2	Encouragement of entrepreneurship by the support system.....	70
6.3	Theoretical contributions, research and practical implications.....	70
6.3.1	Contribution to the research field	71
6.3.2	Practical contributions	72
6.3.3	Limitations and future research	73
6.4	The personal development process	74
	Appended papers.....	91

Abbreviations and key concepts

AIS	Agricultural Innovation System
BM	Business Model
BMI	Business Model Innovation
CAP	Common Agricultural Policy
CLT	Complexity Leadership Theory
EI	Emotional Intelligence
EO	Entrepreneurial Orientation
EU	European Union
LRF	Federation of Swedish Farmers
OECD	Organisation for Economic Co-operation and Development
SBA	Swedish Board of Agriculture
SBMI	Sustainable Business Model Innovation

Entrepreneurship revolves around the constructs of exploration and exploitation (Alvarez & Barney, 2007; Shane & Venkataraman, 2000), and enables value creation, wealth and sustainable development (Goel & Jones, 2016; Hitt, Ireland, Sirmon & Trahms, 2011). It also engages with existing resources to create value (Dew, Sarasvathy & Venkataraman, 2004; Korsgaard, Anderson & Gaddefors, 2016).

Value creation provides something of value for the individual, someone else or for society by, for example, combining resources or knowledge in ways that creates new value (e.g. Adams, Jeanrenaud, Bessant, Denyer & Overy, 2016; Korsgaard, Müller & Tanvig, 2015).

Innovation is changes which are new to the user or to the system for example new mind-sets, new methods, new relations and new ways of connecting existing components (Henderson & Clark, 1990).

Management involves strategic planning, development and leading of businesses, but also self-leadership (Manz, 1986). Understanding management, includes understanding of cognitions (Chesbrough, 2010) and emotions affecting decision-making and activities (Rauch, Wiklund, Lumpkin, & Frese, 2009).

Sustainability is a concept for linking economic, environmental and social sustainability and social development together (Huggins & Thompson, 2014; Janker, Mann, & Rist, 2019).

Agricultural entrepreneur is a label for farmers or managers of agricultural businesses, sometimes used for farmers with diversified or developed business models (e.g. Dias, Rodrigues, & Ferreira, 2019; Pindado & Sánchez, 2017).

Agricultural entrepreneurship is a synonym for entrepreneurship in agriculture.

Agri-food or agro-food sector is the common concept of the primary or agricultural sector and the food industry, covering the whole chain from the farmer/primary production to the consumer-packaged food (Dias et al., 2019).

Primary production is the first part of the agri-food chain, i.e. farmers, hunters, fishermen or others producing food in first line of agri-food chain (County Administrative Board, 2017).

Support system is a label of the system of actors around the farmers and businesses, aiming to work with supporting and developing agriculture and rural areas.

1 Introduction

This first chapter provides the context, or the scene, in which this thesis unfolds. It provides the reasons for conducting this study and sketches the main features of agriculture today, the importance of the sector and some unique preconditions for running rural and agricultural businesses as compared to companies in urban areas. In order to understand the problems of agricultural development, some societal challenges related to rural and agricultural development are illustrated, followed by brief historical flashbacks to occasions that have been significant for agricultural development. The chapter ends with an overview of how the papers included contribute to the overall aim and research questions of this thesis, and provides a guide for the continued reading of the thesis.

1.1 Value creation for sustainable development by managing entrepreneurship in agriculture

An understanding of entrepreneurship in agriculture is central to the understanding of development towards a sustainable society. Rural areas are part of society as a whole, and together sustainable urban and rural areas create a sustainable society (European Commission, 2011; OECD, 2018; United Nations, 2015). In EU and many other countries, agriculture has traditionally been of great importance to the rural community and the countryside, and still is (Alsos, Carter & Ljunggren, 2011; Niska, Vesala, & Vesala, 2012). However, in for example Sweden, the situation has recently changed drastically. From the fact that the countryside used to consist mainly of agriculture, society and the countryside have gradually changed with a drastic reduction in the number of farms and employees in the sector in recent years, as well as a decrease in food production (Swedish Board of Agriculture, 2017). This may partly be related to changed market conditions after EU entry, but also to other changes such as increased mobility in society and on the labour market, changed service levels in the countryside and other factors affecting urbanisation and countryside depopulation. What does this strong downward trend for agriculture mean for rural development? How can sustainable rural areas be developed if the negative trend in agriculture continues?

An understanding of rural entrepreneurship and entrepreneurship in agriculture is central to understanding development towards a sustainable society (Alsos et al., 2011; Niska et al., 2012; OECD, 2018; Swedish Board of Agriculture, 2006, 2018). Rural areas are part of society as a whole, and together sustainable urban and rural areas create a sustainable society (OECD, 2018; Swedish board of agriculture, 2018). What will the environment and society as a whole look like if there are no prosperous rural areas? How and where would our food be produced? There are many social issues related to the development of sustainable rural areas and, as this thesis emphasises, entrepreneurship in agriculture is key to this development (Dias et al., 2019; Fitz-Koch, Nordqvist, Carter & Hunter, 2018), with the previously-unnoticed role of farmers as enabler for sustainable rural development.

In research, entrepreneurship and innovation are two tightly-interwoven concepts which are regarded as key drivers of global, national and regional development and economic growth (Fitz-Koch et al., 2018; OECD, 2018). These concepts are central to value creation for the sustainable development of both companies and societies (França, Broman, Robèrt, Basile & Trygg, 2017). Entrepreneurship revolves around the constructs of exploration and exploitation (Alvarez & Barney, 2007; Shane & Venkataraman, 2000), and enables value creation, wealth and sustainable development (Goel & Jones, 2016; Hitt et al.,

2011). Innovation refer to changes that are new to the user or to the system, for example new mind-sets, new methods, new relationships or new ways of connecting existing components (Henderson & Clark, 1990).

Sustainability oriented literature on value creation states that by contributing to ecological and social value creation, businesses can gain competitive advantages (e.g. Freudenreich et al., 2019). Further, shared value creation connects company success with community success in a long-term perspective (Porter & Kramer, 2011). Although discussions about shared value creation and co-creation of value in networks, there is a gap in current research explaining how such co-creation could be analysed (Freudenreich et al., 2019). Value creation in this thesis has a broader meaning, extending beyond the company and corporate network, treating nature and the environment as stakeholder (Stubbs & Cocklin, 2008). Further value creation in this thesis also means providing something of value for the individual or someone else by, for example, combining resources or knowledge in ways that creates new value. Compared to traditional growth strategies, the definition of value creation in this thesis covers the creation of additional values other than the financial. Such value may, for example, be environmental or social dimensions or enhancement of the quality of a place or of life lived in it (Korsgaard, Müller et al., 2015). By adopting and including re-sourcing strategies in the view of entrepreneurship, in line with Korsgaard et al., (2016) the concept of entrepreneurship is extended from its existing focus on production, consumption and market, to also include value creation for sustainable rural development, although this view of entrepreneurship may be contradictory strict economic growth strategies. No matter how good we are at exploring and exploiting opportunities, management is also required to lead and manage innovations in a sustainable manner (Chesbrough, 2010; Manz, 1986; Rauch et al., 2009). Sustainable development derives from the sustainability concept linking economic, environmental and social sustainability together with long-term societal development (Huggins & Thompson, 2014; Janker et al., 2019). The key concepts in this thesis are thus *value creation*, *sustainable rural development* and *entrepreneurship in agriculture*. Several other terms with less prominent roles are also used in order to promote understanding of the phenomenon and the key concepts.

Managing rural and agricultural businesses implies some unique preconditions as compared to running businesses in cities and more densely-populated areas (National Rural Development Agency, 2006), due to being both small, family-owned businesses and by being located in rural areas (Denzau & North, 1994; Dias et al., 2019; Fitz-Koch et al., 2018; Korsgaard, Müller et al., 2015; OECD, 2018; Suess-Reyes & Fuetsch, 2016; Vik & McElwee, 2011; Zukin & DiMaggio, 1990). In Sweden about 70% of the population lives in urban areas, and rural areas face challenges such as an ageing workforce and economic outcomes that are generally lower than in urban counterparts (OECD, 2018). Swedish agriculture also meets specific challenges in terms of its geographical location with climate challenges, high costs of both labour and tax as well as costs for more extensive and complex regulations than those in other EU Member States. Due to the geographical location, there are major differences in farming prerequisites; for example the southern parts of Sweden have a crop-growing season almost 100 days longer than the northern parts. Hence, most farmland is located in the southern and central parts of the country (European Environment Agency, 2015; OECD, 2018). Rural and agricultural businesses also differ from traditional value creation and extend beyond traditional business models by, for example, prioritising risk reduction or integrating the creation of a life on the farm into business model development (Hansson et al., 2013; McElwee, 2008; Milone & Ventura, 2019; Morris, Henley, & Dowell, 2017). In addition, living and working in rural areas provides unique conditions, with mechanisms such as embeddedness in context, taking into account cultural and social attitudes and behaviours affecting entrepreneurship (Korsgaard, Müller et al., 2015). Long-term sustainability and value creation for society is central to rural entrepreneurship since individuals and entrepreneurs in sparsely-populated rural areas exert major impact on the development of society.

As can be seen from the above, managing rural and agricultural businesses is challenging and consequently support systems have been established to encourage and enable sustainable rural and agricultural development. In Sweden, there has been an extensive support system in place for several

hundred years in order to enable and contribute to the sustainable development of Swedish agriculture and rural areas. But the question is - does it really help? Many organisations, large sums of money and many individuals work in this support system which has been, however, criticised for inefficiency and weak leadership (OECD, 2019). We have a long tradition of farming in Sweden, advantageous biological conditions, an extensive support system and dedicated farmers. Despite this, the negative trend in Swedish agriculture continues.

1.1.1 The Swedish agricultural context and support system

This thesis explores entrepreneurship in Swedish agriculture; a case characterised by a focus on sustainability considered to be outstanding in Europe in this field. However, nevertheless the sector is declining (OECD, 2018). Swedish agriculture accounts for less than 10% of total land area in Sweden. It is primarily located in the southern parts of the country due to more favourable soil and climate conditions. Most Swedish farms are small family businesses with less than ten employees with around one third of household income originating from off-farm sources. The farming sector in Sweden involves 62 937 companies registered as agricultural businesses, a decline in number of companies since 1990, by 35%. (Statistics for 2016; Swedish Board of Agriculture, 2017). Swedish agriculture is characterised by policy work that, since entry into EU in 1995, has clearly intended to create sustainable agriculture focusing on environment and animal welfare, combined with increased productivity and profitability. Today, Sweden produces safe food with good animal husbandry. Productivity has increased since 1995, partly due to changed structure of fewer but larger and more efficient farms and through new technology, which has been developed by a considerable amount of research and education. Since EU accession, livestock production has declined while production of, for example, grains, vegetables and poultry has increased (OECD, 2018). The supply chain is considered to function efficiently, with a relatively small number of actors complemented by niche markets. Sweden has a high level of import of processed food. EU and especially the Nordic countries are the primary markets for Swedish agricultural products, and Sweden is a net importer of these products with the exception of grains (OECD, 2018).

Sweden enjoys a long-established support system aimed at encouraging and enabling sustainable development of agriculture and rural areas. The support system includes a political and governmental system that covers legislation, rules and policies. Governance is based on EU legislation complemented by national regulations (Government Offices of Sweden, 2015; 2018; OECD, 2018). Political policies changed during the 1990s and focus shifted from promoting rationalisation and structural change in agriculture to promoting improved environmental production. Hence, public financing has been much focused on the environment in agriculture over the recent decades (Yngwe, 2014). From 1995, when Sweden joined the EU, funds from the Common Agricultural Policy (CAP) have been used to support farmers in different ways. Advisors from the different organisations provide both commercial advisory services, paid for by the farmers and publicly-funded advisory service. Advisors may also request funds for projects from the government, mainly from Swedish Board of Agriculture (SBA) or County Administrative Boards, i.e. financing from CAP (Höckert, 2017). Business models have partly been forced to change during this historical development and in order to continue to support and create value for agricultural development, further innovation is necessary (Knickel, Brunori, Rand & Proost, 2009; OECD, 2018).

At EU entry in 1995, conditions drastically changed for Swedish farmers who moved from a highly-regulated market into a competitive marketplace. This created both opportunities and challenges for farmers, who changed from one day being subcontractors to large member organisations to the next day being exposed to competition in a European market. The government realised the necessity of supporting farmers and created policies that, via activity plans, would be implemented with the help of advisory organisations and other actors within the support system. For more than 20 years, these policies have focused on both economic and environmental sustainability and, among other things, aimed at increasing food security and food production, animal welfare, reducing climate impact and development of

management among farmers (OECD, 2018; The Swedish Agency for Economic and Regional Growth, 2014; Yngwe, 2014). Sweden is far ahead of developments in most areas, except for management where a lot of funding is still spent and many activities are initiated for its development (Andersson, Höjgård & Rabinowicz, 2017; Andersson, Kaspersson & Wissman, 2009; Swedish Board of Agriculture, 2012; OECD, 2018). However, the system is still criticised for inefficiency and weak governance (OECD, 2019), which is also the case for many agricultural systems in other countries (Knickel et al., 2009; OECD, 2018). Swedish agriculture faces ongoing structural change, with a decreased number of farms and market challenges from increased import of food (OECD, 2018; Swedish Board of Agriculture, 2018), hence the expressed need for increased innovation and entrepreneurship (Fitz-Koch et al., 2018; Government Offices of Sweden, 2018; OECD, 2018).

1.2 Research in agriculture

There is a major gap in research into entrepreneurship in agriculture, with extensive spaces to fill. Since rural entrepreneurship differs from entrepreneurship in other contexts, embeddedness in the rural context is of importance to studies in this field (Fitz-Koch et al., 2018; Jack & Anderson, 2002; Korsgaard, Anderson & Gaddefors, 2016; Suess-Reyes & Fuetsch, 2016). However, there are areas important for entrepreneurship in agriculture, such as policy-making (mainly focusing economic growth strategies), business model innovation with farmers as managers, where context has not previously been taken into account to any greater extent. Business model innovation in agriculture involves activities concerned with spatial context and embeddedness in social context, and development of agricultural businesses involves new combinations of local resources to create value for both entrepreneur and local society. Further, agricultural businesses cannot be located somewhere else without losing the key value propositions, a central aspect within business model innovation (Korsgaard, Müller et al., 2015).

There is a need to look beyond the natural science field and into entrepreneurship. Although a considerable amount of research on agriculture and business has been carried out over a long period of time (Schultz, 1956, 1961), research has revolved around natural sciences, production and efficiency (Niska et al., 2012), and considered agricultural production as relatively homogeneous and isolated from local context (Goodman, 2003). Previous research has been linked mostly to the fields of agricultural economics and rural sociology (Fitz-Koch et al., 2018) and not to the entrepreneurship field (Carter, 1998b; Dias et al., 2019). In fact, agriculture and farming are often considered as being outside traditional entrepreneurship, operating in an arena departed from traditional entrepreneurship, both in Sweden and internationally (Fitz-Koch et al., 2018; Philipson et al., 2004). However, this has begun to change in recent years (Dias et al., 2019), partly due to new challenges after EU entry which have led to greater market orientation within agriculture (Giannakis & Bruggeman, 2015; OECD, 2018). Those changes have created a focus on entrepreneurship and business management which have become increasingly important in the sector (Fitz-Koch et al., 2018; Lans, Seuneke, & Klerkx, 2013; McElwee, 2006).

It is necessary to examine business models from a wider perspective when it comes to entrepreneurship in agriculture. Today, innovation in agriculture is focused on business level, by providing activities for improved management and business model innovation by support systems, partly due to the tradition of managing agricultural businesses with relatively unchanged business models (Swedish Board of Agriculture, 2018). Although BMI is a rapidly-growing research area, there are very few studies related to agri-food or agriculture (Ulvenblad et al., 2018), hence policies build on BMI research from contexts other than agriculture. However, in recent years the importance of reflecting social sustainability in society in BMI has been emphasised and identified as a key to successful business development (França et al., 2017). This is a step towards the broader definition of value creation used in this thesis, where value creation extends far beyond the company and the aim of gaining competitive advantages by creating value.

Agriculture can no longer be ignored in entrepreneurship literature, indicating an urgent necessity to look into entrepreneurship in agriculture with its unique mechanisms affected by for example political, cultural and cognitive contextual embeddedness (Denzau & North, 1994; Fitz-Koch et al., 2018; McElwee, 2006; Zukin & DiMaggio, 1990). The agricultural sector is facing pressure to change to more entrepreneurial models in order to become more innovative and sustainable in the highly competitive landscape (OECD, 2018; Phillipson et al., 2004). However, the stereotypical view in research of entrepreneurship, excluding agriculture, limits this research (Denzau & North, 1994; Fitz-Koch et al., 2018; Korsgaard et al., 2016; McElwee, 2006; Zukin & DiMaggio, 1990). Consequently, this thesis challenges traditional research paradigms, focusing on entrepreneurship in agriculture.

1.3 Research problem

Following this introduction, a number of areas that may add understanding to research within the entrepreneurship field, and particularly to rural entrepreneurship, have been identified.

Theoretical problems:

- Previous research has been primarily linked to the fields of agricultural economics and rural sociology, and not to the entrepreneurship field. In fact, agriculture and farming are often considered as being outside entrepreneurship, operating in a separate arena. Hence, there are motives to extend agriculture into entrepreneurship research and thereby gain deeper knowledge about value creation, exploring and exploiting opportunities, and understanding contextual mechanisms in agricultural entrepreneurship (Dias et al., 2019; Fitz-Koch et al., 2018).
- Managing rural and agricultural business implies some unique preconditions compared to businesses in other contexts. Although we know that the context is of great importance for entrepreneurship, we have little knowledge on how it affects entrepreneurship in agriculture and rural areas and how it affects strategies, decision-making and business models. Following this, there is need to conduct research about entrepreneurial strategies, entrepreneurial orientation and decision-making in agricultural sector (Dias et al., 2019). Further, there is also a need to include agriculture and highlight the importance of considering the rural context in business model research (Ulvenblad et al., 2018), and include exploration of social sustainability which is identified as a key to successful businesses development (França et al., 2017).
- Although entrepreneurship is regarded as keys to sustainable societal and rural development, there is insufficient research into how farmers and entrepreneurship in agriculture create value for rural entrepreneurship and contribute to sustainable rural development. Following this, extended knowledge about the understanding of value creation and the interplay between entrepreneurial activity, community and society level is needed, while also being overlooked in entrepreneurship research (Dias et al., 2019; Hitt et al., 2011; Korsgaard, Müller et al., 2015; Lumpkin, Bacq & Pidduck, 2018). Further, by including the social dimension of sustainability, this can contribute with answers to the *“urgently need to complement the existing environmental and economic pillars of sustainability”* in agricultural research, to understand the agricultural system (Janker, Mann & Rist, 2019, p. 40).

Practical problems:

- The concept of rural entrepreneurship is narrow and provides an incomplete image with very limited understanding of the mutual influence of the farmer and the local rural context, due to embeddedness in the context. There is also a gap highlighted by e.g. Korsgaard, Müller et al., (2015) to explore the engagement between rural entrepreneurs and the place - knowledge valuable for both policy makers, advisors and farmers.

- Support systems have primarily focused on economic efficiency and environmental goals in agriculture, but changes in the agricultural industry require a focus on entrepreneurship. Policy making and activities within the support system are based on economic strategies facilitating development at business level and on following-up economic and environmental sustainability. However, an understanding of social perspectives and societal sustainability is also vital – perspectives greatly prioritised by rural entrepreneurs due to their embeddedness in rural society, but excluded in the agricultural research. This study contribute with such knowledge called for by Janker et al., (2019) in order to bridge the gap between agricultural and social science. Further, knowledge about entrepreneurship in agriculture, is called for from authorities to reach the governmental goal of developing sustainable innovation for agriculture and rural areas (OECD, 2018; Swedish Board of Agriculture, 2018). The Swedish support system is criticised for weak management and performance. Hence, this study answers to the call of further understanding of how to understand and improve the system (Höckert, 2018; OECD, 2018).

1.4 Purpose and research questions

The purpose of this thesis is to explore entrepreneurship in agriculture from different perspectives, to find mechanisms affecting value creation for sustainable rural development. This is enabled by exploring individual, business, system and societal level as well as the interplay between the levels in a Swedish context. At individual and business level: how farmers cope with cognitive and organisational challenges in the development of sustainable agricultural businesses. At system level: how entrepreneurship is encouraged by the agricultural support system, and how this support and encouragement can be developed. Interrelated findings from the five papers enable exploration of the interplay between the individual, business and system levels in order to understand agricultural entrepreneurship at societal level as well. At the end of the thesis, a coherent theoretical framework will be offered illustrating mechanisms in agricultural entrepreneurship, affecting value creation for sustainable rural development.

Given the research problems and the explorative purpose described in this introduction, two research questions are outlined, based on understanding challenges and support in agricultural entrepreneurship. Exploring challenges enable understanding of mechanisms affecting decision making and ways to approach entrepreneurial endeavours, as well as encouragement of agricultural entrepreneurship and the type of support needed for value creation to take place.

RQ 1: What challenges farmers' entrepreneurship, and how can these challenges be approached?

RQ 2: How can entrepreneurship be encouraged and supported in agriculture?

A more detailed explanation of how the research issues are linked will be presented in table 1 below and in chapter 4 summarising the appended papers. In Figure 1, RQ1 can be related to the agricultural business and the farmer, where the individual farmer is tightly interwoven with the agricultural business, and sometimes can be difficult to separate. RQ2 can be related to the agricultural support system. As illustrated in Table 1, Papers 1 and 2 primarily answer RQ1, and Papers 3 and 4 primarily answer RQ2. Paper 5 contributes to answering both RQ1 and 2, and to the overall purpose of this thesis by exploring the interplay and the embeddedness in agricultural entrepreneurship. Together the five papers create understanding of how to contribute to sustainable rural development by visualising mechanisms in agricultural entrepreneurship, affecting value creation for sustainable rural development.

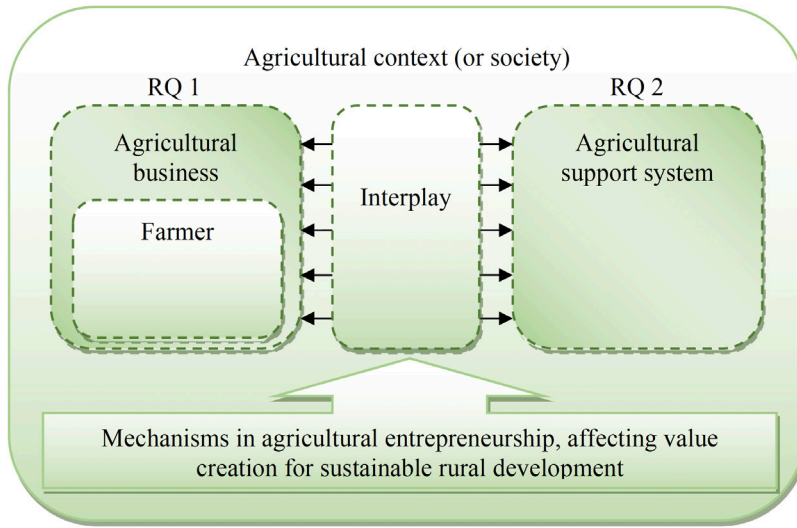


Figure 1: Exploration and analysis of agricultural entrepreneurship at different levels

Table 1 illustrates how RQ1 and RQ2 are broken down into more specific research questions for each paper. Papers 1 and 2 primarily answer RQ1 and paper 3 and 4 primarily answer RQ2. Paper 5 contributes to answering both RQ1 and 2.

Thesis' research questions	Papers' research questions
RQ1 What challenges farmers' entrepreneurship, and how can these challenges be approached?	Paper 1 What hinders farmers when engaging in sustainable business model innovation? Paper 2 How is management and innovation approached during stressful situations?
<hr/>	
	Paper 5 How is agricultural entrepreneurship embedded in development of sustainable rural societies?
<hr/>	
RQ2 How can entrepreneurship be encouraged and supported in agriculture?	Paper 3 What do challenges, behaviours and actions look like within the support system? Paper 4 How can concepts be developed to enable SBMI and entrepreneurship in Swedish agriculture?

Table 1. Research questions

1.5 Guide for the reader

The remaining chapters begin with the theoretical framework and concepts that have guided and assisted in the exploration, analysis and attempts to understand empirical findings. Chapter 2 also provides, and is structured according to, a theoretical model for this purpose. Chapter 3 continues to explain the methodological platform and choices regarding methods, data collection and analysis. These are explained in relative detail in order to make the processes transparent, especially as the researcher's role is as an insider. Because of this role, it is also important to be transparent and discuss how the researcher's background, employment and experiences affect her as a researcher, hence part of Chapter 3 is spent on discussing the role of researcher as an insider in the context.

A summary of the five articles is presented in Chapter 4, followed by a discussion on findings in relation to the research question in Chapter 5. In Chapter 5 an explanation of how the different papers interrelate is given and how they together create and develop knowledge moving towards the aim of the thesis. In Chapter 6, the research conducted in this thesis is concluded, and contributions to both research and practice are presented. At the end of the chapter, suggestions for future research are presented. Since this is a thesis within the field of innovation science, it is vital to share reflections over the researcher's own development process concerning the concept of innovation. Hence, the thesis ends with these reflections. Hopefully these reflections will also inspire you as a reader to reflect over the use of the concept.

2 Exploring agricultural entrepreneurship

In this chapter, the framework related to the Swedish agricultural support system and the theoretical concepts that have guided this thesis are described. These have provided the lenses through which I analysed empirical findings. The theoretical concepts that have guided the understanding of entrepreneurship in agriculture deal with this complex issue in different ways and at different levels. This is displayed in the framework. The theoretical framework is built around the concept of entrepreneurship, including the intertwined sub-concepts of innovation and management. This framework extends our understanding of agricultural entrepreneurship by enabling analysis of the interplay between the farmer, the agricultural business the agricultural support system and society.

Research related to agriculture mainly focuses on production, efficiency and natural science (Niska et al., 2012; OECD, 2018; Yngwe, 2014). However, in later years, research in agriculture has followed societal development and today interdisciplinary research is called for also in this field (Dias et al., 2019; Fitz-Koch et al., 2018). In this thesis, entrepreneurship in agriculture is explored using the key concept of entrepreneurship and the intertwined sub-concepts of innovation and management. This thesis aims at understanding how to develop sustainable rural areas by increasing the understanding of entrepreneurship in agriculture where long-term sustainability and the impact of other sustainability aspects (environmental, economic and social) are important to understand (e.g. Huggins & Thompson, 2014; Janker et al., 2019). Consequently, sustainability is also central in this thesis. The thesis rests on the assumption that understanding entrepreneurship in agriculture requires multi-level analysis and an extensive framework in order to understand the different perspectives so this chapter is structured in accordance with the analytical framework illustrated in Figure 2. Parallel with reading the framework, follow the structure in Figure 2.

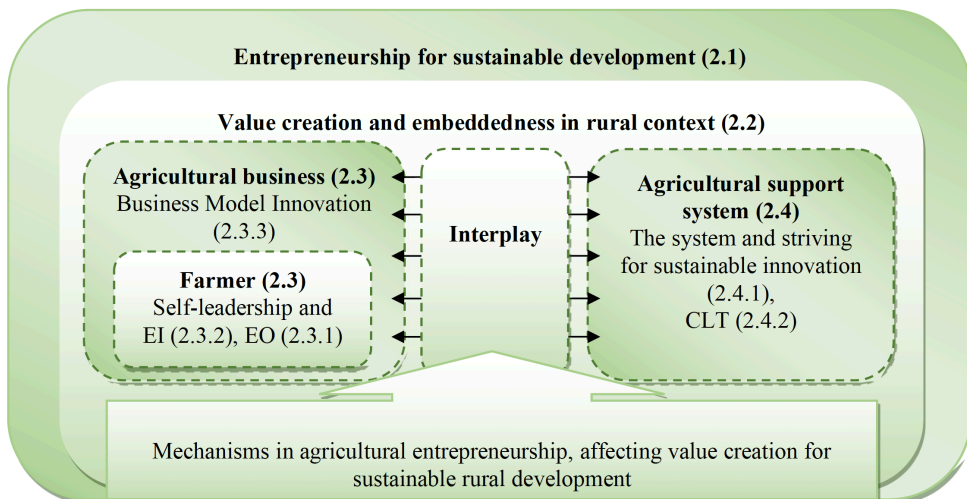


Figure 2: Analytical framework

Since the thesis is about entrepreneurship, this chapter begins by getting acquainted with the entrepreneurship literature for sustainable development (2.1). We gain insights into the ongoing discussion within entrepreneurship research about the development of the subfields rural entrepreneurship and agricultural entrepreneurship, followed by a brief insight in the discussion of the inclusion or exclusion of agriculture in entrepreneurship research and the sustainability perspectives of entrepreneurship. Research into rural entrepreneurship clearly shows that context has great significance for, and impact on, entrepreneurship in rural areas (e.g. Anderson & Gaddefors, 2016; Granovetter, 1985; Jack & Anderson, 2002; McKeever et al., 2015). Hence, it is important for us to understand the unique conditions for managing rural and agricultural businesses and proceed to introducing the framework that helps to explore value creation and embeddedness in the rural context (2.2). With a basic understanding of entrepreneurship in rural areas and in agriculture, and the embeddedness in the context, we can proceed to the business level of agriculture. In this thesis entrepreneurship in agriculture is studied at different levels. In order to understand the business level, we first need to understand the individual level, since the farmer and the business are intertwined in agriculture, extensively influenced by the individual farmer. Hence, we proceed to the framework helping to explore the farmer and entrepreneurship in the agricultural business (2.3). This framework includes Entrepreneurial Orientation (2.3.1), Self-leadership and Emotional Intelligence (2.3.2) relating to the cognitions and behaviour of the farmer, and Business Model Innovation (2.3.3) focusing the business development. In order to enable exploration of the agricultural support system (2.4), this framework includes insights about the support system as such, and also the striving for sustainable innovation (2.4.1). Further, Complexity Leadership Theory (2.4.2) helps in analysing the support system and agriculture at system level. Table 3 provides an overview of the theoretical framework and perspectives included in the appended papers.

	Paper 1	Paper 2	Paper 3	Paper 4	Paper 5
Framework	SBMI, Barriers to BMI	Entrepreneurial Orientation (EO)	Complexity Leadership Theory (CLT)	Self-leadership, Emotional Intelligence (EI)	Agricultural & rural entrepreneurship, embeddedness
Perspective	Individual & Business	Individual & Business	Support system	Individual & Support system	Context, Individual, Business, System

Table 1 Overview of theoretical framework included in appended papers

2.1 Entrepreneurship for sustainable development

2.1.1 Entrepreneurship

Entrepreneurship is an interdisciplinary field, with a spread of perspectives and approaches in literature. For example, regional economists focus on economic explanations of entrepreneurial activities (Tunberg, 2014), while sociological perspectives emphasise local culture, embeddedness, social context and networks (Müller, 2016). The economic side is well established and has exerted a clear influence on entrepreneurial activities through e.g. growth and financial contribution to social development (Acs, 2006; Audretsch & Keilbach, 2004), while the sociological perspectives are less studied (Müller, 2016). Understanding rural entrepreneurship would benefit from a mix of economic and social perspectives (Anderson & Gaddefors, 2016; Gaddefors & Anderson, 2017; Korsgaard, Ferguson & Gaddefors, 2015; Korsgaard et al., 2016; Welter, 2011). However, it may be a challenge to find common ground to begin from as the different orientations also use different epistemological and methodological starting points (Müller, 2016). This thesis contributes to entrepreneurship research within sociological perspectives. Entrepreneurship and innovation are intertwined in the literature and in this study. The rapid evolution of the entrepreneurship field in the past two decades illustrates this interconnection by revolving around the two central constructs of exploration and exploitation (Alvarez & Barney, 2007; Goel & Jones, 2016), meaning understanding of opportunity exploration, i.e. activities to identify opportunities, and

exploitation, i.e. utilising the opportunities discovered. Exploration is often about risk-taking, adapting business strategies and searching for opportunities by reorganising competences to create new competitive advantages. While exploration identifies new opportunities, exploitation involves utilising existing competencies or current capabilities and opportunities (Goel & Jones, 2016; Shane & Venkataraman, 2000). In this thesis I define entrepreneurship as a phenomenon enabling the creation of value, wealth and sustainability from exploration and exploitation of opportunities (Hitt et al., 2011; Shane & Venkataraman, 2000), and also by exaptation i.e. converting existing resources (Dew et al., 2004) engaging with resources to create value (Korsgaard, Anderson et al., 2016). Innovation is defined as changes which are new to the user or the system (Henderson & Clark, 1990). Consequently, entrepreneurship involves innovation since it can introduce novelties such as new mind-sets, new methods or new relationships (Henderson & Clark, 1990). Since this implies change, management becomes a natural part of the changes and development and of the individuals who are involved in these changes (Manz, 1986), both as concerns cognitions (Chesbrough, 2010) and emotions affecting decision-making and activities (Rauch et al., 2009), in order to progress.

Rural entrepreneurship and agricultural entrepreneurship

There is an ongoing discussion within entrepreneurship research about the development of the subfields rural entrepreneurship and entrepreneurship in agriculture or agricultural entrepreneurship as it also is called (Bosworth, 2012; Kitchen & Marsden, 2009; Korsgaard, Müller et al., 2015; Meccheri & Pelloni, 2007; Niska et al., 2012). From discussions about contextual importance, and as social development has moved towards urbanisation with challenges for rural areas through changing social and economic conditions (Labrianidis, 2006; Marsden, 2013), rural entrepreneurship has moved more and more into focus. The new rural orientation shows that rural entrepreneurship cannot be equated with urban entrepreneurship because rural areas exhibit unique preconditions that affect both society and entrepreneurship (Korsgaard, Müller et al., 2015; Pritchard et al., 2012). There are different ways of defining rural areas, one way is by activities and connections to particular resources and nature, such as agriculture (Labrianidis, 2006), and another way is by measuring population density, distances from larger cities etc. (OECD, 2018). Recently, the social aspect has also been used to define rural areas in which, for example, ways of living everyday life play a role (Labrianidis, 2006). In fact, rural entrepreneurship is, by some researchers, considered to be conceptually underdeveloped (Bosworth, 2012; Meccheri & Pelloni, 2007) and it is not obvious that the concept of entrepreneurship ought to be included in rural development (Kitchen & Marsden, 2009; Korsgaard, Müller et al., 2015; Niska et al., 2012). Some researchers within rural development connect entrepreneurship with a narrow opportunistic approach to farming (Kitchen & Marsden, 2009), while established entrepreneurship research is of another opinion. Rural context and entrepreneurship include many intertwined areas and disciplines, and vary within different situational and social variables (Jack & Anderson, 2002; Korsgaard et al., 2016). In this study I use the definition of Rural Entrepreneurship as “*engages with its location not primarily as a space for profit but with ‘place’ as a location of meaningfulness and social life*” (Korsgaard, Müller et al., 2015, p. 13), emphasising the importance of understanding embeddedness in context and in place as will be further explained later on in this chapter.

Agricultural entrepreneurship is probably an upcoming research area within rural entrepreneurship. However, a diversity of terms associated with the concept of entrepreneurship in agriculture may cause some confusion. Terms such as agricultural entrepreneur, farmer-entrepreneur, agripreneur, entrepreneurial farmer and agri-entrepreneur are used (Dias et al., 2019), and the concept is connected to farmers development of non-agricultural businesses by some authors (Alsos et al., 2011; Carter, 1998a; Seuneke, Lans, & Wiskerke, 2013), and by other researchers as innovation of business models or activities that provide entrepreneurial opportunities (Pindado & Sánchez, 2017; Vesala & Jarkko, 2008). Some authors claim that agricultural businesses can be analysed using methods from other sectors (McElwee, 2006; Phillipson, Gorton, Raley, & Moxey, 2004), while other studies indicate the opposite due to the complex relationship between the roles in farm business and ownership (McElwee, 2008). However, entrepreneurship in agriculture is generally considered a sub-domain of rural

entrepreneurship, but may also be connected to urban, sustainable or social entrepreneurship. Since the concept is under development, many aspects of entrepreneurship in agriculture are called for (Dias et al., 2019). In this thesis the labels entrepreneurship in agriculture and agricultural entrepreneurship are used and equated, and a farmer is called a farmer, and nothing else, to avoid the above-mentioned confusion from different streams of research in this area.

Development of agricultural businesses – entrepreneurship or not?

As mentioned above, much research into agricultural businesses is excluded from entrepreneurship literature. In fact, in literature about agricultural business development, the two concepts of peasantry and entrepreneurship are considered contradictory farming strategies and farmer categories (Niska et al., 2012). Peasantry is considered not to be entrepreneurial, being the traditional farming strategy connected to continuity, agrarian way of life, risk avoidance and small farms, while entrepreneurial farming includes market orientation, large scale, risk taking, profit maximisation and large farms (Van der Ploeg, 2012). However, the new generation of younger farmers are rediscovering peasantry by, for example, being innovative, collaborating and answering to societal demands regarding agriculture (Milone & Ventura, 2019). Farmers are traditionally not considered entrepreneurial (Korsgaard, Müller et al., 2015), but running and developing agricultural businesses demands innovative methods both to develop production (Alsos, Carter, & Ljunggren, 2014; Niska et al., 2012), and to diversify operations (Carter, 1998a, 2001). The importance of business development in agriculture has thus increased recently as has the realisation that the intertwined concepts entrepreneurship and innovation are significant parts of development (Niska et al., 2012).

Since the agricultural sector mainly consists of small family businesses, where the owner usually works in different roles and possesses both management and control (Pindado & Sánchez, 2017), the family situation and relationships are fundamental to agricultural businesses (Dias et al., 2019; Fitz-Koch et al., 2018; Korsgaard, Müller et al., 2015; Suess-Reyes & Fuetsch, 2016; Vik & McElwee, 2011). The family is usually an incubator for innovation in family farms, and in many cases attractiveness to potential successors is higher in innovative farms (Suess-Reyes & Fuetsch, 2016). The family influences the discussion of the development of the business but this may also create tensions in discussions about whether to continue to pursue traditional farming or diversify the farm processes (Morris, Henley, & Dowell, 2017), although diversification increases opportunities for farm success (Methorst, Roep, Verhees, & Verstegen, 2016).

Diversification is a highly prioritised issue in rural development policy within EU, and considered essential to rural economic growth (OECD, 2018). There is a great interest in farm diversification within literature (Hansson et al., 2013; Vik & McElwee, 2011), and in pluriactivity by farmers, including development both within and outside the farm (Alsos, Ljunggren, & Toril Pettersen, 2003; McNamara & Weiss, 2005). Diversification can be defined as “*involvement in ventures outside conventional agriculture in which farm resources are used, or ventures based on further on-farm processing and/or marketing and retailing of products*” (Hansson et al., 2013, p. 241). Many family farms have been forced to pursue innovative strategies to tackle changes and challenges in society and in their environment (Suess-Reyes & Fuetsch, 2016). Other farmers wish to reduce risk and use existing unused resources (Hansson et al., 2013) and create a life on the farm by developing land-based rural enterprises (Hansson et al., 2013; Milone & Ventura, 2019; Suess-Reyes & Fuetsch, 2016; Vik & McElwee, 2011).

However, business development in agriculture is a process of activities engaged with the context, and business model innovation for agricultural businesses involves new combinations of local resources which creates value for both the entrepreneur and local society. These businesses cannot be located anywhere else without losing the key value proposition, a central key in BMI (Korsgaard, Müller et al., 2015). Further, innovation may come in many different forms and be considered a process including many dimensions, levels and actors with relationships to the farm, as well as internal relations with the context. The new generation of farmers have been found to innovate their business models by

reorganising processes and farming, and also reorganising relationships between the farm and its social, economic and environmental context (Milone & Ventura, 2019). Ashkenazy et al. (2018) illustrate strategies enhancing rural and farm resilience, and emphasise the importance of considering the unique and constantly changing context at policy-making level in order to avoid contradictory goals and outcomes as a result. Different ways of understanding embeddedness in context are further discussed later in this chapter, but first there will be a glimpse of the sustainability perspective of development and entrepreneurship in order to understand this perspective at an overall entrepreneurship level.

The sustainability perspective of entrepreneurship

Sustainability is discussed in rural entrepreneurship, and has become a key concept for linking economic, environmental and social sustainability with social development (Huggins & Thompson, 2014; Janker et al., 2019). Farmers' activities involve nature and the surrounding environment in a way that makes them face special challenges such as low levels of human and financial capital, relatively small and limited markets and poor local communications (Korsgaard, Müller et al., 2015; OECD, 2018). Farming activities also exert a greater impact on the environment than other sectors (Pindado & Sánchez, 2017). In addition, the local rural population lives close to this impact (Dias et al., 2019). The environmental impact of agriculture is always a topic for discussion, and there is research that shows that farmers have a natural approach to sustainability work, primarily through the long-term sustainability that entrepreneurship for several generations entails (McManus et al., 2012), while others see agriculture as “environmental sustainability bad guys” (Swedish Board of Agriculture, 2012). However, the word sustainability is sometimes viewed as a political catchword rather than a well-developed concept (Littig & Griessler, 2005), and policy-makers would benefit from broadening their perspectives towards the social dimension and not merely looking at technological development or growth in planning regional development (Blake & Hanson, 2005; Huggins & Thompson, 2014). Various tools for evaluating sustainability in agriculture have been developed, but when it comes to social sustainability, views on its content vary greatly (Janker et al., 2019), and the social aspect is the least studied in agriculture (Janker et al., 2019; Müller, 2016; Suess-Reyes & Fuetsch, 2016) even though entrepreneurship research has now made a “*societal turn*” (McKeever et al., 2014, p. 454). Social sustainability contains issues such as taking care of cultural heritage and finding a balance between work and life as a farming family. But since social sustainability is hardly being taken into account in research about innovative and sustainable agriculture, the sustainability focus has traditionally been on economic or ecological sustainability (Suess-Reyes & Fuetsch, 2016). However, researchers now also request methods for measuring social sustainability (Müller, 2016) and one framework to enable the evaluation of the social dimension of sustainability in agriculture has recently been created as a way to try to bridge the gap between agricultural and social science. This framework attempts to capture the agricultural social system and its embeddedness in society, however the authors highlight the need for adaption to context using local cultural and social settings (Janker et al., 2019).

When discussing social sustainability, the two concepts social entrepreneurship and social enterprise, are often mixed up (Luke & Chu, 2013). Rural social entrepreneurship can be explained as “*complementing an entrepreneurial mission with a social mission*” (Lang & Fink, 2018, p. 12), and emphasises “*the processes underlying innovative and entrepreneurial activity for social purposes*” (Luke & Chu, 2013, p. 764). Rural social entrepreneurs are regarded as change agents in rural regions using their problem-solving capacity to tackle socioeconomic problems. They create value on different levels - for groups at the rural community level as well as for groups on regime level and at the close intermediary level (Lang & Fink, 2018). Social enterprise is understood as “*a hybrid organization which pursues both social and economic objectives and provides goods and services for the benefit of a particular community*” (Lang & Fink, 2018, p. 1). They exist for a social aim and focus on the purpose of achieving their social mission (Luke & Chu, 2013). Based on innovative and entrepreneurial activity, some considerable differences exist between the concepts of social enterprise and social entrepreneurship, where social entrepreneurship covers more innovation and strategic issues while social enterprises is more working hands on (Luke & Chu, 2013). Rural communities are considered as

having high levels of social capital and traditions of collective problem solving, but very few studies explore how rural social entrepreneurs act within the complex multilevel network of rural contexts (Lang & Fink, 2018). Social capital is further discussed related to embeddedness in the next part of this chapter.

Entrepreneurship in agriculture is sometimes equated with sustainable entrepreneurship. There are no clear boundaries and many aspects are common as farmers work with sustainability and long-term perspective as well as with the environment. However, we can learn from this framework when exploring agricultural entrepreneurship. Sustainable entrepreneurship is a relatively new subarea of entrepreneurship research (Kuckertz & Wagner, 2010; Shepherd and Patzelt, 2011) intertwined with strategic management and research into organisations with social and environmentally-sustainable aspects (Kurowska-Pysz, 2016; Marko & Vanja, 2016). Sustainability and management researchers agree about the importance of developing sustainable business models, entrepreneurship and leadership at different levels in order to attain sustainable development in society (França et al., 2017; Schaltegger, Hansen & Lüdeke-Freund, 2015). Consensus has evolved among sustainability researchers that sustainable development in society is associated with sustainable development of organisations, and that business models as drivers to implement sustainability in companies is now to be included in sustainability management research. Previously-used approaches involved with, for example, corporate social responsibility, process and product innovation are not enough to create necessary changes in organisations, industries, and societies toward sustainable development. In order to create positive effects on society and natural environment, more research is called for about how to change or create business models (Schaltegger et al., 2015). Entrepreneurial change in approach from short-term towards long-term growth with sustainability aspects may contribute to a sustainable society (Acs, Audretsch, Braunerhjelm & Carlsson, 2012; Rosalinde & Klein, 2010; Shepherd & Patzelt, 2011), where the establishment of multiple strategic orientations such as innovation in sustainable entrepreneurship is recommended to improve business performance (Grinstein, 2008; Choongo, Van Burg, Paas, & Masurel, 2016).

2.2 Value creation and embeddedness in rural context

The agricultural and rural context creates unique preconditions for farmers, hence the framework provided by the rural context and rural development, together with the framework for agricultural and rural entrepreneurship, are important to understand in order to be able to explore agricultural entrepreneurship. Initially, an illustration is provided of a framework that helps explore the agricultural and rural contexts. Since farmers are extremely embedded in rural society, this contextual embeddedness affects their actions and thinking in different ways (Anderson & Gaddefors, 2016; Granovetter, 1985; Jack & Anderson, 2002; McKeever et al., 2015). Also, the framework on the spatial context with place and space (Goodman, 2003; Johnstone & Lionais, 2004; Korsgaard, Ferguson et al., 2015) helps explore the embeddedness and value-creation in the context. After this, I proceed to the framework on management and development of agricultural businesses and the support system.

As entrepreneurial research has developed, context has become increasingly important (Welter, 2011; Zahra, 2007), and today there are even researchers who focus entirely on context, use context as a unit of analysis, place context in foreground rather than as background and believe that entrepreneurship is a social phenomenon and an experience that concerns engaging people in new innovative ways (Gaddefors & Anderson, 2017). Since entrepreneurship is considered a socially-situated collective practice (Johannisson, 1988), enabled and constrained by the context in which it takes place (Anderson, 2000; Welter, 2011), it is natural that the context is allowed space here. The context is of great importance as there may be major consequences if the theory is applied without consideration and reflection on the actual context in the research. This can then lead to both false and inconclusive results which in turn can lead to confusion through calls for further research. A change in research context may also result in changed theory and create interesting opportunities (Zahra, 2007). However, in terms of regional development, regional economists are considered to have a tendency to overlook the meaning

of context (Acs, Stam, Audretsch, & O'Connor, 2017; Baumol, 1996; Tunberg, 2014), while entrepreneurship researchers on the other hand have a tendency to overlook how the role of spatial context affects the entrepreneurial process (Müller, 2016). The relatively new concept of the entrepreneurial ecosystem approach attempts to incorporate and combine literature from both regional development and strategy research and includes both actors and factors that are interdependent and are structured in a way that enables the development of entrepreneurship within a certain area (Acs et al., 2017). Ecosystem is considered to be a concept to increase understanding of the combination of context, entrepreneurship and innovation (Stam, 2015), but is so new that many aspects of the concept need further study in order for it to be really useful (Acs et al., 2017). Development within the interdisciplinary field of ecosystems for strategic regional development has thus begun, and this will be examined with deeper insight later in the chapter when discussing striving for sustainable innovation in agriculture.

Unique conditions for managing rural and agricultural business

Managing rural and agricultural businesses implies some unique preconditions as compared to running businesses in cities and more densely populated areas. In the rural context, history, culture, municipal policy, lifestyle, relationships and individuals exert great influence (Welter, 2011), and it is a great responsibility for the politicians to create and maintain contextual conditions that enable survival of farms (Blake & Hanson, 2005; Labrianidis, 2006; Suess-Reyes & Fuetsch, 2016). Along with societal changes, rural areas have transformed from primarily a production space to a multifunctional consumption space for value creation, well-being, working and living (Halfacree, 2006). Despite the importance of the context, a literature review of research on family farming shows very few studies that explicitly reflect on context in their findings. Further, there are studies claiming that family farms have characteristics and operate in a unique context that differ from the general family business and management research, hence the call for further studies of the rural agricultural context (Suess-Reyes & Fuetsch, 2016).

Literature about rural development emphasises context and entrepreneurship, and two central concepts are discussed: 1) regional context and preconditions that affect entrepreneurship, and 2) regional development and growth achieved through entrepreneurship. However, research within local and regional development has focused on economic growth and economic metric (Huggins & Thompson, 2014), which is also reflected in the three main disciplines that dominate literature i.e. regional economics, sociology and management, and economic geography (Müller, 2016). In order to develop a good, wealthy society for people who live and work in specific rural locations, research on contextual knowledge of place-based development and wellbeing is called for in this literature (Huggins & Thompson, 2014).

Rural contexts create both opportunities (Davidsson, 2015; Korsgaard, Ferguson et al., 2015; Müller, 2016) and challenges to the development of both companies (Müller, 2016) and societies (Labrianidis, 2006; McManus et al., 2012; Pritchard et al., 2012), since contextual and factors other than primarily economic factors motivate entrepreneurs in rural areas (Hansson, Ferguson, Olofsson, & Rantamäki-Lahtinen, 2013; Vik & McElwee, 2011). Weak communication and knowledge infrastructure, limited access to government support and financial and human capital and small limited markets are well-known challenging conditions for rural entrepreneurs (OECD, 2018). But rural entrepreneurs also enjoy benefits compared to urban entrepreneurs, such as greater employee loyalty, lower land prices and labour costs, and ease of creation of niche markets (Korsgaard, Müller et al., 2015). Many benefits are related to their unique embeddedness in the local rural context (Granovetter, 1985).

2.2.1 Contextual embeddedness

There are a number of concepts that are discussed in different ways in the field of rural entrepreneurship, and which together developed and shaped the concept to become what it is today. Two of them are

embeddedness and *culture*, as entrepreneurship is considered as being an embedded, socio-economic process and the entrepreneur cannot be considered in isolation (Jack & Anderson, 2002). It is relatively unanimous among researchers in rural entrepreneurship that the concept of embeddedness includes individuals and organizations, culture and social context, and that it is about the entrepreneur's participation in the social context through ongoing social relations, networks and deeper bonds (Anderson & Gaddefors, 2016; Granovetter, 1985; Jack & Anderson, 2002; Korsgaard, Müller et al., 2015; McKeever, Jack, & Anderson, 2015; McManus et al., 2012). The concept of embeddedness is about the relationship between the entrepreneur and society (Granovetter, 1985; Jack & Anderson, 2002), the individual ties into the local society (McKeever et al., 2015), and the influence of context and community to value creation, cognitions and perceived opportunities and barriers (Johnstone & Lionais, 2004; Müller & Korsgaard, 2017; Welter, 2011).

Embeddedness may be viewed as a dynamic process or phenomenon, affected by local conditions, actions and individuals (McKeever et al., 2015) where the entrepreneur becomes part of the local structure (Jack & Anderson, 2002). Further, embeddedness plays a key role in rural business development and thus highlights the importance of social values in the creation of new companies as well as the development and management of existing businesses. Being embedded makes it easier to identify social resources when establishing new businesses and to gain access to more support during development (*ibid.*), but may also form a barrier due to dependence on specific network actors or over-embeddedness when social aspects go so far ahead of economic aspects that damage is done to the company (Uzzi, 1997). Sometimes the concept of bridging is used, where the entrepreneur bridges between two contexts and creates contacts outside his or her local context. Rural entrepreneurs use their placial embeddedness and, together with their strategic external networks, find ways to create opportunities (Korsgaard, Ferguson & Gaddefors, 2015). However, local resources are used before searching for external resources (Alsos et al., 2014; Korsgaard, Ferguson et al., 2015).

Research sees a challenge in understanding how embeddedness integrates with business and place, and the social value of entrepreneurs to society (Korsgaard, Ferguson et al., 2015). Embeddedness and culture affect both entrepreneurship and communities, since entrepreneurship and communities shape each other by the way resources and relations are used. Being embedded means that entrepreneurs both use and are used by the local society (McKeever et al., 2015). Entrepreneurship can also be regarded as the link between culture and regional development, and studies illustrate differences in the degree of entrepreneurship which are strongly affected by the local community culture. This means that the embeddedness of local community culture becomes a challenge for rural areas trying to encourage value creation and entrepreneurially-driven development (Huggins & Thompson, 2014). When trying to understand embeddedness, it is important to understand and care about the sense of community, since entrepreneurial opportunities actually exist in society, and are utilised via social bonds and entrepreneurial activities (McKeever et al., 2015). In order to further understand how social structure affects the economy in society, embeddedness may be expressed as *“a puzzle that, once understood, can furnish tools for explicating not only organizational puzzles but market processes”* (Uzzi, 1997, p. 22).

Place & Space

In recent years, research has increasingly discussed and illustrated the differences between different regions in rural areas, and that the embeddedness in the unique local context is the key to understanding (Jack & Anderson, 2002; McKeever, Anderson, & Jack, 2014; McManus et al., 2012; Suess-Reyes & Fuetsch, 2016) that is, all rural areas cannot be treated in the same way. This puts further focus on the discussion of the importance of place and space. Placial embeddedness is important for rural entrepreneurs looking for opportunities (Huggins & Thompson, 2014; Korsgaard, Ferguson & Gaddefors., 2015). In the literature about placial embeddedness in rural entrepreneurship, *place and space* are discussed (Johnstone & Lionais, 2004; Korsgaard, Ferguson et al., 2015). Place and space represent two aspects of spatial context. Space is merely about the economic attributes of a location such

as capital, labour and resources, while a place is created with meaning and experiences (Johnstone & Lionais, 2004; Korsgaard, Ferguson et al., 2015).

One way of illustrating the importance of embeddedness in the local rural context is highlighted by Korsgaard, Müller et al., (2015) who separate rural entrepreneurship from entrepreneurship in the rural (areas). They mean that rural entrepreneurship connects place and space, and optimise the use of local resources, social relations, territorial and heritage aspects (Goodman, 2003) and companies in this category most likely stay in the same geographical location, regardless of economic rationality. Entrepreneurship in the rural (areas) consists of companies geographically placed in rural areas, for economic or other reasons, but with limited embeddedness, i.e. who do not feel affinity or loyalty to the area and are profit-oriented and can therefore be moved away from the place if there are financial incentives. Agriculture clearly belongs to the category Rural Entrepreneurship. Thus, the place plays an increasing role in research in entrepreneurship in the rural context, and spatial context implies opportunities to study experiential dimensions (Kibler, Fink, Lang, & Muñoz, 2015; Korsgaard, Müller et al., 2015). Emotional attachment to a place may entail non-rational economic decisions, but attributes such as the inheritance and the trademarks of the place may also be regarded as resources and create value for rural entrepreneurship (Anderson, 2000; Korsgaard, Müller et al., 2015). The identity of geographical locations may also be created or strengthened through entrepreneurship (McKeever et al., 2015). Spatial context can be studied from many different perspectives, covering both physical location and socio-cognitive mechanisms related to attachment (Kibler, Kautonen, & Fink, 2014; Korsgaard, Müller et al., 2015; Lang, Fink, & Kibler, 2014; McKeever et al., 2015), and can be conceptualized as a socio-material phenomenon (Müller & Korsgaard, 2017).

Culture

Culture is part of the place-based development systems that connect economic performance with societal sustainability and wellbeing (Huggins & Thompson, 2014; Johnstone & Lionais, 2004). Culture affects entrepreneurial activities and value creation, and cultural embeddedness both enables and constrains entrepreneurial action (Greenman, 2013). Rural communities are tightly-knit groups of people with a common culture characterised by trust and helpfulness that facilitates value creation in the rural community (Steinerowski & Steinerowska-Streb, 2012). As early as in the 19th century, Tylor defined culture as *“that complex whole which includes knowledge, belief, art, morals, law, custom, and any other capabilities and habits acquired by man as a member of society”* (Tylor, 1871, p. 1). Hence, culture can be described as the way people behave, often as a result of previous experience and a sense of belonging, and relates to shared systems of meaning (Hofstede, 1984).

In order to achieve regional development the culture must, through attitude and action, encourage entrepreneurial behaviour (Müller, 2016). However, culture is considered difficult to change and it can be difficult for governments to influence spatial cultures. But by creating the right institutional environment, behaviours can be encouraged that, over time, can be included in the culture and thus influence it. This is very long-term work that might be considered by policy-makers in rural development. Hence, there are different ways of looking at entrepreneurship in relation to culture and values, and entrepreneurship can be seen as a product of social and cultural values in one place, to the same extent as entrepreneurship can be regarded as the developer of economic and business-oriented values (Huggins & Thompson, 2014).

In order to discover the opportunities that arise in a particular context, involvement and understanding of the context is a prerequisite for the entrepreneur. This is enabled by social embeddedness. If the entrepreneur fails to understand local expectations or cultural rules and relationships, this may instead imply barriers to business development. Embeddedness is a process of becoming part of the social structure. However, it is not enough merely to develop networks in order to be embedded, it requires both understanding of the social structure and involvement in the structure and maintaining both structure and the relationships created (Jack & Anderson, 2002).

Social capital

Embeddedness is also about *social capital*, as social capital gives entrepreneurs advantages (Gedajlovic, Honig, Moore, Payne, & Wright, 2013). Hence, the social capital approach may advantageously be used to study embeddedness of social entrepreneurs in rural contexts (Granovetter, 1985). There is consensus among researchers that social capital is about resources embedded in networks which can be moved by social interactions, and can be explained as something between bonding, bridging and linking capital (Lang & Fink, 2018). Consequently, social capital is of importance both for rural entrepreneurship and agriculture (Granovetter, 1985). Just as with other resources, social capital is a resource that exists within the local context (Adler & Kwon, 2002), which can be moved by social interaction (Lang & Fink, 2018), which the entrepreneur gains access to by social interaction with community and place (Putnam, 2000). The way social capital works and functions is influenced by both community and context, and only exists when engaging in social interaction. Depending on the context, social capital may both facilitate and limit rural entrepreneurs. Social capital can be considered as the outcome of the practices of embedding – both as a process and an outcome, since it is the social environment which is crucial (McKeever et al., 2014). Social capital can also be linked and regarded as a vertical form of bridging, by linking different levels of social capital or different geographical or institutional levels (Lang & Novy, 2013; Marti, Courpasson, & Dubard Barbosa, 2013; Müller & Korsgaard, 2017). Although there is a general consensus about the importance of social capital for entrepreneurship, there is a debate about how the social capital works and should be understood (Gedajlovic et al., 2013; McKeever et al., 2014).

2.3 The farmer and entrepreneurship in the agricultural business

We now understand the importance of considering the context and understanding preconditions for rural entrepreneurship. Hence, we move forward to study the entrepreneurship in agriculture by focusing on innovation and the management of agricultural businesses and the farmers.

Agricultural research is traditionally focused on agricultural production, i.e. how and what to produce or how to cut down food supply chains. However, in order to create a sustainable long-term development in agriculture, a transformation would benefit from including interdisciplinary knowledge about management, entrepreneurship and business development (Bellamy & Ioris, 2017; Levidow, Pimbert and Vanloqueren, 2014; Vandermeer & Perfecto 2013; Wezel et al., 2009). Management research study factors contribute to successful businesses, where the business model is one factor. Research is called for about relationships between strategy, BMI, organisational learning, leadership, entrepreneurship and change management (Chesbrough, 2010; Lambert & Davidson, 2013), to enable change and the creation of value-based management systems (Hemp & Stewart, 2004; Schaltegger et al., 2015). Also, business model scholars call for further research about management using cognitive processes and mechanisms that foster or hinder BMI (Demil, Lecocoz, Ricart & Zott, 2015). Further, there is an ongoing change in the approach of management research from short-term to long-term growth, emphasising sustainability aspects in order to enable a transition towards sustainable societies (Acs, Audretsch, Braunerhjelm & Carlsson, 2012; Rosalinde & Klein, 2010; Shepherd & Patzelt, 2011). To follow societal development and achieve a sustainable society, establishing a multiple strategic orientation is recommended involving entrepreneurship, learning, value creation and innovation (Grinstein, 2008; Choongo, Van Burg, Paas, & Masurel, 2016).

Hence, in recent years, a discussion about learning and developing skills to improve management in agriculture has occurred. Changes in agriculture have also created needs for farmer entrepreneurial skills, for example when considering diversification on the farm. However, farmers seem to possess less entrepreneurial skills than entrepreneurs in other sectors (Pindado & Sánchez, 2017). Although Theodore Schultz as early as the 1950s highlighted the importance of social capital and education for farmers to increase the competitiveness and sustainability of agriculture (Schultz, 1956, 1961), it is not

until in later years that interest was shown in the development of entrepreneurship educations for farmers. A literature review shows that 2013-2017, 13 scientific articles were written about agricultural entrepreneurship programmes, one of which was European. The other articles were from other continents (Dias et al., 2019). Governmental training programmes are considered important to provide entrepreneurial skills (Sampedro-Hernández & Vera-Cruz, 2017), and this kind of governmental support is positively associated with entrepreneurial farmers. Hence, researchers underline the importance of agricultural entrepreneurship education (Dias et al., 2019). In Sweden one such program has been initiated and conducted by the support system, and is studied and described in this thesis (Paper 4). Better educated farm owners perform extensive business ownership activities and establish higher strategic complexity within their businesses (Carter, 1998b). Young farmers with non-agricultural education are found innovative in the management and development of businesses, and view knowledge in a new manner. They work with the traditional advisory organisations in new ways and exchange knowledge in cooperation and dialogue (Milone & Ventura, 2019) instead of taking advice and carrying it out as farmers have traditionally done (Höckert, 2017; Milone & Ventura, 2019), or being passive and not acting due to the advice they have been given (Hilkens, Reid, Klerkx, & Gray, 2018). But there is a risk that farmers rely on governmental support and do not take own initiatives, which can be counteracted by providing complementary training and support in the development of entrepreneurial skills (Bosworth, 2009; Bosworth, McElwee, & Smith, 2015). An improved understanding of how farmers acquire entrepreneurial capabilities is requested in order to improve entrepreneurial education and support (Dias et al., 2019). Entrepreneurial processes are better managed when entrepreneurs possess cognitive abilities such as sufficient knowledge, access to information, quick decisions and cognitive flexibility. Further, positive emotions affect individual cognitions in many ways by fostering entrepreneurial processes, enhancing individual performance and creativity, broadening attention and creating new relations and new intellectual and social resources, while negative emotions hinder entrepreneurial processes (Shepherd, 2015). In small family businesses such as agriculture, management is strongly linked to the individual, i.e. the farmer who owns and runs the business, often together with his or her family. The individual farmer's cognition, emotions, mind-set and actions thus exert a major impact on the agricultural business. His or her entrepreneurial orientation is considered to influence the decision-making in, and development of, the business.

2.3.1 Entrepreneurial Orientation (EO)

In order to explore the cognitive aspects of management, i.e. how farmers think, act and cope with challenges, the Entrepreneurial Orientation framework is helpful. Entrepreneurial Orientation (EO) is a driving force behind entrepreneurial activities and a concept widespread in literature about entrepreneurship, implicating a strategic orientation of entrepreneurial strategy-making processes (Covin & Wales, 2012; Lumpkin & Dess, 1996; Rauch et al., 2009). Entrepreneurship scholars examine EO to find explanations for business performance (Wiklund & Shepherd, 2005) and EO reflects how a business operates, rather than what it does (Lumpkin & Dess, 1996). There is increasing consensus in mainstream literature that the concept consists of innovativeness, risk-taking and proactiveness and that a well-developed EO facilitates decision making, innovation and business performance (Dias et al., 2019; Rauch et al., 2009; Wiklund & Shepherd, 2005), in agriculture too (Grande, Madsen, & Borch, 2011; Ibidunni et al., 2018; Methorst, 2016; Verhees, Kuipers, & Klopčic, 2011). However, there are different ways of viewing EO, such as the simultaneous exhibition of innovativeness, risk-taking and proactiveness (Miller, 1983), or as the process, practices and activities leading to proactive decisions to meet market opportunities (Lumpkin & Dess, 1996), or as *“the sum total of a firm’s radical innovation, proactive strategic action, and risk taking activities that are manifested in support of projects with uncertain outcomes”* (Zahra & Neubaum, 1998, p. 124).

There are contradictory studies discussing the importance of access to capital, and the involvement in the environment combined with EO to enhance performance (Wiklund & Shepherd, 2005), or emphasising a focus on efficiency and managerial skills rather than enhancing EO in order to improve

farm business performance since a high EO can imply negative financial performance (Veidal & Flaten, 2014). Studies also emphasise the complexity of the relationships in the concept, and the importance of the unique context in the performance implications of EO (Lumpkin & Dess, 1996). However, there are few studies in the agricultural sector (Pindado & Sánchez, 2017; Rauch et al., 2009; Veidal & Flaten, 2014) and those that do exist are mainly conducted in Asian and American countries using a quantitative approach (Dias et al., 2019). Hence, more research into entrepreneurial strategies is necessary to understand under what circumstances or among which type of farms an improved EO can lead to increased performance (Dias et al., 2019; Veidal & Flaten, 2014).

2.3.2 Self-leadership and Emotional Intelligence (EI)

In order to further deepen the understanding of the cognitive aspects of management in agricultural businesses, we need to extend knowledge about the thoughts and acts of the individual farmer. The individual farmer's mind-set and actions are influenced by skills in self-leadership and the ability to reflect and manage his or her own emotions. Self-leadership (Manz 1986) is about the ability to lead yourself, and the concept includes strategies for both how to think and act to develop the ability to control your own actions, meaning for example setting goals for desired personal development, following up and reflecting on the development, i.e. creating the life and way of living desired by the individual. The assumption is that it is easier to lead your employees or other people, as well as your business, if you can lead yourself using specific sets of behavioural and cognitive strategies (Neck & Houghton, 2006). Self-leadership is closely linked to emotional intelligence (EI), being the ability to view, understand and control emotions (Joseph & Newman, 2010). EI can be illustrated by four dimensions: how to perceive emotions, how to use emotions, how to understand emotions and how to manage emotions (Mayer, 1997) and can be learned by understanding, for example, motivation and feedback (Goleman, 2004) which also is included in self-leadership. Leadership is usually discussed as achieving organizational goals (Yukl 2012; Yukl, Gordon & Taber, 2002), and leadership of others may also refer to different leadership styles such as transformational leadership (e.g. Bass 1990; Stewart 2006) or participatory leadership (Hersey, Blanchard & Johnson, 2007). However, self-leadership and emotional self-leadership has been less researched (Manz et al. 2016; Neck & Houghton, 2006).

There are many tools and methods for developing self-leadership. Johari's window (Luft & Ingham, 1961) is a model that helps the individuals to get to know themselves in the areas where they may experience difficulty seeing their own behaviour. Another tool is the feedback-stairs, which help an individual to receive feedback (Tullberg, 1988). Motivational theories aim to create an inner driving force to make the individual want to accomplish something. One such a theory is Maslow's needs staircase based on the theory that needs come in a certain order. The most basic need we have is physical in terms of sleep and food and then they ascend up to self-realisation (Maslow, 1954). Another motivation theory is known as the two-factor theory where Herzberg developed Maslow's theory, distinguishing between motivational factors and hygiene factors. Hygiene factors reduce dissatisfaction but do not create satisfaction or motivation. Motivational factors, such as recognition, development opportunities and responsibilities, on the other hand, create satisfaction and motivation but do not remove dissatisfaction (Herzberg, 2017).

2.3.3 Business Model Innovation

It is hard to separate the farmer from the agricultural business, since they are so intertwined. But with help from the framework on sustainable business model innovation, the development process of the business can be understood. The business model concept comes from the field of business management and describes how a business earns money from providing products and services, which includes both the value proposition to customers as well as value creation together with suppliers and other resources in a profitable manner (Osterwalder & Pigneur, 2010; Zott, Amit & Massa, 2011). Previous research

shows countless definitions of business models, differing in both scope and concept and most of them include an individual business and focus on creating and offering value. Although there is disagreement among various scholars, common themes include when business model is seen as (1) a unit to analyse, distinct from product, industry, network etc., (2) a way to explain how companies do business on a system-level, (3) the impact of company activities and (4) a way to explain how to create and capture value (Zott, Amit & Massa, 2011). Business models are also described in literature as a method of business classification and business performance (Lambert & Davidson, 2013). Along with societal development and increased interest in sustainability issues, business models have also been developed in this manner. Research on business models for sustainability emerged in the mid-90s and has increased over the last decade (Boons & Lüdeke-Freund, 2013; Bocken, Short, Rana & Evans, 2014; Teece, 2010; Upward & Jones, 2015; Zott, Amit & Massa, 2011). With a sustainability orientation, nature can be treated as a stakeholder (Stubbs & Cocklin, 2008) or as a link between sustainable innovations and the BM concept (Boons & Lüdeke-Freund, 2013). Also the importance of relational leadership with reflection and sense-making is emphasised in the sustainability orientation (Kurucz, Colbert, Lüdeke-Freund, Upward & Willard, 2017) as are the importance of cognition and intentional choices and changes in both philosophy and values, as well as products, processes or methods to create social and environmental value in addition to economic returns (Adams et al., 2016).

The Business Model Canvas (Osterwalder & Pigneur, 2010), is a famous practical tool to systematically understand, design and implement a changing business model or analyse an old one and create understanding of customers, distribution channels, partners, revenue streams, costs and core value propositions. The canvas model has been developed in different ways to include sustainability aspects (Lüdeke-Freund, Massa, Bocken, Brent & Musango 2016; Upward & Jones, 2015) for example by adding questions highlighting social benefits and environmental regeneration (Upward & Jones, 2015) or shared value, connecting BM innovation, corporate sustainability and shared value creation (Lüdeke-Freund et al, 2016). Shared value is a relatively new way of working with business innovation and growth that connects company success with community success in a long-term perspective. Shared value activities present a chance for business management to use competences and capabilities in a, to the society, respectful and admirable manner (Porter & Kramer, 2011). Cognition, normative values, corporate identity, intentions and strategic orientation are valuable elements when creating new BMs for shared value (Lüdeke-Freund et al., 2016).

In agriculture, common methods for developing original agricultural production are to integrate the supply chain and develop your own brands in order to approach the consumer market, or expand from being solely a raw material producer to also include processing (Lewis et al., 2014). Farmers are affected by contextual factors which might not be explained by what happens in practice, such as place-identity and sense of belonging (McManus et al., 2012) and primarily develop sustainable business models by emphasising embeddedness in the local place (Van der Ploeg & Renting, 2004). They usually develop their business models by increasing the value of their production, for example organic farming; broadening the business with new activities such as agri-tourism; or totally changing basic production for example from agriculture to energy production (Van der Ploeg & Renting, 2004). Since farmer management is characterised by a long-term perspective, and by care for the society and surrounding area (McManus et al., 2012; Van der Ploeg & Renting, 2004), the concept of BM for shared value has been adopted in this thesis (Lüdeke-Freund et al., 2016). Value creation in this thesis goes beyond and broadening the traditional view in the business model literature, and in sustainability oriented literature on value creation by including value creation for the society and for future generations.

Barriers to Business Model Innovation

Frameworks concerning barriers to business model innovation help understanding of cognition and the exploration of farmers' thoughts and actions when facing barriers to business development. This framework extends over different disciplines, highlighting the importance of understanding the context, cognition and drivers affecting these entrepreneurs in development (Bocken et al., 2014; Breuer &

Lüdeke-Freund, 2016, 2017). Previous research has mainly focused on technical businesses and industries where technology takes centre stage. Novelty, lock-in complementarities and efficiency are key aspects identified (Amitt & Zott, 2001), however these aspects often conflict with the traditional assets of the business as managers resist change due to their own existing value-creation (Chesbrough, 2010) or that the required change in technology will be followed by possibly changed end-customers and distribution channels (Christensen, 2013; Christensen & Raynor, 2013). However, not only technological change creates barriers, cognitive barriers are also in place (Chesbrough & Rosenbloom, 2002; Chesbrough, 2006). Hence, the importance of focusing leadership skills and organisational change is emphasised, and two types of barriers identified – barriers to change in operational processes and the cognitive barriers inherent in the resistance of old leaders to change or develop incorporated business models (Chesbrough, 2007; 2010). Cognitive barriers may result in leaders missing opportunities to change BM as they do not see them, or lack the risk willingness to change (Engelken, Römer, Drescher & Welp, 2016), resulting in a gap in responsibility or capability to innovate (Chesbrough, 2007).

Research clearly highlights the need for adapting or changing BMs: rapid response to changes, new opportunities, technological barriers and leadership barriers. A common way of analysing barriers is by developing them into internal or external barriers (Sandberg & Aarikka-Stenroos, 2014). Internal barriers can be influenced by the entrepreneur or within the business including such aspects as leadership, mind-sets and other cognitive barriers related to management, organization and human factors. External factors are related to the external environment such as competitor, consumers and government behaviour, factors that the business cannot influence, partly or totally. For agricultural businesses external factors may include weather, legislation and regulations. In addition, large companies face different barriers compared to small businesses who often lack financial capital or access to industry knowledge (Lüdeke-Freund et al., 2016). Swedish agricultural businesses are traditionally small family businesses, i.e. businesses whose controlling decisions are made within the family and also with a family member leading the company. Hence the cognition and behaviour that characterises family businesses, such as focusing on socioemotional wealth by prioritising the service of family needs and values instead of economic goals may be considered when analysing barriers (Maloni, Hiatt & Astrachan, 2017).

As discussed above, we possess extended knowledge on barriers to business model innovation, however knowledge about barriers to BMI concerning agriculture is scarce. We know that government regulations and policies have been identified as barriers (Sivertsson & Tell, 2015), and that the support system around the farmers acts as a limiting factor by, for example, providing certain types of support while the needs of the farmers and society have changed and hence farmers request other types of support (Knickel et al., 2009). We also know that farmers follow a dominant logic, thinking about their work in traditional manners (Chesbrough, 2010). However, some farmers have succeeded in changing focus from being farmer/producer to becoming a professional business woman/man, i.e. focusing on BMI (Knickel et al., 2009; Tell et al., 2016). It is still the case, however, that farmers have more difficulty in seeing beyond their own production regarding business models and innovation (Sivertsson & Tell, 2015). Existing frameworks cannot fully be translated to agriculture since agricultural businesses have a context differing from the urban, or in large companies in other industries, which affects entrepreneurial situation and innovation processes. Hence, embeddedness in context should be included in agricultural BMI research (Gaddefors & Anderson, 2017; Stathopoulou et al., 2004). Further, also the broader perspective of value creation in this thesis, including value creation for the society extending beyond the company and the aim of gaining competitive advantages needs to be included to understand entrepreneurship in agriculture.

2.4 The support system for entrepreneurship in agriculture

Farmers and actors within the support system live and act together in an ecosystem. Studies on both individual and business and system level are necessary to explore agricultural entrepreneurship, hence

we now proceed to the support system. In order to further explore how entrepreneurship can be understood and encouraged in the agricultural support system, we need to understand the system as such. The support system is complex, criticised for insufficient management and leadership (Knickel et al., 2009; OECD, 2018). Hence leadership theories focusing on leading and managing complex organisations and systems will help explore the system and understand, for example, its communication and organisational challenges. However, before moving to the theoretical framework of Complexity Leadership Theory, the agricultural support system and its striving for innovation will be introduced.

2.4.1 The agricultural support system and its efforts for sustainable innovation

Understanding the agricultural support system is key to understanding entrepreneurship in agriculture, and why the situation and development of agriculture looks the way it does. The agricultural support system includes the political and governmental system that governs legislation, rules and policies. Further, the support system also includes a number of actors aimed at supporting and facilitating development in agriculture and rural areas in different ways (OECD, 2019).

The political and governmental system

Agricultural businesses are governed by different national regulations and conditions, and by legislation and agreements within the industry. EU legislation sets the basis, and national regulations complement. The Common Agricultural Policy (CAP) is a common EU policy regulating agriculture within the EU member states, covering 7-year periods, currently 2014-2020 (OECD, 2018). Of the EU's total budget of EUR 351.8 billion for CAP 2014-2020, approximately EUR 2.1 billion have been allocated to Sweden (Government Offices of Sweden, 2018). CAP is composed of two pillars: Pillar 1 (market measures); and Pillar 2 (rural development payments). Pillar 1 is funded by the European Agricultural Guarantee Fund, and Pillar 2, which is implemented according to the national Rural Development Programme, is funded by the European Agricultural Fund for Rural Development and EU Member states.

The Ministry of Enterprise and Innovation and the Minister of Rural Affairs handle all policy making concerning agriculture in Sweden (Government Offices of Sweden, 2018), and the Swedish Board of Agriculture (SBA) is the implementing agency and Government expert authority on agriculture and food preparedness (Swedish Board of Agriculture, 2018). Agricultural units at the County Administrative Boards handle different forms of support to agriculture at regional level (Government Offices of Sweden, 2015, 2016, 2018), and the National Food Administration is the authority for issues relating to food – organised under the Ministry of Enterprise and Innovation.

Rural development policies affect agricultural development and aim to improve the diffusion of innovation (OECD, 2015). By joining the EU in 1995, Sweden adopted the CAP which included implementing a Rural Development Programme, a programme with a strong focus on agriculture. The 2014-2020 Rural Development Programme includes six priority areas; knowledge transfer and innovation (Priority 1), agricultural competitiveness (Priority 2), food chain organisation and risk management, including animal welfare (Priority 3), environment (Priority 4), climate (Priority 5) and social inclusion and economic development in rural areas (Priority 6) (Government Offices of Sweden, 2018).

However, Sweden lacks a coherent national rural policy (OECD, 2018; SOU, 2015), since there is no framework for cooperation between different sectors. A Parliamentary Committee was established in 2015 aimed at conquering this problem and creating a coherent rural development policy for the next 30 years. It delivered its final report in 2017 “For Sweden’s rural areas – A coherent policy for work, sustainable growth and welfare” (SOU, 2017). Thus, in 2017, the Swedish government launched a National Food Strategy with the overall objective of developing a competitive food supply chain that increases overall food production while achieving both environmental and animal welfare goals, generating growth and contribute to sustainable development in Sweden. This strategy includes three

strategic areas: rules and regulations, consumers and markets and knowledge and innovation. In the last mentioned, the aim is to support the knowledge and innovation system, and innovation is defined as “*finding new or better ways to create value for society, businesses and individuals and new ways of responding to societal challenges.*” (p.18, A National Food Strategy for Sweden). The Government states that successful implementation of the strategy requires commitment and collaboration from the entire food supply chain (Government Offices of Sweden, 2016, 2018), indicating the importance of exploring the support system.

Other actors within the support system

Together with the political and governmental system, the support system consists of advisory organisations, regional and national development organisations, member organisations and federations of farmers etc.

The agricultural advisory system originates from late 1700s when the Rural Economy and Agricultural Societies was established. These organisations are public corporate institutions, i.e. operating in between the private and public sectors, and after a merger in July 2019 (the Rural Economy and Agricultural Society, 2019) consists of 15 regional “companies”. They are member-based organisations, providing advisory service mainly focusing on crop production, economy, animal production, energy etc., field trials and training. Initially, the Governor of the County was chair, a frequent tradition that still exists in some of these organisations today. This position meant that the Rural Economy and Agricultural Societies exerted significant influence on the development of agriculture in the regions. In addition to developing agricultural methods and production, the development of rural societies also became a part of the issues for these organisations, and still remains so (Höckert, 2017). During 1800s other agricultural associations were established, for example Animal Husbandry Associations, Slaughterhouse Associations and Milk Associations, which were merged into Växa Sweden at the beginning of 2000s. Due to its origin, Växa Sweden is specialised in areas connected to dairy production such as breeding, feed, animal health, crop production etc. The LRF (Federation of Swedish Farmers) was also established during this period, being an interest and business organisation for the green industry, and developed a subsidiary company LRF Consulting, which is specialised in accounting, tax and legal matters etc. (Höckert, 2017). Since 2018, LRF Consulting has been primarily owned by Altor, a venture capital company (LRF Consulting, 2018). Until 1967, practically all advisory services were free of charge for farmers, because they were funded by the Swedish government. 1967 the government decided that the publicly-financed advisory services should be managed by the Country Administrative Boards, and the goal of the advisory services was to make Swedish agriculture more efficient and rational. Since about 65% of the advisory services provided by the Rural Economy and Agricultural Societies until then had been government-financed, the withdrawal of public support forced the Rural Economy and Agricultural Societies to change business models, and struggle to survive while at the same time trying to find out how to relate to the publicly- financed advisory service. The organisational and BM change within the Rural Economy and Agricultural Societies opened up the system and the market for other actors to strengthen their advisory services (Yngwe, 2014). This created a new market situation in the agricultural support system and during 1970s advisory services were developed and actors began to charge for parts of their services (Månsson, 1988).

Efforts for sustainable innovation in agriculture

The previously-mentioned changes in preconditions for agricultural businesses has influenced government efforts to facilitate sustainable innovation in agriculture. Hence, activities in the Rural Development Programme are characterised by this aim (Swedish Board of Agriculture, 2012, 2018; OECD, 2018). Some consensus has been reached on what sustainability means, among other things through the global sustainability goals and the three perspectives of economic, environmental and social sustainability (OECD, 2018). What this means more specifically for the agricultural sector is, however,

still ambiguous. Concerning the concept of innovation, a consensus has not yet been reached (e.g. Fagerberg, Fosaas, & Sappasert, 2012).

However, there are problems within the innovation systems that consist of actors who enable, guide, fund, perform and facilitate innovation (OECD, 2018). The national agricultural innovation systems (AIS) in the G20 countries are criticised for insufficient governance, including Sweden (OECD, 2019). In Sweden, the agricultural research and innovation system is integrated into a general innovation policy, and the system is driven by economic processes, efforts for development of organizational innovation, information and communication technology and bio-economy. As a way to transfer and make knowledge from other areas available to agriculture, innovation is profiled in this system. Another reason for this profile is the desired change to a more innovative culture (OECD, 2018). Despite efforts to create new partnerships and strategic innovation arenas, evaluations show that they have not been effective, and that weak governance has limited strategic development. The problem is considered to be in the overall Swedish innovation system (OECD, 2016), hence the Government has developed both Strategic Innovation Programmes (SIP) and Strategic Innovation Agendas (SIA) to address this criticism and guide innovation in Sweden. These initiatives aim at building collaboration between universities, research, industry, public sector and other actors. But since no specific financial means are directly assigned to agriculture or any other sector, it is up to the sectors themselves to be active and both use and co-develop these strategic innovation areas. Further, the Swedish Rural Development Programme, included in the EU framework, also aims to facilitate knowledge transfer and cooperation among innovation actors in the rural and agricultural system (OECD, 2018).

The OECD Food and Agricultural Reviews states that in order to increase productivity and the competitiveness of the food and agriculture sector:

“the key challenges for the Swedish food and agriculture sector are to ensure that innovations strengthen productivity in ways that maintain high standards of environmental sustainability, and balanced regional development within an open trading system.” (OECD, 2018, p.16).

By providing activities for improved management and business model innovation, the support system aims at facilitating innovation in agriculture at business level (Swedish Board of Agriculture, 2018). Due to the lack of studies on business model innovation in agriculture (Ulvenblad et al., 2018), policies are based on BMI research from other contexts. However, social sustainability is now emphasised in BMI and identified as a key to successful businesses development (França et al., 2017). Swedish farms focus on environmental sustainability, food safety and unique animal welfare (Federation of Swedish Farmers, 2009; OECD, 2018) however farm products such as grains, meat, potatoes etc. are low-tech, hence Swedish farmers innovate production, new markets and lower costs instead of products or business models (Sivertsson & Tell, 2015). Government efforts, such as leadership programmes and training are initiated to encourage economic growth by supporting farmers to develop their management, innovation and entrepreneurship. Management is required to lead and manage innovation and sustainable development, and in this thesis involves strategic planning, development and leading of businesses as well as self-leadership (Manz, 1986). Understanding management, includes understanding cognitions (Chesbrough, 2010) and emotions affecting decision-making and activities (Rauch et al., 2009). Exploring the support system and its efforts for sustainable innovation in agriculture, helps understanding new perspectives of value creation for sustainable rural development.

2.4.2 Complexity Leadership Theory (CLT)

Leadership is not only important for farmers on individual level for their self-leadership, or on business level when leading others. Leadership is also necessary on system level, such as in the support system. Here the Complexity Leadership Theory (CLT) is valuable for understanding complex systems. In complex systems, innovation can be regarded as a social phenomenon, leading to a discussion within leadership research about the necessary shift from human capital to social capital (Arena & Uhl-Bien,

2016). Successful innovation requires a thorough understanding of the interplay between cohesion and brokerage, meaning between cohesive groups, characterised by trust and rapid information sharing (Fleming, Mingo & Chen, 2007), and the broker role bridging the groups (Arena & Uhl-Bien, 2016). Organizations' adaptability taking place in key actors' everyday lives is a critical component for achieving goals and bringing forth new and innovative contributions to collaborative interactions (Uhl-Bien & Marion, 2009). CLT involves three, closely intertwined leadership functions; enabling, administrative and adaptive leadership (Kontopoulos, 2006; Uhl-Bien et al. 2007). The CLT has, for some time, demonstrated that the last two factors - administrative and adaptive leadership - are entangled into dynamic relationships of hierarchical top down forces of a formal and bureaucratic nature i.e. administrative forces and informal forces in social systems that may be regarded as emergent adaptive forces. These are further enablers facilitating for actors in the support system to bridge the administrative and adaptive leadership functions.

Administrative leadership is conceptualised as the hierarchical and formal leadership roles where individuals and groups plan, coordinate and expect to act in an effective manner in order to reach stated goals. The bureaucratic functions of administrative leadership focusing on alignment and control stands for visioning, establishment of structures and allocation of resources in order to reach the stated targets and to manage conflicts (Mumford, Bedell-Avers, & Hunter, 2008). Adaptive leadership is conceptualised as the dynamic and informal interrelations between individual actors involving actions of adaptive, creative and learning behaviour and non-hierarchical structures. In this, the administrative forces and the adaptive forces may either help or oppose one another. Enabling leadership is conceptualised as creating enabling, facilitating organizational conditions in order to foster the adaptive leadership, specifically in situations where innovation is necessary. It also enables transfer of knowledge and creativity from the adaptive structures to the administrative structures. The core is to accomplish effective adaptive leadership through enabling leadership in order to accomplish bridging of administrative and adaptive leadership without eliminating them (Ospina & Foldy 2010) as well as understanding the interplay within and between the key actors in the system (Fleming et al., 2007). The concept of adaptive space is a critical concept in this, occurring between the creative entrepreneurial system and the operational system serving as an enabler in collaborative networks, bridging between the formal and informal systems. CLT highlights the social capital within the complex systems (Arena & Uhl-Bien, 2016). The framework set an overarching boundary for understanding organisational leadership while, the nature of the leadership function varies between contexts, calling for a contextual understanding of the support system. Such understanding contributes with knowledge about value creation and support of entrepreneurship from the system perspective, which at the end helps to extend understanding of sustainable rural development.

Summary of keys for understanding entrepreneurship in agriculture

One point of departure in this framework is that, in order to understand agricultural entrepreneurship, such entrepreneurship at individual, business, system and societal levels must be studied. In this chapter, the framework guiding us in this understanding was presented. The theoretical framework from entrepreneurship literature, with its interrelated subfields innovation and management, creates the basis for the analysis in this thesis. Further, the sustainability perspectives of the concepts are adopted into the framework. The contextual framework (e.g. Anderson & Gaddefors, 2016; McKeever et al., 2015; Korsgaard, Müller et al., 2015) creates preconditions for analysing and understanding the data at all levels.

Studying agricultural businesses in isolation from context, i.e. from society and the support system around agricultural businesses, may contribute knowledge of business model innovation (BMI) (e.g. Osterwalder & Pigneur, 2010; Teece, 2010), but does not contribute enough knowledge to be able to explore entrepreneurship in agriculture. It is therefore important to understand how embeddedness in the rural context influences entrepreneurship (e.g. Korsgaard, Müller et al., 2015), how the social aspects such as culture (Greenman, 2013) and the importance of place and space (e.g. McKeever, Anderson, &

Jack, 2014) also exert influence. It is also necessary to understand how the support system works, what the policies and activities are based on and aim for (OECD, 2018), how the system is organised (Ospina & Foldy 2010; Uhl-Bien et al. 2007), and how the support is communicated to farmers. As the agricultural business and the farmer are so closely interwoven (Maloni, Hiatt and Astrachan, 2017; Suess-Reyes & Fuetsch, 2016), it is a challenge to separate analyses at the individual level from the business level. We therefore need to understand how farmers' cognition and ways of thinking and acting (Self-leadership) (e.g. Chesbrough, 2007; 2010; Manz et al. 2016), and their ability to control and manage emotions (EI) (Joseph & Newman, 2010) influence how the farmer chooses to act, make decisions and take risks (EO) (e.g. Rauch et al., 2009). The above review of literature related to entrepreneurship in agriculture shows that existing studies focused on separate perspectives of agriculture, but this thesis explores agricultural entrepreneurship, hence we need understanding of the different perspectives to enable analysis of their interplay and find mechanisms affecting value creation for sustainable rural development.

3 Method

In this chapter, I describe and reflect on what has been done and why. Based on the research approach underlying this thesis, the choices in the research process and their effects are explained. As this is a qualitative case study using semi-structured interviews and observations, these methods will be described and explained. The research process is presented in detail to enable assessment of its research quality.

3.1 Research approach

The philosophical beliefs underlying this thesis are grounded in pragmatism with elements of critical realism, viewing society as an interplay, and thinking of or dealing with problems in a practical manner. Pragmatism is a strong philosophical tradition with front figures such as Kolb, Peirce and Dewey (Elkjaer, 2009; Hall 2013; Morgan, 2014). Pragmatism views differences between ontological, epistemological and methodological approaches as social contexts for inquiry (Morgan, 2014), and offers “*an alternative epistemological paradigm*” (Hall, 2013, p. 19). Just as Dewey advocates, the approach in this thesis is based on critical reflection and that we are consequently prepared to constantly re-examine our own positions. This facilitate learning, and enables individuals and cultures to develop, with communication as the key and reflection being the method for understanding (Elkjaer, 2009; Hall, 2013). My research also aligns with critical realism which, just as in this thesis, is often used to study mechanisms that are not very generalisable or predictable. As social rules, mechanisms and structures are created by humans and thus are changeable and also differ between cultures, groups and individuals. Further, just like critical realism, we cannot or do not want to reflect actual reality. Society is constantly changing, but there can still be mutual dependencies between parts of the social structure that are interesting to identify. This thesis is not looking for legislation or regulations, but for mechanisms that give rise to value creation by agricultural entrepreneurship (Danermark, Ekström & Karlsson, 2018). All in all, this aligns with the goal of contributing to the further development of sustainable rural areas by understanding agricultural entrepreneurship, and how agricultural entrepreneurship create value for sustainable rural development.

Furthermore, an abductive approach has been selected which is a mix of the two traditional main scientific methods of approaching and conducting research. While the inductive approach sees theory as the outcome of research and involves drawing generalisable inferences from observations, the deductive approach is the opposite, based on theory when making observations or findings. However, both approaches often entail parts of the other (Alvesson & Kärreman, 2007). Furthermore, inductive approaches are often associated with qualitative research, even though qualitative research often uses theory as a background to studies, hence inductive and deductive approaches are better regarded as tendencies (Bryman & Bell, 2015). The approach may change while working with literature research, and transform from inductive to a form of abductive since data and theory are reflected together. A mixture of induction and deduction is called an abductive approach, and regards breakdowns as enablers for theoretical changes of concepts and development, while encouraging further thinking, problematisation and self-reflection. Since the aim is to add new knowledge and understand sustainable development processes in the agricultural and rural context, created as a combination of both preunderstanding and empirical material, the abductive approach has been chosen (Alvesson & Kärreman, 2007). Abduction begins with a puzzle that may emerge when examining a development

process that existing theory cannot explain (Bryman & Bell, 2015) and the theoretical framework becomes the vehicle for generalising and analysing, helping to explore and analyse through different theoretical and empirical perspectives (Alvesson & Kärreman, 2007; Gioia & Pitre, 1990; Yin, 2009). As for example when this study was initiated, business models within agriculture were examined in order to explore entrepreneurship, but then the realisation came that some pieces of the framework were missing if we were to understand what it was in the context that challenged and influenced the farmer and hence business development. Hence, the framework about context was consulted and, for example, the theory about embeddedness in context was identified which helped extend understanding.

However, nobody begins from a totally blank page – neither is this study. Even if some assumptions have been made, something new may pop up and then emphasis must be on attempts to identify the novel aspects present. The important thing is to find results that are trustworthy and help the study forward and which are valuable. Focus is on the practical consequences of actions and assertions. The research approach, the explorative aim and the studies in this thesis align with the educational theory explained as "learning by doing", since interest is in how experiences affect and create value for what we do, what we can do differently if we possessed a certain kind of knowledge and what the consequences of a certain kind of knowledge or actions will be (Dewey, 1986). However, the life and living of farmers or individuals within the support system and the interaction between individuals and the environments, including cognition and communication are defined as experience (Elkjaer, 2009).

3.2 Role as researcher and lessons learned from being both an insider and an outsider in the context

I consider myself an insider, but I am also an outsider within the support system and the context. I have experience of managing and developing agricultural businesses, and working in the support system, but unlike the majority of the employees in the advisory organisations, I did not grow up on a farm, have no agricultural education nor a deeper knowledge of agricultural production or an involvement in production counselling. I am educated in economics and strategic management, and have previously worked with market, business development and management issues. However, I enjoy the great advantage of having access to both meetings and information within the support system, as well as knowledge of some history, background facts and a large network through my employment in one of these organisations.

The point of departure is to identify mechanisms that can help to develop sustainable agriculture and sustainable rural areas. I am well aware that my background may make it difficult to study the discourses that I am close to and have my own opinion about, and that it may be a challenge for me to discern self-explanations. I am constantly working for, and trying to ensure, that my own values do not overshadow the analysis (Winter Jørgensen & Phillips, 2017). The risks arising from the author's role as an insider have been managed by, for example, recording all interviews and observations and by transcribing and discussing both coding and analysis with supervisors and other researchers. For practical validation, i.e. the practical usefulness of the results or the extent to which the results can enhance the dialogue, impact on actions and accomplish changes (Abnor & Bjerke, 2008), coding and analysis have also been discussed with people in the industry. In some articles coding has also been carried out together with co-authors and tested and discussed with several others.

I have changed from working as manager in agricultural businesses, to being a project manager for development projects in the interface between research and practice in the support system, and in recent years as a PhD candidate in the academic world. I have stayed within the agricultural and rural context, but have changed perspective. My previous experience from different perspectives probably affect my approach to considering crossover science as something important and necessary in order to develop Swedish agriculture. Cross-discipline based on the approach of Danermark (Danermark, 2002), which

requires different disciplines to form an integrated understanding, coordinated context and, not least, time to reflect and relate the results of the different disciplines to the overall view, complies with the attitude adopted. Crossover-science requires collaboration between practitioners and researchers from different disciplines, with different perspectives, respect for others, humility and curiosity in order to identify explanations other than from their own perspectives.

3.3 Research design

In order to explore agricultural entrepreneurship, the research design of this thesis was formed to 1) explore how farmers cope with cognitive and organisational challenges in the development of sustainable agricultural businesses, 2) explore how entrepreneurship is supported and encouraged by the support system, and how this work can be developed, and 3) explore the interplay between the individual, business, system and societal level in agriculture. This design is aimed at identifying mechanisms that affect value creation for sustainable rural development, and increase understanding of what is occurring in the interplay. However, increased understanding was not the only ambition of this thesis, the aim was also to contribute ways of encouraging and working with entrepreneurship in agriculture for sustainable rural development, and to contribute to development of the research field by providing a model for understanding of agricultural entrepreneurship and mechanisms affecting value creation for sustainable rural development.

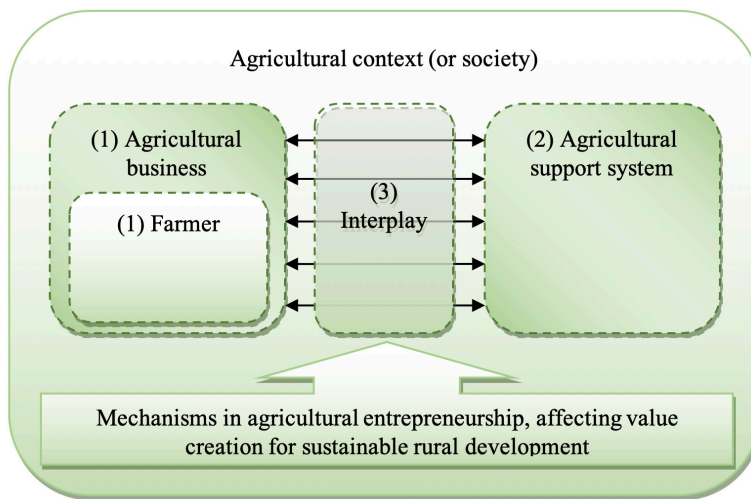


Figure 3: Research design aiming at exploration and analysis of agricultural entrepreneurship at different levels

Since the desire was to explore and understand mechanisms and structures in the explicit agricultural context, qualitative research was undertaken. The qualitative methodological choices made were based on the aim to create understanding of how individuals and groups think, act and behave. This is different to the quantitative approach (Bryman & Bell, 2015; Frankfort-Nachmias & Nachmias, 2007) which usually explains causes and actions by measuring in which quantities these phenomena occur. Qualitative research was conducted by collecting data through observation and interview. This data was then analysed using content analysis according to the Gioia Method further explained in Section 3.6 Data analyses, below (Gioia, Corley & Hamilton, 2013). Empirical studies were carefully planned and designed to respond to the research questions and aims of the thesis. Major importance has, throughout the study, been accorded to credibility, hence planning, design, choice of respondents, data collection and analysis were discussed in detail in the appended papers. Together, the five papers within the frame

of this doctoral thesis address the research questions at individual, business, system and societal level. Hence, the longer the process has proceeded, the deeper my knowledge has become about agricultural entrepreneurship and the more perspectives on the phenomenon have been discovered. Table 2 provides an overview of the methods, data and analyses employed in the papers that comprise the thesis.

	Paper 1	Paper 2	Paper 3	Paper 4	Paper 5
Method	Qualitative	Qualitative	Qualitative	Qualitative	Qualitative
Data	Interviews, observation, documents	Interviews	Interviews, observation, meeting documents	Interviews, observation, documents	Interviews, observation, folders, webpages etc.
Analysis	Content analysis	Content analysis	Content analysis	Descriptive, formative evaluation	Content analysis

Table 2 Overview of research methods

3.3.1 Case study as the chosen method

When seeking to explore in-depth or complex issues in a social phenomenon such as agricultural entrepreneurship, the case study is a preferred method. The research questions here, however, are too complex for survey or experimental strategies (Meyer, 2001, Yin, 2009). Further, the case study may be regarded as an empirical investigation using multiple sources of evidence to explore a phenomenon such as agricultural entrepreneurship without clear boundaries between the entrepreneurship, the development and the context, but where the contextual conditions are important (Yin, 2009). Hence, the research conducted falls under the umbrella of case studies. However, the main criticism of case studies is lack of rigor, since researchers have sometimes failed to work systematically, or allowed ambiguous evidence or biased aspects to influence results (ibid). To meet this criticism, the method used in this thesis is described in detail.

The research contains many ‘how’ and ‘why’ questions, reinforcing the decision to use case study as the preferred research strategy (Yin, 2009). Case study is distinguished from other research design by focusing on a distinct situation or system, such as agricultural entrepreneurship, and a case can be a single organization, place, person or event (Stake, 1995). This thesis is a case study of Swedish agricultural entrepreneurship, where the case is triangulated and data collected from different perspectives using different methods. Farmers and actors within the support system live and act together in society. By studying the phenomenon Swedish agricultural entrepreneurship from different perspectives, i.e. from the farmer's individual and business perspectives, from the advisor, the authority, the policy maker, the management perspective and the official perspective etc. the opportunity to identify mechanisms and structures open up. Using this method, this study contributes to the call for methods for exploring social sustainability (Müller, 2016) and the social dimension of sustainability in agriculture by, for example, understanding the agricultural social system and its embeddedness in the local cultural and society (Janker et al., 2019). If only one perspective had been studied, for example that of the farmers, a one-sided picture without understanding of mechanisms in the interplay within Swedish agriculture would have been produced. However, it is not the amount of empirical material collected that deepens the understanding, what is theoretically interesting is to be able to connect the empirical to the different levels of structures where the actual is placed, and into different theoretical frameworks. There are important levels that cannot be reached by merely hearing what interviewees say, no matter how long we listen.

Different research methods can be used to collect data (Bryman & Bell, 2015). One of the strengths of conducting a case study is the opportunities it gives to use a full variety of evidence, i.e. documents,

interviews and observations (Yin, 2009), which are all utilised in this thesis. A research plan guided the process of collecting, analysing and interpreting observations and formed the plan for logical collection evidence that allowed me to draw conclusions about relations among the variables investigated (Frankfort-Nachmias & Nachmias, 2007). In all papers, data was collected in a practical and present context, examining the behaviour, discourses, and relations etc. of the farmers or actors within Swedish agriculture. The research plan consisted of six steps; 1) Plan; 2) Design; 3) Prepare; 4) Collect (and sometimes going back to Design when collecting data); 5) Analyse and 6) Share (Yin, 2009). The benefits of case studies are that they show conceptual insights, motivate, illustrate or inspire new ideas or indicate gaps. However, case studies may also show too many details when everything seem to be interesting, or obvious results that are hardly surprising (Siggelkow, 2007), which has been experienced in this process characterised by condensing a large amount of interesting data in the processes of creating concepts and themes.

3.4 The sample

This thesis is restricted geographically to Sweden, where government and authorities strive for entrepreneurship and innovation in this sector. For this purpose, Sweden has a support system consisting of political and governmental actors that enforce legislation, rules and policies, together with a number of actors aimed at helping, supporting and encouraging development in agriculture and rural areas in different ways (OECD, 2019).

Since the aim of this thesis is to explore agricultural entrepreneurship, farmers and actors from the support system provide relevant insights. The farmers originate from different parts of southern Sweden, and run farms with different production focuses. Observations and interviews with the major actors within the Swedish support system, at different levels of the organisations and across the range of organisations, provide relevant insights into the support system. Around 130 farmers and 30 actor organisations from the support system were involved in these studies.

Type	Date YYMMDD	Participants
Farmers		
Interview	160504	Farmer, focus meat
Interview	160511	Farmer, focus vegetables
Interview	160614	Farmer, diversified
Interview	160622	Farmer, focus milk, sheep
Interview	160622	Farmer, focus milk
Interview	160924	Farmer, focus meat
Group interview	180530	10 farmers, different production focuses
Interview	181023	Farmer, focus pigs
Interview	181031	Farmer, focus milk/meat
Interview	181031	Farmer, focus pigs
Interview	181101	Farmer, focus milk/meat
Interview	181105	Farmer, focus pigs
Interview	181105	Farmer, crop cultivation
Observation	180529-30	About 100 farmers, different production focuses
Support system		
Observation	180419	17 CEOs of advisory organisations
Interview	180423	Head of enterprise support, government authority

Observation	180529-30	Around 200 regional and national representatives from an actor org.
Interview	180530	Head of an actor organisation
Interview	180605	Head of an actor organisation
Observation	180925	About 30 regional advisors within an advisory organisation
Interview	180926	Business policy expert, actor organisation
Observation	181001-02	About 150 advisors from 17 actor organisations
Observation	181121	About 50 actors within the support system for rural development – from governmental level to smaller national organisations
Interview	180529	Head of an actor organisation
Interview	180529	Crop advisor
Interview	180529	Advisor within economics/own small businesses
Interview	180530	Person within management group of actor organisation

Mixed groups of farmers and actors

Group interview	180529	Milk producer, sheep producer, an actor/a member organisation
Observation	181203	Participants from county government, farmers, advisors from 2 advisory organisations, participants from member organisation
Field observations		Visits to farms, notes,
Documents		Rural and national development programmes, regulations, CAP, agricultural and rural reports etc.
Media		Newspapers, television, social media etc.

Total	Number	Time
Interviews	22	23 hours 44 minutes
Observations	7	54 hours
Total	29	77 hours 44 minutes

Table 3 Data sampling

3.5 Data collection

My role as an insider provided me with unique access to the primary research data that enabled the implementation of the five studies included in this thesis. Direct access to meetings and events made it possible to study the support system from a close perspective. The insider role also helped to identify suitable farmers to interview and cases to study in connection with the national network in agricultural advisory organisations. The qualitative methods used in this thesis - a) interviews, b) observations and c) other documents - are further presented below.

Interviews

Initially, six Swedish farmers with different production focuses, who had developed their business models were interviewed to explore the process of SBMI in agriculture: thinking, acting and lessons learned from dealing with the barriers they experienced in the process (Paper 1). They all talked about development in retrospect, which brought the risk of them wise in hindsight descriptions (Stake, 1995). Hence, the extreme drought in the summer of 2018 gave me the opportunity to interview six other farmers during the ongoing water shortage that put great pressure on them (Paper 2). Interviews were also conducted with farmers and advisors during the development and implementation of a leadership development program (Paper 4), and with actors at different levels within the support system (Paper 3). The interviews were primarily conducted face to face, a few by phone, and all were semi-structured with open questions based on an interview guide. The guide was complemented by follow-up questions to

ensure the capture of as correct and detailed information as possible, but through which the interviewees also had the opportunity to diverge into other topics during the interview (Bryman & Bell, 2015; Johannesson & Perjons, 2012). Semi-structured interviews were chosen in order to understand the farmers' or actors' thoughts, mind-sets and other mechanisms. Words other than those found in theories were used, translated to a language in common to the farmers, a language that is familiar because of previous experience.

By using semi-structured in-depth interviews, the interviewees were allowed to speak freely. Open-ended and follow-up questions could thus explore under the surface and study phenomena and mechanisms. In combination with many hours of observations at the different levels, the underlying structures, culture etc. were revealed. The average duration of each individual semi-structured interview was approximately 80 minutes. The group interviews were shorter at approximately 15 minutes. The interviews were audio-recorded and transcribed. Shorter group interviews were also conducted with farmers and actors within the support system (Papers 3 and 5) as a complement to the semi-structured interviews where I could ask them to discuss one or several issues in order to deepen my understanding in the analysis.

Observations

With the aim of capturing performance and underlying structures, the actors were observed in their natural environment. Unstructured non-participant observation sessions were conducted, where the author observed but did not participate in what was going on in the social setting (Bryman & Bell, 2015). Since what to look for was not predetermined, the observations were unstructured and non-participant observation was selected since there were to be no effects on the discussions in the meetings (Papers 3 and 5). However, using participant-observations in different situations might have enabled further understanding of the phenomena, and perhaps extended the perspective since the discussions could have been influenced in ways that could have generated more input for research purposes. In some situations, large meetings were observed where it was possible to be an anonymous observer. In other situations, the author was known by the participants but stated clearly before the meeting that there would be no participation merely sitting and observing and that they were to forget they were being observed. It worked very well, and they discussed issues in a natural and transparent manner, although the author was sometimes an expert in the issue they discussed and sometimes a 'competitor' working in a competing organisation. On several occasions, everyone knew that the author possessed information or knowledge about the subject that was discussed, which could add to the discussion, but no-one fell into the trap of including me as a participant. This is a challenge I have been aware of through my role as an insider and chose to maintain my role as a professional researcher. However, being an insider has proved extremely useful, for example by affording access to meetings that might not otherwise have known about or accessed. Six observations were carried out at meetings at different levels within and between organizations. Some of the observations covered several meetings over a whole day or two. A total of 54 hours of observations were conducted. In addition, observations and notes were also taken during interviews.

Documents

Websites and other documents from the businesses and support system were studied to complement interviews and observations. In order to understand the preconditions for Swedish agriculture, policy documents such as CAP, rural, regional and national plans for agriculture and development at different levels, strategies for food production and actors in the support system were studied. As complement to the observations of the meetings, agendas and correspondence in preparation for the meetings were studied. Notes from field observations, media and social media were also used in the analysis.

3.6 Data analysis

The empirical material includes documents, events and discourses, all of which are products of an activity which, in turn, can always be traced back to an institution or social structure. In the analyses, it is important to walk backwards through the chain until the mechanisms behind these events are identified. In order to provide contextual richness and to enable the exploration of agricultural entrepreneurship, analyses in the different papers have included iterations between theory and data (Alvesson & Kärreman, 2007). Analyses are based on Gioia methodology, a qualitative method that uses some theory from start, adding additional concepts identified during the process and developing new concepts to understand and explain phenomena and gaps in existing frameworks (Gioia et al., 2013). The method is based on the collection of a rich amount of data, structured at different levels. It was possible to be open to innovation and facilitate both creativity and systematic rigor by creating first order concepts, which were then narrowed down to second order themes and finally formed aggregated dimensions (ibid).

The NVivo software program, which enabled in-depth analyses of the large amount of data collected has been used. The program made it possible to classify, sort and arrange information, to investigate relationships in data and to combine analysis with, for example, linking and searching. By being able to identify trends and cross-examine information in a variety of ways, the program facilitated analyses on several levels, but mainly enabled a comprehensive analysis of agricultural entrepreneurship, including all data collected in various forms. NVivo enabled and quality assured the analyses in this thesis, partly because they were not done manually - but with the help of a computer program. However, the importance of transcription and coding was not neglected. Transcription was time consuming, but valuable for qualitative analyses. The coding process was important and crucial for how the program analysed and, in order to avoid the influence of individual understanding, the coding process was therefore made transparent and discussed with other researchers. Qualitative studies included interpretations and impressions of data and consequently the transparency in the coding process were important. A detailed description of each of the analyses conducted in the separate studies is provided in the appended papers.

Both the choice of theoretical frameworks and the selection of empirical data influence results. The context and the perspective are of great importance to give as clear a picture of the complexity, and the phenomena, as possible. Interpretation and analysis thus play a major role and the analysis levels presented by Alvesson & Deetz (2001) have been applied. They state that 1) an interview can be analysed as a story, where the interviewee can portray both hero and villain, 2) analysis of what the respondents' statements tell us about their beliefs, stereotypes, ideas, values and feelings and how they choose to represent themselves, 4) examination of the statements tells us about the attitudes and norms that prevail in the environment the respondents belong to (Alvesson & Deetz, 2001 p. 123, 154-156). If analysis of what was said in interviews or what was written in words by someone only was used, the perspective or image of the individual (s), i.e. what they want to tell or show would have been achieved.

3.6.1 Ethical considerations

A researcher is responsible for conducting research in an adequate and scientific manner (D'Angelo, 2018; Swedish Research Council, 2011), ensuring the respondents do not experience violation of their integrity (Bryman & Bell, 2015). Confidential treatment of the respondents and data is required in this thesis since the farmers and the actors in the support system share trade secrets and other data that may be sensitive. In order to ensure that no one can identify respondents in interviews, data has been depersonalised in regard to business name, personal name, gender etc. Furthermore, no numbers or statistics that can be traced to a specific business are presented and important phenomena are explained in general terms, to avoid identification. The same applies to observations, where no names of individuals or organizations are mentioned specifically. The Swedish Personal Data Protection Act (PUL) is complied with and the respondents informed about how data are used etc. (Swedish Research

Council, 2011). Hence the purpose of the studies and processing of data were explained before the interviews together and approval gained from the farmers or actors attending without compensation. The intention in the whole process of this thesis was to avoid personal interpretation of the information. If in doubt, the respondent was contacted to ensure responses had been interpreted correctly.

Since I am employed in an advisory organization, there may be a conflict of interest with my employer and it is important for me to act professionally as a researcher, no matter what the results. I collaborate with researchers within academia and participate in the scientific community, discuss my research and am reviewed by academia, and I am financed by external grants, i.e. not from my employer. The same is the case for me in relation to the other actors (e.g. Swedish Board of Agriculture, Federation of Swedish Farmers etc.) to which I am connected in my work. I cannot see any directly moral doubts in my research but since its aim is to help the agricultural sector and agricultural businesses to develop in a sustainable manner, interest groups such as vegans or other groups not wanting society to produce food from animals, may have moral doubts about my research. I carefully followed the CUDOS norms for moral consensus as a way of dealing with these doubts (Swedish Research Council, 2011).

3.7 Research quality

When discussing research quality, reliability is important (Bryman and Bell, 2015; Yin, 2009). Since qualitative studies are criticised for being subjective as they provide too much space for interpretation by the researcher (Flyvbjerg, 2006), awareness of the risk of subjectivity caused a focus on reliability throughout the entire process and consequently an explanation of the research process in detail. However, qualitative studies are necessary in order to be able to understand complicated issues such as those examined in this thesis, and to enable studies of the cognition, relations, structures and mechanisms under the surface (Flyvbjerg, 2006). Different criteria may be used when judging the reliability and quality of research design. Four commonly-used tests to establish the quality of empirical social research are; construct validity, internal validity, external validity and reliability (Yin, 2009).

To assure construct validity, i.e. measuring what is intended in a truthful way (Yin, 2009), different sources such as interviews and other documents were collected and analysed. However, participants did not review drafts of the studies since the studies, for example, contain analyses of barriers they themselves are not aware of, or try to extenuate, hence cannot fairly validate. However, the interview guides were discussed in different research groups during development to ensure examination of what was intended. The analyses were also discussed in different groups of researchers, and the software analysis program NVivo was used to code and analyse transcribed material and written documents. Papers 1 and 2 are written by myself, however during the process both sampling, selection of respondents and analyses were discussed with other researchers. Also, drafts were reviewed. The other papers are written together with at least one other author, who critically discussed the studies during the process. The analyses were also discussed in groups of advisors in agricultural advisory organisations, as the opportunity was given to report on how research was progressing and receive feedback during the process.

Internal validity, i.e. whether or not the observations and theoretical ideas developed in the studies match (Bryman & Bell, 2015), is ensured by digitally audio-recorded and literally-transcribed interviews and observations to ensure correct quotes and empirical material to work with during the process. This enabled the use of the material in analysis several months after interviews were conducted, and also moving back and forth in the material. Audio recordings produce the most precise reproduction of an interview and the method was properly used, meaning that (a) permission from respondents to record was obtained (b) the records were for transcribing and listening to (c) the author was able to manage the device properly to avoid creating distraction during interviews and (d) the device was not used as a substitute for good listening (Yin, 2009). The theoretical framework was developed and reviewed as

new knowledge emerged and respondents were informed about the purpose of the study in advance to assure internal validity.

The intention of this thesis was to explore agricultural entrepreneurship, and to develop a model illustrating mechanisms affecting value creation for sustainable rural development, hence statistical generalisation was not an aim. However, the careful sampling and intentional choices of cases with, for example, different business focus etc. used in the multiple-case studies enabled replication logic and external validity (Yin 2009). External validity refers to the ability to generalise findings (Bryman & Bell, 2015), and the concept developed enables the theory to be used in other contexts where it may be useful to compare findings. Although, the main aim was to explore agricultural entrepreneurship, other industries in rural areas will probably experience the findings as useful.

Reliability refers to proving that the procedures of a study, such as data collection, can be repeated with the same results (Yin, 2009). When the quality of study is assessed as reliable, the results are repeatable and measures consistent. Reliability can be developed into internal and external reliability, meaning whether or not two or more researchers in the study agree about the results (internal) and the possibility of reconstructing the study with the same results (external) (Bryman & Bell, 2015). To ensure internal reliability, continuing reviews by other researchers were performed during the process, and detailed explanation of the process ensures external reliability however an exact social situation of identical farmers is impossible to replicate.

In order to be able to interpret information during collection, detective skills were necessary being open to contrary findings and avoiding bias (Yin, 2009). During interviews the intention was to be a good investigator: asking questions, interpreting answers, listening, being adaptive and flexible, having a firm grasp of the issues studied, and as far as possible being unbiased by preconceived opinions (*ibid.*). To enable this, the framework was not studied in detail until after the interviews, when the analysis began. However, a literature review of research about SBMI and tools was studied in order to enable creation of interview guides and fruitful discussions. The same applies to the interviews in the support system, in which complexity leadership at an overall level has been examined in order to develop an appropriate interview guide. The interviews in Paper 2 were more inductive, since the farmers' challenges and problems led to the theory that should be used, however looking for signs of innovation and entrepreneurship and asking about lessons learned from the drought had been pre-established. Also previous understanding and knowledge about the agricultural context and strategic management, together with good interview technique, created the preconditions for good investigations and continuous awareness of not allowing previous knowledge to influence interviewees enabled professional interviews.

4 Summaries of appended papers

In this chapter the papers included in this thesis are outlined and summarised. Initially an introduction to how the research questions are addressed in the five papers is given. Each paper contributes extended knowledge of sustainable rural development by exploring entrepreneurship in agriculture (Table 5). After this a short summary of Papers 1 and 2, respectively 3 and 4 given separately. At the end of each section, the knowledge contribution by the papers concerning the research question is stated. Finally, Paper 5 is summarised and an explanation is given of how the paper contributes to both the research questions and to the aim of this thesis.

4.1 How the papers address the research questions

This part outlines the five papers included in relation to the research questions. Each one of the papers contributes knowledge to the two research questions to various extents. Table 5 illustrates how the two research questions are addressed in the appended papers. The shading in the boxes shows the degree to which each paper addresses the research question. Darker shading implies that the question is addressed to a greater extent, and lighter shading implies that the paper contributes minor knowledge to the specific research question. Hence, Papers 1 and 2 primarily address RQ 1 by exploring entrepreneurship in agriculture at individual and business level, and Papers 3 and 4 primarily address RQ2 by exploring entrepreneurship at system level. Paper 5 addresses both research questions by exploring how embeddedness in the agricultural and rural context affects entrepreneurship at individual, business and system level. Further, Paper 5 illustrates how this understanding of embeddedness contributes knowledge essential for understanding how entrepreneurship in agriculture contributes to the sustainable development of rural societies. Each paper will be dealt with in more detail below.

Research questions	Addressed in Paper:				
	1	2	3	4	5
1. What challenges farmers' entrepreneurship, and how can these challenges be approached?					
2. How can entrepreneurship be encouraged and supported in agriculture?					

Table 4. Research questions

4.2 Challenges to farmers' entrepreneurship and how to approach them

This part outlines Papers 1 and 2, which primarily contribute knowledge to the first research question; "What challenges farmers' entrepreneurship, and how can these challenges be approached?" A summary of each paper is provided followed by its knowledge contribution to Research Question 1. Papers 1 and 2 focus on development of agricultural businesses, challenges to this development and how these challenges were approached.

Paper 1

Barriers to Sustainable Business Model Innovation in Swedish Agriculture

Cederholm Björklund, J. (2018). Barriers to Sustainable Business Model Innovation in Swedish Agriculture. *Journal of Entrepreneurship, Management and Innovation*. 14(1): 65-90.

Sweden's agriculture industry has faced many challenges in recent years. Among the most severe challenges are the decrease in the number of small and medium-sized farms, the decrease in the number of people employed in agriculture and the increase in governmental regulations and legislation governing such activities. In addition, demands that agriculture must contribute to sustainable social and environmental development have increased. Previous research shows that agricultural business models are relatively constant and that more focus on sustainable business development in this context is necessary.

Purpose

The aim of this study was to explore what was hindering farmers when they engaged in sustainable business model innovation.

Method

The qualitative study followed the Gioia methodology¹ and data for analysis were primarily acquired in semi-structured interviews with farmers at six family farms in Sweden. The interviews were based on the business model canvas with sustainability additions. Farmers with different production focuses and with developed business models were interviewed. Also, observations and field notes collected during the visits to the farms provided data for the analysis.

Summary of main contents

The paper begins with a review of sustainable business model innovation (SBMI), which can create opportunities for sustainable and successful businesses and literature about entrepreneurship and innovation, two key concepts often referred to in SBMI literature. After this, a detailed description of the method and the exploration of the business models and sustainability priority is provided, followed by illustration of barriers experienced by the farmers. The drivers and solutions when approaching these barriers were presented. The paper provides a detailed analysis and presentation of the data structure by Gioia et al. (2013), with extensive quotes illustrating the building of the concepts, followed by discussion of the findings, conclusion and implications with suggestions for future research.

Results and contribution

The paper makes a theoretical contribution to research on SBMI with its focus on sustainable entrepreneurship in Swedish agriculture. The paper provides an understanding of the development process, and an examination and illustration of the barriers, and the relationships between them. Hence, it is concluded that the barriers to SBMI are external, internal and contextual, and these barriers are intertwined. It also contributes an explanation of how these barriers may affect the development of both the agriculture and the agri-food industry, since agriculture is the first step in the food production value chain. Internal factors such as cognition affect how to approach most of the barriers when working with value creation, hence mind-set, leadership skills and strategic management are essential to enable change. Further, the support system was perceived as an external barrier, because of failure to create satisfactory value for farmers. The contextual barriers illustrate the importance of taking context into consideration. The study highlights the unique challenges provided by embeddedness in the rural context, and also indicate that embeddedness might facilitate sustainability and value creation in rural areas.

¹ The Gioia methodology is described in 3.6 Data analysis

The results of the first study indicate that understanding of embeddedness in context with social norms and values is important when exploring SBMI in agriculture. Further, internal factors such as cognition, mind-set, decision-making and lack of strategic management seriously affect business development and value creation in agriculture. For example, possessing the mind-set and view of yourself as being a farmer - not equated with being an entrepreneur, or viewing farming as a lifestyle - not comparable to other businesses, contributes to stress and acceptance of extremely high workloads for farmers. One farmer did not consider herself able to be on parental leave because she was a farmer, hence brought the new-born child to work every day which created stress and a bad conscience. An external barrier disclosed was the support system – aimed at supporting the development of agriculture, but perceived as a barrier by the farmers. The interviews in the first study were conducted in retrospect, and depicted how farmers who developed their business models perceived the barriers they experienced. Due to the extreme drought in the summer of 2018, the opportunity to interview farmers with traditional agricultural BMs during an ongoing barrier/problem occurred. Accordingly, I conducted a study to explore innovation and strategic management in an extremely stressful situation (Paper 2).

Paper 2

The impact of crises on innovation and strategic management of farms – lessons learned from the extreme drought in the summer of 2018

Cederholm Björklund, J. (2018). The impact of crises on innovation and strategic management – lessons learned from the extreme drought in the summer of 2018. Reviewed conference paper. Presented at the Rural Entrepreneurship Conference June 17-19, Inverness, Scotland.

As a complement to previous studies about barriers to BMI in agriculture and agri-food, conducted in retrospect, this study was conducted during the extreme pressure period of an ongoing barrier in the form of a crisis caused by the extreme drought of the summer of 2018. The situation caused major challenges for Swedish farmers, and the study explored how such an ongoing stressful situation affected strategic management and innovation of farms. Hence, behaviour and thinking were studied using semi-structured, in-depth interviews with six farmers in the southern part of Sweden.

Purpose

The purpose of this study was to explore how management and innovation was approached during stressful situations.

Method

The qualitative study followed the Gioia methodology and data for the analysis were acquired in semi-structured interviews with farmers at six family farms in Sweden. The interviews contained questions about behaviour, thinking, decision-making and lessons learned regarding management and innovation in stressful situations. Farmers with different production focus and traditional agricultural production, without diversification or other steps in the value-chain were interviewed.

Summary of main contents

The paper begins with a review of the resource-based view of strategic management, since agricultural businesses are heavily dependent on the farmers so the skills and knowledge possessed by the farmers becomes important resources. Also, literature about entrepreneurial orientation (EO) were reviewed, since EO is a driving force in strategic business development, facilitating decision-making, innovation and business performance. However, there are contradictory studies discussing the importance of access to capital, engagement in environment combined with EO, or emphasising efficiency and managerial skills rather than enhancing EO, since a high level of EO may imply negative financial performance. Context is highlighted as important with the complexity of unique contextual relations. There are very few studies in the agricultural sector, and those existing are mainly conducted in Asian and American

countries with a quantitative approach. Further, the method is described, followed by a rich description of the findings and discussion of these findings related to EO.

Results and contribution

The results reveal that farmers talk about other farmers as colleagues, and do not consider them competitors. Their primary aim is to create a sustainable life on the farm for themselves and their families, and for future generations. Since farmers work with nature and with living animals, they are constantly exposed to uncontrollable challenges. This entails experience and learning from being exposed to uncontrollable, and sometimes unexpected, challenges which in turn foster the farmers' EO and cognition, by for example feeling solidarity and respect for other farmers in the same situation and being innovative and collaborate with others. The study indicates that crisis creates new ways of thinking and acting, both in terms of new collaborations, innovative working methods and product and process development, hence this suggest that EO, when developed, can lead to improved performance during stressful situations.

4.2.1 Knowledge contribution on challenges and ways to approach them

Papers 1 and 2 contribute knowledge about mechanisms that challenge agricultural business development, and provide insights into ways to approach these challenges. Intertwined insights into internal, external and contextual challenges are provided. Internal barriers, such as cognition and mind-set, affect how to approach most challenges and how to work with value creation, and hence can also be facilitators when approaching challenges. The extreme long-term perspective that exists in agriculture affects, for example, sustainability and value creation for the countryside where farming families intend to stay for generations. The contextual challenges such as living in rural areas, socio-economic factors and culture, illustrates the unique challenges of embeddedness in rural context, taking care of surroundings and awareness of the family's reputation. Further, embeddedness also facilitates environmental and social sustainability and value creation within the businesses and in the rural society, by their care for the living place. However, it is remarkable that despite the purpose of being supportive, the agricultural support system is experienced as a barrier, challenging the development of agricultural businesses. Paper 2 illustrates that cognition changes and develops through crises, such as the extreme drought, which further develops strategic management and fosters entrepreneurial orientation by understanding the importance of the long-term survival of the business. Hence, we can also conclude that a EO that has been developed can lead to improved performance in stressful situations. Further, although farmers - especially those using traditional business models - are not considered entrepreneurial, 'traditional' farmers approach challenges by applying an entrepreneurial orientation.

4.3 Encouragement and support of agricultural entrepreneurship

This part outlines Papers 3 and 4 which primarily contribute knowledge to the second research question; "How can entrepreneurship be encouraged and supported in agriculture?" A summary of these papers is provided followed by knowledge contribution to RQ 2. In Paper 1, it was found that the support system was perceived a barrier, despite its aim of helping and supporting farmers and rural entrepreneurs. Accordingly, Paper 3 explores the support system and goes beyond the surface of everyday work by exploring challenges faced by actors and how to overcome such challenges. Lack of leadership skills were identified as an internal barrier in Paper 1, and leadership skills were also identified in the support system as important for the farmers. Hence, the Swedish support system initiated a leadership programme for farmers, developed and implemented by competing actors in the support system. This programme was one of the first attempts to collaborate in the support system, and was performed using a new method i.e. changing from advising to coaching. Paper 4 describes the development and implementation process of this leadership program.

Paper 3

Under the surface of agricultural entrepreneurial ecosystems: through the lens of Complexity Leadership Theory

Cederholm Björklund, J., & Johansson, J. (2019). Under the surface of agricultural entrepreneurial support ecosystems: through the lens of Complexity Leadership Theory. Book chapter accepted for publication in the RENT Anthology Book, which will be published in September 2020. Edward Elgar Publishing.

My contribution: Review, data collection, major part of analysis and writing.

Agricultural advisors have recently received considerable criticism both in practice and in literature for not answering farmers' needs for support in this ongoing industry transformation. Advisors are expected to guide highly-pressured farmers operating in complex settings towards sustainable businesses in highly competitive markets. Previous studies highlight the challenges faced by advisors in the support system, but although regular evaluations of Rural Development Programmes and studies of parts of the agricultural support system, there is no overall picture and understanding of the roles played and the challenges faced by advisors and other actors in this system.

Purpose

The aim of this study was to go beneath the surface of the agricultural support system by exploring the challenges faced by the advisors and other actors within the system by, for example, exploring coordination and control structures. This enabled consideration of how to overcome these challenges and facilitate entrepreneurship in agriculture.

Method

Interviews and observations of actors at different levels within the support system provided the data for the inductive analyses, following the Gioia methodology (Gioia et al., 2013). Six types of national and regional key organisations in the support system were studied of which one of them included 17 independent regional organisations. Data sources were triangulated by observations of meetings within and between key actors in the support system at regional and national levels. Meetings where management and policy problems and challenges were discussed. In addition, interviews with individuals within the actor organisations, and group interviews with actors and/or farmers were conducted.

Summary of main contents

The paper begins with a discussion of the problem and a review of the Swedish agricultural support system to familiarise the reader with the context. This is followed by a review of the Complexity Leadership Theory (CLT) which considers leadership a social phenomenon involving social interaction that causes a shift from emphasising the human capital of the actors/advisors and farmers in the system to emphasising social capital (Arena and Uhl-Bien, 2016). Further, the different functions for bridging structures in complex system to enable leadership are illustrated (Ospina & Foldy, 2010). This is followed by a thorough explanation of the approach/method of the study, the triangulation of data sources and development of first-order concepts from representative statements. A conceptual model outlining the mechanisms fostering and hindering support system adaptation of new practices and innovation is presented and explained, followed by an extended presentation of the empirical findings and analysis including richly described data. The paper ends with conclusion and discussion of the findings and future research.

Results and contribution

The genuine intentions and common mission guiding the development of sustainable agricultural businesses and a vibrant countryside is not enough. An emergent need for innovation in the leadership of advisory work has been identified, and also the conceptualisation of enabling mechanisms to accomplish such change. By identifying the roles played and challenges faced by actors in the support system which affect their behaviour, a strong path dependency guiding everyday practice among the

actors was identified. Many of these challenges remain tacit, and the study contributes to making the support system more transparent in order to enable change. If the support system is to create value for farmers, the creation of adaptive space is suggested as a lubricant providing innovation with the opportunity to flourish by enabling leadership. Adaptive spaces arise between creative and bureaucratic systems in complex organisations and function as enablers, bridging formal and informal systems. Further, individual cognition and embeddedness within the context of the agricultural support system hinder collaboration and value creation. The individualistic culture, which has long been encouraged within the advisory organizations by awarding individual results, budgets etc. has created a mentality in which new advisers have also become embedded. A theoretical model of the dynamics within the system is provided.

Paper 4

A leadership development programme for agricultural entrepreneurs in Sweden

Ulvenblad, P., & Cederholm Björklund, J. (2018). A leadership development programme for agricultural entrepreneurs in Sweden. *The Journal of Agricultural Education and Extension*, 24(4), 327-343.

Author's contribution: Review, data collection, major part of analysis and writing.

Management and leadership skills are necessary to develop agricultural businesses, and consequently leadership programs for farmers have been developed in several countries for example Australia, Canada, the United States and New Zealand. Although these programmes address emotional intelligence, their focus is primarily on leading others. Farmers lack familiarity with the concept of self-leadership, hence this should be introduced early on in these inputs and development programmes. However, much of the academic management education at undergraduate level is also focussed on leadership of others. In order to enable change and adapt to market challenges, the Swedish support system requested leadership training for farmers. This resulted in a leadership program for farmers, developed and implemented by competing actors within the support system. This programme was one of the first attempts at this kind of collaboration between competing advisory organisations and academia. Further, the program focused on three levels of leadership, 1) self-leadership, 2) leadership of employees, and 3) leadership in business. This paper focuses on the two first levels.

Purpose

The aim of this study was to describe the five-phase process of a leadership development programme conducted for farmers who own and manage dairy farms in Sweden. Further, the aim was also to present a template for leadership development programmes that could be used in agriculture and other sectors.

Method

The empirical data comes from interviews with farmers, advisors and authors of a book on leadership. Observations of the instruction in the leadership development programme were also conducted. The authors followed the entire programme from start and conducted a formative evaluation of its design methodology.

Summary of main contents

The paper begins with a review of leadership development and training for farmers. The concepts of self-leadership and emotional intelligence are described and discussed in relation to leadership training. The paper assumes that leadership is a process that occurs in the nexus of the leader, the employee and the situation, and there is a need for balance within these elements. Next, research methodology with a description of where the data comes from, and how it was collected followed. The five phases in the programme development process were described: 1) pre-phase, 2) training concept development, 3) concept consolidation, 4) diploma and training practice, and 5) diffusion and knowledge transfer. After

this, the findings from the analysis and evaluation of the leadership development programme *Ledarpraktikan* were presented. The presentation followed the five phases described. Training concept development was also presented involving 1) the book, 2) advisor training and 3) farmer training. The programme was based on a book developed due to demands stated in interviews with farmers and entrepreneurs from other industries, and was performed using a new method, a shift from advising to coaching. Further, concept consolidation was described. The paper ends with a discussion on the development of the programme, its evaluation and conclusions.

Results and contribution

The Swedish leadership program described in this study illustrates the importance of focusing on self-leadership and developing emotional intelligence competence, combined with coaching skills – both for the farmers and for the former advisors. The results of the study indicate that farmers benefit from leadership development programs in which EI and self-leadership are included as they encourage cognitive development and value creation for the farmers themselves, their businesses and for rural society. Also, participants from different industries create value to both the farmers and the coaches on the program. Gathering participants from different industries is new in agriculture, where activities have traditionally been carried out exclusively for farmers. In this programme, the traditional method of counselling was changed to coaching, which was new to both farmers and former advisers. Coaching is evaluated as a valuable and appreciated method for learning and support. Also the cooperation between different competing actors within the support system was appreciated and created value for both the participants and the coaches. The fact that competing players cooperated creates value by showing neutrality and intention to educate for the best interests of the farmers.

4.3.1 Knowledge contribution on encouragement and support

Paper 3 and 4 contribute knowledge about how entrepreneurship can be encouraged and supported in agriculture. By going beneath the surface of the support system, and exploring the challenges in the system as well as successful collaborative initiatives, we can understand how the system works and what needs to be dealt with to enable encouragement and support for farmers. The support system requires functioning collaboration, communication and management, both within the actor organisations and between the organisations in the system. To create value and favourable conditions for entrepreneurship in agriculture, the support system can work with enabling leadership and create adaptive spaces in the system. However, since individuals within the actor organisations are embedded in the culture and affect both how the organisations function and how collaboration and communication works, a change is required in individual cognition within the employees of the support system. One way to facilitate entrepreneurship in agriculture is by providing training in self-leadership combined with coaching. The example of a joint training input by collaboration within the support system created value for the farmers and hence facilitated entrepreneurship in agriculture.

4.4 Contextual embeddedness

Paper 5 contributes knowledge to both the first research question; “What challenges farmers’ entrepreneurship, and how can these challenges be approached?” and the second research question; “How can entrepreneurship be encouraged and supported in agriculture?” In the four first studies, embeddedness in context appeared to be lurking in the background like a shadow that gradually became larger and larger during the process of exploring entrepreneurship in agriculture. Contextual embeddedness is related to cognition, values and unique preconditions for farmers living and working in rural areas, running small family businesses, working with nature and being embedded in the rural social context. However, it is not solely the farmers who are embedded. Individuals within the support system are also embedded in the context which affects their cognition and behaviour. The final paper approached this shadow of contextual embeddedness in order to enable understanding of entrepreneurship in agriculture.

Paper 5

Farming beyond food: Effect of embeddedness and governance structures on farmers' role in rural development

Cederholm Björklund, J., & Johansson, J. (2019). Farming beyond food: effect of embeddedness and governance structures on farmers' role in rural development. Submitted to Entrepreneurship and Regional Development

Author's contribution: Review, data collection, major part of the analysis and writing.

Agriculture has traditionally been of great importance to country areas. Numerous research projects on agricultural businesses have been carried out over decades, however this research is primarily linked to the agricultural economics and rural sociology or to topics such as production or efficiency. In the discussion about societal challenges as concerns food production farmers have been included in, for example, research about business model innovation. The farmers are considered the primary producer being, as they are, the first step in a food-production chain. However, this is a one-sided picture of the farmer and agriculture. As this article shows, agriculture is not just about food.

Purpose

This paper examines how the entrepreneurship in agriculture is embedded in rural society and what expression such embeddedness takes in the pursuits of rural entrepreneurship.

Method

The study is based on interviews with 24 farmers, 6 observations and 8 interviews with actors within the agricultural support system. It uses the Gioia methodology for analysis, enabling inductive theorising.

Summary of main contents

This paper debates the entrepreneur role in societies, consequences of embeddedness and engagement within the rural context, more specifically, the role of farmers in rural development and in rural entrepreneurship. A contextualised view of farmers embedded in the space and place of the entrepreneurial ecosystem is applied. The paper begins with a brief overview of entrepreneurship in agriculture, followed by outlines of perspectives of embeddedness and value creation in rural societies. The method, with context and theoretical sample, data collection and analyses, is described in detail followed by a section of theorising about the structural embeddedness of entrepreneurship in agriculture, values provided through this embeddedness and how such embeddedness may affect entrepreneurship activities and endeavours. At the end of the paper, implications from the study are discussed and future research areas proposed.

Results and contribution

The study finds that farmers play multifunctional roles and this impacts on societal development, central for understanding farmers' entrepreneurial endeavours and their involvement in the entrepreneurial ecosystem. Hence, this paper discusses farmers' embeddedness in rural society and in development processes. It also highlights the multifunction of farmers in society, which we argue make them enablers for rural development, an important role that has been overlooked in both entrepreneurship research and policy work. The paper contributes knowledge on heterogeneity in entrepreneurship and how micro level processes are influenced by structural factors. The study also contributes entrepreneurship theorising, specifically outlining social and institutional influences by identifying the mechanisms and consequences of farming entrepreneurs' manners of engaging with the spatial context, at business and regional level. Finally, the paper contributes to policymaking by providing knowledge on the

multifunctional role of farmers as enablers in rural society, providing assurance for sustainable rural societies. Farmers cognition and embeddedness in local context is highlighted as well as their thinking, acting and endeavours to become sustainable entrepreneurs. The primary contribution is the understanding and illustration of the governance structures contributing to farmers' role as facilitators and value creators for rural entrepreneurship and society, a role fostered by their embeddedness.

4.4.1 Knowledge contribution on contextual embeddedness

Paper 5 contributes knowledge that enables us to understand the challenges to farmers' entrepreneurship, and how and why these challenges are approached in the way they are. It also helps to understand the gap between the support system and the farmers, and provide insights valuable for the support system to enable encouragement and support in agriculture. Embeddedness in the local context and culture is a key to understanding when studying entrepreneurship in agriculture, since it exerts a major impact on the development of both business and rural society. Today, society mainly considers farmers to be food producers and landscape conservators. However, farmers play other roles that challenge their business development and that result in effects that must be made visible and related to. By understanding farmers' roles as facilitators and value creators for rural entrepreneurship and society – a role fostered by embeddedness - entrepreneurship in agriculture can be enabled, encouraged and supported.

4.5 Summary of key findings

Table 4 provides an overview of key findings from the five papers included in this thesis. It depicts how each paper has contributed to answering the research questions and thus to the overall purpose of the thesis. The summary of the findings provides a foundation for the discussion in the next chapter. In short, Papers 1 and 2 have contributed to the first research question by providing insights into what challenges business model innovation in Swedish agriculture (Paper 1), and how challenges are approached (Papers 1 and 2). Papers 3 and 4 have contributed to the second research question by probing under the surface of the support system and exploring challenges and how to overcome these in order to enable encouragement and support (Paper 3). This knowledge about encouragement and support were further extended by the study of the development and implementation of a leadership programme using a new educational method which took place in collaboration between competing actors in the support system (Paper 4). Paper 5 explores the role of context and farmers in rural development, answering both research questions by providing insights into how the embeddedness in context challenges business development, how challenges are approached, how the support system functions and how the support system can encourage and support by understanding this embeddedness.

RQ	Paper	Key findings
RQ1 What challenges farmers' entrepreneurship, and how can these challenges be approached?	<i>Paper 1</i>	<ul style="list-style-type: none"> • Internal, external and contextual barriers or challenges are intertwined. Internal, such as cognition influences how to approach most of the challenges and how to work with <i>value creation</i>. • The contextual challenges illustrate the unique challenges of <i>embeddedness</i> in rural context. • <i>Embeddedness</i> facilitate <i>sustainability</i> and <i>value creation</i> for rural areas. • The support system is an external barrier, challenging development.
	<i>Paper 2</i>	<ul style="list-style-type: none"> • Cognition and leadership skills form internal barriers, but also become facilitators when approaching challenges. • Cognition changes and develops through experience and learning from crises further develop strategic management. • Challenges foster Entrepreneurial Orientation • EO can lead to improved performance during stressful situations • 'Traditional' farmers approach challenges by applying Entrepreneurial Orientation
	<i>Paper 5</i>	<ul style="list-style-type: none"> • <i>Embeddedness</i> in the local context and culture exerts a major impact on the development of both business and rural society. • Farmers are primarily considered food producers and landscape conservators, but do play other roles that challenge their business development. • Entrepreneurship can be encouraged and supported by understanding farmers' roles as facilitators and <i>value creators</i> for rural entrepreneurship and society – a role fostered by <i>embeddedness</i>.
RQ2 How can entrepreneurship be encouraged and supported in agriculture?	<i>Paper 3</i>	<ul style="list-style-type: none"> • The support system requires functioning collaboration, communication and management to enable encouragement and support for entrepreneurship in agriculture. • Enabling leadership and adaptive space in the system <i>create value</i> and favourable preconditions for entrepreneurship in agriculture. • A change is required in individual cognition for employees in the support system as well as reflections about the effects of <i>embeddedness</i>, in order to facilitate collaboration and <i>value creation</i>.
	<i>Paper 4</i>	<ul style="list-style-type: none"> • Training in self-leadership combined with coaching is a useful method to support and encourage entrepreneurship by facilitating management, cognitive development and <i>value creation</i>. • Cooperation within the support system <i>creates value</i> for farmers, hence facilitating entrepreneurship in agriculture.

Table 5 Key findings

5 Analysis and discussion

In this chapter, research findings are analysed and discussed in relation to the research questions and examined through the lenses generated by the conceptual framework presented in Chapter 2. A discussion of how the findings from the different papers interrelate and together create and develop knowledge essential for the aim of this thesis. Further, reflections and discussion in relation to previous research assist in the discussion of how to advance knowledge of entrepreneurship in agriculture and mechanisms affecting value creation for sustainable rural development.

This thesis contributes to sustainable rural development by providing insights about entrepreneurship in agriculture, focusing on value creation. In order to understand how to develop sustainable rural areas by encouraging entrepreneurship in agriculture, the contributions of each paper included in this thesis provide a piece of the puzzle necessary to explore the interplay between the individual, business, system and society levels in agriculture, following the theoretical model outlined in Chapter 2. Further, this model is extended at the end of this chapter (Figure 4), illustrating the connections between a) the farmers at individual level, b) agricultural businesses at business level, c) agricultural support system at system level and d) the rural society level, where the entrepreneurship contributes value creation. Exploring entrepreneurship in agriculture from different perspectives enables probing under the surface and gaining insight into possible rural area development methods that contribute to sustainable development. The analysis and discussion in this chapter is structured according to the theoretical model and while reading this chapter it is possible to follow the analysis and discussion by referring to the framework illustrated in Figure 4 at the end of this chapter. Initially entrepreneurship for sustainable development begins by understanding value creation and embeddedness in the rural context. This is followed by discussions on mechanisms affecting the farmers and value creation and entrepreneurship in agricultural businesses (RQ 1), as well as in the agricultural support system (RQ 2). This section ends with a discussion about the importance of understanding the interplay between the levels and the findings through the analysis of the interplay within different levels or perspectives of entrepreneurship in agriculture. Each section ends with a summary of contributions related to the research question. Further, three propositions for understanding value creation for sustainable rural development by agricultural entrepreneurship are developed through this analysis and discussion. At the end of this chapter a theoretical framework (Figure 4) is presented based on the mechanisms highlighted in this study. Thus, referring to the goal of offering a coherent theoretical framework illustrating mechanisms in agricultural entrepreneurship, affecting value creation for sustainable rural development.

5.1 Entrepreneurship for sustainable development by understanding value creation and embeddedness in rural context

In previous entrepreneurship research, agriculture has mainly been overlooked (Dias et al., 2019; Fitz-Koch et al., 2018) and the findings in this thesis add to prior research by clarifying and emphasising the importance of including agriculture in entrepreneurship research (Papers 1-5). This is a basic assumption for understanding entrepreneurship for sustainable development. Both urban and rural areas are necessary in a sustainable society (OECD, 2018; Swedish board of Agriculture, 2018), and farmers have a significant role to play in the development of rural areas (Alsos et al., 2011; Niska et al., 2012). Previous research on sustainable development has moved in several different directions. There are orientations that focus on economic sustainability through growth strategies as well as on environmental

sustainability and social sustainability. In recent decades, Swedish agriculture has focused on economic and environmental sustainability. Regarding social sustainability, there are several concepts in entrepreneurship research that are often confused (Luke & Chu, 2013). Farmers have a significant role to play in the development of rural societies and hence are connected to the sustainability concepts further discussed below.

However, by being embedded in the context, influenced by culture, history and social norms in the local environment (e.g. Gaddefors & Anderson, 2017; McKeever et al., 2015), findings from this thesis shows the impact of embeddedness on farmers' behaviour and entrepreneurship in ways that makes them prioritise long-term environmental and social sustainability. Further, the environmental and social sustainability perspectives are, to farmers, equated with the creation of long-term economic sustainability (Paper 1, 2, 5). Although previous entrepreneurship research has highlighted the importance of considering the embeddedness in context when studying entrepreneurship (e.g. Anderson & Gaddefors, 2016; Granovetter, 1985; Jack & Anderson, 2002; McKeever et al., 2015), few studies focusing on entrepreneurship in the agricultural context have been conducted (Dias et al., 2019; Fitz-Koch et al., 2018). As far as is possible to ascertain, no one is specifically focusing on the embeddedness of entrepreneurship in agriculture. Hence, findings in this thesis contribute knowledge by illustrating the importance of understanding embeddedness in the context of entrepreneurship in agriculture, where the embeddedness exerts a major impact on value creation and the development of both business and rural society (Paper 5). Further, findings in this thesis contribute by illustrating the important role that farmers play in rural development and their contribution to rural entrepreneurship (Paper 5), which is necessary to take into account when working with sustainable development. *Embeddedness* is a mechanism affecting, supporting and challenging the individual farmer, and hence the agricultural business, as further discussed next.

5.2 Entrepreneurship in agricultural businesses and the farmers – challenges and approaches

What challenges farmers' entrepreneurship, and how can these challenges be approached?

Findings in Paper 1 add to prior research often categorising barriers to BMI as internal or external (Sandberg & Aarikka-Stenroos, 2014), by adding the category of contextual barriers, i.e. influence from embeddedness and culture in the surrounding areas, as will be discussed in more detail below. Further, the study in Paper 1 also illustrated that the internal, external and contextual barriers were tightly interwoven, since for example embeddedness in context and culture affects cognition and behaviour, which in turn affect decisions and how to approach challenges. However, these barriers may also be considered benefits for the farmer and for rural development, and sometimes are perceived as a barrier from one perspective while being a benefit from another. The understanding of these barriers has increased and changed along with the deepened understanding of value creation at different levels (Papers 1-5). The understanding developed from first being in line with previous research mainly studying barriers to development at business level (Sandberg & Aarikka-Stenroos, 2014), without any analysis of influence on other perspectives, to the insights that barriers may be perceived as mechanisms that affect entrepreneurship in agriculture in different ways. Hence, they affect in both positive and negative ways, and create both opportunities and challenges. A mechanism may, for example, be perceived as a barrier to business model innovation in the agricultural business from a relatively short-term perspective, while at the same time create value for rural development from a long-term perspective. Another example is internal mechanisms such as weak leadership skills, or cognition and mind-set which influence how farmers approach challenges. While, for example, cognition means the farmer considers farming a lifestyle and rarely seeing himself or herself as an entrepreneur, this may affect the short-term economic growth of the business. On the other hand, considering agriculture as a way of living contributes to the long-term sustainability of the business and value creation to the local

rural society. An example of this is that farmers lend resources to one another or exchange services without interest in financial gain. Because of this understanding, the continuation of the analysis and discussion will include discussions of mechanisms, illustrating that what was previously entitled barriers may be considered mechanisms that affect entrepreneurship in agriculture and rural development.

This thesis shows that the understanding of contextual mechanisms i.e. embeddedness in the local context, is key to exploration when studying entrepreneurship in agriculture and sustainable rural development. Running agricultural businesses is challenged by unique preconditions compared to running business in other industries and at other geographical locations. On the one hand, rural areas present logistical, geographical and structural challenges, such as finding staff, sustainable logistics solutions and/or service functions, compared to businesses operating in cities or in densely populated areas. In addition to being located in the countryside, the farming business presents additional unique challenges for the farmer as an entrepreneur. Agriculture consists mainly of small family businesses, where the role of owner and manager is held by the same person. By living on the farm and considering farming as a lifestyle, the family is also largely involved in the business. In many cases, family members also work in the business, and jobs are created to provide family members with employment, without having to be strategically or financially advantageous for the business (Paper 1). By prioritising family wealth and family reputation, or caring for the local inhabitants in the surrounding areas, decision-making may be influenced in manner that sometimes entails non-financially beneficial decisions for the business (Alsos, Carter, & Ljunggren, 2014; Ashkenazy et al., 2018; Milone & Ventura, 2019; Van der Ploeg, 2012), while at the same time creating value for the rural community. Compared to value creation in existing sustainability oriented literature, the value creation in agriculture extend far beyond the company and unlike other companies in the sustainability oriented literature on value creation, the aim is not to provide value to gain competitive advantages (Freudenreich et al., 2019). The value creation is developed and built in the embeddedness. Agriculture is an extremely long-term business, and long-term for farmers means several generations to come (Papers 1, 2 and 5). A farmer rarely sells or relocates his/her business, which means that they are included in the concept of rural entrepreneurship (Korsgaard, Müller et al., 2015). Inherited embeddedness in the local context is of great importance for farmer cognition that influence decision-making and management of agricultural businesses and have shaped generations of farmers into the local culture, just as new generations are formed and embedded in the context (Papers 1, 2 and 5).

Today, many activities focus on approaching challenges in entrepreneurship by attempting to transform farmers into entrepreneurs, by facilitating economic growth and encouraging farmers to become more innovative business managers, with improved skills in financial management and production planning etc. Business model innovation (Paper 1), and the development of leadership inputs for farmers (Paper 4) are two examples of such activities. However, do such activities also provide value for sustainable rural development without reflecting and paying attention to the contextual mechanisms? Studying business models in agricultural businesses without considering the unique contextual mechanisms creates misleading results, as this thesis clearly shows. One such example of misleading results arose when business model scholars consider farmers as the first step in a food processing value chain mainly prioritising economic growth (Knickel et al., 2009; Tell et al., 2016). Without reflection on the differences between agricultural businesses and the other companies in the value chain, results are related to economic growth strategies and intentions. However, farmers cannot be equated to other companies in the chain, challenged by unique contextual and cultural mechanisms (e.g. Greenman, 2013; McManus et al., 2012; Suess-Reyes & Fuetsch, 2016) as previously discussed, hence prioritising for example long-term sustainability and values other than short time profitability. Further, the difficulties in separating farmers from their business provide another example of how internal and contextual mechanisms are largely intertwined, and hence must be understood and taken into account when exploring business model innovation in agriculture. As this study shows, existing theories from previous research cannot be applied when studying agriculture. Theoretical models for business model innovation need to be developed to include agricultural contextual mechanisms. Hence, this thesis contributes to research on sustainable business model innovation (Boons & Lüdeke-Freund, 2013;

Bocken et al., 2014; França et al., 2017; Osterwalder & Pigneur, 2010; Teece, 2010) by studying farmers' development of business models, challenges and approaches. Consequently, this thesis contributes understanding of challenges in agricultural entrepreneurship.

In addition, external mechanisms, such as competitors, market situation, weather etc. challenge entrepreneurship in agriculture and business development. In fact, the support system was found to be an external mechanism, perceived as hindering development by farmers (Paper 1), which was remarkable given that the purpose of the system is to encourage and support development in agriculture. Findings from Papers 1 and 4 contribute extended knowledge of challenges to entrepreneurship in agriculture, and can help the support system to create policies, activities and measures to overcome challenges in the domestic market situation or requirements and methods in the exercise of their authority. However, a major challenge for agriculture is that it is an industry with low financial profitability, which means that agricultural businesses and entrepreneurship in agriculture are affected by the financial support that is transformed from EU grants to national support efforts to develop agriculture. In a weak economic sector such as agriculture, this support is significant. However, much of the financial support is transformed and channelled into services provided by actors within the support system. This system aims to encourage and enable sustainable development and innovation in agriculture and rural businesses. However, both policies and activities are primarily based on economic growth strategies, with follow-up and metrics thereafter (Dosi, 2013; Fagerberg, Martin & Andersen, 2013; Lundvall, 2013; Tunberg, 2014). Reflecting on and including the extended knowledge provided by this thesis will contribute to a holistic perspective which can facilitate understanding of both entrepreneurship in agriculture and sustainable rural development. This is also in line with entrepreneurship as re-sourcing, emphasising sourcing of resources from new places and to new ends consequently, entrepreneurship needs to be involved in solving sustainability problems from all three sustainability perspectives, and it may be necessary to reduce the financial gain priority to create environmental or social value and value for the local rural society (Korsgaard et al., 2016). In Sweden, environmental considerations have been of great importance in these strategies in recent times. Support and incentives are thus created, executed and evaluated according to economic and environmental sustainability (Paper 3), however farmers also largely prioritise social sustainability by being embedded in the local context (Papers 1, 2 and 5). Here is a gap and this could probably explain why farmers experience the support system as a hindering mechanism instead of support (Paper 1). This may take the form of a gap in communication and understanding of recipient needs and aims. Further, the gap between prioritised activities at business level and the need for a holistic understanding of the interplay within agriculture and the connections to sustainable rural development may also be an explanation for the farmers' perceptions of the support system. There are also other reasons for this experience, which will be discussed further below when discussing the support system (Papers 3, 4) and the interplay between the different perspectives.

This thesis also contributes knowledge on how the challenges to entrepreneurship may be approached by the farmer. Papers 1, 2 4 and 5 provide understanding of cognitive aspects; thinking and acting in farmers' everyday lives and decision making for the business and for the creation of value both for the business and society (Papers 1, 2 and 4) (Dias et al., 2019; Manz 1986; Mayer, 1997; Neck & Houghton, 2006; Rauch et al., 2009; Wiklund & Shepherd, 2005). Cognition and lack of leadership skills are found to be internal mechanisms affecting how to approach challenges (Paper 1). The study of how farmers approach the challenge posed by the extreme drought in the summer of 2018 illustrated the importance of a positive mind-set, controlled emotions i.e. emotional intelligence and strategic management. The study also revealed that farmers possessed entrepreneurial orientation (EO). EO involves risk-taking, proactivity and innovativeness and well-developed EO is considered as facilitating for decision making, innovation and business performance (Dias et al., 2019; Rauch et al., 2009; Wiklund & Shepherd, 2005), also in agriculture (Grande, Madsen, & Borch, 2011; Ibidunni et al., 2018; Methorst, 2016; Verhees, Kuipers, & Klopčic, 2011). The discovery that farmers have well-developed EO is an interesting contribution that contrasts with previous research where farmers are not considered to be entrepreneurial (Fitz-Koch et al., 2018; Korsgaard, Müller et al., 2015). In cases where agriculture is considered to be

included in entrepreneurship, it concerns agricultural companies that diversified or broadened their operations in different ways, and deviated from traditional agriculture for other business models (Van der Ploeg, 2012). However, the study that forms the basis of Paper 2 also contradicts this research, since the farmers in the study were traditional middle-age agrarian farmers without further processing or diversification. There is also research that claims that the younger generation with education in fields other than agriculture needs to take over farming to enable entrepreneurship and EO (Milone & Ventura, 2019). However, this is also contradicted by this study. An explanation for the result is that the experienced farmers were involved in previous crises and in some cases a similar drought situation in the early 1990s. Their experience contributed learning that developed cognition and strategic management and also fostered EO. Hence, the study concludes that traditional farmers without diversified businesses also possess EO, and that well-developed EO can lead to improved performance in stressful situations – and otherwise – as stressful situations foster EO.

The findings in Paper 2 partially align with previous studies discussing access to capital and engagement in the environment, combined with EO necessary to enhance business performance (Wiklund & Shepherd, 2005). Farmers have access to capital, but their capital is tied up in real estate and machinery which means that liquidity can sometimes affect entrepreneurship. In addition, they are highly involved in the environment and possess an entrepreneurial orientation which may explain the courage to be risk-taking and expose themselves and their families to major financial risks. The sustainability priority discussed earlier, where environmental and social sustainability are prioritised and are expected to provide long-term economic sustainability (Papers 1, 2 and 5), may also be an explanation. This partly also aligns with, or explains, previous research emphasising a focus on efficiency and managerial skills rather than enhancing EO, to improve farm business performance, since a high EO may imply negative financial performance (Veidal & Flaten, 2014). As discussed before in this chapter, if growth strategies and economic measures are used, results will be in accordance with them. However, previous studies also emphasise the complexity of the relationships in the concept of EO, and the importance of unique context in the performance implications (Lumpkin & Dess, 1996). However there are few studies in the agricultural sector (Pindado & Sánchez, 2017; Rauch et al., 2009; Veidal & Flaten, 2014), and those existing have mainly been conducted in Asian and American countries applying a quantitative approach (Dias et al., 2019). Hence, this thesis contributes essential knowledge in order to understand under which circumstances, or among which type of farms, increased EO can lead to improved performance (Dias et al., 2019; Veidal & Flaten, 2014).

Cognition affects management and how entrepreneurs approach challenges (Chesbrough & Rosenbloom, 2002; Chesbrough, 2006; Shepherd, 2015). Well-developed self-leadership i.e. the ability to manage yourself (Manz, 1986), and emotional intelligence, i.e. the ability to view, understand and control your own emotions (Joseph & Newman, 2010), may facilitate how to approach challenges. Farmers who know what they want, and what they do not want, both for themselves and for their businesses, find it easier to manage the challenges in business development and in their lives. The farmers who have not reflected about what they want or how they want their lives, were more affected by external mechanisms that they could not control (Paper 1). In addition, these farms produced poorer financial results than the farms where farmers developed a strategic mind-set including self-leadership (Papers 1 and 2). The fact that the support system was identified as hindering business development may also be explained by the lack of self-leadership, reflection and taking their own responsibility, i.e. it may be easy for farmers to blame the support system as a defence against them not having to take responsibility for their results (Manz 1986; Manz & Neck, 2013). This risk, that farmers rely on governmental support and do not take their own initiatives, has been highlighted before (Bosworth, 2009; Bosworth, McElwee, & Smith, 2015). Swedish farmers are used to receiving financial support and acting in a regulated market. Before EU entry they did not need to be market oriented, since conditions were dictated by state and member organizations, and the farmers themselves had the task of complying with them. Following EU accession, they are in a free market with competition from imported food which has drastically changed their preconditions. However, these changed conditions and hence the need for leadership development has been discovered and adopted by the support system,

as illustrated in the study of the development and implementation of the leadership program for farmers (Paper 4). However, the extent of and how these efforts have been carried out, given that the situation still looks like it does in agriculture is a matter of conjecture. It is relatively many years since EU accession, but the downward trend has not reversed. The study in Paper 4 and other ways to encourage and support entrepreneurship in agriculture are discussed further below. But first, a conclusion by presenting the main contributions and a proposition deriving from the analysis and discussion related to RQ 1 - *What challenges farmers' entrepreneurship, and how can these challenges be approached?*

This view of agriculture and farmers, that they are not considered part of entrepreneurship research, challenges entrepreneurship in agriculture as activities focus on transforming farmers into entrepreneurs and business leaders and on changing their business models in ways that are not adapted to the agricultural context. Theoretical models for business model innovation need to be developed to include agricultural contextual mechanisms since existing theories from previous research when studying agriculture cannot be applied. Also, traditional farmers with traditional business models possess EO, a skill that can lead to improved performance in stressful situations – and otherwise – as stressful situations can foster entrepreneurial orientation. *The extremely long-term sustainability perspective including many generations to come, add a further dimension on the general sustainability concept, including economic, environmental and social sustainability. Further, farmers prioritise environmental and social sustainability, and view the long-term survival as economic sustainability.* This approach challenges entrepreneurship in agriculture while at the same time creating value for sustainable rural development. From the above analysis and discussion, the first proposition for understanding value creation for sustainable rural development by agricultural entrepreneurship, is developed. This proposition will be followed by two further propositions as the analysis and discussion proceed and as the thesis is summarized.

Proposition 1: Farmers engage in *agricultural sustainability*, i.e. engage to a higher extent in environmental and social sustainability than traditional types of entrepreneurs. They view economic sustainability from an extremely long-term dimension for many generations, thus prioritizing environmental and social aspects in order to achieve long-term economic sustainability.

5.3 Encouragement of entrepreneurship by the support system

How can entrepreneurship be encouraged and supported in agriculture?

We now proceed to the system level, where this thesis contributes understanding of how entrepreneurship is encouraged by the agricultural support system, and how this work can be developed. It has become clear from previous discussion that the system financial support is important to the farmers, and that financial incentives from the EU are channelled through national activities provided by the support system. We also know that this system is perceived as hindering business model innovation (Paper 1) and that the agricultural innovation systems (AIS) in the G20 countries are criticised for being inefficient with weak governance – also in Sweden (OECD, 2019). Paper 3 contributes by making structures and mechanisms in the support system more transparent in order to enable change in organisation, management and performance. Hence, Paper 3 explore the support system and provides insights into how the support system around farmers is governed and organised, cognition and relations within and between the organisations. For example, how the actors in this support system communicate, cooperate, think and act, and what influences their behaviour and value creation.

The empirical findings show that there is a mismatch between the activities aimed at supporting and developing Swedish agriculture and rural areas (Papers 3 and 4), and the support experienced by the farmers (Papers 1 and 2). When exploring challenges to sustainable business model innovation, the farmers experience the support system as hindering development (Paper 1). This is because they

experience the counselling provided as old-fashioned and out-of-date and that it does not maintain the quality and provide the value that they ask for. Today, farmers are very much up-to-date and knowledgeable and technological development and digitalisation have enabled them to find information on the Internet, via international forums, etc. in a completely different manner than before. The support system is a large and complex system of actors. These Swedish advisory organisations have existed for more than 200 years and show a strong path dependency guiding everyday practice (Paper 3). Their structures may be difficult, but essential, to change which is evident when probing beneath the surface of the support system. The system has not developed in pace with the changes in the world surrounding entrepreneurship in agriculture, especially since the Swedish EU entry in 1995 which opened up a free market. Hence, the system needs to be adapted according to the needs of the farmers. Current functions are not providing enough value for farmers (Paper 1) or encouraging entrepreneurship in agriculture (Paper 3). There is an immediate need to develop the support system in innovative ways in order to adapt to the needs of value creation for tomorrow (Paper 3) aligning with previous research indicating that the support system risks becoming a barrier as it is not meeting the need of the farmers (Knickel et al., 2009). Innovation, communication and collaboration are necessary both within and between actor organisations in the support system. The current individualistic culture in counselling does not encourage collaboration and knowledge transfer, on the contrary it counteracts such cooperation. Many advisors are very well educated and their education, work experience and upbringing come mainly from agriculture. They are specialists in primarily natural sciences and production which has traditionally been necessary for agriculture (Höckert, 2017). However, the advisory organisations have not been sufficiently proactive and open to acquiring competence from other industries and in areas such as strategic management, leadership and communication (although things have gradually changed in recent years). While the actors in the support system aim to work to create value for the farmers and, for example, encourage the development of farmers' self-leadership, leadership and innovation capacity (Paper 4), they themselves are in great need of these skills (Paper 3). This complement of skills would facilitate the development of sustainable agriculture and rural areas, and also the internal development of the support system (Paper 3). Hence, lack of self-leadership (Manz 1986; Manz & Neck, 2013) also forms a hindering mechanism within the support system where an individualistic culture (Höckert, 2017) prevails and influences working methods, communication, results and value creation. The paradox is that the advisory organisations within the support system are supposed to encourage innovation (OECD, 2018), but are characterised by older cultures, and in many respects age-old ways of working and thinking (Höckert, 2017). In order to facilitate collaboration, value creation and to encourage entrepreneurship, change is required in individual cognition within employees in the support system, and also reflection on effects of the embeddedness of the individuals within the actor organisations.

By using the Complexity Leadership Theory (CLT) (Arena & Uhl-Bien, 2016) to explore organisational challenges social interaction with, for example, communication is emphasised, enabling leadership, innovation and development of methods in the advisory service and support system. The support system is complex, hence adaptive space is necessary and can be created by developing bridging structures between different formal and informal systems (Arena and Uhl-Bien, 2016; Kontopoulos, 2006; Ospina & Foldy 2010; Uhl-Bien et al., 2007). Building on the CLT, Paper 3 contributes a model to enable innovation and entrepreneurship in the support system and hence facilitate entrepreneurship in agriculture. The model concludes with the actors in the support system possessing a common vision to contribute to the development of sustainable rural areas. However, a common vision is not enough. The system needs management consisting of 1) a functioning collaboration model, 2) methods for managing and developing the system and 3) strategic management of the organisations in the system. In addition, the three parts must work together – well-functioning communication, facilitation of activities and leadership - all enabled by the creation of adaptive space in the system. In this adaptive space, innovation can flourish by stimulating pressure and simultaneously helping individuals to act under pressure.

Leadership skills are essential both within the support system and in agricultural businesses. One of the first joint projects between competing actors in the support system was a leadership development programme for farmers. The fact that competing actors from the support system cooperated in this

manner is unusual in Sweden. After following the development and implementation of the programme, Paper 4 presents results showing that farmers benefitted from their participation in the programme in which EI (Joseph & Newman, 2010; Mayer, 1997) and self-leadership (Manz & Neck, 2013) were emphasised, since this kind of training input encourages cognitive development. The results also show that this type of collaborative effort within the support system create value for the farmers, who also see value in studying with participants from other industries in such programmes. Further, the shift from advising to coaching is a valuable method for supporting farmers' development and value creation (Paper 4). This study also shows that it is a successful model which can be linked to the results in Paper 4, where adaptive space in the system is requested (Arena and Uhl-Bien, 2016; Uhl-Bien et al., 2007). This type of collaboration may be a way of creating adaptive space and enabling development and innovation both for farmers and for the support system. Unfortunately, there is also a risk of working with development projects in this kind of organisations since, at the end of the project, there is often no one to manage and develop the project due to lack of financial incentives. There are low levels of risk taking by the agricultural advisory organisations, since they are financed by project funds or income from advisory services (Höckert, 2017). CLT emphasises the need for adaptive spaces in between the operational and entrepreneurial system in organisations and, as innovation can be regarded as a social phenomenon within complex systems (Arena and Uhl-Bien, 2016), we need to understand the interplay between the three, closely-intertwined leadership functions; enabling, administrative and adaptive leadership (Fleming et al., 2007; Kontopoulos, 2006; Uhl-Bien et al. 2007). The support system is a complex system and leadership is essential both within and between the actors in the system. CLT shows that someone who takes leadership point in development is necessary, which is a challenge that must be solved within the support system.

Previous research has furthermore shown that business model innovation is an appropriate and successful method for developing sustainable organisations by creating, capturing and developing value (e.g. Boons & Lüdeke-Freund, 2013; Bocken et al., 2014; Teece, 2010). Hence, BMI may also be valuable to the support system, both for development within actor organisations and for the development of the system as a whole. Policy-makers, politicians and officials could work with business model innovation in rural areas, i.e. to create value in rural areas. One starting point would be to understand how to create value and to focus on value creation for those who live, work and visit the countryside, while at the same time creating both economic, environmental and social profitability in the countryside. At present, parts of this area of understanding are missing, but could be developed by understanding the importance of embeddedness in rural areas (Anderson & Gaddefors, 2016; Granovetter, 1985; Greenman, 2013; Jack & Anderson, 2002; Korsgaard, Müller et al., 2015; McKeever, Jack, & Anderson, 2015; McManus et al., 2012). However, when working with sustainable rural development, considerable attention must be paid to contextual embeddedness (Paper 5), and considering who you create value for. With the individualistic culture in the support system (Paper 3), there is a risk that value is created for yourself instead of for the farmers, agriculture or rural areas.

The conclusion is derived from the analysis and discussion related to the RQ 2 - *How can entrepreneurship be encouraged and supported in agriculture?* In order to encourage and support entrepreneurship in agriculture, the support system would benefit from development in different perspectives, both within and between the organisations. For example development in collaboration and communication, and knowledge and method development. Changes at different levels can facilitate collaboration and value creation. Cognitive changes by employees in the support system would benefit from reflection on value creation and understanding of the effects of their embeddedness in the culture, as well as an understanding of farmers' embeddedness. Extended knowledge about rural entrepreneurship and entrepreneurship in agriculture, and knowledge within the fields which are necessary to assist farmers may also create preconditions for understanding how value can be created for agriculture. Paper 3 contributes a model for enabling innovation and entrepreneurship in the support system as a proposition for one way to facilitate entrepreneurship in agriculture. The support system has a significant role in the development of entrepreneurship in agriculture as hence in value creation for

sustainable rural development. Against this background, the above analysis and discussion, a second proposal has been developed.

Proposition 2: The right set of conditions, considering the farmers' embeddedness, and provision of relevant support adapted to the context, can improve the farmers' value creation and development of sustainable rural areas.

5.4 Exploring the interplay

With the aim of understanding how to contribute to sustainable rural development, the purpose of this thesis is to explore entrepreneurship in agriculture from different perspectives, to find mechanisms affecting value creation for sustainable rural development. Interrelated findings from the five papers enable exploration of the interplay between the individual, business and system levels, in order to understand entrepreneurship in agriculture at societal level too. By exploring the interplay between different levels of entrepreneurship in agriculture, opportunities are created to identify challenges and mechanisms that it would not otherwise have been possible to study. If entrepreneurship in agriculture had been studied from a business perspective only, for example by studying business models as in Paper 1, it would not have been possible to explore and understand the gap between the farmer and the support system (Paper 3), nor to gain an understanding of how embeddedness in context affects decision-making or what the pursuit of sustainability in the agricultural business means to the farmer (Papers 1, 2 and 5). By exploring and understanding embeddedness in the local context (Paper 5), the social capital possessed by the farmers was revealed as well as how these resources both facilitate and limit entrepreneurship. Social capital is about resources embedded in networks and social relationships, and is mobilised through social interaction with the local community (Lang & Fink, 2018; Putnam, 2000). Since one of the agricultural businesses' greatest resources is the farmer him or herself, social capital is of vital importance for entrepreneurship in agriculture (Granovetter, 1985). Local society is of such importance that it may be decisive to whether social capital enables or limits the farmer (McKeever et al., 2014). The results of this thesis align with a stream of research illustrating farmers as social entrepreneurs, due to the social capital that brings them advantages (Gedajlovic, Honig, Moore, Payne & Wright, 2013). Social entrepreneurship means, among other things, creating value for their own businesses and others, for both customers and suppliers, but also for the community surrounding the entrepreneur (Luke & Chu, 2013). Here, this thesis contributes novel findings showing that farmers play a significant role in society as value creators and enablers of rural entrepreneurship and the development of rural societies.

The findings contribute to the discussion on the importance of social capital for entrepreneurship (Gedajlovic et al., 2013; McKeever et al., 2014). It also highlights the discussion of the concepts of social entrepreneurship and social enterprise which are often mixed together when referring to sustainability (Luke & Chu, 2013). The importance of farmers' social capital is highlighted in this study, indicating that entrepreneurship in agriculture can clearly be included in social entrepreneurship. This aligns with the definition of rural social entrepreneurship as "complementing an entrepreneurial mission with a social mission" (Lang & Fink, 2018, p. 12), and emphasises "the processes underlying innovative and entrepreneurial activity for social purposes" (Luke & Chu, 2013, p. 764). The illustration of farmers' roles as enablers and value creators (Paper 5) aligns with the definition of rural social entrepreneurs as solvers of socioeconomic problems and change agents in rural regions (Lang & Fink, 2018). However, this thesis also clearly indicates that farming is not to be considered a social enterprise, although farming might align with social enterprise understood as "a hybrid organization which pursues both social and economic objectives and provides goods and services for the benefit of a particular community" (Lang & Fink, 2018, p. 1) but a social enterprise exists for a social aim, and focus is on the purpose of achieving its social mission (Luke & Chu, 2013). Although farming contributes social sustainability to society, its primary purpose is not a social mission since it combines social, environmental and economic sustainability. Farmers aim to create a sustainable life on the farm for their families and for future

generations, while at the same time providing value for their surroundings by taking care of the environment, producing food and engaging in rural development. There are also other differences between the concepts of social enterprise and social entrepreneurship in which social entrepreneurship works more with innovation and strategic issues than social enterprises which work more hands on (Luke & Chu, 2013). As illustrated in this thesis, farmers possess an entrepreneurial orientation (Paper 2), hence they work with innovation and strategically plan for their and their families' future on the farm and in the local area, consequently they may be categorised as belonging to the concept of social entrepreneurship.

This thesis concludes by presenting its main contributions and a proposition deriving from the analysis and discussion related to understanding the interplay between levels in agriculture. This analysis highlights *embeddedness* as a key mechanism in order to understand entrepreneurship in agriculture. The social capital of the farmers is vital for entrepreneurship in agriculture, since one of the agricultural businesses' greatest resources is the farmer him or herself. Their embeddedness means their social capital interacts with the local community. In fact, their role as enablers of rural entrepreneurship and value creators for sustainable rural development derives from their social capital and the embeddedness. This is because farmers complement their entrepreneurial mission, i.e. running the agricultural business, with the social mission of contributing to local rural development. From the analysis and discussion above, the third proposition is developed.

Proposition 3: Value creation for farmers are broader than for traditional entrepreneurs, and in existing sustainability oriented literature on value creation, implying a need to support and measure value creation differently adjusted to the agricultural sustainability.

5.4.1 Mechanisms affecting entrepreneurship in agriculture

There are two key mechanisms crucial to understanding entrepreneurship in agriculture, and how entrepreneurship can contribute to sustainable rural development. Studies and analyses of agriculture from different levels, as well as the interplay between the levels, have enabled the highlighting of these mechanisms. Based on these mechanisms, the theoretical framework has been developed. Thus also the goal of offering a coherent theoretical framework illustrating mechanisms in agricultural entrepreneurship affecting value creation for sustainable rural development.

The agricultural and rural context provides unique challenges and opportunities for entrepreneurship. However, the key is to understand the *embeddedness* in the local context. Embeddedness both affects cognition and communications and, due to farming being inherited from generation to generation, embeddedness is also inherited to a great extent. Farmers are traditionally given the role of primary producer of food and conservers of the landscape. By understanding embeddedness as a mechanism affecting entrepreneurship, this thesis highlights that both research and society have overlooked the important role that farmers play as enablers for rural entrepreneurship and sustainable rural development. Sustainability is divided into economic, environmental and social sustainability in both research and practice. However, this study shows that what farmers mean by sustainability is not divided in this manner. For farmers, the extremely long-term sustainability for generations is important and natural. Consequently, they possess an embedded, basic sustainability perspective in which they take care of both environment and society. Farmers add a further dimension on the general sustainability concept, and prioritise environmental and social sustainability in their daily decision making, and view the long-term survival for generations as economic sustainability. This approach forms the concept of *agricultural sustainability*. This concept explains the way in which farmers view sustainability, and thus affects agricultural entrepreneurship and value creation for sustainable rural development.

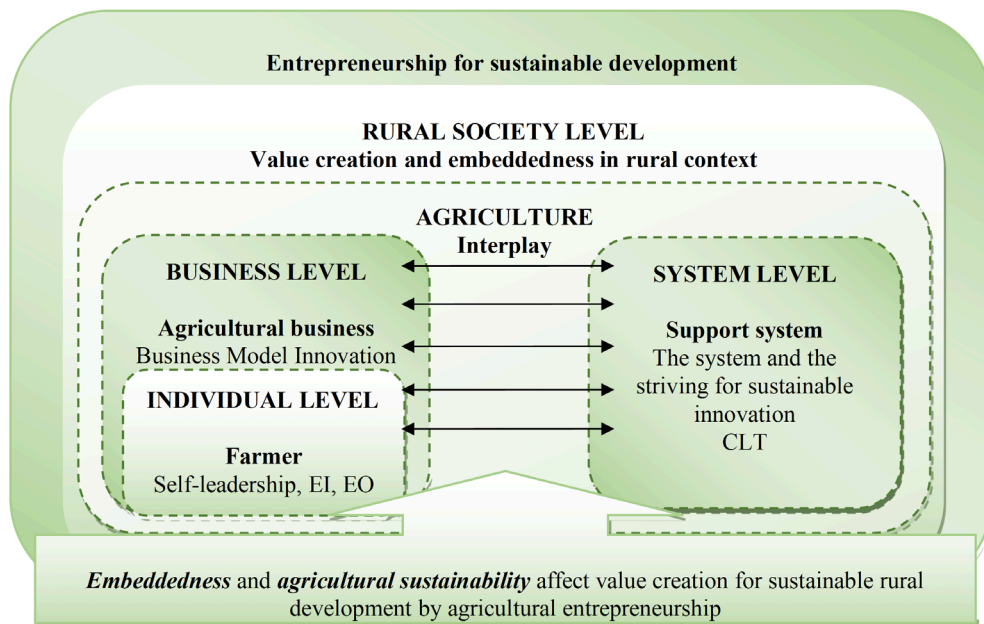


Figure 4: Extended framework including mechanisms affecting value creation for sustainable rural development by agricultural entrepreneurship

6 Conclusions

The overall aim of this thesis was to explore entrepreneurship in agriculture from different perspectives, to find mechanisms affecting value creation for sustainable rural development. The research has been presented in this thesis and in five appended papers. By exploring agricultural entrepreneurship from different perspectives, the aim of the thesis was fulfilled. Hence, studies exploring entrepreneurship in agriculture at individual, business, system and societal level - and the interplay between the levels - were conducted. First, studies at individual and business level focused on the exploration of how farmers cope with challenges in the development of sustainable agricultural businesses. Second, studies at system level explored how entrepreneurship was encouraged by the agricultural support system, and how this work could be developed. Third, interrelated findings from the five papers enabled exploration of the interplay between the individual, business and system level, in order to understand entrepreneurship in agriculture and at societal level. The overall aim was specified through two research questions, which are specifically addressed below. The goal of this theses was also to provide a theoretical framework illustrating mechanisms that affect value creation for sustainable rural development, as previously presented above. Understanding these mechanisms enabled the development of three propositions for the understanding of value creation by agricultural entrepreneurship, also presented in this concluding section. This chapter ends by stating limitations and implications for future research.

6.1 Entrepreneurship in agricultural businesses and for farmers – challenges and approaches

What challenges farmers' entrepreneurship, and how can these challenges be approached?

Findings in this thesis illustrate that farmers face intertwined internal, external and contextual challenges in their entrepreneurship. Internal, such as cognition, mind-set and attitude, affect how to approach most of the challenges and how to work with value creation for both the business and for society. Cognition is affected by their embeddedness in context, and this embeddedness also provides an economic challenge to entrepreneurship in agriculture, since it influences decision-making in ways that are seldom based on economic values. However, *embeddedness* also means the farmers function as enablers for rural entrepreneurship and rural development by providing value for the local society, other entrepreneurs and by facilitating social and environmental sustainability etc.

Since the farmer is so closely interwoven with his or her business and family, their internal and contextual challenges are also intertwined and need to be understood together. These challenges can be approached by working with leadership development, such as self-leadership and emotional intelligence. The ability to manage yourself includes, for example, self-reflection and is extremely important in agriculture since the life of the farmer and the business are so tightly intertwined. Without this knowledge, there is a risk that the farmers become passive, rely on economic support and shift the responsibility for their results to, for example, the support system. Further, farmers are exposed to both unexpected and extreme challenges that they cannot control because they work with animals and nature. However, these challenges foster entrepreneurial orientation, which in turn can lead to improved performing during future stressful situations or challenges.

The support system also challenges development, and there is a mismatch between the support provided and the support experienced by the farmers. This can be explained by a mismatch in communication, where the providers, i.e. the EU, government and actors in the support system, do not understand the recipients' (i.e. the farmers') situation. Farmers face unique challenges compared to entrepreneurs in other industries, both by being located in rural areas and by living and working at the same place as well as, for example, by working with nature and live animals. However, being *embedded* in the local rural context provides challenges by influencing the decision-making and management of agricultural businesses. This mismatch can be partially explained by the support system providing support based on economic growth strategies, while farmers prioritise completely different values and strive for *agricultural sustainability* adding a further dimension to the general sustainability concept, by the extremely long-term focus and prioritising of social and environmental sustainability, viewing the long-term survival as economic sustainability.

6.2 Encouragement of entrepreneurship by the support system

How can entrepreneurship be encouraged and supported in agriculture?

It is important for the support system to understand and reflect over the mismatch between the activities aimed at supporting and developing agriculture and rural areas and the support experienced by farmers. Authorities, policy-makers and society mainly consider farmers as food producers and landscape conservators, but farmers play other roles that challenge their business development. Hence, these roles need to be taken into consideration to enable the support to succeed, as these roles both challenge the agricultural business while at the same time providing value for the society. Activities in the support system are mainly based on economic growth strategies, while farmers primarily strive for extreme long-term sustainability for many generations to come, being a mix of environmental and social sustainability, which they consider ensures long-term financial sustainability, i.e. a concept called *agricultural sustainability* in this thesis. Farmers are not entrepreneurs who runs businesses primarily to earn money. They have completely different values, affected by mechanisms in the agricultural context, and prioritise lifestyle, family and socio-economic factors, i.e. social and environmental sustainability. Activities provided through the support system are relatively short-term through the forms of funding and support programmes in both the EU and nationally. This can contrast with farmers' extremely long-term perspectives and create challenges in value creation. However, entrepreneurship can be encouraged and supported by understanding the individual and interorganisational challenges within the system, and by having the courage to reflect on these challenges and to exercise leadership over both individual and the system. Taken together, to encourage and support sustainable development in the agricultural and rural context, the support system would benefit from being developed to prioritise innovation, leadership, communication and value creation, which can be achieved by creating adaptive spaces in the system (as presented in the model developed in Paper 3). Further, understanding of the importance of taking farmers' *embeddedness* into account in policy making and activities may facilitate entrepreneurship in agriculture.

6.3 Theoretical contributions, research and practical implications

This thesis has broadened the limited knowledge concerning entrepreneurship in agriculture by highlighting the importance of understanding *embeddedness* and *agricultural sustainability*, hence contributing knowledge valuable for understanding sustainable rural development. Taken together, the overall results show that internal, external and contextual mechanisms challenge farmers' business development, and that farmers approach challenges by using their entrepreneurial orientation and by, for example, taking risks while paying attention to contextual embeddedness in their decision making. Hence they provide value for their local rural society and for rural entrepreneurship. This thesis

contradicts previous research which states that farmers are not entrepreneurial and has more or less overlooked agriculture in entrepreneurship research. On the contrary, this thesis shows that farmers contribute to rural entrepreneurship and rural development to a considerable degree. These insights help to create an understanding of sustainable agricultural and rural development and of the challenges that farmers face in their entrepreneurship, but also of the opportunities that farmers possess and provide for society. This thesis can thus contribute to policies and strategies shifting their focus from trying to transform farmers into entrepreneurs to taking advantage of the enabling role played by the farmers. This thesis also contributes to the understanding of entrepreneurship in agriculture, where value creation extends far beyond the individual business, and hence impacts sustainable rural development.

Further, this thesis contributes three propositions for understanding of value creation by agricultural entrepreneurship:

Proposition 1: Farmers engage in *agricultural sustainability*, i.e. engage to a higher extent in environmental and social sustainability than traditional types of entrepreneurs. They view economic sustainability from an extremely long-term dimension for many generations, thus prioritizing environmental and social aspects in order to achieve long-term economic sustainability.

Proposition 2: The right set of conditions, considering the farmers' embeddedness, and provision of relevant support adapted to the context, can improve the farmers' value creation and development of sustainable rural areas.

Proposition 3: Value creation for farmers are broader than for traditional entrepreneurs, and in existing sustainability oriented literature on value creation, implying a need to support and measure value creation differently adjusted to the agricultural sustainability.

6.3.1 Contribution to the research field

This thesis contributes to entrepreneurship research, and in particular to the area of rural entrepreneurship, by providing deeper insights into strategic management and innovation in the agricultural context.

- In contrast to prior entrepreneurship research, which has mostly overlooked agriculture (Carter, 1998b; Dias et al., 2019; Fitz-Koch et al., 2018; Philipson et al., 2004; Vik & McElwee, 2011), this thesis places focus on the importance of including agriculture in entrepreneurship research. It contributes by providing insights into farmers' cognition, entrepreneurial orientation, business model innovation and strategic management in agriculture. Further, this thesis discovers and illustrates the role of farmers as enablers of rural entrepreneurship and rural development. By doing so, the previously limited knowledge about entrepreneurship and *embeddedness* in the rural and agricultural support system is also broadened (Höckert, 2017; Niska et al., 2012; OECD, 2018; Phillipson et al., 2004; Yngwe, 2014). Findings also contribute to the discussion on the understanding of social capital for entrepreneurship, (Gedajlovic et al., 2013; McKeever et al., 2014). By exploring agricultural entrepreneurship from different perspectives, this thesis contributes to the discussion on the importance of context (Gaddefors & Anderson, 2017; Venkataraman, 2004; Welter, 2011) and contributes extended knowledge about how *embeddedness* in the context and the striving for *agricultural sustainability* affects agricultural entrepreneurship and value creation for sustainable rural development. This value creation extend far beyond the company and the aim in sustainability oriented literature on value creation, to gain competitive advantages (Freudenreich et al., 2019). In doing this, the thesis contributes knowledge within the area of rural entrepreneurship (Korsgaard, Müller et al., 2015; Korsgaard et al., 2016; Stathopoulou, Psaltopoulos and Skuras, 2004), and the ongoing creation of the research areas agricultural entrepreneurship (Alsos et al., 2011; Dias et al., 2019; McElwee, 2008; Milone & Ventura, 2019; Pindado & Sánchez, 2017; Van der Ploeg, 2012;

Vesala & Jarkko, 2008) and sustainable entrepreneurship (Kuckertz & Wagner, 2010; Shepherd and Patzelt, 2011).

- By exploring the support system and thereby providing insights into cognition, relations, communication, cooperation etc. under the surface, this thesis extend knowledge of the challenges in the management and development of the agricultural support system. Internal challenges within the actor organisations and, between them, are explored. The Swedish agricultural innovation system is criticised for inefficiency and weak governance (OECD, 2019), and this thesis illustrates the urgent need for development to create value for the farmers. By using Complexity Leadership Theory to explore the organisational challenges (Arena & Uhl-Bien, 2016; Kontopoulos, 2006; Ospina & Foldy 2010; Uhl-Bien & Marion, 2009), this thesis contributes insights into research about innovation systems and ecosystems (Bassis & Armellini, 2018; Moore, 2016; Teece & Linden, 2017) as well as entrepreneurship and innovation in agriculture. By presenting a model for the development of the support system, this thesis contributes suggestions for ways to further encourage entrepreneurship in agriculture and sustainable rural development.
- This thesis further contributes to research about the management of sustainable business model innovation (Boons & Lüdeke-Freund, 2013; Bocken et al., 2014; França et al., 2017; Osterwalder & Pigneur, 2010; Teece, 2010) by illustrating the importance of including and reflecting on the *embeddedness* in context and the understanding of *agricultural sustainability* in development. BMI scholars consider farmers as the first step in a value chain (Knickel et al., 2009; Tell et al., 2016) but the farmers cannot be equated with other companies in the chain due to unique contextual conditions (Greenman, 2013; Jack & Anderson, 2002; McManus et al., 2012; Suess-Reyes & Fuetsch, 2016). Business model innovation in agriculture engages with the spatial context, uses local resources, is affected by the embeddedness in the social context and creates value for the farmer, the family, the agricultural business and the local society. Further, agricultural businesses cannot be located somewhere else without losing their key value propositions, a central key within business model innovation (Korsgaard, Müller et al., 2015). Hence, these mechanisms need to be understood and taken into account, and theoretical models for business model innovation be developed accordingly.

6.3.2 Practical contributions

This thesis also makes several practical contributions. First, by creating an understanding of the mechanisms influencing entrepreneurship in agriculture at different levels. It is important for farmers to understand and reflect on what influences them and their decision-making in their daily life and in their businesses. It is also valuable for actors within the support system and policy makers to understand the influencing mechanisms, to enable reflection on activities and actions provided to support and create value for the farmers.

By highlighting the mismatch between the support provided and experienced, this thesis creates preconditions for entrepreneurship and innovation in agriculture. In order to be able to develop, it is important to understand the current situation and, from this, decide where to go. The government and authorities want to develop innovation in Swedish agriculture (OECD; 2018; SOU, 2017; Swedish Board of Agriculture, 2018). At the same time, the Swedish AIS is criticised for being insufficient with weak governance (OECD, 2019). This thesis highlights an important gap between farmers and the support system which needs to be addressed. By exploring and highlighting organisational challenges and problems within the agricultural support system, which are urgent to consider and act upon, possible solutions and approaches to these challenges are provided. Further, a theoretical framework facilitating this development is also provided.

This thesis also shows that, in policy making, it is important to understand which research or reports policy work is based on, and that both the *agricultural sustainability* perspective and the *embeddedness* in context must be taken into consideration. It is not enough to base policies on economic strategies (Fagerberg et al., 2013; Höckert, 2017; Korsgaard et al., 2016) without considering the unique context and preconditions. The farmers' role is much more than a primary producer, providing raw material in the first step of a food value chain and a conservator of the landscape, which is the accepted picture in both media and within the support system today (Federation of Swedish Farmers, 2009, Swedish Board of Agriculture, 2018). Policies based on these assumptions can overlook considerable values and significant aspects of rural entrepreneurship and rural development. Regions and areas are different and have very different preconditions - it might not be possible to have a plan for all rural areas, since individuals and their embeddedness in the local context exert influence and control, and need to be taken into account.

6.3.3 Limitations and future research

There are no studies without limitations, and neither is this. The sample is restricted to Swedish agriculture, which may limit the generalisability of the findings. However, the topic in this thesis is relevant, regardless of geographical boundaries. The detailed descriptions of sampling, design and analysis in the studies make it possible to replicate the study in other contexts. If context and embeddedness are extremely important for entrepreneurship in agriculture, and farmers play a key role in rural development, it would be interesting to compare the findings of replicated research in other countries. Currently there is limited research into embeddedness in rural areas (Anderson & Gaddefors, 2016; Granovetter, 1985; Korsgaard, Müller et al., 2015; McKeever, Jack, & Anderson, 2015; McManus et al., 2012), and future research would also benefit from studying the roles of other rural entrepreneurs than farmers, to enable creation of policies and programmes for entrepreneurship and sustainable rural development.

Although Swedish agriculture primarily consists of family businesses, family business research is a separate research area which has not been included in the framework of this thesis. However, I have reflected over some general insights from this research such as the understanding of that the owner usually plays different roles and possesses both management and control (Pindado & Sánchez, 2017), and that the family situation and relations are fundamental to agricultural family businesses (Dias et al., 2019). Further, an understanding of the influence of cognition and behaviour, such as focusing on socioemotional wealth by, for example, giving priority to serving family needs and values instead of economic goals, are considered in the analyses (Maloni, Hiatt and Astrachan, 2017). Family business research is consciously excluded to limit this study. The same goes for cognitive theories and behavioural sciences. This study could be deepened and focused on, for example, cognitions, which could advantageously be done in an interdisciplinary study including psychologists and behavioural scientists. For example, would it be interesting to investigate whether the underlying cognitive mechanisms look different at different levels?

However, entrepreneurship is an interdisciplinary field, and studying entrepreneurship in agriculture from different perspectives require understanding of different concepts. This thesis may be criticised for the use of too many different concepts. However, the underlying concepts contribute to an understanding of the key concepts of *value creation* and *sustainable rural development*, as well as the phenomenon of *entrepreneurship in agriculture* in a way that enabled and made visible the embeddedness which is crucial to understanding agricultural entrepreneurship. Since agriculture is largely absent in entrepreneurship literature, these concepts are necessary to contribute this knowledge and understanding in the field, and through this contribute to entrepreneurship literature.

The support system plays a significant role for entrepreneurship in agriculture, but is criticized for its inefficiency and management. The result in this thesis follows the same line, but also proposes a model for change. However, agriculture may not need as much support as the industry believe? Perhaps can

agriculture in some respects, such as current support needs and support systems, be compared with other industries? One way of developing the agricultural support system could be to learn from other industries. Agriculture is traditionally dependent on, and accustomed to, receiving financial support through CAP and nationally (Höckert, 2017; OECD, 2018; Yngwe, 2014). Farmers can be compared with, for example, subcontractors in the vehicle industry who experience the same pressure from major customers as farmers do from large cooperative organisations such as Arla or Scan. Subcontractors are continually pushed to improve and tighten their margins, reduce profitability and perform under preconditions created by major customers such as Volvo and Scania, who control and change rules of the game and the preconditions based on their needs, regardless of the small entrepreneur who is a subcontractor. The subcontractors are not used to financial support or subsidised counselling like the farmers are. It would be interesting to explore and learn from such an industry both on the individual and the business level. Further, it would also be interesting to compare the support system around other entrepreneurs in order to learn and develop the agricultural support system. It would also be interesting to test the theoretical model developed in this thesis, and to make comparative studies of agriculture and, for example, subcontractors to the automotive industry, within the same geographical rural context. Thus generating further in-depth knowledge that could be added to the model which may show whether the influencing mechanisms also apply to industries other than agriculture and if so, whether they apply equally.

Last but not least, it would be interesting to pick up the thread that was started by Theodore Schultz as early as the 50s (Schultz, 1956, 1961), and continue the discussion about social capital in agriculture. In this thesis social sustainability and how farmers, among other aspects, prioritise and create value for social sustainability in society have been discussed. However, it would be interesting to develop this track by trying to make social sustainability visible and measurable. In recent years, researchers have begun to request methods for measuring social sustainability (Müller, 2016), and one framework to enable evaluation of the social dimension of sustainability in agriculture has recently been created as a way to try to bridge the gap between agricultural and social science. The framework attempts to capture the agricultural social system and its embeddedness in society, however the authors highlight the need for adaption to the context applying local cultural and social settings (Janker et al., 2019). This thesis shows that embeddedness is of great importance for entrepreneurship, and that social capital is of importance for understanding embeddedness (Granovetter, 1985). Further, social capital, i.e. resources embedded in networks can be mobilised by social interaction (Lang & Fink, 2018) and bring entrepreneurs advantages (Gedajlovic, Honig, Moore, Payne, & Wright, 2013). Hence, the social capital approach can advantageously be used to study the embeddedness of farmers and social entrepreneurs in the rural context (Granovetter, 1985). Consequently, social capital is of importance both for rural entrepreneurship and agriculture, and future studies would benefit from further exploration of the social capital both within agriculture and within rural entrepreneurship.

6.4 The personal development process

As this is a thesis within innovation science, this PhD process was completed by reflecting on my own development with regard to the concept of innovation. I realise that I, from the beginning of the PhD process, had the same pre-understanding of innovation and its meaning, as society in general (Fagerberg, et al., 2013; Rogers, 2003). When starting these PhD studies, I studied barriers to sustainable business model innovation, and then became acquainted with and used, among other things, theories about barriers to radical innovation (Sandberg & Aarikka-Stenroos, 2014) in Paper 1. This is a trifle ironic given that I now consider it quite meaningless to divide innovations in this manner.

I mainly regarded innovation as technological, although I began to feel more comfortable with the fact that innovation was in fact minor changes in ways of working or thinking, and that it was sufficient if the user regarded it as innovation. This through, among other things, the work on the study which forms the basis of Paper 4 that dealt with the development of a leadership program, and the changes in mind-

set and behaviour that self-leadership leads to. As the PhD programme has progressed, it has become increasingly clear that the context, culture and embeddedness in the social rural society (e.g. Korsgaard, Ferguson et al., 2015) play a major role, both for individual farmer and actor actions and then automatically also for innovation, at all levels. In my final paper I therefore discuss the farmers' role in rural development and in rural entrepreneurship, and the consequences of embeddedness and engagement within the rural context.

In Paper 1, it was found that the support system was perceived as a barrier to sustainable business model innovation, so I dug deeper into the system. I began to study the support system with help from the framework on complexity leadership, which concerns how complex systems are interrelated, led and developed (Ospina & Foldy, 2010; Uhl-Bien & Arena, 2017), and understood how the roles and cognition of actors, collaboration, learning and knowledge-sharing i.e. communication and relations, impact the diffusion of innovations, and how individualistic culture and weak strategic management hinder innovation within the system (Paper 3). Communication and relationships are two key concepts when it comes to innovation, partly because of the importance of diffusion of innovations, but also by acquainting myself with the concept of architectural innovation (Henderson & Clark, 1990), which was finally understood as covering my definition of the concept of innovation. By understanding innovation as changes which are new to the user or to the system, such as new mind-sets, new methods, new relations (Henderson & Clark, 1990), I also understood that entrepreneurship is an expression of innovation.

7 References

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Appended papers



Barriers to Sustainable Business Model Innovation in Swedish Agriculture

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Abstract

Sweden's agriculture industry has faced many challenges in recent years. Among the most severe challenges are the decrease in the number of small and medium-sized farms, the decrease in the number of people employed in agricultural activities, and the increase in governmental regulations and legislation governing such activities. At the same time, the demand that agriculture contributes to sustainable social and ecological development has increased. Although research shows that sustainable business model innovation (SBMI) contributes to the creation of sustainable businesses and to the development of a sustainable society, Swedish agriculture has not been at the forefront in the use of SBMI. The purpose of this paper is to examine the barriers to SBMI in Swedish agriculture in order to understand why farmers seldom engage in SBMI. This qualitative study follows the Gioia methodology and data for the analysis were acquired in semi-structured interviews with entrepreneurs at six family farms in Sweden. The paper makes a theoretical contribution to the research on SBMI with its focus on sustainable entrepreneurship in the Swedish agricultural industry. The paper concludes that the barriers to SBMI are external, internal, and contextual.

Keywords: sustainable business model innovation, barriers, agricultural entrepreneur, sustainable entrepreneurship.

INTRODUCTION

A sustainable world requires a sustainable agriculture industry that produces enough food to feed the world's population that is said to be increasing annually. The claim is that by the year 2050, global food production will need to increase by 70% (FAO, 2009; Öborn, 2011). Because food sustainability is a global problem, various government institutions and departments have called for more research on business model (BM) innovation in the agriculture industry (Griggs et al., 2013; Jordbruksverket, 2017)². There is a grave concern,

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² Jordbruksverket is the Swedish national Agriculture Department.

largely based on the environmental challenges posed by climate change, whether many areas of the world will be able to increase their food production sufficiently to meet this challenge. In addition to food shortages, environmental damage, depopulation, and an overgrown countryside are likely consequences if the agriculture industry fails to become more sustainable.

Predictions indicate that Sweden will continue to have a favorable farming climate (*Lantbrukarnas Riksförbund*, 2009)³, and the Swedish government's goal is that its agriculture industry will be globally competitive, innovative, and sustainable by the year 2030 (*Jordbruksverket*, 2017). Moreover, there is a focus on Swedish agriculture on the environment, food safety, and animal welfare (*Lantbrukarnas Riksförbund*, 2009).

However, declining profitability and decreased production in recent years have created severe challenges in the Swedish agriculture industry. Both the number of farms and the number of farm employees have decreased significantly (*Jordbruksverket*, 2017). Increased competition from imported foods and increased administrative and statutory requirements contribute to the difficulties (*Jordbruksverket*, 2017; Tell et al., 2016). In addition, there are inheritance issues as well as management issues because many Swedish farms are family farms inherited from older generations and managed along traditional lines, with relatively constant BMs. If the Swedish agricultural industry is to meet the challenges of a globalized and rapidly changing world, more focus is needed on sustainable business development in this context. This paper answer the question: What is hindering farmers when engaging in SBMI? In order to answer the research question, this paper draws on literature about sustainable business model innovation (SBMI), which can create opportunities for sustainable and successful businesses (Bocken et al., 2014; Boons & Lüdeke-Freund, 2013; França et al., 2017). Further, literature about entrepreneurship and innovation, two key concepts often referred to in the SBMI literature, is used (Schaltegger & Wagner, 2011; Stubbs, 2017), as well as the emerging research field of sustainable entrepreneurship, that addresses innovative ways to achieve sustainable ecological, economic, and social goals (Belz & Binder, 2017).

This paper contributes to the research with its understanding of the development process, an examination and illustration of the barriers, and the relationships between them. It also contributes an explanation of how these barriers can affect the development of both the agricultural and agri-food industry, since agriculture is the first step in the food production value chain. Here, a definition of agricultural entrepreneurship is useful and,

3 Lantbrukarnas Riksförbund is the Federation for Swedish Farmers.

as discussed in the literature (e.g., Pindado & Sàncnes, 2017), agricultural entrepreneurship can be defined as the conduct of the non-agricultural businesses by established farmers (Seuneke, Lans & Wiskerke, 2013) or as the production of processes and goods in the agricultural industry (Vik & McElwee, 2011). Both definitions are applicable in this paper.

The next section, literature review, summarizes the literature on sustainable entrepreneurship, sustainable business models, sustainable innovation, and barriers to the creation of sustainable BMs. The research methodology is described next, followed by a description of the six farms, analysis of the identified SBMI barriers and results of the study. Finally, the conclusion section includes implications and suggestions for future research.

LITERATURE REVIEW

Sustainable entrepreneurship research

Sustainable entrepreneurship is an emerging sub-area of entrepreneurship research (e.g., Binder & Belz, 2015, 2017; Gast, Gundolf & Cesinger, 2017; Stubbs, 2017). This sub-area, which is connected to strategic management and organization, focuses on social and environmental sustainability (Kurowska-Pysz, 2016). Sustainability and management researchers generally agree that sustainable development in society is associated with sustainable development of organizations and that BMs are drivers of sustainable entrepreneurship.

The sustainability management literature emphasizes the importance of entrepreneurship and leadership in SBMI (França et al., 2017; Lambert & Davidson, 2013; Schaltegger, Hansen & Lüdeke-Freund, 2016; Stubbs, 2017). Hernández-Perlines and Rung-Hoch (2017) highlight the importance of sustainable entrepreneurship and corporate social responsibility (CSR) in family businesses. According to Jansson, Nilsson, Modig and Hed Vall (2017), this research, in its focus on large companies, often neglects small and medium-sized enterprises (SMEs). However, Schaltegger et al. (2016) claim that CSR and process- and product innovation alone cannot make the changes needed to achieve real sustainability in society, hence creating sustainable value for customers has to include creating value to a broader range of stakeholders. They call for more research on how to change or create BMs at all levels.

Various factors influence internal management processes, strategies, and actions when sustainability is in focus. For example, Sullivan and Gouldson (2017) found that businesses in general only invest in sustainability when it is economically profitable. Jansson et al. (2017) note the importance of working with external and internal perspectives on sustainability at both business and policy levels. Companies that take a long-term growth perspective, instead

of a short-term, can contribute to a sustainable society (Acs, Audretsch, Braunerhjelm & Carlsson, 2012; Evans et al., 2017; Shepherd & Patzelt, 2011) and sustainability should be emphasized when discussing the strategic management of agricultural businesses (Chen, Yueh & Liang, 2016).

Various related topics now appear in the sustainable entrepreneurship literature. For example, Woodfield et al. (2017) examine the issues related to sustaining family businesses. Further, family business research has found collaborative innovation to be an effective way to overcome innovation barriers (Feranita, Kotlar & De Massis, 2017), which is a part of SBMI. Increasingly, studies on the sociology of rural life, family farms, and farm entrepreneurship appear in the Scandinavian sustainability and entrepreneurship literature (e.g., Gaddefors & Anderson, 2017; McElwee, 2008; Tell et al., 2016; Vik & McElwee, 2011; Vesala & Vesala, 2010). However, none of these studies examine the barriers to SBMI in Swedish agriculture.

Business model and business model innovation research

Although definitions of BMs differ in both scope and concept, usually these definitions take an individual company perspective focusing on creating and delivering value (Lambert & Davidson, 2013; Zott et al., 2011). BM innovation (BMI) research typically examines various activities such as selection of suppliers, creation of value propositions, development of customer relationships, and exploration of revenue models (Breuer, 2013; Osterwalder and Pigneur, 2013; Zott, Amit & Massa, 2011).

There is not a great amount of BM research or BMI research related to the agriculture industry. BM and BMI research mainly focuses on media, information technology, and biotechnology industries (Lambert & Davidson, 2013). However, a few studies examine BMI in the agri-food industry as a whole (e.g., Tell et al., 2016). The Swedish Agriculture Department reports a gap in research on strategic development and management linked to the countryside and rural businesses (*Jordbruksverket*, 2006).

The emergent field of sustainable entrepreneurship had begun to address advanced strategies for sustainable development, such as SBMI (e.g., Provasnek, Schmid, Geissler & Steiner, 2017), and emphasize the importance of the long-term perspective when addressing sustainability (Acs et al., 2012; Shepherd & Patzelt, 2011; Stubbs, 2017).

Various researchers have studied BMI as a competitive strategy in the agri-food industry. Baregheh, Hemsworth and Rowley (2014) examined the drivers of innovation in the food sector. Tell et al. (2016) examined SBMI in the agri-food industry. Giannakis and Bruggeman (2015) studied the increased competitive pressure in market-oriented agriculture. McElwee (2008) and Vesala and Vesala (2010) concluded that agricultural entrepreneurs require

more entrepreneurial mind-sets and better entrepreneurial skills. Research by Vik and McElwee (2011) reveals that agricultural activities create opportunities for new product development and innovation in business processes.

A comprehensive review of the early BM literature (Wirtz, Pistoia, Ullrich & Göttel, 2016) emphasizes its focus on change and development but without a linkage to social and environmental sustainability. This is also emphasized by Biloslavo, Bagnoli and Edgar (2018), who try to close the sustainability gap by proposing the “Value Triangle,” a SBM framework with society incorporating the natural environment and a long-term perspective being at the core, and with public, partner and customer value being co-created and co-delivered. However, SBMI research, which emerged in the mid-1990s with e.g., Elkington (1997) stressing the importance of all businesses needing to help society achieve the three inter-linked goals of economic prosperity, environmental protection and social equity, has increased significantly in the last decade (Bocken, Short, Rana & Evans, 2014; Boons & Lüdeke-Freund, 2013; Teece, 2010; Upward & Jones, 2015), and research about SBMs is suggested to be both multi-, inter- and transdisciplinary when developed as an integrative field (Lüdeke-Freund & Dembek, 2017). In this research, nature is identified as a stakeholder (Stubbs & Cocklin, 2008) that links sustainable innovations and BM concepts (Boons & Lüdeke-Freund, 2013).

The Business Model Canvas (BMC) is a well-known practical tool to work with BMI and create an understanding of customers, distribution channels, partners, revenue streams, costs, and core value propositions (Osterwalder & Pigneur, 2013). The BMC has been developed to include sustainability (Foxon et al., 2015; França et al., 2017; Upward & Jones, 2015) and now encompasses sustainability and shared value creation (Lüdeke-Freund & Musango, 2016). The adapted BMC posits that normative values, corporate identity, intentions, networks, and strategic orientation are relevant in the creation of BMs (Bocken et al., 2014; Breuer & Lüdeke-Freund, 2017; Lüdeke-Freund & Musango, 2016).

BMI for sustainability (i.e., SBMI) highlights the importance of intentional choices and changes in philosophy, values, products, processes, and methods. The aim of SBMI is to create social and environmental value in addition to economic return (Adams et al., 2015).

Barriers to sustainable business model innovation

The literature emphasizes the need for organizations to quickly adapt their BMs in response to industry change and the appearance of new opportunities. However, organizations often encounter barriers when they try to respond to such external events. Chesbrough (2007, 2010) observed two cognitive barriers: leadership resistance to innovating operations, and leadership resistance to innovating BMs. Cognitive barriers can cause leaders to miss opportunities

to make BM changes because of either not recognizing such opportunities or because of an unwillingness to make the needed changes (Engelken et al., 2016).

One way to categorize barriers to SBMI is to divide them into internal and external barriers. Internal barriers relate to company leadership, mind-sets, and other human factors while external barriers relate to company environment such as the behavior of competitors, consumers, and governments (Sandberg & Aarikka-Stenroos, 2014).

Another way to categorize barriers to SBMI is to divide them into cultural and structural barriers. Structural barriers arise from unclear policies and regulations or from market and financial issues. Cultural barriers involve behavioral and social issues with, e.g., customers and stakeholders (Laukkanen & Patala, 2014).

Larger companies tend to encounter different barriers than SMEs. It is possible for a company to overcome a barrier, depending on, for example, the efforts exerted, the size of the company, and the nature of the barrier itself (Sandberg & Aarikka-Stenroos, 2014). Because they have more resources, including access to industry knowledge, larger companies may have greater success in overcoming barriers than SMEs (Lüdeke-Freund & Musango, 2016).

Research shows that entrepreneurs find it easier to overcome barriers to innovation if they have certain cognitive abilities. These abilities include sufficient knowledge, access to information, and decision flexibility. Shepherd (2015) found that positive attitudes can influence how well entrepreneurs innovate whereas negative attitudes hinder such activities. Positive attitudes toward work and others can enhance individual performance and creativity, support new relationships, and expand the use of intellectual and social resources.

Innovation in the agriculture industry

The rural context for SMEs can create barriers to SBMI because of the pressure of social norms and local values (Jack & Anderson, 2002). In addition, agricultural entrepreneurs differ from entrepreneurs in other sectors. Some farmers, with weaker entrepreneurial capabilities, tend to be less proactive in making changes and adopting new strategies. These farmers are more likely to be older, established farmers. According to Pindado and Sánchez (2017), however, younger farm entrepreneurs are just as proactive as entrepreneurs in other industries. An SLR of 570 peer-reviewed journal articles categorized barriers to BMI in the agri-food industry and showed that internal barriers on an individual level were the least studied, while recommending that future research should focus on the cognitive barriers of entrepreneurs to enhance the development of BMI (Ulvenblad et al., 2017).

In Sweden, family-owned farms focus on creating socio-emotional wealth and supporting the family. To some extent, farms prioritize these goals above economic goals (Maloni, Hiatt & Astrachan, 2017). Family succession is an important consideration for family farms (Pindado & Sánchez, 2017). For most Swedish farms, the entrepreneurs and their families have influential operational and administrative roles. However, such leadership may be problematic with an unwillingness to make changes and implement new working methods. It is also necessary to strategize around, and scale up, opportunities in agricultural BM development (Torkkeli et al., 2015).

RESEARCH METHODS

Semi-structured interviews with six agricultural farm owners/managers were conducted for 3-4 hours each, aiming to 1) learn how the entrepreneurs had developed their present BMs (and planned their future), 2) understand the entrepreneurs' ideas about sustainability and barriers to SBMI. Swedish advisory groups recommended three of the farms for the study. The other farms were selected from network activities. All six cases demonstrated some degree of novelty (Flyvbjerg, 2006), each of them having a distinctive business focus, to include the main focus of agriculture and avoid the influence of market factors for certain production orientation. Further, they are small family businesses with employees and with developed BMs. Table 1 summarizes the farms' business focus, BM, and sustainability priority.

Because the entrepreneurs had previously developed BMs, it seemed probable that they had the ability and the willingness to innovate their BMs (Chesbrough, 2007, 2010), and that they could describe encountered barriers to SBMI and the efforts they had (or had not) taken to overcome them.

The interview guide was based on the BMC (Osterwalder & Pigneur, 2013) with additional questions related to sustainability (Breuer & Lüdeke-Freund, 2017; Upward & Jones, 2015). The interviews were taped, transcribed, and together with secondary data (e.g., provided documents and webpages, newspaper articles and media), analyzed using content analysis.

A qualitative approach was taken, following the Gioia methodology, where the research process developed from inductive to abductive, considering data and literature in tandem, not knowing the literature in detail too early to avoid bias, while allowing for discovery without reinventing the wheel (Gioia, Corley & Hamilton, 2012, p. 21).

Table 1. The six farms: business focus, business models, and sustainability priority

Farm	Business focus	Create value to customers and stakeholders	Deliver value to customers and stakeholders	Sustainability priority
Adair	Meat producer selling to stores, restaurants and slaughterhouse	Deliver fresh meat all year	Meet quality- and traceability requirements	Economic, Ecological Social
Bethia	Diversified business with crop cultivating, animal farming and breeding, selling to stores and restaurants	Cycle reasoning, use all parts of production, most profitable business partner, cooperative activities	Top quality, fresh meat all year	Economic, Ecological Social
Cullodina	Organic milk and meat producer selling to Swedish and German dairies and Swedish slaughterhouse	Develop breeding with beef	Meet quality requirements	Economic, Ecological social
Dougie	Cultivation business growing vegetables, selling to grocery stores through wholesalers	Control of entire chain, delivery all year	Meet quality- and traceability requirements	Economic, Ecological Social
Edeen	Diversified business with milk, beef and lamb production, forest and tourism activities with lodging, cafe, shop, dairy and bakery, selling to dairy, slaughterhouse and end consumer	Diversification, products without additives, the whole chain on the farm, farm activities	Meet quality requirements, locally produced foods without additives	Economic, Ecological Social
Forba	Organic beef producer developing breeding and social business, selling to demerged sales company	Minimal disturbance of the ecosystem, breed to develop high quality, create socially sustainable environment	Deliver ecologic, grass grazed meat	Ecological Social, Economic

Comparisons of similarities and differences in the interview material were conducted and text elements were categorized to increase the understanding of the perceptions of barriers that was experienced. Barriers to SBMI were identified and categorized as concepts, themes, and aggregated dimensions (Gioia et al., 2012). Figure 1, which exemplifies this analysis, illustrates how entrepreneurs' responses (i.e., using informant-centric terms and codes) lead to the development of researcher-centric concepts, themes, and aggregate dimensions. This tandem reporting shows the links between data and concept development.

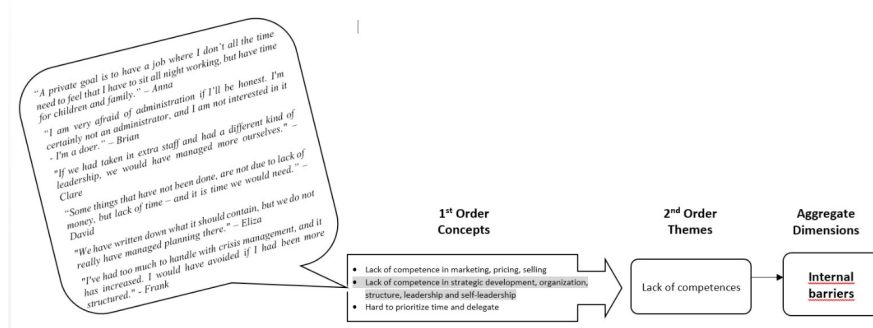


Figure 1. Creation of concepts, themes and aggregate dimensions

Source: Gioia et al. (2012).

Transcribed interviews and secondary data were analyzed in cycles, using content analysis, with meaning units that were condensed and grouped into groups of barriers and challenges. I strived to include all barriers that were found, in order to be able to convey different perspectives, experiences and learnings. After the initial stages of the analysis, a framework about barriers to SBMI (e.g., Laukkanen & Patala, 2014; Sandberg & Aarikka-Stenroos, 2014), family business research (Maloni et al., 2017), and cognition research (Chesbrough, 2010; Shepherd, 2015) were considered in tandem with the data to analyze what barriers could be explained with existing framework and to find what barriers that did not fit into existing theory. Since the most appropriate description of the findings was to use the model of internal and external barriers (Sandberg & Aarikka-Stenroos, 2014) this was expanded to include new knowledge about contextual barriers. Finally, the relations between the different categories were analysed and theory was developed with new knowledge about the interrelations.

As qualitative studies are criticized for being subjective (Flyvbjerg, 2006) reliability is focused on the whole process with detailed explanations, since case study is needed to understand a complicated question like the one in

this study (ibid.). The interview guide ensures that intended parts are covered when collecting data and continuing reviews of the study are performed by other researchers during the process.

ANALYSIS AND RESULTS

The Swedish farms

The six farms in this study are described with fictitious names.

Adair Farm has seven employees and an annual turnover of about 17 million SEK. Its main activities are cattle breeding, production of premium meat, and sawmill work. *Anna* and her husband are the owners. She works primarily with management and sales. The couple are well educated and have work experience in other industries. The farm's main customers are Swedish grocery stores and restaurants that require high-quality products and verifiable product traceability. Under its own brand, the farm promotes safety and environmental/social sustainability. External consultants advise on strategic development.

Bethia Farm has ten employees and an annual turnover of 25 million SEK. The farm grows crops, breeds sheep, pigs and cattle and produces wind energy. The farm sells produce and lifestyle products, under its own brand, to stores and restaurants. *Brian*, who has worked in other industries, has a large network of contacts to consult. The goal is to be a diversified business with long-term sustainable production of high-quality produce. The farm aims to be the qualitative customer's first choice when purchasing produce, and tries to minimize waste and deliver best quality raw materials in accordance with the entrepreneur's ethical philosophy. Economic sustainability is defined as a positive cash flow. Environmental sustainability is achieved through minimization of resource consumption and strategic crop rotation and social sustainability is achieved by participation in local activities.

Cullodina Farm has four employees and an annual turnover of 8 million SEK. The farm mainly produces organic milk but also produces meat, forestry products, and crops. The farm rents residential and business machines to customers. *Carl* manages farm operations and *Claire*, with experience from other industries, manages the administrative work. Dairies and slaughterhouses are customers. As far as strategic development is concerned, their aim is to increase annual turnover, maintain a stable workforce, and provide more leisure time for themselves. Outside consultants provide business and financial advice. Customer relationships are maintained through satisfactory deliveries. The entrepreneurs have a large network within and outside the industry, and collaborate with neighbors and other entrepreneurs by land swaps, equipment

loans and rentals. Ecological sustainability is achieved by organic production. Economic sustainability is achieved when the revenues are covering expenses.

Dougie Farm has 20 employees and an annual turnover of 50 million SEK. The farm produces and processes organic premium vegetables and grain via participation in crop rotation with neighbors. *David*, who is in charge of sales and administration activities, operates the farm with his sister, *Diana*, who is responsible for the production. The farm's aim is to control the entire chain – from the farm to wholesaler warehouses to Swedish grocery stores. Some of the produce is sold under their own brand. The entrepreneurs have a large network in the agri-food industry. Strategic issues are discussed with the family and with external advisors. Sustainability means being able to pass the farm on to the next generations.

Edeen Farm has three employees and an annual turnover of 4 million SEK. The farm primarily produces milk although it also produces meat (beef and lamb), has forestry activities and is a tourist destination with accommodation, as well as a cafe, shop, dairy and bakery. *Eric*, who is responsible for crop production and administration, manages the farm with *Eliza*, who is responsible for animal care, the shop, dairy, and bakery. Milk is sold to a Swedish dairy. Most of the meat is sold to a slaughterhouse except for a small amount that is processed on the farm. The farm cooperates with contractors and others in an agriculture network. Strategic development is discussed within the family. The entrepreneurs' goal is to achieve financial sustainability to work less. Environmental and economic sustainability is achieved by crop rotation and care in the breeding of healthy animals. Activities are considered economically sustainable when repayment of loans is possible.

Forba Farm has five employees. [Past annual sales figures are irrelevant because the farm has recently undergone a structural reorganization]. The farm produces organic beef and is engaged in animal breeding. *Frank*, who has previous experience in the slaughterhouse industry, manages the farm. The sales company, which was split off from the farm in 2015, has an annual turnover of about 16-17 million SEK. This company sells organic grass-fed beef that it purchases from 30-35 farms. The farm and the sales company split off in order to develop a socially sustainable agricultural business, to increase sales, and to better manage costs. Today, the sales company is responsible for the farm's sales, marketing activities, and pricing strategies. The sales company has a board of directors, and the farm plans to appoint one. Strategic issues are discussed with network contacts. The entrepreneur's goal is to advance social sustainability in the local area. For the entrepreneur, environmental and social sustainability are connected. Economic sustainability means producing a sufficient surplus that will pay for all development costs.

Table 2 summarizes the barriers, drivers, and solutions used for each farm.

Table 2. Barriers, drivers, and solutions

Farm	Barriers	Drivers	Solutions
Adair	Accepts a farmer's life, liquidity, water protection area, local slaughterhouse closure, administration, lack of competence in marketing and pricing, quick changes, changes in rules, labelling, consumer behavior, workload, safety, time for family	Positive attitude, business focus, possibility oriented	Good communication, have fun, involve family, delegating, synergies, collaboration, minimizing waste, storytelling, focus on core business, cost awareness, strategic board
Bethia	Accepts a farmer's life, liquidity, public procurement, economic and emotional process, business culture and politics, cheap food, lack of market knowledge, administration, low price, no strategic board, time for family	Positive attitude, possibility focus, curiosity, innovative, risk averse, competitive, another future	Time off, entirety fit, cost awareness, focusing on cash-flow, outsourcing, cooperation, strategic network, teamwork, risk diversification
Cullodina	Accepts a farmer's life, liquidity, delegating difficulties, control needs, lack of good consulting, pricing from cooperation, carefulness, geographical location, strategic development, lack strategic work, self-control and influence over production, unknowing consumer, workload, family time, rapid growth	Positive attitude, another future, possibility focus.	Cost awareness, focusing on core business, captured occasions, network
Dougie	Accepts a farmer's life, administration, social media, workload, expansion, self-leadership, large customers pricing, delivery requirements, expensive value chain expensive, eagerness to develop, time for family, quick growth, owner differences, seasonal workforce	Positive attitude, business focus, risk averse, possibility focus, owner differences, competitive, another future	Cooperation, network, cost awareness, strategic network, teamwork, leadership skills, rent land, opportunity to buy packing plant

Farm	Barriers	Drivers	Solutions
Edeen	Accepts a farmer's life, liquidity, price from cooperatives, administration, lack of good consulting, business culture, lack of marketing knowledge, family discipline, small scale, workload, self-leadership, unknowing consumers, sales	Positive, curiosity, willingness to learn, innovative, risk averse	Network, cost awareness, only family employees
Forba	Accepts a farmer's life, lack of good consulting, Swedish support system, impatience, submit to new leader, release control, consumer knowledge	Possibility focus, risk averse, curiosity, sustainability focus	Sustainability focus, cost awareness, focusing on core business

ANALYSIS

The analysis revealed similarities and differences in the nature of the barriers and the approach to them. When reducing concepts into themes and dimensions, consistency with existing theory about External and Internal barriers was discovered to some extent. However, those were insufficient for analysis of the barriers to SBMI in the agricultural context (Pindado & Sánchez, 2017), a third aggregate dimension was needed, and hence theory was developed with the addition of contextual barriers. See Figure 2 for a listing of the concepts and themes related to the three aggregate dimensions, explained in the following text.

External barriers relate to the behavior of competitors, consumers, and governments (Sandberg & Aarikka-Stenroos, 2014). The entrepreneurs explained that the barrier of *resistance or lack of support from actor(s)* was evidenced by several factors. Since the agri-food industry is more adaptive to larger production, small-scale production is more costly than large-scale when measured on the basis of per unit of output. Further, changing consumer behavior, consumers' unawareness of differences between labels, and unwillingness to pay for added value, also create barriers. Consumer ignorance is exemplified by Eliza, saying:

"People demand organic without knowing the meaning of it."

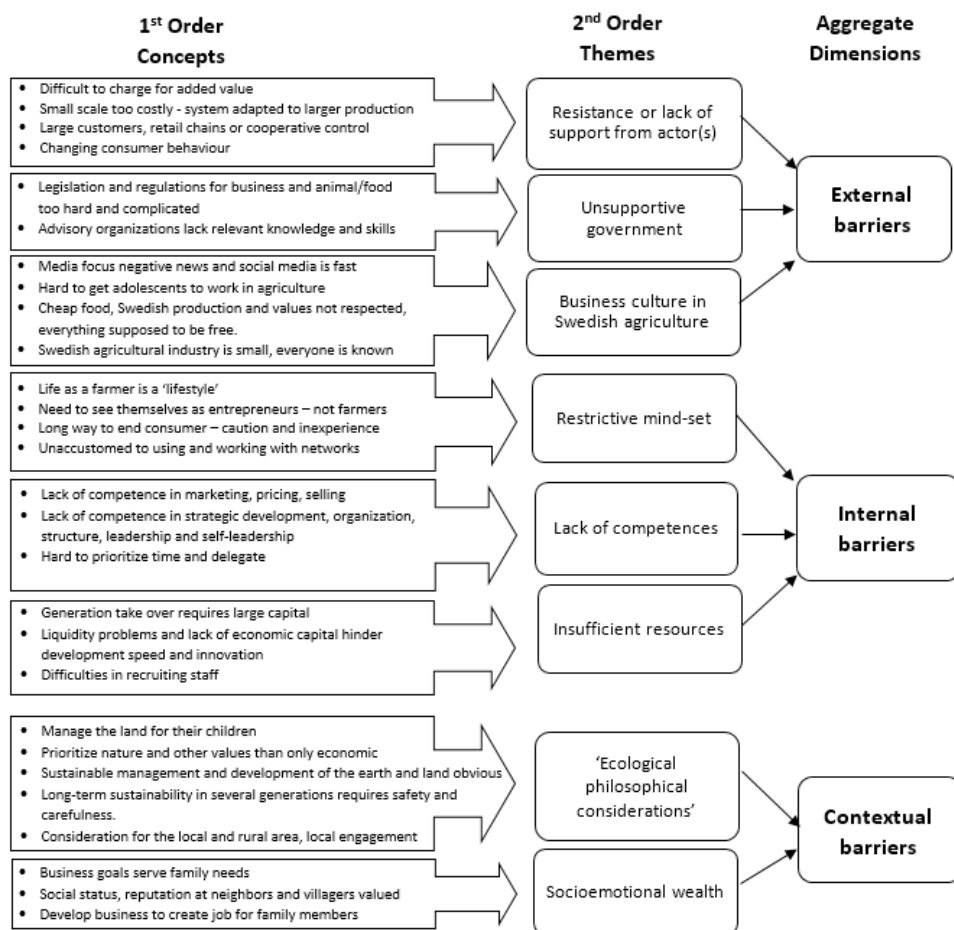


Figure 2. Data structure

Source: Gioia et al. (2012).

Further, Claire illustrates the consumer power:

"If customers would abandon organic, we have to change to conventional...the biggest risk is mainly the milk price and changing consumer behavior."

The entrepreneurs found *unsupportive government* limiting the scope of changes. First, difficult and complicated legislation and regulations for the

agri-food industry have increased administrative requirements that take time from actual productive work, as expressed by Anna:

“That’s why I am sitting here in the office. If we haven’t had this [the rules], I would not been needed here.”

Although strict rules may drive development and sustainability in new ways (Vik & McElwee, 2011), such rules often limit both development and sustainability when new fees and new requirements are imposed. David express frustration:

“I sometimes feel limited and it has to be enough with written procedures. It is frustrating.”

Second, the governmental advisory groups (with a long history in Swedish agriculture) seem to lack the relevant knowledge and skills for development. The entrepreneurs request advice that is less focused on traditional production and more on strategic business management and new methods, as explained by Eric:

“I’m very skeptical about many of the advisory organizations. I will happily take advice, but they do not have the knowledge I need.”

Frank reflects on the impact of advisory organizations on business development, and states:

“Advisory organizations are slowing down development. If I had not listened to them, I would have progressed much further. They come here to learn.”

The entrepreneurs explain that *the business culture in Swedish agriculture* is a barrier to SBMI, making it difficult to interest young people in farm work and careers. They often feel the need to resist the media pressure to be more competitive and more profitable, as reflected by David:

“Media focuses on negative news as if milk price is lowered a few pennies. If we focus on bad things, we get a Swedish agriculture that is hard to develop.”

Another aspect of this barrier is the pressure of the so-called Law of Jante, a peculiar Nordic unwritten law of behavior that can influence the business culture. Under Jante, individual success and wealth are seen as inappropriate, and sometimes leads to disrespect for hard work and ambition. Therefore,

entrepreneurs may be unwilling to appear more successful than others or to boast about their success, as expressed by David:

"I never talk to anyone about how we are doing - because then we have this Jante."

Internal barriers relate to human factors (Sandberg & Aarikka-Stenroos, 2014). Individual emotions and attitudes largely influence entrepreneurial processes (Shepherd, 2015), and a *restrictive mind-set* can hinder attempts to make changes to BMs and be damaging to self-leadership (Manz & Neck, 2013). The entrepreneurs realize that they should view their farms as professional companies rather than as traditional, family-run small businesses (Vesala & Vesala, 2010), but traditionally do not, as explained by Eliza:

"Farmers have never seen themselves as entrepreneurs; we are not used to it."

Because they look at farming as a 'lifestyle', they find the leap to a professional's way of conducting business a challenge. They recognize the difficulties the farming 'lifestyle' creates (e.g., never a day off and long hours), but generally they do not see a transition to professional management either as a clear possibility or as a goal. More farm networking might help overcome this mind-set, but such networks are rare in Sweden. Anna explains:

"A goal is to have a job where I don't have to work all night. It should be a lifestyle, sure – if you go into this profession you have forgotten about holidays long ago."

More farm networking might help overcome this mind-set, but such networks are rare in Sweden, as Carl reflects:

"My dad and his generation would never network with others."

The entrepreneurs describe their *lack of competences* with respect to strategic management, organization, and self-leadership that hinder their development and commercialization of innovation (Shepherd, 2015; Laukkanen & Patala, 2014). They also find lack of marketing and sales competence as a hindrance, as illustrated by Eliza saying:

"Producing is easy, but then it will be sold too"

Insufficient resources refer primarily to the entrepreneurs' lack of adequate financing. Lack of capital to finance operations and to preserve the family farm for future generations is a barrier to development (Lüdeke-Freund & Musango, 2016). Many of the farms have liquidity problems hindering them, e.g., to hire qualified employees.

Contextual barriers relate to the setting for the farms. The *ecological philosophical considerations* create barriers, for example, based on inherited cultural and rural values. The entrepreneurs view the world in a way that influences their lives and their businesses. Frank illustrates a picture of the farming considerations, explaining:

"We have a larger universe below the ground than above...and farming is a complex business."

Nature (i.e., the land) are valued second after financial return, and the land is considered to be managed to pass to the heirs. Brian explains the value and the mind-set saying:

"We have to leave the earth as a better place than it was when we came...I would never have done this for money. It is about completely different values."

Long-term sustainability through generations requires safety and care. However, this attitude creates a barrier to economic profitability because many decisions do not mean greater production and greater revenue, sometimes with lost financial opportunities as a result (Engelken et al., 2016).

Socio-emotional wealth describes a barrier that is the result of a focus on family needs and values instead of the attainment of financial goals, e.g., achievement of social status and acquisition of a good reputation among neighbors (Maloni et al., 2017). The awareness and restriction are expressed by David saying:

"Numerous talks are being conducted about us at the home of employees; it is both an opportunity and a large risk."

In fact, some of the farms in this study were specifically developed to create jobs for family members, as for example in the case of Eliza and Eric:

“When our son was being educated to become a baker, the oven was replaced at his school, and he was allowed to take it. Then we build a bakery.”

Figure 3 depicts the overlaps and the intertwining of the three barrier groups, illustrated as transparent circles filled with nets that link the barriers, symbolizing the interconnections and influences. Many of the barrier groups share characteristics and effects each other, which also means that it can be difficult to work with an isolated group of barriers, and that actions in one group affect the other groups. Since cognitive aspects affect how to approach challenges and barriers, internal barriers is a large and important dimension to understand, further discussed below.

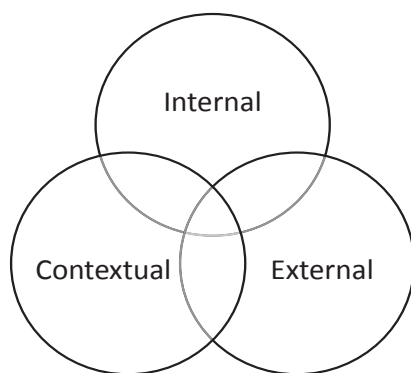


Figure 3. Interrelated barriers to SBMI

DISCUSSION

In general, Swedish farmers seldom engage in SBMI (Tell et al., 2016). The reasons, found in this study, are that they meet different barriers and approach them in different ways. The entrepreneurs in this study have developed their BMs, and hence they have managed to conquer many barriers. This depends on, e.g., the entrepreneurs having a positive attitude, being possibility oriented, being innovative, and using their network (see Table 2). Most of them also have education and work experience from other industries, and have chosen to take over the family businesses, which is likely to affect their approach, motivation and actions. These characteristics and skills are probably not typical of the majority of Swedish farmers. On the other hand, we can learn from studying what challenges they face and how those entrepreneurs approach various barriers.

Barriers to SBMI are examined and illustrated and relations briefly discussed. Since cognitive aspects affect how to approach challenges and barriers, internal barriers are the absolute largest group, largely linked to both external and cognitive barriers, which are also interrelated in different ways (see Figure 3). However, enabling a thorough analysis of the relations and interrelations of the barriers would require a study focusing on the relationships. This study is the first step, contributing with knowledge about why farmers seldom develop their BMs, what the barriers to this development look like, how they can be categorized, how they affect agricultural entrepreneurs, and how the barriers are approached.

The most challenging external barriers are the pressure from large cooperatives, the complexity of ever-changing legislation and regulations, and the lack of relevant governmental and advisory support. The most challenging contextual barrier is the dilemma created by the need to strike a balance between environmental/social sustainability and individual economic stability. The entrepreneurs emphasize that land is loaned from future generations, a philosophy that also creates an internal barrier to SBMI, because it influences nearly all their decisions about internal management processes, strategies, and actions.

Since cognitive aspects affect how to approach challenges and barriers, internal barriers is an interesting and important dimension to understand; intertwined with both external and contextual barriers, which also are interrelated in different ways (see Figure 3). Mind-sets, attitudes, cognitions, etc., affects how the entrepreneurs approach challenges (Manz & Neck, 2013). These characteristics also highly affected if the challenges are transformed into barriers or remains challenges. Working with the internal barriers means that the entrepreneurs need to develop themselves and their cognitive abilities, which in turn requires both maturity, courage and self-awareness, and therefore can be a challenging dimension of barriers to conquer. Those self-leadership processes are individual and take time to change (Manz & Neck, 2013), but since leadership problems hinder the development of BMs (Chesbrough, 2010), and many of the entrepreneurs have minimal leadership/management training and experience, it is important to highlight this dimension. The lack of leadership competence results in the inadequate use of both time and workforce.

Strategic planning is a do-it-yourself exercise or do-it-family exercise. Several entrepreneurs have discussed developing a strategic forum, but seem to lack the drive to make the forum a reality.

Moreover, the pervasive philosophy of farming as a 'lifestyle' is an internal barrier connected to the contextual, caused by respecting cultural farming traditions and rural values, and resulting in a resistance to innovation. The

farmers are inclined to think of themselves as dependent sub-contractors to the large cooperatives rather than as independent contractors.

The entrepreneurs support environmental sustainability through “management and development of the earth and land.” Some entrepreneurs support societal sustainability through “local engagement” with neighbors and the community. Although they are not purely profit-driven, generally, however, they rank economic sustainability above environmental/social sustainability. As one entrepreneur states, “business goals serve family needs.”

CONCLUSION

The entrepreneurs describe barriers to SBMI, but they have not developed many solutions. They understand the necessary change if the farms are to survive in Sweden. Indeed, some farms have begun to diversify by adopting ecological farming methods and by diversifying their traditional farming activities. Such diversification means changing the conservative mind-set that is characteristic of traditional farming to a mind-set aligned with the goals and practices of professional farming. It means developing the professional leadership skills associated with strategic management as well as acquiring knowledge of modern marketing tools and methods.

It will be difficult for these entrepreneurs to prosper if they continue to look at farming as a ‘lifestyle’ rather than as a for-profit business. Food production on their relatively small scale is a challenging activity, especially when competitors are large enough to set prices, control markets, and take advantage of economies of scale. Larger competitors, with greater knowledge and expertise, are also better positioned to understand and comply with new legislation and regulations.

This study contributes to new knowledge about barriers to SBMI in the agricultural sector, specifically with the developed dimension contextual barriers, and the interrelations between the three dimensions; internal, external and contextual. Previous research has shown that cognitive abilities affect intentions, behaviors and actions, which is further confirmed in this study, showing that a significant part of the challenges lies in the entrepreneurs themselves and how they approach different barriers. This study highlights the need to work with leadership and self-leadership, and also emphasize previous research showing the pressure of social norms and local values in the rural context. Significant to this context is the fact that agriculture has a unique challenge in combining the difficulties it means to be both a farmer, entrepreneur and working in the countryside.

Practical and policy implications

This study identifies and illustrates three barrier groups to SBMI for agricultural SMEs in Sweden. In response to the Swedish Agriculture Department's request for research that increases our understanding of barriers to the development of this sector, this study examines and illustrates the barriers. The main goal of this study is to educate policy makers, advisors, legislators, and farm entrepreneurs about these barriers. If the barriers to SBMI are better understood, then it is more likely solutions to overcome these barriers can be found. As explained in Figure 3, the barriers are intertwined, which also illustrates the importance to understand the internal influences. This study's findings can be disseminated into existing national education courses for the development of the agricultural sector.

Future research

An interdisciplinary study examining the internal/psychological processes involved in the relationships and interrelations between the barriers would deepen the understanding. It would also be of interest to compare the barriers for farms without developed BMs, with the barriers identified in this study.

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Abstrakt

W ostatnich latach szwedzkie rolnictwo stanęło w obliczu wielu wyzwań. Do najważniejszych z nich należy spadek liczby małych i średnich gospodarstw rolnych, spadek liczby osób zatrudnionych w działalności rolniczej oraz wzrost regulacji rządowych i prawodawstwa regulującego taką działalność. Jednocześnie wzrosło zapotrzebowanie rolnictwa na zrównoważony rozwój społeczny i ekologiczny. Chociaż badania pokazują, że innowacyjne modele biznesu zrównoważonego (SBMI) mają wpływ na powstawanie zrównoważonych firm i do rozwoju zrównoważonego społeczeństwa, w szwedzkim rolnictwie stosowanie tychże modeli należy do rzadkości. Celem tego artykułu jest zbadanie barier dla wykorzystania SBMI w szwedzkim rolnictwie. To jakościowe badanie jest zgodne z metodologią Gioia, a dane do analizy zostały zebrane w częściowo ustrukturyzowanych wywiadach z przedsiębiorcami z sześciu gospodarstw rodzinnych w Szwecji. Artykuł stanowi teoretyczny wkład w badania nad SBMI, koncentrując się na zrównoważonej przedsiębiorczości w szwedzkim rolnictwie. W artykule zidentyfikowano zewnętrzne, wewnętrzne i kontekstowe bariery dla SBMI, gdzie wewnętrzne są największe i stanowiące największe wyzwanie

Słowa kluczowe: zrównoważony model biznesu, innowacje, bariery, przedsiębiorcy rolni, zrównoważona przedsiębiorczość.

Biographical note

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The impact of crises on innovation and strategic management of farms – Learnings from the extreme drought in the summer of 2018

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ABSTRACT

As a complement to previous studies about barriers to development of business models (BM) and innovation in agriculture and agri-food, conducted in retrospective, this study were conducted during the pressure of an ongoing barrier in form of a crisis caused by the extreme drought of the summer 2018. The situation caused major challenges for Swedish farmers, and I was wondering how such an ongoing stressful situation affect strategic management and innovation of the farms? Hence, behaviours and thinking during the drought were studied by semi-structured in-depth interviews with six farmers in the southern part of Sweden. The paper answer to calls about further exploring how rural entrepreneurs absorb and recover from shocks (Korsgaard, Müller and Tanvig, 2014), and entrepreneurial strategies in agriculture to understand under what circumstances or among which type of farms an increased entrepreneurial orientation (EO) can lead to increased performance (Dias et al., 2019; Veidal and Flaten, 2014). Some general considerations appeared in the study. First, the farmers were hesitant about the word "crisis", as there are other things that have been much worse for them, both private and concerning not transitory business problems. Second, the mental stress was emphasized. Third, the effects of strategic planning, of both management, innovation, learning, and approach of stressful situations were illustrated. Mind-set, experiences and learning, and self-leadership were facilitating factors that emerged in the study. The study indicate that crisis creates new ways of thinking and acting, both in terms of new collaborations, innovative working methods, and product and process development, hence suggest that developed EO can lead to increased performance during stressful situations. Further, the importance of strategic long term discussions about both life situation and the business is emphasized. The paper also highlights some important factors when approaching challenges and strains, and complement previous research about barriers to BMI conducted in retrospective. This increased understanding is useful both for researchers and practice working with entrepreneurs and business development to facilitate prioritization of efforts and activities.

KEY WORDS: Agriculture, strategic management, innovation, crises, business model innovation

Introduction

Many studies investigate barriers to development of business models (BM) and innovation and how entrepreneurs act and approach those (e.g. Chesbrough, 2007, 2010; Sandberg & Aarikka-Stenroos, 2014). In agriculture and agri-food, studies reviewing barriers to business model innovation (BMI) (e.g. Tell et al., 2016; Ulvenblad et al., 2018), and ways of developing sustainable BMs have been conducted (Franceschelli, Santoro, & Candelo, 2018), as well as barriers to sustainable business model innovation (SBMI) from the farmer perspective (Cederholm Björklund, 2018). However, these studies, have been conducted in retrospective.

There is a risk with studies relating to challenges and obstacles afterwards, a risk of the interviewee giving a nuanced picture of the situation, which could have been different if the study was carried out during an ongoing stressful situation.

I was given the opportunity to qualitatively study behaviour and thinking during an ongoing stressful situation caused by the extreme drought of the summer 2018, which resulted in major challenges for Swedish farmers. These challenges did not cease when the rain came in late August, but affected farmers for much longer due to, among other things, a lack of feed, and difficulties in sending animals to slaughter, with a very strained economy as a result. I was wondering how such an ongoing stressful situation affect strategic management and innovation of the farms?

The study supplement previous research, and answer to calls to further explore how rural entrepreneurs absorb and recover from shocks (Korsgaard, Müller, & Tanvig, 2015), and to further study entrepreneurial strategies in agriculture to understand under what circumstances or among which type of farms an increased entrepreneurial orientation (EO) can lead to increased performance (Dias, Rodrigues, & Ferreira, 2019; Veidal & Flaten, 2014). Research also call for further investigation of the relationships between strategy, BMI, organizational learning, leadership, entrepreneurship and change management (Lambert & Davidson, 2013), as well as the change in approach towards long-term growth, instead of short-term which have dominated recently, since sustainability aspects of entrepreneurs can contribute to long-term profitability and transition towards a sustainable society (Acs, Audretsch, Braunerhjelm, & Carlsson, 2012; Shepherd & Patzelt, 2011).

Theoretical framework

Resource-based view of strategic management

The resource-based view (RBV) of strategic management, i.e. ways to manage consciously developed plans to deal with a situation (Mintzberg, 1987), focus on the characteristics of firm resources that can contribute to a sustainable competitive advantage (J. Barney, 1991; J. B. Barney, 1986). By examining on business-level, how or why resources contribute to the advantage of one firm over another in a particular product or market (e.g. J. Barney, 1991), the question of how to compete is important in determining the RBV's potential contributions to strategic management (Priem & Butler, 2001). In agriculture, the business is heavily dependent on the farmer, hence the skills and knowledge possessed by the farmer him or herself therefore becomes important resources.

For farmers, with small family businesses, the individual learning and leadership get implications for the business. The mind-set, individual emotions and cognitions of the entrepreneur largely affects the development and entrepreneurial processes (Shepherd, 2015), and the self-leadership, i.e. the ability to lead oneself, as for example setting goals for desired own development, follow up and reflect on the development, in other words - creating the life and way of living wanted by oneself (Neck & Manz, 2010). Hence, entrepreneurial competences helps to manage internal operations within the farm business, but to relate to environmental challenges, agricultural entrepreneurs need to adopt an appropriate entrepreneurial orientation (Ibidunni et al., 2018).

Entrepreneurial orientation

Entrepreneurial Orientation (EO) is a driving force behind entrepreneurial activities, and a concept widespread in the literature about entrepreneurship, implicating a strategic orientation of entrepreneurial strategy-making processes (Covin & Wales, 2012; Lumpkin & Dess, 1996; Rauch, Wiklund, Lumpkin, & Frese, 2009). Entrepreneurship scholars examine EO to find explanations for business performance (Wiklund & Shepherd, 2005), and EO reflects how a

business operates, rather than what it does (Lumpkin & Dess, 1996). There is an increasing consensus in the mainstream literature that the concept consists of innovativeness, risk-taking and proactiveness and that a developed EO is facilitating decision making, innovation and business performance (Dias et al., 2019; Rauch et al., 2009; Wiklund & Shepherd, 2005), also in agriculture (Grande, Madsen, & Borch, 2011; Ibdunni et al., 2018; Methorst, 2016; Verhees, Kuipers, & Klopčic, 2011). However, there are different ways of defining EO. For example Miller (1983) emphasize simultaneous exhibition of innovativeness, risk-taking and proactiveness, while Lumpkin and Dess (1996) highlights the process, practices and activities to proactive decisions to meet market opportunities, and Zahra and Neubaum (1998) define EO as “the sum total of a firm’s radical innovation, proactive strategic action, and risk taking activities that are manifested in support of projects with uncertain outcomes” (Zahra & Neubaum, 1998, p. 124). Innovation can be defined in many ways, and scholars agree that innovation create some kind of change, but the word innovation is still an umbrella term including a myriad of types. The innovation purpose and who innovates, are two core aspects when defining the orientation of the innovation (Edwards-Schachter, 2018). In this study we see innovation as development with new ways to think and act, which may involve developed products, processes or individuals.

There are contradictory studies discussing the importance of access to capital, and the engagement in the environment combined with EO to enhance performance (Wiklund & Shepherd, 2005), or emphasizing a focus on efficiency and managerial skills rather than enhancing EO, to improve farm business performance, since a high EO can imply negative financial performance (Veidal & Flaten, 2014). Studies also emphasise the complexity of the relationships in the concept, and the importance of the unique context in the performance implications of EO (Lumpkin & Dess, 1996). However, there are few studies in the agricultural sector (Pindado & Sánchez, 2017; Rauch et al., 2009; Veidal & Flaten, 2014), and the existing ones are mainly conducted in Asian and American countries with a quantitative approach (Dias et al., 2019). Hence, more research into entrepreneurial strategies is necessary to understand under what circumstances or among which type of farms an increased EO can lead to increased performance (Dias et al., 2019; Veidal & Flaten, 2014).

Design of the study

Method and case selection

To create a deep understanding of the situation and the thoughts, mental and social processes taking place within and with the farmers, a qualitative approach were applied. Dealing with soft issues such as meanings, mind-set and thoughts behind actions and decisions are not suitable for quantification or measuring (Bell, Bryman, & Harley, 2018), and deep understanding is needed to be able to find the underlying meanings (Wolcott, 2008). In October 2018, semi-structured in-depth interviews were conducted with six farmers in the southern part of Sweden, where the drought were perceived to have caused major challenges due to the high temperatures and lack of rain during the summer. The cases were selected by recommendations from agricultural advisors when searching for farmers with different production focus, located in the south west of Sweden, earning their living by the business, and having employees. During the interviews, issues such as business model development, management, thoughts, actions, and learnings from ongoing and previous crises etc. were discussed. The interviews were recorded, transcribed and coded in the analysis software NVivo 12, and analysed by reading and re-reading, going back and forth to discover patterns in the answers and conversations. The analysis started with an inductive approach, and developed to an abductive, considering data and theory in tandem (Alvesson & Kärreman, 2007). The patterns of entrepreneurial orientation emerged during the analysis and helped form the final structure of this paper. The method was chosen in line with Wolcott (2008), who argue that the purpose with qualitative research is not to aggregate all collected data, but to distinguish the essence with help from sufficient context.

Data and findings

Strategic management and development

Farming activities in many cases are inherited through generations. In cases where future generation in the family is not interested in taking over, thoughts are discussed about how employees can be involved to take over the business, and options for the future. Likewise, how employees' competences can complement each other and create conditions for a sustainable business. Further, thoughts about agriculture as self-employment, and the feeling of not knowing what else to do were discussed.

The strategic planning is held at different levels. Some are planning for a year, and others for a few years. All discuss strategic issues within the family, and also bank contacts, auditors, production advisors and other farmers are used to discuss strategic issues. It appears that the crisis has led to increased awareness of more long-term strategic planning, and both the family and the business itself are stated to be reasons for this: *"We will probably use this dry offer for advice, but I will probably not use either of xxx [regular advisory organizations], but I will pay one hour and get five hours to get future structure of the business. Not for my sake, but for my wife, my family and the employees' sake."*

Likewise, thoughts are discussed about the importance and meaning of strategic planning, and how these issues changed character during the ongoing crisis situation. Examples are given of how the strategic thinking regarding land acquisition has changed, the cautiousness and strategic planning for acquisition of land. However, there is also a scepticism about strategic planning, and the importance of how such a plan can control the development, since the world and surrounding environment changes rapidly. Most of the farmers have some kind of strategic plan, but not written in a document, but in the head of the farmers.

Awareness that growth and larger businesses have some advantages, but also entail increased vulnerability is also discussed. A farmer who has experienced a previous drying crisis in the early 90s says: *"We have better machines now - combo drills and such. We did much better now than we did then. Then the livestock is so much bigger now so it affects more than it did at that time. So in this way you become more vulnerable."*

In several cases, the interest in environmental sustainability drives the development of the farms. Biogas is given as one example of how to increase the environmental sustainability, and the environmental interest also determine investments in for example a direct seeder for minimized soil compaction and increased carbon binding, although it is not economically justifiable.

When discussing crisis support from authorities, the farmers' view of the actual entrepreneurship and their challenges as agricultural entrepreneurs emerges. Some see themselves as entrepreneurs and reflect on the responsibility that this role entails: *"You have your own responsibility. Should all companies which goes bad just say - oh, now we have to have money? It can't be that either. Now, agriculture is a little special thing, but it is a small company actually."*

Another farmer highlights the agricultural entrepreneur's challenge: *"The entrepreneur's challenge is not the daily job, but it is the business management forward."*

An example of how the farmer needs to think about the business economy and the time spent is given: *"There is not so much farmer in stores, and apparently it is very trustworthy, and yes I could imagine doing it, but I have to take quite a lot of money for participating there. Not that I want to make a lot of money, but I have an alternative employment here at home ... short of time is the largest obstacle in this company - I have to think so. If I do one hour [activity outside the company], another must be removed, or may I do it a little faster."*

One farmer reflects on his development as an entrepreneur since they took over the farm 10 years ago: *"Then I was probably not really good ... It was more drive. Shit what we were driving, but shit what a pain it is. You couldn't cope with it always. After all, life has its crises, and a few years ago I came out on the other side and felt that hell, now I feel really good. I went to a therapist who turned the mirror towards me, and that is useful. I can't really say what happened, but then I think I became a much better entrepreneur as well. I felt myself becoming a better person. It was life that came between, and it is connected to me".*

In several conversations, the farmers expressed that they already from the beginning knew what they wanted/did not want. For example, some of them did not want to be as tied up as their parents, and explain their decisions and choices to also enable to hire staff.

Self-leadership and mind-set, awareness and learning

In the conversations, examples are given of how self-leadership and mind-set affect the farmers' work and life, and they discuss what they want and how they want it. Several of the farmers express a will to work less, but still works more than they want to, mainly because the care about the work load of the employees, which in most cases are one or few outside the family.

The importance of being comfortable and feeling well is reflected in the conversations. Combining agriculture with being elected in a regional farmer member organisation is a way of feeling good for one of the farmers: *"It is the combination I like ... that's why I am elected as well ... it is not the most profitable or best for the farm's care, but I feel better of doing that".*

Another farmer who chose to leave a machine collaboration explains how he thought about that decision: *"I sat here and felt bad in the middle of the sowing, when I did not get the cooperation to work. Then it was necessary to get out of it, to dare to take the step, to dare to believe that we can handle this ourselves in some way".*

In contract writing, it is often the price that controls, but here are also given examples of transport and logistics solutions that play a major role, in order to get a sustainable work situation without too much stress.

The situation after the summer drought is mentally stressful, and awareness of this and how they should relate to this stress is very much reflected in the conversations: *"I will have more drops, but it is mostly the mental bit to be prepared for it and consciousness. Then I know that ok, I am tired and half-tempered half a day. Then you have to settle in time next night and so nine hours later you feel better ... Then I think I have ... when I talk to myself then [laughing], then I try to have some kind of strategy to handle it."*

The mental stress is facilitated by age and experience in the industry: *"Pure psychic, it can be a lot harder if, for example, you had been newly started. If only one can hold out, there is something good too. It has always done that, and it will always do".*

The farmers give several examples of positive mind-set and opportunity focus: *"We lose half the harvest this year. But there will be new years to come. We have sown like a fool in the fall so that we'll take us through, and the bank is with me if I need liquidity insurance".*

Although the harvest has been halved, a farmer gives examples that he does not put energy into pondering over what he cannot influence himself, but chooses to see the positive in the situation: *"What should you do? You can't do anything about it. It went easy to thresh. It went fast and smoothly [laughing]."*

Another farmer reflects on what it means to be solution-focused, and the business opportunities that can arise: *"Are you now in a crisis focused on solutions, then it is nice to be able to find it too? That we are not only looking at half harvest. Is the glass half full or half empty? That perspective - but what can we do? What are our challenges? What can we ... all*

of a sudden in the summer, it was a giant market for irrigation that had not been used in 30 years maybe, but they could use them. "

When discussing and reflecting on learning and experience from this and previous crises, several examples are given that experience has significance for both learning and safety: *"Experience has enormous significance. It definitely has. We fixed it then [the previous crisis], and we'll fix this also - only the product prices are up, so you do not get a depression in the settlement prices at the same time as something like this, there is no strange thing about this, it will be solved. "*

Ups and downs are something to be counted on as an agricultural entrepreneur and the farmers show awareness of this: *"So there were a number of tough years that we went through, but it belongs to this industry also in one way or another".* Another farmer gives examples of this by telling us that *"Then it turned and has been good for the last two or three years. It is like turning just like that [turning his hand]. So one should not give up".*

Experience also means that farmers have the opportunity to act quickly and a farmer share the learning after the summer drought: *"You should be on your toes even more if you say so. Partly with efforts in the plant culture, because it is very important to do at the right time. So when it is dry or raining, then you need to get out, and if it is going to be fertilizer then you have to put it then. Then you have to release everything else because it is at that time it is useful. If you wait then it's too late. "*

The farmers reflect on and discuss the word crisis, which is used in both media and the questions in these interviews. Several of them argue that this type of setback or barrier is something that entrepreneurs may expect, and that the word crisis can be too big in this context.

"I think it's a big word with a crisis, because... that's such things that happens. 1992 was also such a year when it was awkward, and it is luckily not very often it happens, but sometimes it happens and that is something one should bring with in some way, so that crisis, yes, it is a big word. "

"This is a road bump among all the others, so it's like ... crisis it's too big a word I really think to use for this. Sure, it has been a little awkward, but it is a variation that one may try to manage."

Innovation

By monitoring the outside world and interest in environmental issues and method development, farmers keep up-to-date and are inspired to both innovative working methods and equipment. There are several examples of how the interviewees think of development and gather knowledge from different parts of the world. Some farmers have studied cultivation experiments done in France with the aim of improving the environment and the climate by binding carbon in the soil and processing the soil less with direct seed in intermediate crops. One farmer is a member of a Danish association that works with environmental improvement methods, and advocate the international concept of Conservation Agriculture, which he is interested in. Another farmer has studied a rice cultivation in California where a method of reducing carbon dioxide emissions is used, which he is considering bringing to Sweden and develop to use in grain cultivation: *"There is a New Zealand machine that works in a different way. It is hardly found in Sweden. There are not so many of these that I have bought either..."*

Business model innovation is also discussed in the conversations, and one farmer tells about a new possible business model to sell climate benefits to companies who want to ease their heart: *"I believe that we in the agriculture could sell our climate benefit to those who want to clean their soul. For example, Preem would be able to buy a number of hectares of binding of carbon from me. That would be awesome."*

One farmer has recently been in Austria and studied a business model where all pig producers are affiliated with a common organization that, together with slaughterhouses, trade and government, sets the market price weekly: *"I think we should look at this. Then it would have been handled in a completely different way with the drought. I mean, if we do not get paid then it is not working – if we should have this amount of meat. Then it is important to have balance there all the time. But it will never be introduced here [in Sweden]."*

The view of innovation is illustrated by one farmer who reflects on whether he works innovatively: *"Innovative ... I do not know ... I feel that I cannot change that much. So I question everything, almost all the time. If we can do it in one way or another, with the resources we have. If you are satisfied then it usually goes backwards I say."*

Another farmer reflects on how he works with innovation: *"I do not take the first step and I am not the first on new technology. I can sometimes be attracted, but I'm a little too coward and too bad on technology too. So others will do those innovation pieces."*

Innovation is encouraged and initiated in different ways. One farm makes a plant culture experiment and has invested in technology to be able to develop a new cultivation method. The purpose is partly less climate impact, partly less soil compaction and partly better nutritional content in the crops. This attempt was initiated in dialogue with the plant cultivation advisor. The farmers say that they learn from other farmers' experiences and mistakes, and finds new methods for, for example, cultivation, conversion of machines or stall construction: *"It is the colleagues who have the solutions. I have almost solely acted on their mistakes when designing the new stable."*

There are also examples of innovation driven by needs, where one farmer explains that they bought equipment from Italy, but that the equipment was too small and needed to be rebuilt to keep the farmer's conditions: *"Our neighbour is blacksmith, so he has rebuilt and modified and so. And we have built our own stuff. So it worked great. They have been here from Italy and looked at what he has built and improved their stuff directly from the factory."*

Through contacts from a grower's meeting during the summer, new odd plants have been tested on a farm: *"One discuss and think and, what the hell, it must work. It is warm and nice weather yet, and if it starts to rain, it is very strong power in the soil.... So I called and talked to the guy who was on the field walk, and yes out of that..."*

Risk and proactivity

Risk is a concept that is discussed and reflected highly by the farmers, which provide examples of risk awareness, risk willingness, risk taking, risk spreading, opportunities and proactivity.

Risk willingness and risk taking

It is difficult to calculate how long the purchased and own feed from the current year is lasting. *"I am unable to judge how much there is in a large tin can in time perspective. If it ends already in February so it will be a crisis. Is it enough for May-June, then we will be able to handle it."*

It is risky to run a family business, given the vulnerability. *"We have had three tough private health items in the family [diseases and deaths], which is tough when you are in them and strengthens when you go out of it ... That autumn it was a number of times when I just let everything here go and drove ... so it stood still that year. We managed it on an ongoing basis. My staff had to be prepared for me to just leave ... It puts perspective in the long run, if you stand up for such things, even if I have been sleepless for many nights because I lost millions of money, it is just market values ..."*

One farmer explains that he was influenced by a colleagues' situations and fate. He gives examples from conversations with a colleague who put themselves in bankruptcy, and that

the colleague was relatively prepared after some time discussions with the bank etc. However, the colleague tells how the wife and the three teenage children are affected by the decision, how it is spoken in the school and how they are forced to move from the farm to an apartment. The farmer summarizes his reflections: *"Everyone who is in crisis now will not be farmers in one or two years. Hopefully they are the ones who take the decisions. One and the other will be helped to make the decisions as well. This is so extensive this drought. After all, it's the real side ... Some change jobs, someone changes partners. It belongs to life, even to us. But it is a little bigger, because it pulls with the farm and everything."*

Being a small entrepreneur with few employees means dependency and greater risk. The crisis has led to some farmers choosing safer production and reduce risk taking somewhat. For example, crops that are relatively safe are grown instead of crops that are very popular. Previous crisis situations have created awareness of risk: *"After 1992, I think much more about risk. I was not so involved in the farm then, but I do know that mom and dad ... after -92 I think they changed - with becoming more cautious in a completely different way."*

The risks have been reduced by being proactive and buying feed to have stock in case of challenges such as drought. *"We buy feed as early as possible in order for our own grain to last as long as possible."* The importance of being proactive and acting quickly is emphasized: *"In June I noticed that, shit - this goes to hell, so I bought grain from last year."*

Securing prices and writing agreements are other new ways this year, to reduce risk taking. There are also risks from outside which the farmers themselves cannot directly influence, but which they constantly live with: *"The biggest problem is the wild boar. They are putting the spanner in the wheel for everything. It is pure disaster. It takes on the psyche and everything, so you have made the fields so that they are finished and when you are going to take the first harvest everything is destroyed. It's as stressful as the drought."*

Activities in the outside world and debates in the media with, for example, the impact of Nature Conservation Societies and animal rights activists, among other things, create psychological pressure on agriculture, which means that the business is seen as risky. *"You feel a bit pointed out, and I ponder just as much how to handle this in the future if it will be this or that? That is why I feel we need to reduce the debts a little faster. It is not sure that we can continue."*

Risk diversification and opportunities

Developing and diversifying the farm business is seen as a way to minimize and spread risk, but also to create opportunities for development. By being proactive and increase control more and more on a larger part of the chain, conditions are created to cope with stress of various kinds. For example, one farmer invested in a mill facility to gain control of freight and deliveries and not to buy as much feed. Another farmer explains his development thoughts about owning most of the processing steps: *"The largest risk reduction would be not to dare to invest at all. Then there is no development at all. We are not there, but we take on the processing stage, picking home it bit by bit ... insemination and having own breeding."*

Lust and development focus can also justify high risk taking: *"None of us thought it was fun to imagine empty houses here on the farm, so we worked through a venture for one year and more than doubled the loan debt. Loan-financed completely and counted backwards on how much sows we would need to have a full-time midwife in the stable, and then we just dropped below the limit on notification duty."*

One farmer has never had contracts with animal transport and slaughterhouse. He has relied on personal contacts with the animal carrier. He has seen advantages and opportunities in being able to give and take and act quickly with his personal contact with the carrier. After the carrier has been laid off by the slaughterhouse, the farmer has had problems with getting rid of the animals.

Business development is motivated both by opportunities for development but also by safety and risk reduction for future owners / generations. The farmers see opportunities to develop

their businesses and new investments is implemented despite the situation. Importance of anticipate risks and to be prepared is also highlighted, not least to satisfy the requirements of the bank. One farmer reflects on the risk taking with the investment: *"It is hell as much money, but I think.... It's a gamble this ..."*

Age and experience can affect both risk taking, innovation and proactivity. In the conversation, examples are given that the energy for running new projects or development is of importance. Age and experience also create safety, calmness and stability: *"Then you start to get old, so now you have no such strategies or goals that you have to come up with a lot of stuff... Now it is important to keep it in order and so...."* while I feel that I can take the life a little easier also in a way. So it will work out. At least when you feel that you have a fairly stable business".

Discussion and conclusions

Agriculture is embedded in a complex environment (McElwee, 2006; Smith, McElwee, & Somerville, 2017), where for example agricultural activities impact the environment to a larger extent than other sectors (Pindado & Sánchez, 2017), and farmer families are embedded and affected by the cultural environment and rural context in a way that distinguishes them from other entrepreneurs in for example urban areas (Anderson & Gaddefors, 2016; Jack & Anderson, 2002; Korsgaard, Ferguson, & Gaddefors, 2015; McKeever, Jack, & Anderson, 2015). Hence, farmers have unique challenges and conditions through both the complexity of working with nature and living animals, and by running family businesses in rural areas. Extreme weather conditions, such as the drought of the summer 2018 therefore significantly affect both the farmers, their families and their businesses.

Entrepreneurial farmers and businesses

According to Carter (1998), farmers have traditionally been entrepreneurial, but in mainstream entrepreneurship research, farmers are generally not considered entrepreneurial and the mainstream entrepreneurship research largely has overlooked the agricultural sector (Fitz-Koch, Nordqvist, Carter, & Hunter, 2018). The entrepreneurial perspective can be discussed by examining innovation and risk taking, using the definition by Miller (1983) who describes the characteristics of an entrepreneurial business as: "An entrepreneurial firm is one that engages in product market innovation, undertakes somewhat risky ventures, and is first to come up with "proactive" innovations, beating competitors to the punch" (Miller, 1983, p. 771).

Farmers primarily aim to create a sustainable life on the farm for themselves and their families, and for future generations. They also try to solve environmental and societal needs in the rural areas. It can be discussed if the farmers are aiming to "beat the competitors to the punch", as Miller (1983) express it, depending on how we look at competitors, e.g. if we consider other farmers as competitors, or if we see imported food, urban construction, rural extinction or what we consider as competition. Farmers in this study talk about other farmers as colleagues, and do not see these as competitors. Nor do they mention other food production as competition. It might be that farmers do not primarily see themselves as food producers competing with other food producers, but more as social entrepreneurs, who create a sustainable life on the farm, keep the countryside alive and the landscape open? Perhaps their "market" is the rural area and the environment where they live. Something that suggests this is that they aim to solve environmental and societal needs before economic reward, which could be regarded as social innovation (Edwards-Schachter, 2018). Together with the proactive, social and environmental innovations, we also get an insight in the risky ventures which are undertaken, seen from the farmer perspective, many times risking the family economy and home. Hence, farms can be considered as relatively entrepreneurial businesses.

Entrepreneurial orientation (EO)

The farmers illustrate both high innovativeness, risk-taking and proactiveness in different ways. The *innovative* perspective of EO concerns engaging in experimentation, new ideas and creative processes, i.e. developing new methods and technologies (Lumpkin & Dess, 1996), which is seen within the farmers activities for new equipment and methods aiming to among other things, improving the environment and reducing the climate impact. They collaborate with neighbours, discuss with network contacts and analyse international trends to develop both methods and technologies.

The *risk taking* dimension involves a will to bring more resources to projects, where the cost of the failure can be high (Miller & Friesen, 1982). The cost of the failure can truly be high for farmers, who many times risk both the family economy and home. Positive small business performance and EO is considered requiring access to financial resources (Covin & Slevin, 1991), but EO can also be used to overcome constraints, where firms with a high EO can be superior performers (Wiklund & Shepherd, 2005). After the drought, farmers have had a shortage of financial resources, which according to Covin and Slevin (1991) would mean that the farmers in the study would not exhibit EO. However, this has been disproved by the results in the study. Resources can be more than financial, and if using the resource-based view (J. Barney, 1991), where the composition of resources in the firm creates competitive advantages and differences in performance, and the disequilibrium perspective (Schumpeter, 2017) we can understand the results in this study, i.e. that during resource constraints and disequilibrium such as during the drought, EO can create a differentiation mechanism. The farmer is a major resource, and the skills possessed by the farmer have great importance for the business's performance. This study shows that farmers have increased their understanding of strategic management and planning during the drought. They also show a relatively developed self-leadership and opportunity-focused mind-set. They are aware and reflect on risks, even if they take large risks, which affect both themselves, the business and the family.

If we extend the dimension of *proactiveness* to include anticipating and acting on future market needs (Lumpkin & Dess, 1996), to also include future social and environmental needs, the farmers can be seen as proactive as well. Some farmers, talk about how they prepare for future market challenges created by, for example, animal rights activists, which can lead to drastically reduced meat consumption, others give examples of how they prepare for changed farming conditions, or for reduced climate impact as part of being involved in creating a better world. The drought has resulted in the farmers being open to bring learning and experiences into the future, and they work proactively to minimize soil compaction, to be better prepared for wet and rainy periods through better drained soil, that a larger layer of animal feed can facilitating strenuous situations in the future, that price hedging of input materials and writing agreements should be prioritized. The importance of being foresighted and quick acting is emphasized.

In general, EO emphasizes opportunity seeking behaviour which is far away from the necessity entrepreneurship (Veidal & Flaten, 2014), which could be a reason for expecting results indicating low EO in this study conducted during a strained situation. However, the farmers show many examples of high EO, also during the crisis. This is in line with previous research which found a developed EO to facilitate decision making, innovation and business performance (e.g. Dias et al., 2019; Ibidunni et al., 2018; Methorst, 2016). The profitability of the farm business critically depends on the management skills of the farmer (Nuthall, 2009), and improved management skills may be more worthwhile than entrepreneurial skills for farmers (Veidal & Flaten, 2014). The farmers show increased management skills in form of increased insight into the importance of strategic planning, both within production planning and method selection, as well as planning the actual business and management, and what the farming business means for the family. They also bring forth the importance of strategic long term discussions about both life situation and the business. On-farm activities and traditional farming share most of the resource base and the management competencies, and

are in previous research found to degrade the EO-financial performance (Veidal & Flaten, 2014). When looking at the relationship between EO and non-financial performance, this might illustrate the will to create a life and work on the farm, not primarily financial goals, found in this study, which also is in line with previous studies indicating that other things than financial reward is motivating farmers, e.g. the possibility to live and work at the farm (Vik & McElwee, 2011).

Some general considerations appeared in the study. First, the the farmers were hesitant about the word "crisis", as there are other things that have been much worse for them, both private and concerning not transitory business problems. Second, the mental stress was emphasized, both from the uncertainty during the drought and because of the mental abrasions created by, for example, working hard with a genuine interest in the environment and climate-enhancing action, and at the same time be seen as "environmental beacons". Third, the effects of strategic planning, of both management, innovation, learning, and approach of stressful situations were illustrated and the importance of those skills emphasized.

The farmers demonstrate a developed entrepreneurial orientation and the study indicate that a developed EO can lead to increased performance during stressful situations. Some important factors when approaching challenges and strains are illustrated, such as the farmers' mind-set, which affected their actions. Experiences from previous crises created learning and better preparedness. Both experience and strategic planning facilitated the situation. The importance of self-leadership were illustrated by examples showing the benefits of knowing what they wanted strategically with the business and life, since it was easier to both act quickly and in a suitable way. Farmers' life situation also affected how they dealt with challenging situations, partly because the family was so involved in the farming business. The study indicate that crisis creates new ways of thinking and acting, both in terms of new collaborations, innovative working methods, and product and process development. The study shed light on the importance of strategic long term discussions about both life situation and the business.

Implications and value

This paper highlights some important factors when approaching challenges and strains, and complement previous research about barriers to BMI conducted in retrospective. This increased understanding is useful both for researchers and practice working with entrepreneurs and business development to facilitate prioritization of efforts and activities.

A basic philosophical question raised during the study was whether and how farmers see the market or what they want to develop? In the field of innovation science and entrepreneurship, research generally assumes a market thinking among the entrepreneurs. But the question is whether the farmers primarily focus on a market or if they see the contribution to the development of the family situation, or the environment and the rural community as the primary? Those questions would be interesting to study in future research.

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Under the surface of the agricultural entrepreneurial support ecosystems: Through the lens of complexity leadership theory

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Abstract

Agricultural advisors have recently received much critique both in practice and in the literature for not answering agricultural entrepreneurs' need for support in the ongoing industry transformation. Advisors expect to guide highly pressured agricultural entrepreneurs operating in complex settings towards sustainable businesses in highly competitive markets. The current study using complexity leadership theory goes beyond the surface of the agricultural advisors' everyday work by exploring challenges faced by the advisors and considering how to overcome them. The advisors' genuine intentions and common mission guiding the development of sustainable agricultural businesses and a vibrant countryside is not enough to achieve the goals. We identify an emergent need for innovation in the leadership of advisory work and conceptualize enabling mechanisms to accomplish such change. We suggest that the creation of adaptive space as a lubricant gives innovation the opportunity to flourish through enabling leadership.

Introduction

'For some time, there has been perceived dissatisfaction with the agricultural advice. While farmers have been critical, it has not been possible to concretize the dissatisfaction, especially beyond that the advisors know too little'.¹

'Many people see the support system as something negative and ironically call it support while meaning hindrance.'²

¹ <http://www.lantbruketsaffarer.se/efterlyses-radgivning-var-d-namnet/>

² An actor in the agricultural support ecosystem

There is an urgent call among practitioners and scholars to open up the black box of the agricultural entrepreneurial support ecosystem to take agricultural entrepreneurship one step further. There is a need to acquire more knowledge on hidden aspects of the agricultural support ecosystem. Agricultural entrepreneurs globally face the pressure to transform into entrepreneurial models to improve innovativeness and survive in the highly competitive landscape (Phillipson et al. 2004). Agricultural entrepreneurs, as innovators, constantly seek new opportunities and new ways of doing things, and they need advisors' support to accomplish this. Entrepreneurs and the ecosystem surrounding them are about to change.

Although rural development programmes are continuously evaluated (e.g., Hörnsten 2017) and parts of the agricultural support ecosystem are studied from different perspectives, there is no overall picture and understanding of the roles played and the challenges faced by advisors in the ecosystem. Scholars note that knowledge about what is actually going on is scarce (Cederholm Björklund 2018; Höckert 2017). Previous studies highlight the challenges faced by advisors in the business support system (Johansson et al. 2019), but little is known about the agricultural support system. Much is known outside the entrepreneurship literature on the agricultural ecosystem at a meta-level, while the social constructions and actions taking place at a micro-level remain neglected both in general and in the entrepreneurship literature (Korsgaard et al. 2015; OECD 2018). The agricultural entrepreneurial ecosystem operates much in the shadow of what reflects 'real' entrepreneurship and is often neglected in traditional entrepreneurship literature, causing a knowledge gap (Phillipson et al. 2004). This occurs even though the sector is one of the largest worldwide, accounting for 3% of the global GDP (FAO 2016) and employing a billion people. Only in Sweden, the agricultural sector involved 131,571 registered businesses and constituted the primary business activity of 108,886 companies³ in 2016 (Swedish Board of Agriculture 2018a), making the Swedish case highly relevant for study. Also highlighting the relevance of the sector, the EU has allocated 351.8 billion EUR for the Common Agricultural Policy (CAP) 2014-2020, of which approximately 2.1 billion euros are allocated to Sweden (Government Offices of Sweden 2018). It is no longer possible for the agricultural entrepreneurship ecosystem, with its unique political, cultural and cognitive embeddedness, to be ignored in the entrepreneurship literature (Denzau and North 1994; Dias et al. 2018; Fitz-Koch et al. 2018; Korsgaard et al. 2015; Zukin and DiMaggio 1990). This chapter primarily focuses on the Swedish context, which is highly embedded in the European system. However, the agricultural support systems in all G20 countries are criticized for insufficient governance. They share a common need to establish long-term strategies, involve stakeholders throughout processes, clarify actors' roles, improve research and development coordination, and implement useful evaluation systems (OECD 2019).

The current study answers the call to further contextualize agricultural entrepreneurship research by highlighting the specific context of the entrepreneurial agricultural support system in general and the advisory support system in particular. We explore the roles and challenges of advisors in the support system through the lens of complexity leadership theory (CLT). We look into advisors' relational leadership and connectedness in the agriculture entrepreneurial support ecosystem (Ospina and Foldy 2010). This enables us to explore advisors' leadership in coordinating formal and informal work when operating in dynamic agricultural entrepreneurship environments where innovation is expected (cf Allen 2001; Cilliers 1998; Stacey et al. 2000).

3 Involving the Swedish standards for industrial classification, SNI 0111–0170

The theory enables the exploration of advisors' formal and informal social interactions when dealing with new conditions. It provides a basis for exploring behaviours in the specific context of the complex adaptive system of agricultural entrepreneurship (Gartner et al. 2006; Welter 2011; Welter et al. 2017; Zahra 2007).

This study seeks to contribute to the entrepreneurship literature by exploring the environment surrounding advisors in agricultural entrepreneurship in several ways. First, we identify the roles played and challenges faced by advisors in the support ecosystem that affect advisor behaviour. We identify a strong path dependency guiding everyday practice among the actors (Nee 1998, p. 86). Many of these challenges remain tacit, and the study aims to contribute to making the ecosystem more transparent in order to enable change (Cederholm Björklund 2018). We identify formal and informal interaction patterns between key actors in the support ecosystem, e.g., governmental actors, agricultural advisory organizations, agricultural member organizations and rural societies, that impact the advice provided. We further observe the norms and values governing behaviour and fostering 'leadership practices', or collective action within and across the organizations in the system (Ospina and Foldy 2010). This exercise may contribute knowledge for the development of advisory practices and support for agricultural entrepreneurs (Phillipson et al. 2004). Second, we contribute to the conceptualization of the advisor leadership practice in agricultural entrepreneurial support systems and how everyday practice hinders the adoption of the innovation practices demanded by environmental pressure. We suggest that informal adaptive practices be adopted in order to develop the creativity and the formal administrative systems needed to develop goals and routines for challenging established practices (cf Welter 2011). Finally, we meet the need for qualitative methods in the research on agricultural entrepreneurship and advisory practice, which allows us to capture the richness and diversity of the agricultural entrepreneurial support ecosystem (Welter 2011).

Contextualizing the Swedish agricultural entrepreneurship support ecosystem

To understand the actions taking place among advisors in the agricultural entrepreneurship support ecosystem, the contextual aspects of the ecosystem, such as the nature of the actor organizations and the political and cultural embeddedness, must be outlined (Denzau and North 1994; Jack and Anderson 2002; Korsgaard et al. 2015). The present chapter acknowledges the situational boundaries embedded in the context of the Swedish agricultural entrepreneurial support ecosystem. These boundaries are connected to the historical context of the industry as a whole, strong path dependency and changes in the conditions and the nature of modern agriculture and push towards a higher degree of market and business orientation, greater competition, technology changes and digitalisation.

Swedish agriculture has changed from being highly regulated by the government, when the state coordinated price levels, to being market-driven, when Sweden joined the EU in 1995. The EU opened up a market-driven agricultural sector based on free trade both within the EU and across the world. This change occurred in many other countries as well. To address the new market conditions, management became of critical importance for agricultural entrepreneurship. Agricultural entrepreneurs need support to guide their activities in the highly competitive market and their adjustment to the continuous changes in the market (OECD 2018; Swedish Board of Agriculture 2018b). Advisors in the agricultural entrepreneurship support ecosystem expect to be prepared to guide and facilitate these changes. Accomplishing change appears to be a challenging task, as agricultural entrepreneurs find it hard to obtain the help needed from those

whose aim is to support their entrepreneurship. The highly institutionalised Swedish agricultural support ecosystem with 200-year-old traditions is criticized for adapting poorly to support the development of sustainable agricultural business, e.g., because of limited advisory knowledge, agricultural entrepreneurship knowledge, and work methods (Höckert 2017). This chapter aims to explore the challenges faced by agricultural advisors in their work of providing guidance to agricultural entrepreneurs.

The key actors in the Swedish agricultural entrepreneurial support ecosystem consist of governmental actors, agricultural advisory organizations, agricultural member organizations and rural societies, among others. The agricultural entrepreneurship support ecosystem may at a macro level be divided into 1) a governmental system and 2) an advisory system. The governmental system outlines the boundary of the support system. Funding and regulations governing the Swedish support ecosystem mainly derive from the EU and the CAP. Reform is implemented by the CAP every 7th year to cover a period, such as 2014-2020. The governmental system channels EU funds and government-level directives via the Swedish Board of Agriculture to county administrative boards and other organizations. The value of the EU cohesion policy in the 2014-2020 programme period is EUR 351,8 billion, almost one-third of the EU budget, and approximately 2.1 billion euros of this sum have been allocated to Sweden (Government Offices of Sweden 2018). The programmes are currently under the close supervision of the EC, but the commission has signalled reform and greater opportunities for member states to control their own programmes in the future. The agricultural support ecosystem is nationally governed by the Swedish Rural Development Programme (RDP). The recently developed Swedish food strategy also guides and regulates activities in the agricultural support ecosystem at the national level.

The advisory system involves advisory organizations, such as governmental actors, associations and private organizations, which are merging into larger units. A large part of the advisory system consists of individual companies linked to a joint federation, which acts as coordinator and fosters development. The federations have no mandates for deciding for or governing the member organizations, which are all independent legal units. Actors in the agricultural support ecosystem have a common vision of contributing to agricultural entrepreneurship and sustainable rural areas, but at the same time, most of the actors are competitors. The governmental advisory organizations are as such competitors of the non-governmental organizations. This competitive structure limits the willingness and ability of agricultural advisory support organizations to collaborate, and all organizations try to gain access to the limited resources allocated to the agricultural support system. There are governmental incentives for collaboration and knowledge sharing, but most resources are allocated towards individual activities within organizations, contradictory to the desired development (Höckert 2017; OECD 2018).

Scholars point to various challenges in agricultural support organizations, and severe problems in advisor guidance have been observed in practice and in the literature (Höckert 2017; OECD 2019). The agricultural support ecosystem is criticized for being based on subject-based knowledge and non-systematic models, and the challenges of agriculture are considered systemic (Höckert 2017). Höckert highlights the lack of space for reflection corresponding to higher loops of learning at all levels in the system. She outlines a control paradox where advisors are specialized and seldom collaborate, such that there is neither reflection nor learning within organizations. She notes the need for a broadened epistemological perspective in the advisory organizations, an extension of knowledge sharing and interplay, the creation of a collaborative culture, and, more broadly, a change from individual-based knowledge to knowledge that unites

the knower and the knowing. The actors within the system have not managed to thoroughly describe the problems and their systemic boundaries, and the system has not reflected about what is needed to enact the change from an individual to a collaborative culture. The current study will take a further look under the surface of the agricultural entrepreneurial support ecosystem.

Complexity leadership theory

To explore beyond the surface of the complex agricultural entrepreneurship support system and the advisors' roles and challenges, we apply CLT. This framework allows us to explore the coordination and control structures of the support system. According to CLT, leadership is considered a social phenomenon involving much social interaction that causes a shift from emphasizing the human capital of the advisor and the entrepreneurs in the system to emphasizing social capital (Arena and Uhl-Bien 2016). The agricultural entrepreneurship support ecosystem is complex and involves many types of interdependent actors, such as agricultural entrepreneurs, financiers, policy makers, and scholars. The advisors expect to take the central role in the network of these key actors, who cooperate dynamically seeking common goals (Uhl-Bien et al. 2007). Leadership reaches beyond the mere leadership position and authority to encompass the management of knowledge flows within and between organizations. In line with Fleming et al. (2007), we argue that understanding the leadership in such complex adaptive systems requires a thorough understanding of the interplay within and between the key groups acting in the ecosystem.

The agricultural entrepreneurship advisory ecosystem outlines a complex adaptive system, a promising arena for key actors to meet, problem solve, learn and adopt new behaviours and ways of working (Carley and Hill 2001). Organizational adaptability, taking place in the key actors' everyday life, is a critical component for reaching goals and bringing forth new and innovative contributions to collaborative interactions (Uhl-Bien and Marion 2009). Advisors in the agricultural entrepreneurship system are considered facilitators or brokers in the system and are expected to have an active role in producing new behaviour and new ways of working (Uhl-Bien et al. 2007). Previous studies outline the broker role as involving interactive and dynamic actions, bridging meaning by different cohesive groups and ensuring trust and information sharing (Arena and Uhl-Bien 2016).

Formal and informal control are considered as co-ordinating the interdependent structures and activities in the dynamic ecosystem. In the conceptualization of advisors' roles and challenges in the social agricultural entrepreneurship system, we depart from the three closely intertwined modes of leadership outlined in CLT, i.e., the administrative, adaptive and enabling leadership (Kontopoulos 2006; Uhl-Bien et al. 2007). The administrative modes of leadership characterize formal and bureaucratic leadership involving dynamic relationships of hierarchical top-down character. Individuals and groups plan, coordinate and expect to act effectively to reach their stated goals. The bureaucratic functions of the administrative leadership focus on aligning and controlling actions for the collective purpose, establishing structures and allocating resources to reach the stated targets and managing conflicts (Mumford et al. 2008)

Enabling leadership conceptualizes the dynamic, non-hierarchical and informal interrelations between individuals and groups of actors. The informal mode is an enabler facilitating actors in the support system to bridge the administrative and adaptive leadership functions. This mode of leadership serves as an adaptive emergent force that creates and facilitates organizational conditions to foster adaptive leadership and provides guidance in

situations that require transition and innovation. The focus of this mode is on adaption, creativity and learning. In this way, the administrative forces and the adaptive forces may either help or oppose one another. Enabling leadership assures the transfer of knowledge and creativity from the adaptive structures to the administrative structures. The key aim is to accomplish effective adaptive leadership through enabling leadership to bridge the two types of leadership without eliminating them (Ospina and Foldy 2010).

The concept of adaptive space is a critical concept in this. Adaptive space arises between the creative adoptive system and the bureaucratic administrative system and serves as an enabler in collaborative networks, bridging the formal and informal systems (Arena and Uhl-Bien 2016; Uhl-Bien et al. 2007). The framework of CLT sets an overarching boundary for exploring and contextualizing organizational leadership in the agricultural entrepreneurial support system.

Approach/method

This study involves six types of loosely and moderated coupled national and regional key organizations in the agricultural entrepreneurship support ecosystem in Sweden. The organizations cooperate across borders to reach the common goal of nurturing agricultural entrepreneurship and the rural ecosystem. One federated organization is a joint union that includes 17 independent regional organizations. The federation coordinates and develops member organizations but cannot make decisions for or govern the members.

We used a research design triangulating data sources to understand the structures below the surface of the support ecosystem and discern the behaviour and actions of individuals and organizations. This research design enabled us to explore the tacit structures of advisor roles and challenges, making the agricultural ecosystem more transparent. We collected data through in situ observations and interviews to provide the rich contextualized data based on qualitative methods called for in the literature (Welter 2011). We observed meetings where key actors in support organizations at the regional and national levels discussed management and policy problems and challenges. In total, we observed 16 meetings involving the participation of 34 key actor organizations from the agricultural entrepreneurship support system. Fourteen of those meetings involved up to 50 participants, and two of the meetings were major meetings with between 50 and a couple hundred participants. The data were collected over a period of 8 months during 2018. Deeper knowledge of the organizations was provided through one researcher's insider access to key organizations and to native knowledge of the work processes in these organizations. This researcher collected data, attended the meetings, recorded what was said, and took notes but did not take an active role in any of the observed meetings. The observations were complemented with semi-structured interviews with key actors for follow-up and further exploration of the advisors' roles and challenges in the complex agricultural ecosystem. In total, 54 hours of effective meeting and discussion time were observed, and 3 hours of interviews were recorded. In total, 4 key actors in the support system participated in longer semi-structured interviews, and another 28 individuals from the actor organizations participated in shorter interviews.

We base the results on the data from the observations and interviews that are recorded, transcribed, inductively analysed and coded into concepts, themes and dimensions using the Gioia methodology (Gioia et al. 2012). Table 1.1 presents the coding structure and the resulting categories. We started by individually reading the transcriptions, making a broad initial coding, and briefly noting ideas. Then, through a more thorough reading, we individually identified

statements, discussions and frames. The researchers compared their coding and proposed first-order concepts. After discussing the findings and concepts, we identified 7 overarching themes among the first-order categories and developed second-order themes. The second-order themes identified are the lack of mutual understanding and trust, lack of collaboration, old traditions and culture, bureaucracy, individual impact/influence, co-opetition and goal congruence, and lack of strategic management and leadership. The last mentioned theme was developed during the analysis as a result of the discussions.

Table 1.1 Categorizing representative statements and first-order concepts

First-order	Representative statement
Lack of trust/uncertainty between actors	'It's complex and creates some uncertainty. The hardest thing, it's this checking, lion of... as it's called when you create fear. So, the Commission is afraid of the auditors, and Sweden is afraid of the Commission, and the Swedish government and all the way down to the County Administrative Board... and finally it ends up on the farmer.'
Lack of trust/uncertainty between individuals	'It's the officers, the staff who are careful while the management had the idea that they would not be really careful, but it did not really work out.'
Lack of flexibility and sensitivity	'We are not responsive... so maybe we could have been a bit more responsive, but I think the members want us to be fairly uncompromising.'
Lack of understanding of different needs and roles	'The County Administrative Board is living its own little life. They think they... it will be very exciting to see... we will ask them how they handle the new management act. They have not even followed the current...'
Fruitless collaboration efforts	'It's very hard between our professional categories, and it has affected our investment applications in a negative way, and our customers.'
Lack of overall perspective	'We're working together all the time, but then we should see... there would not be such problems with gravel in the machines. Then it would be much better. They probably collaborate de facto, but not... that's the result that counts.'
Lack of collaborative intentions	'You have to go all the way... from the time you leave until things come out at the other end. It has not worked all the way here. It's an important lesson for the whole system.'
Old working methods and structure	'When there is an emergency situation, you can also add resources. But when the sun shines there is no need to collaborate.'
Inherited roles	'Since ancient times it has been said that we should do this way.'
Discourse reinforces the importance of traditions	'We still have that tradition left...'
Focus on natural science	'What is revolutionary is that we will not have the governor as president next year... after 203 years, it feels strange.'
Innovations create	'It's a production specialist who manages marketing, not an educated communicator - that is the problem.'
	'We have a new business development in progress... focusing on plant cultivation.'
	'New solutions or innovations create almost exclusively more bureaucracy.'

more bureaucracy	
Complicated procedures	'It was not so easy to do what we had planned - it did not work out according to EU regulations'.
Duplicate application procedures	'It's unnecessarily complicated. We know we've got this money to deal with, but we still have to apply for it.'
Individual (advisor) limitations	'We've learned the hard way that experience groups work better than advice.'
Interpretation of individuals in the system	'This with assessments... one tries to make them transparent, but it's not easy.'
	'Authorities interpret political decisions.'
Effects of individuals in the system (lobbies)	'So, we'll see what's happening, who they'll find as successor to him, and if it's still a good team of co-operation.'
Individual culture, who am I here for?	'You think of yourself in the first place and do not help a colleague or help someone. Nor do you share customers or work, and you don't look for the customer's best - what the customer would need for advice, but you look at your individual budget and yourself in the first place.'
Individual mind-set	'The Swedish Board of Agriculture, they bring in new employees who ask a lot of new questions.'
	'It is building relations that gives effect.'
Rural Development Programme and National Food Strategy rules	'Our foundation is the Rural Development Programme.'
	'The strategic goals control... but we are affected by the National Food Strategy.'
The actors have different target groups and assignments	'I think we should not forget why we are applying for money... what goals we have.... instead of running at all balls.'
	'It's not only agriculture in this region, it's everything that has to do with living and existing at the countryside.'
	'Our members are mainly farmers.'
Most of the actors are competitors	'This old question. It's a good time to have a small talk about it. If they do this..., then we must actually have planned structured return fire.'
	'That's a sensitive question. We have old relationships.'
	'Still, they put too much energy inwards, so they will get even more outward and are a competitor to us in many contexts, but at the same time they are very open to cooperation. They are really very, very professional.'

After reviewing the patterns emerging from the second-order themes, we found phenomena and common issues that made it possible to connect and assemble the themes into overarching aggregated dimensions (see Figure 1.1). Three overarching dimensions were identified: a) collaborative model, b) institutionalized organizations/systems and c) strategic management. The overarching themes were coded to outline a communication platform. The next step was the development of the conceptual model (see Figure 1.2). We identified the value

of exploring our findings with the use of CLT to gain knowledge on the social constructions and actions taking place within the support ecosystem. The communication platform was further conceptualized and attached to the themes of 1) facilitating activities, 2) enabling leadership and 3) adaptive space. The conceptual model outlines the mechanisms fostering and hindering the support ecosystem's adoption of the new practices and innovation required by the external society.

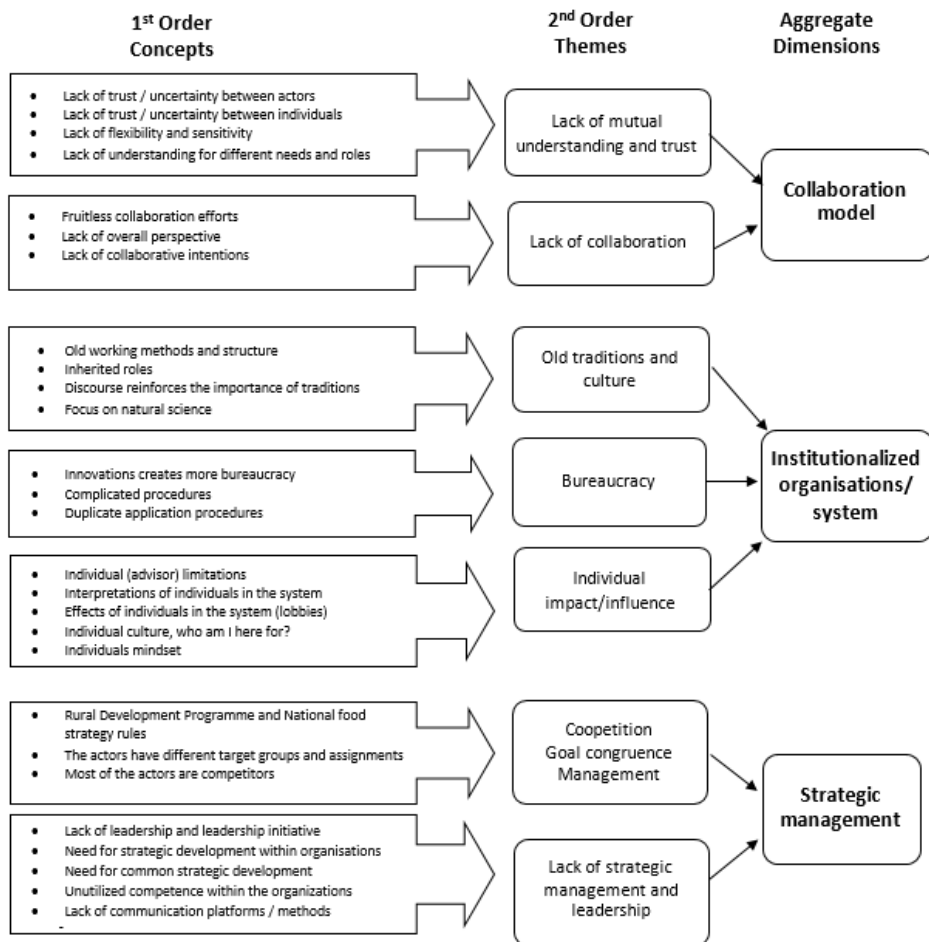


Figure 1.1 Conceptualizing challenges in the agricultural entrepreneurship support system

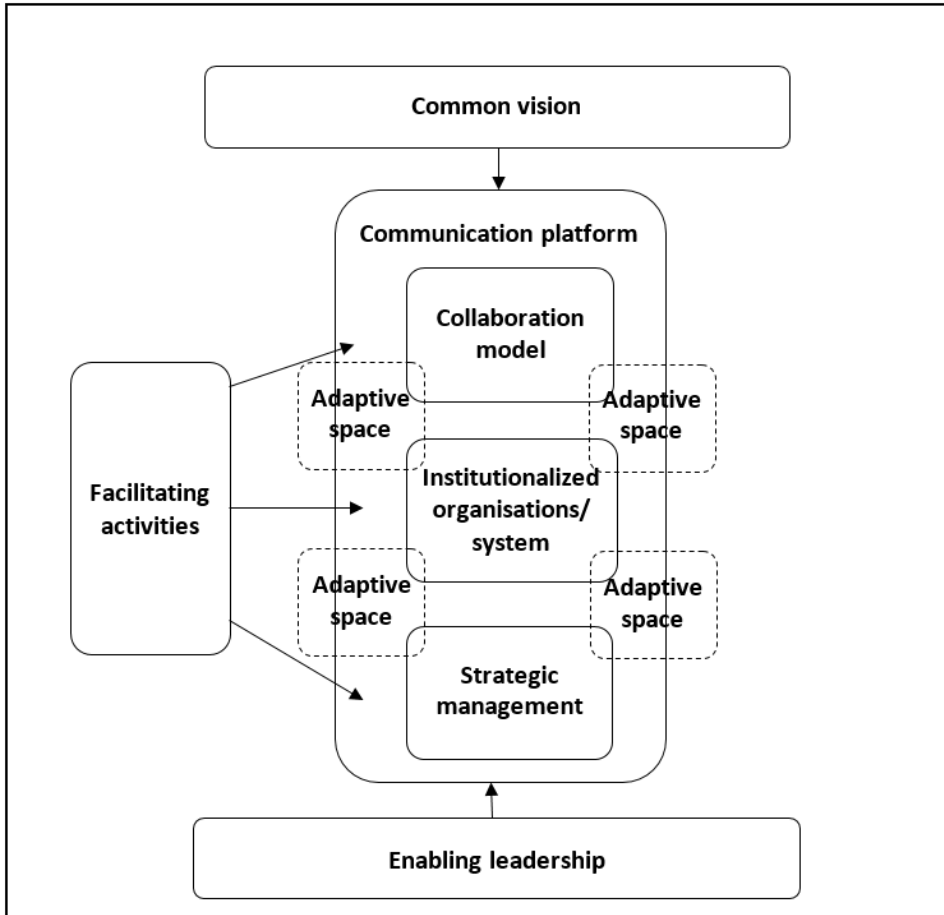


Figure 1.2 Model for enabling innovation in a sustainable rural entrepreneurial support ecosystem

We base our study on social constructivism (Berger and Luckmann 1966), where actors in the ecosystem socially construct their knowledge structures through interaction with each other. The implications are constructed in time and may as such be manifested or change over time. Knowledge arises because actors perceive the world in a certain way and act accordingly (Berger and Luckmann 1966).

Empirical findings and analysis

The agricultural entrepreneurial support ecosystem in Sweden has a common vision of contributing to a sustainable, prosperous rural society and a sustainable use of the land.

However, the support organizations target different groups: the authorities work for the countryside, and some organizations work for their members, others for customers and still others for a mix of members and customers. The members of organizations may be, for instance, agricultural entrepreneurs. Support organizations are managed and operated in different ways, with different intentions and missions. The organizations are often managed to fulfil requirements of the food strategy, RDP and other funding organizations rather than to fulfil agriculture entrepreneurs' expressed needs. The goals and funding are typically governed by the Ministry for Rural Affairs and interpreted by officials at the Swedish Board of Agriculture at different levels. The support organizations receive income through their provision of advisory services. The main part of the organizations' funding derives from the Swedish Board of Agriculture and County and Regional Administrative Boards. The organizations that aim to collaborate in the support system also compete for the same source of funding.

The funding that governs the Swedish support ecosystem derives largely from the EU. However, new directives propose greater national self-determination, and representatives from different organizations have gathered to discuss possibilities and common challenges. They try to interpret the future by discussing potential scenarios.

'A re-nationalization, moving the system to the Member States, is challenging. What will happen? There are opportunities.'

'The idea is to set targets at the EU level. It is up to the Member States to find solutions. The question is how Sweden manages to handle it, given how detailed everything was before. Can you get rid of the administration we have today? Meanwhile, it is positive that there is such an input [required] instead of the details [required] at the EU level because we do not like it. There is a great opportunity for Sweden to do something good about this if they/we have capacity.'

Policies and guidelines for work with environmental, economic and social sustainability are largely implemented and followed up by the support actors in the ecosystem. They agree that a prerequisite for sustainability and a functioning support system is to simplify and ensure the feasibility of the relevant policies, measures, etc. The ability to simplify is vital. This is exemplified through the following statements:

'It should be as simple as possible. We do not want it to be a barrier for the farmer. It is sometimes, and it is sad. It's a bit complex with support systems and rules, but there's not much we can do there more than talking about it upwards, and we've done that. We know how difficult it is, we are very humble.'

'New solutions or innovations create almost exclusively more bureaucracy. That's the dilemma. What would have to be more innovative is the simplification. It could be more innovative. Therefore, we are looking for simpler solutions. It's the innovation we want.'

'What would be more innovative is the simplification. This is where we need to invest in innovation within the support system.'

'A bit of lean production for bureaucracy. How can we make this work smoother?'

A need for the development of a common *collaboration model* is identified based on observations and interviews. Uncertainty and lack of confidence exist between individuals and organizations, and sensitivity to and the understanding of different needs and roles in the ecosystem are lacking. While some collaboration efforts have been tested, the actors suggest a lack of overall perspective and collaborative intentions as reasons for the failure of these attempts at collaboration.

The observation and interviews outline the old traditions and culture, bureaucracy and individual influence that create a highly *institutionalized ecosystem*. The advisory organizations are more than 200 years old. The strong culture and the associated structures, methods and discourse make procedures complicated and bureaucratic. The individualistic culture is another problem identified within the system and has been confirmed by previous studies about Swedish agricultural advisory organizations (Höckert 2017). This is expressed through limitations in individual knowledge, individual interpretations, lobbying, culture and mind-set.

We identify a need to *develop strategic management* both within the organizations and in the overall agricultural entrepreneurship support ecosystem. Lack of leadership and leadership initiatives cause the institutionalisation and conservation of the old and individualistic culture, with the consequence of unutilized competence. The support actors clearly outline a common vision of creating sustainable rural areas in Sweden, while goal congruence, management and the fact that the actors are also competitors obstruct the collaborative effort to work towards the goals.

One challenge outlined is communication, especially communication between organizations, where no common communication platform or method of effective interaction and communication currently exist. Co-operation meetings and communication forums become individual-dependent and sensitive to changes in the people composing the group. However, there have been some initiatives for facilitating innovation within the ecosystem. Some of those mentioned are relationship building meetings and collaborative activities and meetings. There is a willingness within the system - primarily from the governmental point of view - to simplify. There are also individual initiatives aimed at encouraging innovation.

'What happens is that you get rid of the war, I would say [when communicating]. If you can use such a hard word. Because there are many misconceptions on both sides maybe. But perhaps also some relief that 'Well, that's how it works in your region'.

[Communication] It's necessary for understanding. It's enough to meet sometimes and tell how it is. It's not that difficult.'

We outline an initial conceptualization of the challenges identified in Table 1.1, which presents representative quotes and first-order concepts. The final step in the theoretical conceptualization is presented in Figure 1.2, which outlines a model for enabling innovation in a sustainable rural entrepreneurial support ecosystem. We identified early that the organizations have 'a common vision/mission' that is a starting point and a common ground for collaboration within the ecosystem. While this is not enough, the three blocks from Figure 1.1 highlight the need for managing the ecosystem to achieve a sustainable and innovative support system. The three blocks are a) a functioning collaboration model, b) methods for managing and developing

an institutionalized system, and c) strategic management of organizations and the system. In addition, all three blocks must work together; thus, they must be embedded in a common communication platform, as discussed earlier. Facilitating actions that are adjusted to the situation are needed for the key actors to actually communicate, bring the advisory system together and accomplish change. There is both formal and informal leadership present in the model. The communication platform involves formal leadership with administrative routines and control. There, enabling leadership brings forward informal leadership. Finally, an adaptive space is created in the ecosystem, which provides the lubricant or the space where innovation can flourish. Adaptive space is created by stimulating pressure and simultaneously helping individuals act under the pressure. The model is based on CLT and aims to enable leaders to be skilful at formulating challenges and challenging enough to act as pressure and then help individuals act in a safe adaptive space while processing the pressure (Arena and Uhl-Bien 2016).

Conclusion/discussion

We contribute to the field of entrepreneurship by investigating the agricultural entrepreneurial support ecosystem, specifically the complex challenges faced and the interactions in the support system that take place when seeking to foster sustainable agricultural entrepreneurship (Fitz-Koch et al. 2018). The findings indicate that the agricultural entrepreneurial support ecosystem needs to adapt to changes in the environment to provide the support needed by agricultural entrepreneurs exposed to innovative challenges. The pressure in the environment requires changes in innovation practices and in the management and control of such changes in the support ecosystem, in Sweden and in other countries (Höckert 2017; OECD 2018). We highlight a number of challenges for creating a sustainable agricultural entrepreneurship ecosystem and identify a cognitive embeddedness, i.e., mental processes, among individuals and groups of actors. These impacts on the interaction between actors also hinder the mutual change process and the development of a common ground of economic reasoning (cf Zukin and DiMaggio 1990, pp. 15–16). We identify leadership structures and everyday practices shaping and reshaping the work processes that also hinder the adoption of new innovation practices.

Complexity and institutionalization, together with the lack of collaboration, communication and strategic management, are identified as recurring obstacles. There are stabilizing mechanisms in the ecosystem that strive to maintain familiar structures even as the organizations are forced to change under pressure. There is a need for innovation within the system to face challenges, make the system work and adapt to new opportunities and conditions. We identify cultural barriers consisting of internal and external competition within and between actors/organizations in the ecosystem. The poor strategic management cannot effectively coordinate key actors' interrelations and exchanges. Individual actors and organizations primarily consider their own personal brand, identity and benefits; 'what's in it for us'. The individualistic competitive culture within and between the support organizations spills over to challenge collaboration, learning and knowledge sharing (cf Höckert 2017), which in turn impact the support provided. We identify barriers that hinder agricultural entrepreneurial support ecosystems from thriving, affecting organizations' incentives for innovation and providing support for innovation. Like previous studies, we identify a strongly path-dependent support ecosystem, where social constructions are strongly manifested over a long period (Höckert 2017; Nee 1998, p. 86) based on the 200-year-old culture and traditions. The ecosystem is highly

institutionalised, dominated by bureaucratic behaviour, encapsulating routinized acting and behaviour according to cognition and norms. This is also the case in other types of entrepreneurship support organizations (Johansson et al. 2019; Malmström et al. 2017). We identify a need to develop adaptive practices that nurture the informal adaptive system and bring forth creativity. There is also a need to combine these informal systems with formal administrative systems that develop goals and routines that challenge established practices. Bridging leadership can connect different perspectives to facilitate collaboration without merging or reducing the perspectives (Ospina and Foldy 2010). The results indicate a need to create an adaptive space for reflection and learning (Höckert 2017). In this innovative way of working, prestige and old structures may be questioned, and leadership may be developed within the ecosystem.

We can conclude that the entrepreneurial support ecosystem has not developed in parallel with the changes of the world surrounding agricultural entrepreneurship and its support system as expected after Sweden's entry into the EU in 1995, which opened up a free market. Under the right conditions and connections, the key actors may become cohesive groups that contribute to the development of the system (Arena and Uhl-Bien 2016; Fleming et al. 2007). We agree with Arena and Uhl-Bien (2016) that *'pressures are at the heart of adaptive space'*.

This study sheds light on the importance of bringing agriculture into entrepreneurship and enriches entrepreneurship theory by modifying the theory to fit the agricultural entrepreneurship context (Fitz-Koch et al., 2018; Welter et al. 2017). Much previous work has focused on this ecosystem. We provide knowledge on the behaviour of the key actors in the support ecosystem by offering a new theoretical model of the dynamics in the ecosystem that is based on inductive analyses and CLT (cf Arena and Uhl-Bien, 2016). With this study as a starting point, future work can focus on creating a sustainable innovative system. We conclude in line with Burns (2005) that *'If organizations are too stable, nothing changes and the system dies; if too chaotic, the system will be overwhelmed by change. In both situations, an organization can only survive and prosper if a new, more appropriate, set of order-generating rules is established'*.

Like any study, ours is not without limitations. First, we limit the study to the Swedish agricultural entrepreneurial support ecosystem. The Swedish context is highly embedded in the European system, and this may provide some ground for the generalization of the research together with findings from previous studies in other countries. We suggest that future research explore the agricultural entrepreneurship advisory system in other international contexts and test and develop our conceptual model in a broader contextual setting. Second, the conceptual model adopts an organizational perspective of the entrepreneurial support system, while the field would benefit from digging deeper into the cognitive foundations of social construction and action within the ecosystem. We suggest that further studies explore the cognitive level to reveal conscious and less unconscious dimensions. Finally, the study focuses on the key actors in support organizations, while there is a need to further highlight the expectations, needs and wants the agricultural entrepreneurs have concerning the agricultural entrepreneurial support ecosystem. In line with this, we recommend that future studies consider the entrepreneurs' perspective as a complement to the current study.

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A leadership development programme for agricultural entrepreneurs in Sweden

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ABSTRACT

Purpose: This article describes the five-phase process of a leadership development programme conducted with agricultural entrepreneurs who own and manage dairy farms in Sweden. The programme primarily focused on leadership of employees and on self-leadership. The article's purpose is to present a template for leadership development programmes that can be used in the agricultural sector and in other industry sectors as well. **Design/Methodology:** The empirical data come from interviews with agricultural entrepreneurs, agricultural advisors and authors of a book on leadership in its various forms. Observations were also conducted of the instruction in the leadership development programme. **Findings:** First, agricultural entrepreneurs (and possibly entrepreneurs in other sectors) benefit from leadership development programmes in which the concept and practice of self-leadership are emphasized. Second, such programmes are more valuable to participants if other actors (e.g. academics and advisors) are participants. Third, coaches are useful as support for the programmes' participants. **Practical Implications:** An implication of this study is the finding that working with the knowledge transfer and dissemination to advisors and entrepreneurs in the agricultural sector can enhance leadership competences in the industry. Role transformation (e.g. advisor to coach) can also enhance the transfer of such leadership competences. **Theoretical implications:** An implication for theory is to include a self-leadership module in leadership theories about learning leadership in development programmes. **Originality/Value:** Knowledge transfer and dissemination through leadership development programmes for agricultural advisors and entrepreneurs can have a beneficial effect on industry leadership and management. In addition to the traditional leadership skills that many leadership development programmes teach, such programmes also need to emphasize self-leadership.

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Introduction

This article focuses on the need for leadership knowledge in the agricultural sector. The article describes a leadership development programme for this sector in Sweden. The

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programme aimed to increase selected agricultural entrepreneurs' leadership knowledge, especially knowledge of self-leadership that complements the development of general leadership skills. The programme, which focused on the concept of Leadership Practice, had two segments on advisor education: LP1 and LP2.¹

It is important to focus on leadership development for agricultural entrepreneurs, for several reasons, depending on global challenges, firm development characteristics and entrepreneurial perceptions. For example, it is estimated that global food production will have to increase by 70% by the year 2050 (Dobermann and Nelson 2013; FAO 2009; Öborn et al. 2011). According to Horizon 2020 (European Commission 2011) and the UN's sustainable development goals (Griggs et al. 2013; United Nations 2015), food security and sustainable agriculture are priority areas for research and innovation-related activities. Further, Dobermann and Nelson (2013, 2), based on recently reported discussions with relevant stakeholders, conclude: 'The world's agriculture and food systems must become more productive, more resource-efficient, more resilient, and less wasteful'.

For more than two hundred years, there has been a tradition in Sweden for farmers to acquire advice from agricultural advisory organizations, partly financed by funds from the government. However, those advisory organizations traditionally focus production and natural science, which is seen as a barrier to sustainable development of Swedish agriculture (Cederholm Björklund 2018). To support and promote rural enterprise, the national Department of Agriculture in Sweden requires greater knowledge about strategic development, growth, networks and management linked to the countryside and to rural businesses, both at corporate and individual levels (Jordbruksverket 2006).

Moreover, the trend in Swedish agriculture is towards decreased production with fewer farms and fewer employees (Jordbruksverket 2017). The surviving farms are larger units with more staff, new standards and requirements and a greater need for effective leadership (OECD 2004). Farmers, however, often see themselves more as producers and suppliers than as entrepreneurs and leaders (Ståhl et al. 2016; Vesala, Peuro, and McElwee 2007). Therefore, farmers need leadership skills that support growth in the agricultural sector through innovation and industry networking (Carter 2001; Ulvenblad et al. 2012). This is the background to the development of the programme described in this article.

Previous research shows that several countries have developed leadership programmes for agricultural entrepreneurs. For example, Australia, Canada, the United States, and New Zealand have developed strategies for leadership development for the agricultural sector (Brosnan 2014). Although these programmes to a certain extent address the following five emotional intelligence (EI) characteristics of self-leadership, that Goleman (2004) describes: self-awareness, self-regulation, social skill, empathy and motivation, their focus is primarily on the leadership of followers. However, agricultural entrepreneurs also need self-leadership skills and strategies (D'Intino et al. 2007; Houghton, Dawley, and DiLiello 2012a; Manz 1986; Manz and Neck 2013; Neck et al. 1999; Neck and Houghton 2006).

Further, agricultural entrepreneurs seem to lack familiarity with the concept of self-leadership. Some studies show that self-leadership must be explained to participants in leadership development programmes (Brosnan 2014; Ulvenblad et al. 2012). This means that self-leadership should be introduced early in leadership development programmes, already on undergraduate level.

However, much of the academic leadership education on undergraduate level is designed with a focus on course curricula, learning/teaching formats and available jobs

(Morgan et al. 2013). As a result, this education takes a traditional approach to the concept of leadership that is based in how to lead others – instead of how to lead oneself.

Thus, a greater focus is needed on leadership development for agricultural entrepreneurs so that they can better manage larger units as well as identify and implement innovative ways to create, deliver and capture value in this rapidly changing agricultural environment. This article also addresses the deficiency in leadership education for practicing agricultural entrepreneurs, with its focus on self-leadership practices in a leadership development programme designed specifically for agricultural entrepreneurs.

The article is structured as follows. We present the article's frame of reference next with general descriptions of leadership development and education for agricultural entrepreneurs. We then describe our research methodology followed by a presentation of our findings related to the five-phase process of the leadership development programme. Finally, we present our conclusions, describe practical implications of the programme and offer suggestions for future research.

Leadership development and education for agricultural entrepreneurs

The leadership development programme described in this article is based on three levels of leadership: (i) self-leadership, (ii) leadership of employees and (iii) leadership in business. We focus on the first two levels in this article.

Self-leadership or leading oneself (Manz 1986; Manz and Neck 2013) involves strategies for both thought patterns and behaviours that link to the development of emotional intelligence (EI), defined as the ability to view, understand and control the emotions of oneself and of others (Joseph and Newman 2010). EI is often explained by dividing the concept into the following four dimensions: (1) how to perceive emotions, (2) how to use emotions, (3) how to understand emotions and (4) how to manage emotions (Mayer and Salovey 1997). Neck and Houghton (2006, 270) define self-leadership as 'a process through which individuals control their own behaviour, influencing and leading themselves through the use of specific sets of behavioural and cognitive strategies'. In this process, the fundamental assumption of self-leadership is that it is easier to lead others and to lead your business if you can successfully lead yourself. Houghton et al. (2012b) suggest that exposure to emotional regulation and learning self-leadership strategies should be taught in management education for various reasons, including the need to increase leaders' ability to manage stress. Goleman (2004) further emphasizes that EI can be learned by understanding and training the limbic system by, for example, motivation and feedback.

The traditional perspective on leadership envisions the leader as an individual who commands and inspires others (typically, subordinates). Leadership of others, and thus leadership of businesses, is more generally discussed in the context of achieving organizational goals (Yukl 2012; Yukl, Gordon, and Taber 2002). Leadership of others can also refer to different leadership styles such as a participatory leadership style (Hersey and Blanchard 1969; Kanape-Willingshofer and Bergner 2014) or a transformational leadership style (Bass 1990; Bass et al. 2003; Stewart 2006).

Self-leadership, by contrast, has been less researched, both conceptually and empirically (Neck and Houghton 2006) and emotional self-leadership has received little attention (Manz et al. 2016). This gap is evident in entrepreneurship studies even though the entrepreneur is often viewed as 'the innovative self', a concept derived from Schumpeter's work



Figure 1. The art of leading myself, my employees and my business (Ulvenblad et al. 2012).

(Betta, Jones, and Latham 2010). The leadership research is deficient on leaders' (e.g. agricultural entrepreneurs) need to learn to lead themselves in various situations, especially in their interactions with others (D'Intino et al. 2007; Houghton, Dawley, and DiLiello 2012a; Neck et al. 1999).

This article assumes that leadership is a process that occurs in the nexus of the leader, the employee and the situation (Hughes, Ginnett, and Curphy 2008). Further, the need for balance is emphasized among the three elements (Ulvenblad et al. 2012). See Figure 1. Without balance, the agricultural entrepreneur may easily fail.

Research methodology

The article's empirical data come from the analysis of a leadership development programme for agricultural entrepreneurs in Sweden (LP1 and LP2). The programme, which began in the Spring of 2011, was inspired by the profitability and survival problems experienced by various dairy farms in Sweden. The authors of this article, who followed the entire programme from its beginning, conducted a formative evaluation of the programme's design methodology (Nieveen and Folmer 2013). Our overall goal was to apply the learning outcomes from this evaluation to the programme's five-phase process of leadership development. The five phases are the following: (i) *pre-phase*, (ii) *education concept development*, (iii) *concept consolidation*, (iv) *diploma and education practice* and (v) *diffusion and knowledge transfer*.

The first phase – the *pre-phase* – began with discussions in a steering group of agricultural entrepreneurs and agricultural advisors. Next, in the Autumn of 2011, using our semi-structured interview guide, we conducted interviews with various agricultural entrepreneurs and employees at nine dairy farms. We developed this guide jointly with two agricultural advisors. After the steering group consisting of agricultural entrepreneurs, agricultural advisors and researchers gave us feedback on the first version of the guide, we developed a revised version. We selected the interviewees using a list of Swedish farms compiled by national advisory organizations that provided various data on farm ownership structure, legal business form, number of employees, and business history. We selected interviewees at farms that had between 2 and 20 employees and had operated between 4 and 30 years.

We had two main aims in the interviews. The first aim was to explore the interviewees' concerns about the lack of leadership skills and competences in farm management. A better understanding of these concerns could lead to improvements in leadership development programmes. The second aim was to collect examples of challenges and problems that could be presented as practical learning examples in a book. The semi-structured interviews focused on the three leadership levels identified above: (i) self-leadership, (ii) leadership of employees and (iii) leadership of business and were conducted by three of the four authors (Anna Wall, Jennie Cederholm and Erland Hedin) to the book *Ledarpraktikan (Leadership Practice)* (Ulvenblad et al. 2012). We transcribed and analysed the interviews using content analysis. Comparisons of similarities and differences in the interview data were made, and text elements were categorized by themes. We used our analysis of these themes to increase the understanding of the perceptions of challenges and problems that was experienced at the nine farms. In the analysis we highlighted patterns in lack of leadership skills and competencies in farm management. Contributions and learning from this first phase were the identification of problems, challenges and lack of skills in the three leadership levels identified in the Introduction [(i) self-leadership, (ii) leadership of employees and (iii) leadership in business].

The second phase – *education concept development* – featured interviews with a group of eight people from both practice and academia. Two group meetings were held in 2011 and 2012. These meetings were planned as 'focus group'² interviews in which we asked questions related to the three leadership levels. Our aims in these interviews were to capture participants' perceptions about the content and structure of the education concept development and to obtain feedback on the text of the book planned for publication (Ulvenblad et al. 2012). We gave this text to members of the focus groups before the meetings, which were attended by the book's four authors. One author moderated the meetings while the other authors took notes.

These focus group interviews each lasted about three hours. The author-moderator worked actively to obtain responses from the entire group so as to ensure the best coverage of each discussion topic and to avoid the inherent disadvantages of focus group interviews such as group think and dominance by strong individuals (Fontana and Frey 1994; Hines 2000). Similarities and differences in perceptions on the book text were identified. The discussions also addressed possible inclusion/exclusion of content in the book and in leadership education programmes. Based on these discussions, the book's authors reached a final decision on book content including which theories to include and how to illustrate the text. Contributions and learning from this second phase were the identification of important theories that should be included in the book as well as clarification of how to illustrate the text material to achieve the best learning outcome for the target groups; agricultural advisors and agricultural entrepreneurs.

This second phase culminated in

- the completion of the book *Ledarpraktikan (Leadership Practice)* (Ulvenblad et al. 2012),
- the two advisor education programmes (Autumn of 2012 to Spring of 2013, and Autumn of 2015 to Spring of 2016), and
- the agricultural entrepreneur education programme (Spring 2013, and on-going).

The third phase – *concept consolidation* – focused on an evaluation of the leadership development programme using interviews with the participating actors. This phase was conducted in the following two steps:

Step 1/ This step was conducted in the Spring and Autumn of 2015. The first aim of this step was to examine how the education concept in focus – enhanced leadership competence – can influence and facilitate sustainable business model innovation in the agricultural sector. The second aim was to obtain feedback that would consolidate the concept and thereby lead to greater industry relevance. Data were collected from 24 interviews with the book's authors, the steering group, the agricultural advisors (who had participated in the first education programme (*LPI*) on educating and coaching agricultural entrepreneurs), and various agricultural entrepreneurs from different production areas. These entrepreneurs worked in areas related to the production of milk, various crops, meat and poultry.

The interview questions in this step related to business models, self-leadership and the education process. Each interview, which lasted about 20 to 30 minutes, was audio-recorded. The interviews were planned by the authors of this article together with two research colleagues (Jenny Ståhl and Per-Ola Ulvenblad). The two research colleagues also conducted the interviews and analysed them using content analysis (Ståhl et al. 2016). Similarities and differences in the interview data were analysed and categorized by themes. Our two research colleagues also observed the leadership education in practice for agricultural entrepreneurs using an interactive research approach (Aagaard Nielsen and Svensson 2006).

The learning outcomes from these interviews and the observations were three-fold. First, we learned about the agricultural firms' development of leadership skills and their business models. Second, we learned more about the process of the education concept development. Third, we learned that the education programme teachers required coaching instruction. These learning outcomes revealed the importance of committed teachers who could create a dynamic learning climate in the classroom and during classroom breaks.

Step 2/ This step was conducted in the Spring of 2015. Its aim was to increase our learning about the new education programme (*LP2*) that was scheduled to begin in the Autumn of 2015. One researcher (Jenny Ståhl) conducted telephone interviews with the agricultural advisors who had participated in the first education programme (*LPI*) in the Spring of 2015. The interviews, which followed a semi-structured guide, lasted for approximately 30 minutes (Ståhl 2015). We analysed and compared the interview content in order to use it in the education programme for the agricultural entrepreneurs.

We describe the fourth phase – *diploma and education practice* – and the fifth phase – *diffusion and knowledge transfer* – in the next section. Our specific findings about leadership development programmes stem from these two phases. The authors of this article conducted both of these final phases.

Findings

The process – a leadership development programme

In this section, we present our findings from our analysis and evaluation of the leadership development programme for agricultural entrepreneurs in Sweden – *Ledarpraktikan* (*Leadership Practice*). Our presentation follows the five phases in the leadership development



Figure 2. The leadership development programme – three levels.

programme: (i) *pre-phase*, (ii) *education concept development*, (iii) *concept consolidation*, (iv) *diploma and education practice* and (v) *diffusion and knowledge transfer*. Our presentation is also based on the three leadership levels: (i) self-leadership, (ii) leadership of employees and (iii) leadership in business (with emphasis on the first two levels. See Figure 2.

Pre-phase – images from nine dairy farms in Sweden

The agricultural entrepreneurs described their views on effective leadership in different ways. Many of them said they needed greater role security and better employee communication skills. They also said they sometimes were reluctant to delegate authority to their employees. Further, they commented that while ‘growth’ in the dairy industry typically implies an increase in the number of dairy cows, growth also means more employees are employed (or are needed). As the number of employees increase, the need for improved communications between leaders and employees also increases.

Working with his father, wife and a few employees, *Alan* has operated a farm for many years. The farm produces milk, beef, and pork. He thinks that milk production is a much more complex operation than many other areas at the farm. While he is interested in the areas of leadership and management, he recognizes these areas take time to learn. He understands that the many challenges in farm management today require skills other than farming skills. Alan says:

Everything will not be done in your own way ... but as we grow, I realise that I can't be everywhere doing everything. So, I have to trust others.

Bob and his brother *Bill* have operated their dairy farm since the late 1980s when they took it over from their parents. They have six employees. Bob and Bill formed a partnership with colleagues in the industry for self-processing their farm products. When they sold most of the processing part of the company, they retained a small ownership percentage. Both men are interested in issues related to leadership and farm management. Bob says that it is important to take a ‘helicopter view’ of the operations so you don’t become bogged down in details.

Carl operates a dairy farm with over 300 cows. He took over the farm from his parents in the early 1990s. Since then, the company has grown both in terms of annual turnover and in number of employees. He has two roles: as the farm manager and as a farm worker. He admits a difficulty arises in supervising production when one is not ‘present’ everywhere. As far as self-leadership, he says you need time to reflect. However, when a business is growing rapidly, such time is very limited. Carl says:

All of a sudden, the company was so big that I did not really have control. When I learn things every day, I understand that I have to reflect. But finding the time is the problem.

After farming with his brother for some years, *David* now operates the farm alone. At one point he came to a crossroads: 'liquidate or develop'. Since his decision to develop, he has had no regrets. Today he owns and manages a large and diversified company so that business is not dependent only on milk production. He is the CEO and its overall manager. *Diana* and *Dick* are middle managers at the farm. Dick points to the importance of open dialogue although such communications are not always easy. Diana thinks it is important to act as a role model, which includes helping with the less attractive tasks. Diana says:

It is all even faster when one is two. The desire to help is also spread in the business, and suddenly there is no "dirty work".

Eric and *Eve* operated their milk production farms separately for many years. Because their farms were quite close geographically, they decided to form a limited company and operate it together. They now employ five permanent employees and, when necessary, use the care-taking system (*avbytarssystem* in Swedish) in which temporary employees are employed. Eve says that it is really motivating to work with the employees as she tries to create well-functioning teams. Because the interaction with the employees is very important to her, she understands the need for leadership skills.

Fabian and his wife bought their farm 30 years ago. The purchase was the realization of a long-held dream to own a business. Their daughter *Fia* has studied agriculture and is gradually growing into the role of a farm manager. She hopes eventually to take over the farm. The farm is run as a private firm with ten employees. Fabian's employees want to understand more about the farm's financial results so that they can be more involved in its operations. He thinks a lot about how to do this, although he expresses a certain concern that people will talk too openly about the farm's results. He is worried about possible misunderstandings if the employees do not fully understand the figures. He also finds it difficult to change employee behaviour and to give employee feedback in a relevant way.

George and *Gilbert* are old friends and neighbours. Separately, each operated a farm (inherited several years ago) until they joined to form a limited company. Their wives and another employee work at the company. They also hire contractors for certain jobs, as needed. George has the title of CEO although, in practice, he shares this leadership role with Gilbert. George says:

When we formed the limited company, someone had to be the CEO on paper. Although none of us was interested in the position, we needed a name, so it had to be me. I don't feel like a leader. I discuss everything with Gilbert and we share the leadership role.

Both men struggle somewhat with maintaining communications at a professional, formal level given that the company employs family members. With his many years of experience, George has learnt that a leader doesn't need to know everything. He states, however, that he has some problems as far as the delegation of work tasks. George says:

I'm afraid of conflicts ..., and I'm a workaholic. I would rather do a job myself, which can cause irritation.

Harry has worked with growth plans from the very early years of his farm's existence. Over the years he acquired more land and buildings, and today he has several hundred dairy cows. The farm is now a limited company with more than 20 employees. He thinks a lot about good leadership, especially when employees do not follow the rules. Referring to confrontations with employees, Harry says:

It's not easy to tell them they're making a mistake. Should I do it in front of everyone, or make a solo presentation?

Before *Ian* and *Ilse* took over their farm, Ian was responsible for its operations for quite a long time. Together they have acquired new buildings, use more agricultural robots, and employ several people. They also employ temporary people during the harvest season. Thus, as the company grows, Ian and Ilse recognize they need more leadership skills as they define their goals and visions for their everyday work. Until now, their focus has been more on the requirements of the increased production activities. That focus is changing. Ian says:

Yes, that's right. I'm in fact the leader of my staff now ... somehow, I have to create management time now. It does not work if I work in production all the time.

In summary, the interviews with the agricultural entrepreneurs at the nine dairy farms reveal that the owners need and desire more leadership skills. Although they don't explicitly discuss self-leadership as a concept, they understand they need to change how they think and act as far as leading their companies. They also think they need to improve their interaction skills with the employees in terms of improved communications and work delegation. They want help with leadership skills when changing and developing their businesses – leadership skills both for themselves and for their employees. In addition, they need help with time management, work delegation, thought/behaviour patterns, and conflict resolution.

Education concept development

The education concept development involves (i) the book, (ii) advisor education and (iii) agriculture entrepreneur education. This development follows the same three-level structure (see [Figure 2](#)) and concludes with a discussion on the holistic perspective on the three levels.

The book. The outcome of the education concept development was the book *Leader Practice – The art of leading myself, my employees and my business* (*Ledarpraktikan – Konsten att leda Mig själv, Mina medarbetare och Min verksamhet*) (Ulvenblad et al. 2012). The first version of the book, which was published in the Summer of 2012, was used as course material for the first round of advisor education, *LPI*. The revised version of the book, which was published in 2013, was used as course material for the second round of advisor education, *LP2*. See [Figure 3](#).

Feedback on the content and structure of the education development concept acquired in the focus group meetings was used in writing the book. This feedback, which centred on book and programme inclusions/exclusions, led to the identification of important theories that should be included in the book as well as clarification on how to illustrate the book to achieve the best learning outcome for the target groups: agricultural advisors and agricultural entrepreneurs. This feedback was especially relevant with respect to team building and to diversification in employment practices

The advisor education and the agricultural entrepreneur education. The education for the advisors and the education for the agricultural entrepreneurs had the same general structure. See [Figure 4](#). However, there was one main difference. The programme for the



Figure 3. The structure of the book.

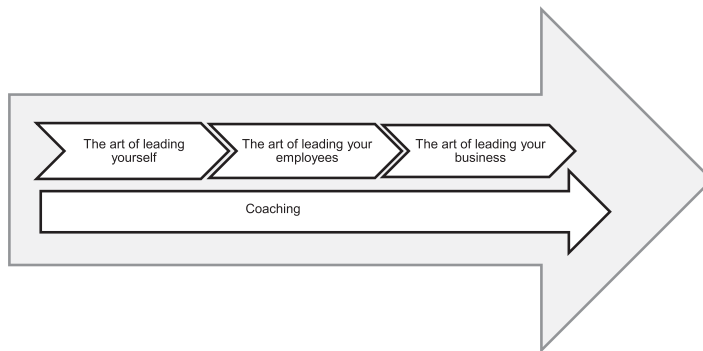


Figure 4. The education concept.

advisors includes education in coaching because they help the entrepreneurs to find solutions to their problems. The advisory role changes from an advisor for entrepreneurs to a coach for entrepreneurs.

We base our ideas on leadership education on the following two assumptions. First, to lead others in a motivated, engaging and effective way, it is essential to be competent at self-leadership. Leaders must be able to lead themselves. Second, it is important to have advisors who are trained in the art of coaching. Competent coaching improves the learning process and makes it easier to implement, for example, strategic business decisions.

Concept consolidation

Concept consolidation involved (i) interviews with the book's authors, the steering group, the agricultural advisors and the agricultural entrepreneurs from the different production areas (e.g. production of milk, crops, meat and poultry) and (ii) interviews with the agricultural advisors who participated in the first round of education (*LPI*).

Evaluation Step 1. The aim of this step was two-fold. The first aim was to increase the understanding of how the education development concept, through the enhanced leadership competence it creates, can facilitate and shape sustainable business model innovation in the agricultural sector. The second aim was to generate feedback on the process and its results in order to consolidate the concept by increasing its generalizability as well as its industry relevance.

The results from the interviews with all actors in the process highlight the importance of leadership programmes for agricultural entrepreneurs. Further, the interviews with the entrepreneurs (Ståhl et al. 2016) led to the following conclusions:

- The entrepreneurs think they have a better understanding of and more knowledge about how the soft values (e.g. communication competence) in an organization affect its results.
- Several entrepreneurs emphasize that you cannot lead others without knowing your own views on the relevant issues and problems.
- While the entrepreneurs know they must lead their employees, they are very aware that good leadership also means leading yourself.
- The entrepreneurs want to improve their leadership skills although they know they require training and support if they are to prioritize such strategic work.

The following comments are representative of the entrepreneurs' thinking after they had completed the course:

I think in a completely different way now. When I face a situation in which I notice that we are doing the wrong thing, I no longer allow myself to jump into the situation. I stop and think the problem through so that I can develop better solutions. I strive to jointly discuss how we want things to be with a particular problem. The employees see that I have changed.

After the course, I definitely changed my way of working. I have become better at listening – at understanding the perceptions of others. I don't take first things first anymore. Instead I wait until I feel that everyone is ready. Then you have a way to work around the initial reluctance to change. Before it was a lot more bang on. I was very blunt, and it was not always productive

Ståhl et al. (2016, 1) concluded in their article on leadership development and sustainable business model innovation:

[The] results of the study indicate that the entrepreneurs are well aware of the problems that the sector is facing and that education can be an important part of their long-term survival strategy. They have a will to change but they need help and education to prioritize strategic work and to develop their business models, since they all experience lack of time. Historically, traditional advisory services have been used in the agricultural sector. However, in this education program, the main focus has been on coaching rather than advisory. The results show that this has been a successful way of education; the agricultural entrepreneurs have started to change their mind-set which creates opportunities to sustainable business model innovation.

In summary, the agricultural entrepreneurs need to continue working on the development of self-leadership and leadership skills. They also require greater knowledge of thought/behaviour patterns and personal development, combined with improved communication skills.

Evaluation Step 2. The aim of this step was to add value to the new advisor education programme (LP2) that was scheduled to begin in the Autumn of 2015. Therefore, interviews were conducted with the agricultural advisors who had participated in the first advisor education programme (LPI).

The results from the interviews indicated consolidation of concept by the use of regular meetings for the advisors/coaches was needed. The advisors/coaches also required regular competence development. The conclusions from this evaluation step were the following:

- Coaching competence is essential.
- Advisor/coach education should follow the same structure as entrepreneur education.
- The book structure should be followed.
- In *LPI*, the balanced scorecard was not included. It is important to include all elements in the education.
- It is important to use professional images in all aspects of the education.
- It is important that practices relate to theories; otherwise, it is difficult to understand and apply theories.

Diploma and education practice

Based on the evaluations of the education development concept, the new education advisor programme (*LP2*) was held. Important feedback was used in this segment. An individual with a Master's degree in Psychology and who works at the Swedish Defence University was employed for the coaching elements of the programme. The individual was a very effective educator/coach.

Each advisor made an interactive presentation of one of the three leadership levels at the diploma presentation: (i) self-leadership, (ii) leadership of employees and (iii) leadership in business. These presentations lasted approximately two hours. A reflective feedback discussion with all participants was held after each presentation.

The results from the diploma presentation showed how important it was for the advisors to present elements of the education development concept as though it were a lesson or lecture useful for actual practice. The advisors thought this was the most relevant aspect of the leadership development programme. They emphasized the importance of using their own experiences in the programme. They also welcomed the feedback they received because of its value for the future work with agriculture entrepreneur education.

Diffusion and knowledge transfer

The diffusion and knowledge transfer in this leadership development programme took different paths.

First, 375 copies of the book on leadership were given to relevant actors in the agricultural sector. Grants from the Board of Agriculture, Sweden (*Jordbruksverket*) financed this book distribution. Second, a research project for evaluation of the programme was financed by grants from the Knowledge Foundation, Sweden (KK-stiftelsen) and several agricultural organizations (The Rural Economy and Agricultural Society in Halland and Östergötland, LRF Consultants, Advisors in Sjuhärad, TOBO Solution and VÄXA Sweden). The research project, with its focus on developing business models in the agricultural sector and in Swedish food production (Ulvenblad et al. 2014), advanced the diffusion and knowledge transfer of its results, both nationally and internationally.

Through the leadership development programme, we learned that the agricultural entrepreneurs, as well as the former advisors, need coaching skills. However, coaching elements for the entrepreneurs were not included in the original programme. Therefore, the authors' affiliated university, working with the agricultural advisory organizations, participating agricultural entrepreneurs and agricultural advisors, developed an education programme for a diverse audience. The aim of this collaboration was to develop a

university course titled 'Coaching and Self-leadership', to be first offered in Autumn of 2017 and Spring 2018. The course is planned to continue to be offered in the university curriculum.

Discussion

Previous research has shown that some countries have developed leadership programmes for practicing agricultural entrepreneurs (Brosnan 2014). Although these programmes may include aspects of self-leadership in terms of Goleman's (2004) characteristics of EI, their focus is mainly on the leadership of followers. Developing and teaching self-leadership in such programmes has received less attention. The results from this leadership development programme for the agricultural sector in Sweden show the importance of developing EI competences as well as self-leadership strategies and coaching skills, both for the agricultural entrepreneurs and for the former advisers.

The initial interviews, conducted in the *pre-phase* of the leadership development programme, revealed that the agricultural entrepreneurs were interested in developing their leadership skills. They also stated that they wanted to improve their interactions with employees by improving their competences in the areas of communication and work delegation. Further, they stated they understood the need to change how they thought and acted in exercising leadership of their companies.

Although the agricultural entrepreneurs did not refer explicitly to the concept of self-leadership, they implied that they wished to change their way of reflecting on their behaviour, on increasing their self-awareness and awareness of others, and on thinking about and interacting with their employees. Self-leadership requires the use of special strategies for thought patterns and for behaviours (Manz 1986; Manz and Neck 2013). We identified self-leadership as a crucial element in the leadership development programme. As Ståhl et al. (2016) emphasize, people cannot lead others unless they have a clear view of the issues and problems that are likely to arise in dealing with their employees. This study shows that, in addition to the traditional leadership skills that many leadership development programmes teach, such programmes also should emphasize self-leadership. For example, as several authors have argued, the importance of self-leadership can be related to various leadership or communication styles (Bass et al. 2003; Kanape-Willingshofer and Bergner 2014; Stewart 2006). The evaluation prepared by Ståhl et al. (2016) revealed the positive effects of this including self-leadership in the programme. For example, after completing the programme, the agricultural entrepreneurs stated that they had a much better understanding of how soft values can influence an organization's results.

Conclusions, implications and suggestions for future research

The principal findings from this research are three-fold. First, agricultural entrepreneurs (and possibly new entrepreneurs in other sectors) benefit from leadership development programmes in which the concept and practice of EI and self-leadership are emphasized. Second, such programmes are more valuable to participants if other actors (e.g. academics and advisors) are participants. Third, coaches are useful as support for the programmes' participants.

An implication of this study is that by working with diffusion and knowledge transfer, advisors and entrepreneurs in the agricultural sector can enhance leadership competences in the industry. Role transformation (e.g. advisor to coach) can also enhance the transfer of such leadership competences.

Since governmental policymakers require greater knowledge about strategic development and management in rural businesses (Jordbruksverket 2006), the findings from this study may have immediate practical applications, not only for Swedish policymakers but also for policymakers in northern Europe where the conditions for agricultural entrepreneurship are similar to the conditions in Sweden.

A suggestion for future research is to investigate the inclusion of an EI and self-leadership module in leadership development programmes for other industrial sectors and for not-for-profit sectors. Such research could begin with interviews (as described in this article's pre-phase) in order to determine participants' opinions and needs related to the practice of effective leadership. It would also be relevant to implement the programme in other countries in northern Europe, adjust it to country-specific conditions, and continue the research on the learning outcomes.

Notes

1. "LP" is the abbreviation for *Ledarpraktikan* (in English, Leadership Practice).
2. Focus group interviews have often been used in marketing research to collect consumer attitudes on products, etc. (Fontana and Frey 1994). They have also been used successfully in other research areas such as entrepreneurship and small business (Blackburn and Stokes 2000; Hines 2000; Sexton et al. 1997).

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Farming beyond food: Effect of embeddedness and governance structures on farmers' role in rural development

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Abstract

This article contributes to the debate on entrepreneurs' role in societies as well as the consequences of rural embeddedness and engagement, or the role of farmers in rural development and entrepreneurship. A contextualized view of farmers embedded—both spatially and positionally—in the entrepreneurial ecosystems is applied. The study, based on interviews with 24 farmers, 6 observations, and 8 interviews with actors within the agricultural support system, uses the Gioia methodology for analysis, thus enabling inductive theorizing. We find that farmers' multifunctional role and their impact on societal development are central to understanding farmers' entrepreneurial endeavours as well as their engagement in the entrepreneurial ecosystem. Hence, this article discusses farmers' embeddedness in rural society and development processes. It highlights the multifunctional role of farmers in society, which we argue make them enablers for rural development, an important role that has been overlooked in both entrepreneurship research and policy work.

Keywords: farmers, entrepreneurship, rural development, embeddedness, agriculture

Introduction

'Farming is not just about food. It is about rural communities and the people who live in them. It is about our countryside and its precious natural resources.' (The EU's Common Agricultural Policy; see EU, 2017, p. 4)

Agricultural entrepreneurship is a rapidly emerging domain both in entrepreneurship research and practice. The farming sector provides 20 million jobs in the EU, making it of vital importance to society. However, recent trends exhibit a steady decrease in the numbers of farms, agricultural entrepreneurs, and people employed in

the industry (McManus et al., 2012; OECD, 2018). Both the production value and the net entrepreneurial income decreased between 2017 and 2018 by around 3.5% and 65%, respectively. These numbers clearly reinstate the centrality of farmers to the economy, but also a worrying trend—for society in general and rural society in particular. Notably, despite the importance of rural economy, mainstream entrepreneurship research has largely overlooked the agricultural sector (Carter, 1998; Fitz-Koch et al., 2018; Dias, Rodrigues, and Ferreira, 2019). Though the agricultural sector has fully welcomed entrepreneurship, scholars working primarily in business schools have yet to fully address this sector's challenges and opportunities. Thus, agricultural entrepreneurship and rural development fall outside their conventional scope of work (Mehlhorn et al., 2015).

Nevertheless, there exists a long, rich history of research on agriculture and agricultural business (Schultz, 1956, 1961) that is primarily linked to agricultural economics and rural sociology (Fitz-Koch et al., 2018; Flora and Flora, 1990, 1993; Emery and Flora, 2006). Indeed, early studies were dominantly focussed on production and efficiency (Niska, Vesala, and Vesala, 2012) as well as entrepreneurship that was a foundation for the development and survival of rural and regional communities (Fortunato, 2014; Mehlhorn et al., 2015).

The extant literature has already established that agriculture is crucial to the countryside (Alsos, Carter, and Ljunggren, 2014) for obvious geographical and topographical reasons. Further, the use of the country has been important in shaping many rural areas (Mitchell, 1998). Despite this, only a limited number of studies have covered agricultural entrepreneurship—Even when they do focus on this subject, farmers are often seen to be engaged in 'the practice of cultivating the soil, growing crops and raising livestock as the main source of income' (Vesala, Peura, and McElwee, 2007, p. 51). Agricultural production has been considered relatively homogeneous and isolated from the environment wherein entrepreneurship activities occur (Goodman, 2003). Farmers are typically excluded from the analyses of rural entrepreneurship and development of rural societies despite their deep embeddedness in such societies (Carter, 1998; Dias, Rodrigues, and Ferreira, 2019; Seuneke, Lans, and Wiskerke, 2013). There is increasing interest in the rural context of entrepreneurial activities as well as the processes and outcomes thereof (McKeever, Anderson, and Jack, 2014; Müller and Korsgaard, 2018; Welter, 2011; Zahra, 2007), with special focus on entrepreneurship skills (Phelan and Sharpley, 2011; Vesala and Jarkko, 2008). However, our work answers the scholarly call for more research in agricultural entrepreneurship *beyond* entrepreneurial skills (Alsos, Carter, and Ljunggren, 2014) and towards building knowledge on farmers' embeddedness in society—that is, rural entrepreneurship rooted in the context of a larger socioeconomic process (Jack and Anderson, 2002) than as an isolated phenomenon.

To our knowledge, there are no rigorous studies on the embeddedness of farmers in rural society. The rural entrepreneurial ecosystem still needs to be demystified to fully grasp how the local rural context effects and is affected by entrepreneurship (McKeever, Anderson, and Jack, 2014). Studies do suggest the implications of rural development by farmers, but, yet again, contextual embeddedness is neglected (McManus et al., 2012). Thus, there exists a challenge in understanding how embeddedness integrates with entrepreneurship and place as well as in unravelling the social value of entrepreneurs to society (Korsgaard, Ferguson, and Gaddefors, 2015). We argue for a deeper understanding of entrepreneurship as an engine of socioeconomic rural development. In line, we seek to clarify the factors that enable and constrain this development (Labrianidis, 2006; Korsgaard, Ferguson, and Gaddefors, 2015) within

different contexts and entrepreneurial activities (Korsgaard, Ferguson, and Gaddefors, 2015). We wish to explore how myriad ‘actors’ and ‘forces’ affect the entrepreneurial ecosystem through cultural and social interactions (Acs et al., 2017), and, thus, how cultures affect the relationship between entrepreneurship and regional, or local, development (Huggins and Thompson, 2014).

To address research gaps, we expand our understanding of contextual peculiarities in entrepreneurship—that is, peculiarities that aim to meet rural challenges. We thus answer the research questions ‘How is agricultural entrepreneurship embedded in development of sustainable rural societies?’ We accordingly examine the role of farmers in this development process, allowing us to focus on factors and forces that affect farmers’ cognitions and decision-making thereof.

Our findings show that farmers’ endeavours are socially situated in rural collective practice. Their activities are deeply embedded in local rural culture, which affects the sustainability of their society. Farmers hold different roles in rural society; *create* and *re-create* embeddedness within that context; serve as enablers for rural entrepreneurship by providing resources and services; create value for society; and ensure long-term sustainability. Further, farmers support traditional entrepreneurs and, thus, support public interest. More specifically, in the context of the regions examined herein, they keep their landscapes open, maintain a soccer field, maintain the streets with snowploughs, bestow graduated students with tractors and trolleys for traditional celebration, and provide resources during societal crises, such as wildfires. The locus of embeddedness is directed towards multiple layers—for example, embedded rural businesses, embedded members of the rural community, and associations in the rural community. On the other hand, we may also find a state of ‘dis-embeddedness’ of rural business, wherein agricultural entrepreneurs may become gatekeepers. Our findings highlight the multiple roles and values of farmers. We show the multiplicity of agricultural entrepreneurship, which enables and constrains agricultural and rural entrepreneurship activities.

This article makes at least three important contributions. First, we examine how agricultural entrepreneurship is embedded in rural society and its forms of expression, especially in the pursuit of rural entrepreneurship. Our work adds to the system of knowledge on heterogeneity in entrepreneurship and how structural factors affect micro-level processes (Welter, 2011).

Second, we contribute to entrepreneurship theorizing: We specifically outline social and institutional influences by identifying mechanisms and consequences of farming entrepreneurs’ means to engage with the spatial context at both the business and regional level (Zahra, 2007; Müller and Korsgaard, 2018; Welter, 2011; Welter, Baker, and Wirsching, 2019).

Third, we contribute to policymaking by providing knowledge on the multifunctional role of farmers as enablers in rural society and, thus, actors who assure sustainability. We also enlighten the role of embeddedness for farmers as well as their activities and endeavours for becoming sustainable entrepreneurs. Through this study, we enrich the knowledge on values that arise from embeddedness and on social obligations that might turn into costs and burdens. This is an area often ignored in policy work, possibly due to the lack of sufficient research and competencies of policymakers (McKeever, Anderson, and Jack, 2014; OECD, 2018; Tunberg, 2014).

The remaining paper is organized as follows. First, we provide a brief overview of agricultural entrepreneurship. Second, we outline the perspective of embeddedness of agricultural entrepreneurship in rural societies. Third, we theorize about the structural embeddedness of agricultural entrepreneurship, values provided through the

embeddedness, and how such embeddedness may affect the entrepreneurship activities and endeavours. Finally, we discuss the implications of the study and suggest future research in the area of embeddedness, agricultural entrepreneurship, and rural development.

Framework of Rural Embeddedness in Agricultural Entrepreneurship

Agricultural Entrepreneurship and Embeddedness

Research on farmers has typically focussed on policy, individual farmers, or farmers' role in the value chain of the food industry (Dias, Rodrigues, and Ferreira, 2019; Fitz-Koch et al., 2018). There is a preoccupation with multiple businesses and activities carried out by farmers as well as farmers as multi-entrepreneurs who combine farming with other types of businesses such as tourism (Carter, 1998; Vesala, Peura, and McElwee, 2007; Vesala and Jarkko, 2008). We go beyond this view to examine the farmer as a multifaceted actor embedded in the rural entrepreneurial ecosystem and, thus, playing a central role in this society.

Rural development can be understood from the perspective of geographical and social/cultural situations—that is, *entrepreneurship in the rural and rural entrepreneurship* (Korsgaard, Müller, and Tanvig, 2015).

The literature typically outlines two core groups of rural-operated entrepreneurial ventures: 1) those with financial motives who find rural entrepreneurship economical advantageous, but largely without any emotional or cultural connection to the countryside and, thus, possess limited embeddedness. These entrepreneurs may also move from the rural area, for example, due to financial incentives. 2) The second venture is operated by those dominated by social motives. They are embedded in a heritage of cultural and emotional bonds to the region and its inhabitants. The first group establishes ventures for particularly economic motives, whereas the second remain in the region due to social motives. In the second type of venture, entrepreneurs do not easily move from the rural area, because of their cultural and emotional embeddedness. We assume that farmers are included in *rural entrepreneurship*, where the rural context and agricultural entrepreneurship have a mutually effect. Furthermore, the farmer's incentives go beyond mere economic incentives (Cederholm Björklund, 2018; Hansson et al., 2013; Vik and McElwee, 2011; Goodman, 2003). We argue in line with Welter (2011, p. 176) that 'a contextualized view on entrepreneurship can add to our knowledge of when, how, and why entrepreneurship happens'. As such, the context is outlined as 'a multiplex phenomenon, which cuts across levels of analysis and influences entrepreneurship directly or indirectly, but which also is influenced by entrepreneurial activities'.

The concept of embeddedness explains the connection between social, economic, and local institutional contexts (McKeever, Jack, and Anderson, 2015), namely, the relationship between the individual entrepreneur and society (Granovetter, 1985; Jack and Anderson, 2002). It considers the entrepreneur's participation in the social context through ongoing social relations, networks, and deeper bonds (Anderson and Gaddefors, 2016; Granovetter, 1985; Jack and Anderson, 2002; Korsgaard, Müller, and Tanvig, 2015; McKeever, Jack, and Anderson, 2015; McManus et al., 2012). Rural communities are characterized as tightly knit groups of people who have a common culture characterized by trust and helpfulness (Steinerowski and Steinerowska-Streb, 2012). Culture can be described as the way people behave, often as a result of previous experiences, as well as a sense of belonging. It relates to shared systems of meaning

(Hofstede, 1984). Embeddedness includes individuals, organizations, culture, and social contexts. Culture may thus connect economic performance with societal sustainability and well-being (Huggins and Thompson, 2014; Johnstone and Lionais, 2004).

The degree of the relationship, or its embeddedness, governs the social ties among entrepreneurs in a society. Embeddedness varies from a 'deeply embedded relationship' to arm's length and general relationships. It could also be understood as 'embedded' to 'dis-embedded'. The internal structures within which the community and actors function, and how this affects motives, expectations, and activities, form the context of embedded entrepreneurship (Dacin, Ventresca, and Beal 1999; Uzzi and Gillespie 1999; Uzzi and Lancaster 2003).

'Place' and 'space' represent two aspects of spatial context. Space constitutes only the economic attributes of a location, such as capital, labour, and resources, whereas a place is created through meaning and experiences (Johnstone and Lionais, 2004; Korsgaard, Ferguson, and Gaddefors, 2015). When creating opportunities, rural entrepreneurs use both 'placial' embeddedness and non-local networks; they primarily use localized resources before seeking non-local ones (Korsgaard, Ferguson, and Gaddefors, 2015).

Any degree of embeddedness requires a two-way relationship. Only a large network is not enough, but both acceptance and inclusion in the place are necessary (Jack and Anderson, 2002). Emotional attachment to a place can entail non-rational economic decisions; attributes such as inheritance and trademarks of the place can also be seen as resources (Anderson, 2000; Korsgaard, Ferguson, and Gaddefors, 2015).

Agricultural Entrepreneurship and Value Creation

Relationships and social interactions that arise from rural embeddedness may provide access to otherwise inaccessible resources in the community (Adler and Kwon, 2002; Gedajlovic et al., 2013). Social values involve resources embedded in the networks where social interactions are organized, leading to benefits for both individuals and groups (Brunie, 2009). Embeddedness in a community and place may imply embedded resources and creation of values through networks and social relationships that are advantageous for entrepreneurs (Putnam, 2000). There is a general acceptance of the importance of social values, alongside economic values, for entrepreneurship, but it is not clear how such social values and cultural contexts work in practice and how they relate to entrepreneurship.

Social embeddedness is a means to engage with others, but also to structure interactions. Thus, it serves as an enabler for developing communities. Both economic and social development are part of entrepreneurs' embeddedness in the local community, where culture poses a major challenge (Huggins and Thompson, 2014). In fact, social embeddedness is a critical part of the entrepreneurial process (McKeever, Anderson, and Jack, 2014). Social, spatial, and economic processes are dynamic and interwoven in entrepreneurship, which becomes a *flow of activities* (Anderson and Gaddefors, 2016). Culture affects entrepreneurial activities and cultural embeddedness enables and constrains entrepreneurial action (Greenman, 2013). To achieve regional development, the culture must encourage entrepreneurial behaviour through attitude and action (Müller, 2016). However, culture is considered difficult to change, making it challenging for governments to influence spatial culture.

Depending on the context, social capital can facilitate and limit rural entrepreneurs. Though rural embeddedness and networks of relationships may provide opportunities for entrepreneurs to create, use, and maintain social capital, they also

affect how entrepreneurs perceive opportunities (Welter, 2011; McKeever, Jack, and Anderson, 2013) and barriers (Johnstone and Lionais, 2004; Müller and Korsgaard, 2017; Welter, 2011). Entrepreneurs use their place embeddedness to create opportunities (Korsgaard, Ferguson, and Gaddefors, 2015), whereby entrepreneurial action may be purposive but not necessarily intentional. To achieve purposefulness, people sometimes create situations by drawing on meanings, rituals, and practices that are taken for granted in the collective culture (Greenman, 2013). Although there is general consensus about the importance of social values for entrepreneurship, there is a debate on how social values work and how they should be understood (Gedajlovic et al., 2013; McKeever et al., 2014). This is particularly true for the case of rural entrepreneurship and embedded farmers.

Method

Context and Theoretical Sample

We seek to build a theory on farmers' embeddedness in development of rural societies. We thus draw on our access to and field experience in agricultural entrepreneurship. The target of our research is Swedish farmers as well as key actors of rural development and agricultural entrepreneurship. We explore entrepreneurship as socially constructed (Anderson and Gaddefors, 2016) and taking place in everyday life. Hence, it is situated within a social context where both entrepreneurs and organizations are embedded (Welter, 2011; Zahra, 2007) and where, for example, social interactions, culture, trust, shared past experiences, history, and mutual understanding affect behaviour (McKeever, Anderson, and Jack, 2014). We selected the sample based on individual engagement—that is, experiences of the phenomenon of theoretical interest, until reaching saturation (Gioia et al., 2012). We noted the farmers' embeddedness when studying their thinking processes and actions during business development as well as how the actors in the support system thought, communicated, and acted when working with rural development.

The study includes interviews with 24 farmers, 6 observations of meetings in the farming community, and 8 interviews with actors within the agricultural support system. The group of farmers interviewed included 24 farmers comprising 3 women and 21 men, all born into the farming occupation from many generations ago. Observations were conducted on six meetings with key actors within agricultural entrepreneurship. These meetings included 450 people: a mix of farmers and other people from agricultural support organizations. Furthermore, eight actors in the agricultural support system comprising two women and six men, with long experiences of working in agricultural entrepreneurship were included.

Data Collection

We collected data from multiple sources to capture multiple perspectives of farming. However, we primarily used five sources: 1) individual interviews with farmers; 2) individual interviews with representatives from agricultural organizations, namely advisory organizations and so-called Rural Economies and Agricultural Societies; 3) group interviews with farmers and representatives; 4) observations on meetings with organizations in the agricultural society; and 5) field notes.

We further developed a semi-structured interview protocol. This approach allows us to collect a considerable amount of data as the interview often flows in the

direction of the interview participant's responses. Initial interviews were used for further refinement of the interview protocol. The protocol for farmers involved questions on the farmer's role and interaction with the rural community as well as opportunities and challenges of their own business development and their rural community of residence, which also included their farms. The protocol on representatives from agricultural organizations involved questions on challenges within agricultural development and collaboration thereof.

Interviews were audio recorded and transcribed. The semi-structured in-depth interviews with farmers and individuals within the farming organizations lasted on average 80 minutes and the group interviews were short interviews of 15 minutes on average. Data collection was performed between 2016 and 2018.

Observations and fields notes were also important sources of data in the current study. Observations were made on meetings where farmers and agricultural organizations met to discuss the support of and challenges in agricultural development. This included discussions among critical actors in the agricultural environment, namely, farmers and agricultural organizations. We thus demonstrated the contextual embeddedness and surrounding environment. In addition, non-verbal communication about agricultural entrepreneurship was captured through field notes.

Analyses

We structure the overall analyses in line with established procedures for inductively developing theories (Gioia et al., 2013; Miles and Huberman, 1994; Strauss and Corbin, 1998). Accordingly, we use established guidelines for comparing techniques (Glaser and Strauss, 1967) by recursively working between theory and empirical data.

To analyse the empirical data, we systematically coded interviews and observations throughout the data collection process using a coding scheme developed for this purpose. This method follows a naturalistic inquiry approach (Lincoln, Lynham, and Guba, 2011). We use an inductive research design approach for theory building about complex processes (Edmondson and McManus, 2007; Gioia, Corley, and Hamilton, 2013). Notes were taken for each meeting, and consequently discussed in the team for potential interpretations. Transcriptions and notes were inductively analysed using the Gioia methodology (Gioia, Corley, and Hamilton, 2012).

During the meetings, we closely examined how the farmers and key actors in the agricultural entrepreneurship community described and motivated farmers' roles. The discussions touched on how farmers developed their companies, background and history, connection to the countryside, collaboration and contacts with the surrounding areas, strategic thinking, barriers to development, motivation, culture, attitudes, identity, decision-making, and actions. Thus, we closely examined farmers' work and their interrelations and interactions with rural society during decision meetings. Our goal was to discover roles played by farmers in rural society. Observations were made on meetings and workshops, where the topic of agricultural entrepreneurship and rural development added new aspects to agricultural entrepreneurs and rural development. Data gathered through interviews with key actors in the agricultural support system enabled crystallization of the phenomena and supplemented the observations and in-depth interviews.

To guide our work in the correct direction and towards the topic presented, we used an established three-step coding procedure. In Figures 1 and 2, we present the coding, coding structure, and resulting categories.

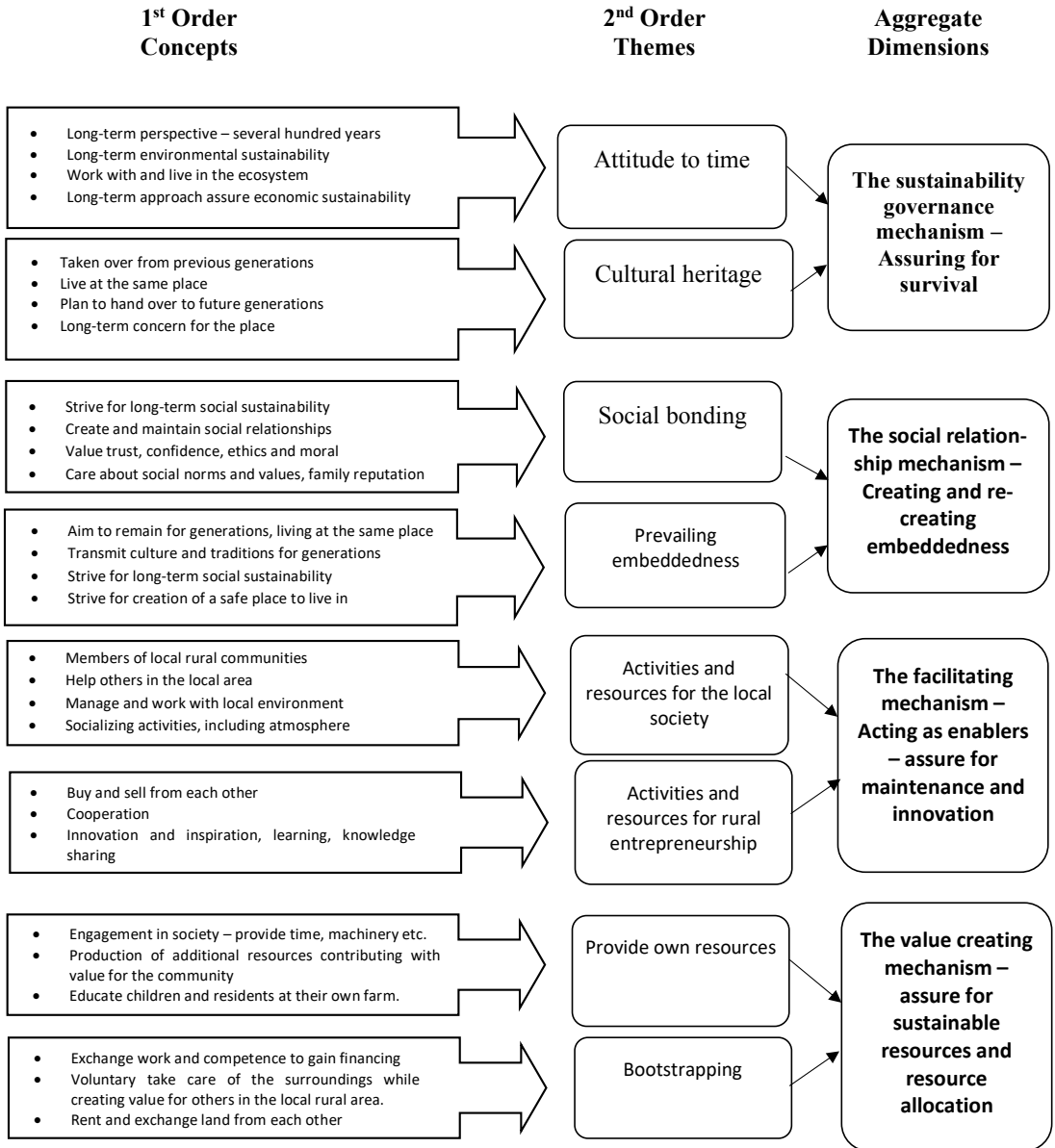


Figure 1. Creation of concepts, themes, and aggregated dimensions (Gioia et al., 2013).

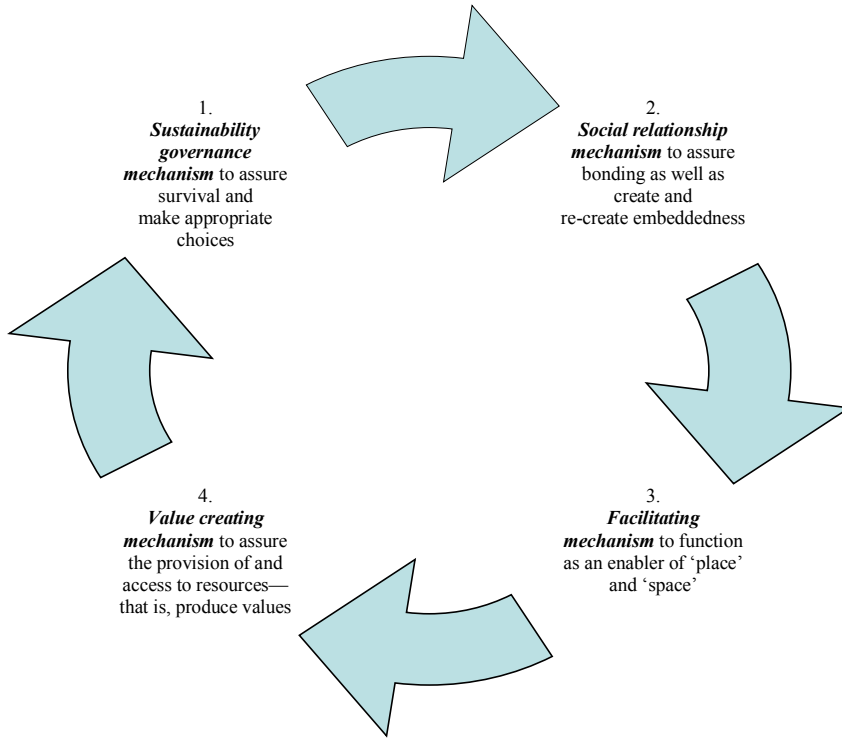


Figure 2. The multifunctional roles of farmers in rural development: Governance mechanisms and behaviours

Our initial coding of the empirical data was rather broad—In this step, we first collapsed all codes into first-order categories. We identified discussions where the participating actors expressed similar ideas. We began by manually scanning phrases; to balance the richness and direction of the data, we then searched for guiding questions and expressions that enabled us to make sense of the empirical data (Glaser and Strauss, 1967; Strauss and Corbin, 1990; Eisenhardt, 1989). This enabled us to identify the actors' view of farmers' roles in broad terms.

The next step was to identify overarching themes among the first-order categories—that is, the second-order conceptualization. At this step, the research team identified concepts at an abstract level, or theoretically distinct groupings. We also noticed that some of the previous literature on agricultural entrepreneurship indicated suitable categories for coding (REF).

Investigating the data revealed the multiple roles played by farmers in rural society. We clearly recognized the potential contribution, to the literature, of insights into governance mechanisms affecting farmers' behaviour. We thus linked the various phenomena that emerged from the data and outlined a theoretical framework. We used both *a priori* codes from the agricultural entrepreneurship literature and emergent codes to categorize patterns in the data on farmers' roles in rural entrepreneurship.

The next step was to assemble the second-order themes into overarching dimensions by reviewing patterns in these themes. This led us to third-order conceptualization. To secure construct validity, we compared our emergent theoretical framework with the extant literature on agricultural entrepreneurship to refine our construct definitions, abstraction levels, and theoretical relationships (Eisenhardt, 1989). In doing so, we concluded that the more abstract and overarching dimension—governance structures—that emerged from the patterns and relationships identified in the third-order conceptualization explained the farmers’ behaviours in the embedded context of rural society. The final themes were developed based on the voices of farmers and key actors in rural society. The team of researchers structured and interpreted these in close association with farmers’ contextual factors and prior theorizing in agricultural entrepreneurship (Strauss and Corbin, 1990; Nag, Corley, and Gioia, 2007).

Findings

Herein, we outline the findings by presenting the governance structure and embedded farmers’ behaviours in rural society. We find four governance mechanisms and corresponding behaviours from the coding: 1) *sustainability governance mechanism* to assure survival; 2) *social relational embeddedness mechanism* to assure social bonding; 3) *facilitating mechanism* to assure fostering; and 4) *value creating mechanism* to assure resources. These themes capture the central elements in the data on farmers’ governance mechanisms and behaviour in a socially embedded environment of place and space—that is, themes that contribute to the farmer’s role in development of rural societies and entrepreneurship.

Sustainability Governance Mechanism: Survival

The first theme emerging from the data relates to farmers’ governance of sustainability—that is, assuring survival and making appropriate choices to certify sustainability.

Farmers’ attitudes towards time are a key factor in understanding their role in society. Their long-term approach towards decisions reflects the need to assure a future for successive generations. The resources and livelihoods of current farmers have been passed down from previous generations, and are maintained for the next ones. The data include ample evidence indicating that ‘time’ is a key aspect for understanding farmers’ engagement with the spatial context. Farmers have an inborn long-term perspective of environmental, social, and economic sustainability. First, they work with and live close to nature, making them a direct link in the natural ecosystem.

Second, agricultural businesses are inherited for generations; hence, farmers often reside in the same place for centuries even.

Third, this long-term approach also prioritizes assuring economic sustainability for farmers—that is, assuring survival, the ‘going concern’, and maintaining farming for future generations. This mechanism, which farmers often employ, outlines a precious resource when operating in the rural setting—a resource that assures future survival in both the rural place and space. Prior studies also allude to this point (*see* Anderson, 2000; Askegaard and Kjeldgaard, 2007; Korsgaard, Ferguson, and Gaddefors 2015). Thus, sustainability governance mechanisms are closely related to farmers’ heritage.

The work to assure sustainability through a sustainability governance mechanism is reflected through the following statements regarding historical and future heritage:

'We have done that before as well [payed attention to climate changes and research], because we live with it—That is nothing new. We live in, by, and with nature, so we are in it. That has not changed, and so we are very responsive and have always been'.

'Sustainability works. In my eyes, [it] means that we borrow the earth from our children. It is a sustainability idea. These damn [sustainability] certifications—I do not know how much they actually give'.

The sustainability governance mechanisms encapsulate the long-term perspective of historical and future sustainability as well:

'Economic sustainability means it is sustainable for generations; but everyone who talks about economic sustainability [nowadays] means two–three years ahead'.

On growing up with farming: 'Now it is suddenly environmentally conscious to act in the way we have always done, so society has changed quite a lot'.

Social Relationship Mechanism: Creating and Re-creating Embeddedness

The societal relationship mechanism assures social bonding as well as the creation and re-creation of social embeddedness in rural society. Farmers act to ensure that social embeddedness that is inherent through generations prevails for future generations. Residing in the same place for generations allows farmers to create and re-create embeddedness by transmitting culture, traditions, and relationships for generations. It also contributes to assuring sustainability in the rural area.

Farmers consider environmental and social sustainability to be self-evident requirements when working with and within nature. It is critical to assuring that heritage prevails into the future, which, in turn, enables a family to reside in the same place for generations.

Economic sustainability also assures sustainability, but its effect is more limited. Striving towards long-term structural social sustainability contributes to farmers' embeddedness and to the continuous *re-creation of embeddedness* in local rural society. Thus, a social relationship governance mechanism, or social bonding mechanism, affects farmers' behaviour.

Faithful and well-established social relationships are the core of embeddedness, making them highly valuable assets that govern farmers' behaviour. This mechanism assures an environment of trust, confidence, ethics, and moral values, which are central to any relationship based on social embeddedness.

Farmers seek to assure the generation of social values; they care deeply about social norms and values. They value their reputation as well as that of their family's reputation, which together help create and maintain social relationships. By contributing to value creation for rural society, farmers contribute to the development of an embedded and safe place to reside. This also implies that the farmers' emotional attachment to a place and space makes them somewhat disregard pure economic rationality. Such structures have also been identified in prior studies (e.g. Kibler et al., 2015). Strong norms guide the creation and re-creation of embeddedness in these

relatively informal, self-guiding, and interdependent relationships. The statements below reflect the governance mechanism of social relationships:

'What is important to us for it to be sustainable is good relationships with neighbours and customers; and then, it is important that you take care and behave yourself.'

'Social sustainability to me is—for example—a 30-year-old woman who wants to have children and who want to have a good and safe life, living in a place where she can trust the environment, where everyone helps out, where all are included, where everyone is seen, and everyone gets a place'.

The importance of creating safety for society and employees is reiterated during the interviews. One farmer exemplifies this social relationship while emphasizing the care of employees and their families. Thus, people take care of each other at the farm. Parents of young employees recently told the above farmer that they feel positive about leaving their children at the farm because the farmer takes care of these children.

Farmers face high environmental uncertainties and challenges. This also includes the farm animals under their care, weather patterns, and inevitable changes in societal attitudes and trends, all which affect farmers' actions and behaviour. Farmers are accustomed to living and working under these conditions, and they often experience high stress as a result. Thus, the social relationship governance mechanisms are key because they contribute to the creation of humility and respect for nature and among people within agriculture. This mechanism and the strong ties thereof are represented in the statement below:

'There is great humility and respect between us [farmers]'.

Facilitating Mechanism: Enablers for Maintenance and Innovation

In the facilitating mechanism of place and space, farmers act as enablers who act to assure maintenance and innovation in rural society. As per tradition, farmers are active in local communities, or associations, that work towards improving their society. Such association arrange activities to facilitate the work of other members. For example, farmers help other agricultural entrepreneurs in the local rural area in developing their businesses. These activities are a non-profit commitment that unites and involves inhabitants, such as farmers and their families, in the local rural area. This mechanism is inherited in the embedded rural society, where farmers are involved in the local rural society and accustomed to helping from childhood onwards.

Farmers spoke about how they conduct activities through local associations. These activities include heart and lung rescue, visiting companies for testing machines, and arranging barbecue evenings to socialize. The facilitating governance mechanisms assure lifelong engagements. Even farmers whose companies have expanded to become large-scale and industrial retain this tradition. This mechanism is a valuable resource for survival and embeddedness. It assures the maintenance of heritage and provides a basis for future innovation in the local rural society and community. The following statements emphasize the facilitating governance mechanism and how farmers function as enablers of local rural society.

'We have a community where we arrange different activities for our members [for instance, to help them] to develop their companies'.

'In the agricultural community, you help each other, and you are like a family in some way'.

'I am a tenant on farms, where you do not want to enter into large partnerships, but want someone more family-friendly and local'.

Farmers are catching up and including new members in the association and in the countryside. One farmer spoke about how she responds to a new member:

'Every time you get that little email that you have a new member, I send a postcard home to that member and say "Hi! Welcome!" for the next time we have course in this subject. That is how we do it'.

Land is both expensive to buy and difficult to access. Enabling surrounding businesses and farms for growth and development is challenging, and hence more large-scale farmers lease out land. For younger and relatively new generations of farmers, this support has been crucial to their company's development:

'It is an advantage not having to own all the land—it would have been completely impossible. Ninety per cent are leases'.

Through farmer cooperation, products and services are bought and sold mutually, thus leading to employment, higher turnover, and better opportunities for surrounding businesses. Collaborations also help avoid tying up capital for machines that would otherwise have been under-used, thus aiding financial sustainability.

'They help us with sowing and threshing, and we also get to buy straw from them. We help them with the pressing of straw'.

'We plough and harrow, but we have no drills or harvesters. We buy these services from machine stations. We have also started to buy floating manure driving, which saves time—you cannot tie up too much capital either'.

'We sell an experience-based product called Österlensafari, together with some other producers here'.

Value Creating Mechanism: Sustainable Resources and Resource Allocation

The value creation mechanism is deeply based on the behaviours and outcomes that arise from the sustainability, social relationship, and facilitating mechanisms. Farmers find that environmental, social, and economic value creation are all expected for and required to assure sustainability. Farmers provide their own resources, such as time, competencies, and machinery; thus, they enable individual members as well as the entire community to gain access to resources. This also allows the production of additional resources that could contribute value. This way, rural society can survive and assure embeddedness. The facilitating mechanism provides resources to the community and enables development of new resources.

Farmers actively create value for both society and rural entrepreneurship by, for example, providing resources and services. Resources are often bootstrapped; the

farmers their own work and competencies, and thus decrease the need for proper financial resources, such as capital.

Farmers spoke about how they take care of the local environment and surroundings, and thus simultaneously create value for others. For example, some farmers have formed an association to manage watercourses in the countryside. The initiative is voluntary and relatively informal, but contributes to environmental, social, and economic values. Similarly, one of the farmers is engaged in mutual social and economic exchange with a neighbouring golf club. The farmer's pigs and sheep graze around the golf course, and the animals are fed with leftover food from the restaurant. By summer's end, a barbeque is arranged in the golf club's restaurant. The golf club has also received the municipality's environmental award this way.

The farmers in the study also provide competencies by working with education and information for the community's residents. They offer educational activities for children who are invited to the farm for learning about agriculture and food production. They also arrange activities for families, local villagers, or tourists who want to educate themselves in, for example, food production and environmental care, from a farming perspective. This type of education aims to raise awareness of farming, and thus bring the consumers of farm products and services closer to the source:

'We want to be a bridge between the producer and the consumer because we think that step is far too far'.

'We inform that this is arable land, how it works, what we have done historically, and what it generates, what the forest binds, and the natural values. This way, you can include both economy, history, and nature considerations.'

The employment opportunity in agriculture also creates value for society and rural communities. The industry offers job for seasonal employees. Though it is a challenge to hire local seasonal staff in rural areas, there is great value in enabling access to such opportunities for young people, especially school students. It allows such groups to gain experience in and enter the job market. This has both social and economic value:

'Last year at the Christmas party, we took a toast to reach the goal of paying wages of over SEK 1 million to local youth this year. We are proud that we made it! Last year, we had 28 young people working here, and this year it is 43.'

Agriculture fulfils several functions in society, besides producing food and keeping the landscape open. An up-to-date and clear example of how farmers create value for society is seen through their efforts during disasters such as fires. A farmer tells us that municipalities and rescue services now contact local farmers' organizations to map where manure barrels are located, in preparation for future fires. However, the farmer notes that this service from farmers to society is not entirely new.

Similarly, at student graduations, many schools and municipalities transport graduates by tractor and trolley as per tradition. In the countryside, both landscapes and roads are usually managed by farmers, who maintain gravel roads throughout the year, mow roads, or plough snow. The countryside has immense non-profit involvement—for example, when sports associations and other local associations need to prepare and maintain, say, soccer fields, the farmers provide both machines and materials together with other local entrepreneurs.

Thus, farmers are socially embedded and engage with the community. They create and maintain the social context. Hence, agricultural entrepreneurship can be seen as a socially situated, collective practice, with economic processes becoming outcomes of social values (McKeever, Anderson, and Jack, 2014). The value creation mechanism assures the provision of and access to sustainable resources, thus enabling sustainability.

Towards a Typology of Farmers' Role in Rural Entrepreneurship: Governance Mechanisms and Behaviour

Our analysis helps us in providing a conceptual framework on farmers' role in rural entrepreneurship. In this regard, we outline the governance mechanisms that guide farmers' behaviours and actions. This conceptualization involves a typology based on four core governance mechanisms that affect farmers' behaviours and engagement within the spatial context. Such mechanisms help in comprehending the embeddedness of agricultural entrepreneurship in rural society. They also clarify how this embeddedness is expressed in the pursuit of rural entrepreneurship.

Figure 2 (*see p. 14*) depicts the four interrelated mechanisms and corresponding behaviours. Governance of sustainability and assurance of survival are critical to farming entrepreneurship, livelihood, and actions thereof. 1) The governance mechanism of social relationships assures embeddedness and secures sustainability.

2) History, values, culture, and genuine care for social relationships in the local rural area increases farmers' embeddedness. Because agriculture is a business inherited for generations, the farmers naturally create and re-create embeddedness. In the facilitating mechanism, embeddedness affects farmers in ways that makes them contribute to development, with the inclusion of neighbours as members in, for example, farmer associations. Hence, they function as enablers of rural entrepreneurship and rural development.

3) By providing resources and services through, for example, collaborations with neighbours and local companies, and engaging in management of nature in the countryside, or educating residents, farmers create value for both society and rural entrepreneurship.

4) The value creation mechanism and assurance of resources in a resource-constrained society are cornerstones of the financial bootstrapping model in rural society. This includes coordinating resources for sustainability (Winborg and Landström, 2001). Through a long-term perspective and genuine care for society and the natural ecosystem, farmers assure resource acquisition for securing sustainability. There appears to be a type of self-organization in rural entrepreneurship, where agricultural entrepreneurs participate in the input and output functions (Mason and Brown 2013; Stam, 2015). That is, the output includes resources and activities, whereas the input is embeddedness.

Discussion and Conclusions

Role of Farmers in Rural Entrepreneurship

As society has evolved, the number of farms and individuals working in agriculture has decreased drastically (OECD, 2018; Swedish Board of Agriculture, 2017). Tourism, food processing, and other diversified activities have become dominant for regional rural development (Carter, 1998; Swedish Board of Agriculture, 2017). Within this paradigm shift, the importance and roles of farmers have changed, which has led

policymakers and researchers ignore sustainability in rural entrepreneurship. Rural businesses, particularly in agricultural entrepreneurship, cannot be equated with urban companies, because 'context' is more crucial in rural environments as an influencing factor (Anderson and Gaddefors, 2016; McKeever, Jack, and Anderson, 2015; Welter, 2011; Zahra, 2007). Rural entrepreneurship is unique, making it necessary to examine specific contexts and sub-cultures for a nuanced understanding (George and Zahra, 2002; Huggins and Thompson, 2014; Johannisson and Wigren, 2006).

The current study contributes to an understanding of agricultural entrepreneurship and rural development. Our discussion focussed on 1) the role of farmers in rural entrepreneurship and development. More specifically, we explore farmers as facilitators of sustainable rural development owing to their embeddedness in rural society. We finally examine the 2) implications for future research and practice based on our findings.

In farming, other types of entrepreneurship, and rural governance, any opportunity for growth is contingent on available resources (Katz and Gartner, 1988). By spotlighting sustainability in the growth mandate, farmers must reconsider how to govern and gain access to resources. Farmers and the rural society are resource-constrained, and hence are likelier to bootstrap available resources for survival. This also strengthens communal embeddedness, where all actors strive to adhere to environmental, social, and economic sustainability. The ultimate goal is to practice a meaningful life of safety and well-being.

We firmly established the role of farmers as the engine for rural development and entrepreneurship, thus further understanding their multifunctional role in society. We identified four governance mechanisms and corresponding behaviours in agricultural entrepreneurship, all aimed at securing sustainable rural areas and entrepreneurship. These mechanisms are: 1) sustainability governance mechanisms for survival; 2) social relationship mechanism for bonding as well as creating and re-creating embeddedness; 3) facilitating mechanism for enabling rural entrepreneurship; and 4) value creating mechanism for creation and access to sustainable resources in rural society. Of particular interest is the neglected role of farmers in rural society, namely, their function as enablers of rural development and entrepreneurship. Our empirical findings contribute to a more nuanced conceptualization of farming entrepreneurship that is embedded in the rural community.

Beyond Traditional Entrepreneurship: Farming Entrepreneurship and Value Creation

Entrepreneurship is an output of economic systems (Acs et al., 2017), and it is highly affected by its context (Müller and Korsgaard, 2018; Welter, 2011). Social structures similarly affect the economy. We argue in line with Uzzi (1997, p. 22) that farmers' embeddedness in rural society is 'a puzzle that, once understood, can furnish tools for explicating not only organizational puzzles but market processes'. Being embedded in rural society means farmers both exploit society and are exploited by society (McKeever, Jack, and Anderson, 2015). Their activities uniquely involve nature and the surrounding environment, and thus reflect special challenges (Cederholm Björklund, 2018), such as low levels of human and financial capital, relatively small and limited markets, and poor local communications (Korsgaard, Müller, and Tanvig, 2015; OECD, 2018)

Traditional farmers do not fit into the stereotype of a typical entrepreneur, but they still have an important role in social development and rural entrepreneurship. As

Jack (1998) predicted over 20 years ago, farmers can contribute to rural development through activities that go beyond operating farm businesses and complementary non-farm businesses. They can be providers of premises and offer assistance to other entrepreneurs in rural areas. In this article, we show that farmers are enablers of rural entrepreneurship and development, as they create value thereof. This point is seldom characterized in entrepreneurship research, nor is it considered in policy work within any support system.

Farmers are highly embedded in the local context and motivated by factors uncommon to other entrepreneurs (Hansson et al., 2013; Vik and McElwee, 2011), primarily because they are custodians of local environment and development. The physical closeness and social relatedness inherent to farming communities affects entrepreneurial processes and farmers' behaviours. Strict rules and norms exist as embedded features of a place and space in rural entrepreneurship. This dynamic creates a structure of informal trust-based control through interdependent social relationships. Social attachments and emotions towards a place may influence choices in actions—for example, disregarding economic values and rationality (Kibler et al. 2015) for social ones. Embeddedness eases the acquisition of social resources for businesses and the access to developmental support (Jack and Anderson, 2002). However, high dependency on specific network actors, or over-embeddedness, could be a barrier: The social aspects far exceed the economic aspects, causing business damage (Uzzi, 1997).

Our result fall in line with the results of an Australian study by McManus et al. (2012), who investigated farmers' perceptions when engaging in local communities in rural areas. They highlight the importance of local economy and jobs, quality of local environment, and strong sense of belonging as potential for resilience of rural communities. The study also clarifies that rural resilience does not merely concern the social versus the economic, but it involves a system of ongoing processes within the local context. The values and close relationships within local rural society creates tensions as well as economic and social pressure, while also creating opportunities and safe habitation for all.

Despite the critical nature of social values to entrepreneurial activities and endeavours, there is weak recognition of social embeddedness and the resulting values that are created and reproduced in rural contexts. This is particularly prominent with farmers' embeddedness and their role as rural entrepreneurs (McKeever, Anderson and Jack, 2014). Hence, researchers and policymakers must understand that agriculture is not limited to food production and supply, but that the multifunctional role of farmers makes them key to rural development.

Implications and Future Research

This study carries several implications for future research on rural development and entrepreneurship by agricultural entrepreneurs.

First, we clarified the farmer's role as fundamental to rural entrepreneurship and development.

Second, we clarified our conceptualization by distinguishing between four core governance mechanisms and corresponding behaviours that influence farmers' actions.

Third, we add to the conceptualization of sustainability in rural entrepreneurship. The emerging literature on agricultural entrepreneurship largely looks into economic and ecological sustainability, leaving out the social aspects (Suess-Reyes and Fuetsch, 2016). We contend that sustainable rural development is conditional on the interactions and interrelationships between the local economy, environment, and culture

whose dominant attributes include a perception and sense of belonging. We thus argue for the important role of agricultural entrepreneurs in rural development and also emphasize the importance for policymakers to consider social sustainability (McManus et al., 2012). Agricultural entrepreneurship that is embedded in rural areas creates opportunities for successful bootstrapping of resources. These resources facilitate competitive advantages that arise from broad value creation. Thus, entrepreneurship that is uniquely catered to local rural growth safeguards the economic and social well-being as well as survival of rural communities and areas.

Nevertheless, this study is not without its limitations. First, we believe that a more complete understanding of farmers' embeddedness in rural society has much to offer in the field of agricultural entrepreneurship.

Second, we suggest further testing and development of our conceptual model—that is, the taxonomy of governance mechanisms and corresponding behaviours—on a larger number of farmers across countries. We also encourage further contextual research in different regional areas to gain a deeper understanding.

Third, we suggest further studies to better understand the prevalence of each basis of governance mechanisms and corresponding behaviours to further develop measures for variables in the model. These variables could then be rigorously tested.

Fourth, we support a broader and deeper examination of rural entrepreneurship. There may be additional actors in this ecosystem who function as facilitators with important roles, but who may have been neglected in research and policy work.

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