Sveriges lantbruksuniversitet
Swedish University of Agricultural Sciences

Department of Economics

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- A study of advisors and key-persons working with energy saving instruments for farmers

Tina Sandell

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Abstract

The Swedish government strives to be independent from fossil fuels and be an example regarding environment and sustainability. This goal requires development in renewable energy production as well for energy efficiency. Swedish agriculture faces challenges when it comes to the renewable energy production. Farmers can lower their energy-use by changing behaviour and routines or by changing energy systems. Researchers and energy experts are confident that it is possible to reduce farmers' energy use radically. Although changes require some kind of economic costs and the effects can be uncertain. The Swedish Board of Agriculture and the Energy Agency are two authorities, which provide instruments for energy efficiency. Agricultural advisors are seen as the main carriers for the instruments for energy savings. The instruments consist of contribution and counselling where advisors competence is essential. At the same time, there are fewer advisors with the right skills that work with energy and these instruments in the agricultural sector.

Theory of Practice has been used to describe the practice for individuals within multiple of different situations and areas of research. A primary methodological aim is an approach that can capture and analyse individuals in their everyday practices in an intricately way. Additionally, Stakeholder Theory is used in this study to bring out an understanding for the different actors. Their needs and behaviours, which are affected or can, affect the instruments for energy savings.

There are several studies about the instruments for energy savings, which focus on farmers' motivation for the environmental work. There is a lack of studies about the advisors and authorities work with the instruments for energy savings. Therefore this study fills a gap in the existing literature. The aim of this study is to explore advisors and key-persons activities working with instruments for energy savings for reducing GHG emissions on farms. Thus 18 interviews were performed with advisors and key-persons that works with the instruments provided to farmers. This study has a flexible design and an explorative approach where the researcher used the theoretical framework, Theory of Practice and Stakeholder Theory, to categorize and analyse the empirical findings.

The results of this study show that advisors are located in a complex context between authorities and farmers. It is not explicitly stated what their obligations for implementing marketing for the instruments are. Further, it has arisen that it is troublesome to attain a satisfying overview of the instruments for energy savings. The findings also confirm the lack of advisors and reveal that almost every advisor has their methodology and opinion about the instruments. The insights gained from this study may be of assistance to provide a broad perspective about the advisors and key-persons working with the instruments. It would be interesting to investigate further what different aspects are essential for the advisors in the marketing of the instruments for energy savings.

Sammanfattning

Den svenska regeringen strävar efter att vara oberoende av fossila bränslen och att vara ett föregångs exempel när det gäller miljö och hållbarhet. Detta mål kräver utveckling av förnybar energi-produktion och -effektivitet. Det svenska jordbruket står inför utmaningar när det gäller förnybar energi. Lantbrukare kan sänka sin energianvändning genom att ändra beteende och rutiner eller genom att byte energisystem. Forskare och energiexperter är övertygade om att det är möjligt att radikalt minska lantbrukares energianvändning genom dessa förändringar. Förändringar som innebär någon form av ekonomiska kostnader och med osäkra effekter. Jordbruksverket och Energimyndigheten är två myndigheter som tillhandahåller verktyg för energieffektivisering. Rådgivare inom den agrara näringen är grundläggande för att lantbrukare ska kunna tillgodose dessa verktyg för energibesparingar. Samtidigt blir rådgivarna med rätt kompetens som arbetar med dessa verktyg färre.

Theory of Practice är en teori som har använts för att beskriva individers utövande inom flera olika forskningsområden. Det primära syftet är ett tillvägagångssätt som kan fånga och analysera individer i sin vardag. I denna studie används även Intressentmodellen där syftet är att få förståelse för de olika aktörerna, deras behov och beteenden, som påverkas eller kan påverka verktygen för energibesparingar.

Det har framkommit att det finns ett flertal studier om lantbrukares motiv och barriärer för att arbeta med energibesparing. Samtidigt finns det en avsaknad av studier som behandlar rådgivare och myndigheters roll i detta arbete. Denna studie ämnar att fylla detta gap genom att studera rådgivare och nyckelpersoners arbete med verktygen för energibesparing på gårdar.18 stycken intervjuer genomfördes därför med rådgivare och nyckelpersoner. Denna studie har en flexibel design och ett explorativt tillvägagångssätt där forskaren använde Theory of Practice och Intressentmodellen för att kategorisera och analysera de empiriska resultaten.

Resultatet från denna studie visar att rådgivare befinner sig i ett komplicerat sammanhang mellan myndigheter och jordbrukare. Det finns otydligheter i vem som är ansvarig för att implementera marknadsföring för verktygen till lantbrukare. Vidare har det framkommit att det är svårt att får en tydlig översikt av vad det finns för verktyg att tillgå för lantbrukare. Resultaten bekräftar även den problembakgrund som har beskrivits angående bristen på rådgivare som arbetar med detta. Det framgår även att nästan alla rådgivare har sitt egna tillvägagångsätt när det gäller utförandet av marknadsföring och rådgivning av verktygen. Insikterna från denna studie är behjälpliga för att ge ett brett perspektiv om rådgivares och nyckelpersonernas uppfattningar och aktiviteter angående verktygen. Till vidare forskning vore det intressant att ytterligare undersöka vilka olika aspekter som är viktiga för rådgivarna angående marknadsföringen av verktygen för energibesparingar.

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List of Terms

Climate check-up – Energikollen genom Greppa Näringen

County of Administrative Board – Länsstyrelsen

Eco-driving – Sparsam körning genom Greppa Näringen

Energy Audit – Energikartläggning genom Energimyndigheten

Focus on Nutrients – Greppa Näringen

Swedish Board of Agriculture - Jordbruksverket

Swedish Energy Agencies – Energikontoren

Swedish Energy Agency – Energimyndigheten

1 Introduction

*This chapter gives an introduction to the study. Background is presented to provide the reader an underlying view of the topic. Followed by the problem that leads up to the aim and the research questions. After the delimitations for the thesis, a compilation of the "*instruments *for energy savings"[1] that is elemental for this study. At last, an outline of this study is presented.*

1.1 Problem background

The Swedish government strives to be independent from fossil fuels and be an example regarding environment and sustainability. (Government Offices of Sweden, 2017).

Table 1. The goals the Government Offices of Sweden has put up for the year 2020 (Government offices of Sweden, 2017).

The goals for the year 2020
• To have at least 50 % of Sweden's energy production to consist of renewable energy
• To have 40 % reduction of climate emissions
• To have 20 % of more efficient energy-use
• To have at least 10 % of renewable energy in the transport sector

This goal requires development in renewable energy production as well for energy efficiency. In the agricultural sector, which accounted for 13 % of Sweden's fossil emissions by the year 2015, there is potential for improvement in this area (Naturvårdsverket, 2017). Researchers, consultants and energy experts all agree that it is possible to radically reduce our energy use through energy efficiency measures (Bioenergiportalen, 2014). There are different views about how much energy-use we can decrease. Farmers can lower their energy-use by changing behaviour and routines or by changing energy systems. Changes that all require some economic costs are more difficult to implement. When the effects of different actions are uncertain, prohibitions and detailed regulations are usually worse than financial subsidies (Swedish Board of Agriculture, 2018a). The agricultural sector stands for site-specific conditions and the need to review company's total resource utilization, which means that appropriate advice along with technology development, is an action that often appears.

Swedish Energy Agency and Swedish Board of Agriculture are authorities that provide instruments for energy savings within the agricultural sector (Swedish Energy Agency, 2017a; Swedish Board of Agriculture, 2018b). With the help of the instruments for energy savings, the government aims to favour for farmers to reduce emissions in Sweden. Optimal use of resources is usually favourable for farmer's profitability and competitiveness, while it minimizes the impact on the environment (Swedish Board of Agriculture, 2018a). Advisors working with the instruments for energy savings are a central part of the work towards achieving the goals for energy production and efficiency in the agricultural sector. Other actors are The Federation of Swedish Farmers, the County Administrative Boards, and the Energy Agencies of Sweden.

[1] *The instruments for energy savings are described further in 1.5.*

Collaboration, communication and lack of knowledge constitute a barrier to achieve sustainability in society (Sigrand, 2011). To succeed in environmental science, such as the work towards a more sustainable environment, collaboration about the instruments for energy savings for energy efficiency and production is an important aspect. Therefore it is essential to map involved actors around the farmers, also known as stakeholders (Donaldsson & Preston, 1995; Freidman & Miles, 2006). According to Stakeholder theory, the involved stakeholders around an organization can be mapped and divided into different divisions and categories. It is a way to explore the power structure of stakeholders around an organization (*ibid.*). In this study, the stakeholder theory is applied to farmers instead of an organization.

Through Bourdieu's social theory of practice, the complex situation with authorities, agricultural advisors, and other stakeholders are taken in to account in a broader social space (Chudzikowski & Mayrhofer, 2011). It combines three concepts, field, habitus and capital and stands for that individuals are producers of social practice, following some specific logic in a social space. The field is the playground where actors have their positions. The habitus stands for verbal and practical actions of an actor and finally the capital, which stands for actors' specific logics of practices (Chudzikowski & Mayrhofer, 2011; Krais, 1988).

1.2 Problem statement

Sweden is a European Union Member State and included in the European Union Common Agricultural Policy (CAP) (Swedish Board of Agriculture, 2009). For the period, the year 2014 to 2020, CAP has increased the focus on reducing GHG emissions from the agriculture sector by different instruments for energy savings (Swedish Board of Agriculture, 2018a). Instruments for energy savings for the agricultural sector has been provided in various shapes over a long time and farmers are known to be able to adapt accordingly with changes in agricultural support. Many of the instruments for energy savings within CAP are used as they are meant for reducing GHG emissions, although some of them could be developed further and used to a more significant extent. The increase of users that are farmers does not seem to evolve (SBA 1). In fact, some of these instruments for energy savings show numbers of farmer-users in a falling direction. The advisors and other key-persons whom work with the instruments for farmers play an essential role for a higher level of adaption by farmers.

1.2.1 Empirical problem

The Swedish Board of Agriculture and the Swedish Energy Agency can be seen as the underlying actors for the instruments for energy savings since they are the authorities behind (Swedish Energy Agency, 2017a; Swedish Board of Agriculture, 2018b). Agricultural advisors are seen as the primary carriers for the instruments for energy savings. They are explicitly educated for working with farmers' energy-use, with the instruments for energy savings or to inform farmers about them (SBA 3). The advisors are also seen as the most crucial actor to make the instruments for energy savings work. At the same time, there are fewer advisors with the right competence that can or want to work these instruments for energy savings. Advisors and persons working at the Swedish Board of Agriculture all agree that the amount of advisors for this work is only a few (SBA 3).

According to the Swedish Board of Agriculture, more collaboration between sectors is necessary to achieve the environmental goals for the agricultural sector (Swedish Board of Agriculture). At the same time there seem to be preconceptions about which actors are responsible for engaging farmers with the instruments for energy savings for reducing GHG

emissions (Advisor 4). Thus insight about both advisors and authorities view on the work for the instruments for energy savings can engender improvements or opportunities that can contribute to actions that work around deficiency.

1.2.2 Theoretical problem

There are several studies that explain how farmers make decisions, what motivates them and drive them to work with environmental changes and improvements. At the same time there is a lack of knowledge about the advisors' role within energy efficiency for farmers. There is a need for studies, which focus on the advisors and authorities that work with the farmers, their work and the challenges they meet. Previous studies have been provided where farmers' motivation for energy efficiency is studied (Berglund & Frode, 2016; Hansson, 2012: Focus on Nutrients, 2011). Common for these studies is that they focus on identifying factors such as motives or barriers for farmers to choose to participate and apply for different agricultural programmes or instruments for energy savings to improve the environment. Studies that to the present have been found by the researcher with a focus on the agricultural advisors are case studies and not many (Stål & Bonnedahl, 2015). There is a lack of knowledge and understanding about the advisors' role within energy efficiency (*ibid.*). Together with the uncertainty of who the responsible actors are, for carrying out information to farmers about the instruments for energy savings, there is a need for studies that focus on the advisors and authorities that are relevant for this complexity.

1.3 Aim

The aim of this study is to explore advisors and key-persons activities working with instruments for energy savings for reducing GHG emissions on farms.

To reach this aim, two research questions are presented.

- *What characterize the advisors and the key-persons work around the instruments for energy savings?*

- *What are the key-factors for improving the work with instruments for energy savings?*

1.4 Delimitations

This study is delimited to study individuals, which works as advisors, at an authority or the Federation of Swedish Farmers. The respondents are in some way connected to the instruments for energy savings within the agricultural sector for energy efficiency and production. The instruments for energy savings are further delimited to; Climate check-up, Eco-driving, Energy Audit and Contribution to energy efficiency and production within The Rural Development Programme. There are other instruments that can be applied for within the agriculture sector, yet the instruments that are central in this study are what most respondents referred to during the interviews. They are seen as specifically relevant for farmers to apply for, despite the result in this study illustrate a more complex description of some of the instruments. The instruments for energy savings in this study are described more explicit in

1.5. Furthermore, this study has covered a valuable amount of respondents working with the instruments for energy savings in Sweden. However, this study does not seek to conclude a broader perspective of the work with instruments for energy savings in Sweden. This study only aims to look into the complexity that is perceived by the respondents, which was interviewed for this study.

1.5 Characterization of the instruments for energy savings

The purpose of presenting the instruments for energy savings is to provide the reader an underlying understanding for the instruments, which the respondents for this study work with. Due to the aim of this study, the instruments for energy savings are not the unit of analysis. Although brief understandings of the instruments are essential for understanding the context the respondents are located. The main purpose of the instruments for energy savings is to lower the energy-use for farmers or to help them produce energy in a more efficient way in order to work for a more sustainable industry. Table 2 displays the instruments for energy savings and shows who provides the instruments. The different instruments are provided to farmers through different actors, some directly by the authorities, some by advisors or other key-actors such as the Federation of Swedish Farmers and The County Administrative Boards. This is further described in the result of this study.

Tabell 1 . Overview of the instruments for energy savings

Providers of instruments	**Instruments for energy savings**
Focus on Nutrients	- Climate check-up - Eco-driving
Swedish Board of Agriculture	- Contributions to renewable energy and efficiency
Swedish Energy Agency	- Energy Audit

1.5.1 Climate check-up and Eco-driving

Focus on Nutrients is a cooperation project between The Swedish Board of Agriculture, The Federation of Swedish Farmers, The County Administrative Boards and a large number of advisory organizations within the agricultural sector (Swedish Board of Agriculture, 2018a; Focus on Nutrients, 2017). The European Agricultural Fund for Rural Development and reclaimed environmental taxes by the Federation of Swedish Farmers finance for the project. Contributions are given to county administrative boards that prioritize which advisory is implemented regionally. The project is an important complement to other instruments, such as legislation and environmental compensations. Focus on Nutrients aims to reduce emissions of climate gases, reduce over fertilization and the pursuit of safe use of plant protection products. The counselling within Focus on Nutrients is supposed to develop farmer's competence and focus on long-term environmental strategies at farms. The counselling should not be used as a yearly service for the farmers, such as production advisory can work. There are approximately 8000 advisory members in Focus on Nutrients, and another 2000 members that only receive newsletters or participate in single advisory services. A farmer participates voluntarily and decides which measures are implemented at the company.

In this study, the majority of the respondents work or has worked with Focus on Nutrients, and more specifically the instruments for energy savings called, Climate check-up and Eco-driving. There are two instruments within Focus on Nutrients that are performed by advisors for farmers in purpose to energy efficiency on farms (Swedish Board of Agriculture, 2018a). Climate check-up consists of advisory about the energy use and what energy savings could be done on the farm. On the counselling an advisor, together with the farmer, map out the farms directly energy use and the advisor makes an action plan and a simple list of potential arrangement that can be done to save energy. The counselling can be performed individually or in groups and is firstly directed to farmers with more than 25 units of animal or 50 acres of arable land (Focus on Nutrients, 2018a). The farmer shall finance 10 percentages of the cost of the counselling. The Eco-driving is entirely free of charge and is group courses in eco-driving for agriculture-machines (Focus on Nutrients, 2018b). The course contains theory and practical training with a total of 10 hours. The Swedish Board of Agriculture makes agreements with advisors in Sweden that performs the courses and is responsible for different geographical areas.

1.5.2 Contribution through the Swedish Board of Agriculture

Besides Focus on Nutrients the instruments for energy savings in this study includes Investment contributions in the Rural development programme 2014-2020 (Swedish Board of Agriculture, 2017a; Swedish Board of Agriculture, 2017b; Swedish Board of Agriculture, 2018a; Swedish Board of Agriculture, 2018c; Swedish Board of Agriculture, 2018d). Within the program, there are different contributions, which farmers can apply. This study is delimited to investment contributions for renewable energy and energy efficiency. Investments in energy efficiency can be better ventilation, lights or isolation in a stable. Expenditure in renewable energy can be biogas. The County of Administrative Board handles applications for investment contribution.

1.5.3 Energy Audit through the Swedish Energy Agency

The instruments for energy savings mentioned so far are handled through the Swedish Board of Agriculture. Outside the agriculture politic, farmers can also receive contributions from the Swedish Energy Agency by Energy Audit (Swedish Energy Agency, 2015b). Energy Audit is a contribution provided for small and medium-sized companies with an energy consumption of 300 MWh per year. In the agricultural sector, farms with at least 100 units of animals are also able to apply for the contribution even if they have lower energy consumption. In an Energy Audit an advisor with the right knowledge for energy counselling provide a map out of the farms energy use that is more comprehensive than Climate check-up through Focus on Nutrients. The advisor also gives a proposal on the actions that can improve the energy use. The contribution covers 50 percentages of the cost, thus maximum 50 000 Swedish Crowns.

1.5.4 Other instruments for energy savings

Other instruments for energy savings that have come up in this study are Climate studies, Network for energy efficiency and Climate-step. Climate studies can be seen as a lengthening of Energy Audit, which consists of a contribution for further counselling for energy efficient investments through the Swedish Energy Agency (Swedish Energy Agency, 2015a). Companies can receive up to 70 percentages of the cost, merely the fact that the company has to have at least 50 employees which makes it less relevant for the agriculture sector. Network for energy efficiency, is also coordinated by the Swedish Energy Agency (Swedish Energy Agency, 2015b). The purpose is to create a network of 8-16 reasonable similar companies that is provided with a network coordinator and an energy expert who gives advice and support. This tool can be seen as more relevant for this study although there is only one network in

Sweden with agriculture companies (SEA 3). The networks started the year 2016 and are supposed to last in four years (Swedish Energy Agency, 2015b). Thus, this study is not focused on this tool, yet open for the inputs about the work with this network and what in can contribute with. The last tool that has come up in this study is Climate-step. It is investment contribution for actions that contribute to reduce carbon dioxide, provided by the Swedish Environmental Protection Agency (Swedish Environmental Protection Agency, 2018). Since some advisors have mentioned this tool it can be seen as relevant for this study, yet the consideration for it is limited. Climate-step can be applied by Universities, county councils, organizations, housing cooperatives, etcetera (Swedish Environmental Protection Agency, 2018). Since it is very wide in the fact of who can apply for the contribution and most of the applications farmers can do, can also be made in the Rural development programme instead.

1.6 Outline

To give the reader a comprehensive overview of the structure in this paper figure 1 is presented below. The first chapter presents a background problem and a motivation for this study. It subsequently leads out to the aim and research questions for this study and contains the characterization of the instruments for energy savings, which is important reading for understanding this study. The following chapter covers the used methodology and explains how this study was conducted with the motivations of different choices. The third chapter presents a theoretical review that outlines in a theoretical synthesis. The empirical data is shown in chapter four and starts with an overview. The empirical data is analyzed by the basis of the theory. To facilitate the reading of this paper, chapter four is structured similarly to chapter three based on the theoretical synthesis. It is followed by analysis and discussion in chapter five. This chapter is also structured similarly to the theoretical and empirical chapters. This paper ends with chapter six where conclusions are presented together with suggestions for future research.

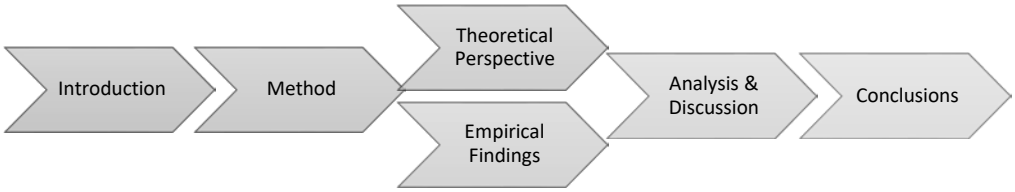

Figure 1. Illustration of outline

2 Method

In this chapter the methodological approach for the study is presented. The purpose is to clarify how the study has proceeded during the theoretical and empirical findings the researcher has made. The process for the study is presented, which describes different critical turns. The literature review is presented in this chapter since it is essential for the reader to understand what the researcher read before interviews and that a researcher can never be entirely objective from knowledge and experiences (Robson, 2011). Further, the method for data collection is described. The chapter ends with a discussion of the method together with ethical considerations.

2.1 The Process

In a deductive process the researcher moves from theory to observation (Robson, 2011). In an inductive it is the opposite. Criticism to inductive reasoning is that it is not possible to gather enough empirical data for theory building (Bryman & Bell, 2015). The deductive reasoning is criticized for being very strict with a clear selected theory from the beginning, which not always is the case. With an inductive reasoning an empirical phenomena may arise that cannot be accounted in the literature. Further on the inductive reasoning seeks to explain a phenomenon by searching for the best explanations and interpretations about the empirical aspects through a continuously examine where the researcher remains open rather than searching for confirmations about preunderstandings.

For this study, the researchers understanding went back and forth between the empirical subjects and the literature search and theories, yet with a more inductive approach. The process of developing the relevant theories for this study has been through a continual process. Thus the researcher could stay receptive in the analysis. In the early stage of this study the researcher tried to grasp all the aspects of the topic and find the empirical problem. Initially, the different instruments for energy savings were viewed on websites and some contact with Research Institute of Sweden and a few respondents about the instruments for energy savings were essential for the understanding for any difficulties about them. By direct contact with some respondents the following process was facilitated. The respondents could easily give names on advisors in the country that were relevant to the study and they had a lot of inputs when they were allowed to speak freely about the situation. It gave the researcher a good overview of the amount of advisors within the area that could be relevant for the study, which were only a few. That changed the process of the study, since it became possible to talk to a group of respondents that could describe and stand for a more comprehensive and complex phenomenon in the Swedish Agriculture sector. Before and during the interviews the first literature search were made where the researcher became aware of some common issues within environmental communication and the agricultural extension to farmers (Hallgren & Ljung, 2011; Bawden, 2007).

The process in this study followed by searching in the literature, which led to some delimitations of the study and a deeper focus on which respondents were of higher value. The process did take a turn after a while where the approach became much more inductive (Bryman & Bell, 2015). During the interviews the researcher found that theories that had been found were no longer relevant. Instead the focus shifted to the respondents for the study and allowed a massive amount of inputs shape the empirical data. During the process of the study it became clearer for the researcher that the goal was not to test theory, which is the case in deductive approach (Eriksson & Widersheim-Paul, 1999). The inductive process seemed

more appropriate since the study became more and more explorative, which means that the theories for the study were not obvious. The study proceeded with the empirical data and where interpreted and analysed by support from a theoretical framework that were put together at the end of the process.

2.2 Literature review

According to Bryman and Bell (2015) a literature review is a way to gain knowledge about what is already known in the topic and concepts, theories and research methods that have been applied to it. A literature review is a way to find out if there are any unanswered questions and make sure to not trying to explore something already discovered. It is also an important part for developing research questions and showing the importance of a study. In the literature search the databases Google Scholar and Web of Science were used.

2.2.1 First literature review

In the early stage of this study the research problem was unclear and therefore the academic books or articles that were collected consisted of basic theories of communication, change and environmental communication. Through the process of developing the understanding of the empirical problem, the literature review changed several times and dived in to previous research with similar topics. In this case it was essential to find some studies with the same or similar characteristics to make sure that the study was of relevance. The reference lists from similarly studies were of great value in the followed literature search. It provided keen depth in existing gaps in the literature and a narrative literature review was performed.

A narrative review is suitable for qualitative researchers since the view of theory usually changes when collecting data (Bryman & Bell, 2015). When studies, similar to this one were encountered a form of “Snowballing” method was used to find more relevant literature. Where the reference list was in focus to find underlying literature for different theories. Keywords used in the literature search to find relevant theories for the empirical data were energy efficiency, agricultural advisors, environmental communication, and etcetera. The articles that were found were mostly specific about agriculture extension and with focus on a more sustainable environment. In the early stage of the literature review in this study literature from other students studies also eased the search process. Some of the material, which was compiled, was fundamental literature about environmental communication (Hallgren & Ljung, 2005; Nitsch, 1998). How the climate policy is dependent on both traditional governance and joint efforts from society (Hedlund & Montin, 2009), which is in line with the instruments for energy savings. Other theories that was seen as relevant was Sustainable farm management (Klerkx & Jansen, 2010), where Bawden (2007) describes that a sustainable agriculture is in need of more adequate knowledge systems. During the interviews it became clearer that the literature that was found was more interesting as a background study than to use in the analysis. Therefore a second literature review was performed with a focus on theories that could explain the practice of the respondents.

2.2.2 Second literature review

Based on the empirical data that had been collected, grand theories about stakeholders and practicing were seen as a potential framework for the study. Therefore a second literature review was made where keywords used in the literature search to find relevant theories for the empirical data were stakeholders, actors, authorities and governance. This was motivated by the empirical findings where the connection, which the researcher had in mind to find, could

not be found. Therefore theories that could help describe the situation in which the respondents evolve were desirable. The researcher for this study landed in the Stakeholder theory and Theory of Practice as the main literature for the study. The Stakeholder theory is a way to describe and sort out the actors that are involved in this study. The Theory of Practice is used in many different research fields to describe empirical practices (Grenfall, 2012). Although the Theory of Practice was described as complex and difficult to use in its correct nature, the researcher for this study still believed that the empirical material was rich enough to use a practice theory. Many theories provide useful accounts in their specific area and ignore factors that could provide a wider understanding (Anderson & Ronteau, 2017). This motivates the choice of the theory although it might seem difficult to use. To gather a better understanding for how the Theory of Practice could be use, articles that used the theory in practical, such as case studies, were essential for this study. The articles were situated in other practices, such as criminal behaviours and entrepreneurship (Moyle &Coomber, 2017; Anderson & Ronteau, 2017). They motivate the Theory of Practice as useful in other contexts. The theories that were chosen for this study was, by the researcher determined very soon after the empirical data was gathered. Therefore the literature consists mostly of peer-reviewed articles and books, since the researcher dived directly into the main references.

2.3 Research design

Depending on the topic and what research questions a study tries to answer different research designs are used and work as a framework for the study (Bryman & Bell, 2015; Robson, 2011). In a fixed design, the method for collecting data is planned before it begins and the comparisons and relationships between variables are vital (Bryman & Bell, 2015; Robson, 2011). According to Robson (2011) a fixed design is not to recommend if a study aims to look into the complexities of individuals. A flexible research design is then preferable, where the aim is to create a wider understanding of phenomena (Bryman and Bell, 2015). The flexible design allows the researcher to stay open on options about methods and changes may arise when involving empirical data in the early process (Robson, 2011). The research questions are usually underdeveloped and evolve gradually with the study and the choice of respondents can be decided step by step.

This study focused on gaining a deeper understanding of the happening between advisors and authorities within instruments for energy savings provided for farmers for energy efficiency and production, thus a flexible research design was chosen. The advisors engage with each other, authorities, farmers etc. Each respondent has their particular view on how these instruments for energy savings should be used and what is working better or not working properly. At the same time, there are many other actors that are involved, from the authorities and from the Federation of Swedish Farmers for an example. When starting this study the researcher did not have a clear view of what kind of state of difficulties that could be. Therefore a flexible design was preferable where the researcher had the opportunity to explore the phenomena. By reaching out to both literature and collecting data the researcher had the opportunity to look into the complexities of individuals. Thus a greater understanding of what the research questions should be and gradually evolved them step by step. This study outlined in a rich amount of empirical data that has been considered by the theoretical framework, rather than testing theories. Which is, according to Robson (2011), what a flexible design can provide.

2.3.1 Qualitative approach

There are two different research approaches, quantitative and qualitative (Robson, 2011). The qualitative approach is preferable when the researcher studies a complex area of human activities (Gummesson, 2006). Robson (2001) stresses that a qualitative approach is appropriate when the purpose of the research is to understand a social situation in a specific field in a deep meaning. Conversely from quantitative research, where it is traditionally of a high importance that the researcher stays objective and hold back personal belief, the qualitative approach allows the researcher to subject thinking.

Due to the nature and the fundamental purpose of this study, and given the above, the research is based on a qualitative approach. It stresses the importance of a deeper understanding of individuals in its context, in this case the respondents working with instruments for energy savings. Furthermore, there was no distinct theoretical knowledge or concept that this study could dependent on, which also favour for a qualitative approach (Robson, 2011).

2.3.2 Unit of analysis

The unit of analysis is what the researcher decides to focus on (Battacherjee, 2012). It can be a collective, a person or a scientific study. It explains what type of primary unit the researcher study (Bryman & Bell, 2015). According to Eriksson and Wiedersheim-Paul (1999), an emphasis on the actors is typical for case studies. With case studies the aim is to get rich information about a subject or an organization (Bryman & Bell, 2015).

The purpose of this study was to find underlying motives and specific information from respondents, as Denscombe (2000) describes case studies. Criticism to case studies is that they cannot draw general conclusions (Lundahl & Skärvad (1999). In this study, the aim is not to generalize the phenomena to other situations, but to critically study actors that work with the instruments for energy savings. Thus the unit of analysis in this study is the individuals and not the instruments.

2.3.3 Collection of data

There are several methods to collect data, interviews, questionnaires and observations for example (Robson, 2011). Interviews are a way to gather a lot of information and an easy way to gather the right information. Although it can seem to be time consuming, it is a convenient way to establish a deeper understanding. For this study, due to its aim, interviews were an appropriate method for collecting data since it allows the respondents to speak openly about the subject.

Sample

The population for advisors, working with the instruments for energy savings for farmers is difficult to map out. There are some changes in advisors every year and some advisors are self-employed. Thus a probability sampling is not feasible (Bryman & Bell, 2015). A purposive sampling is where the researcher has the unit of analysis in mind when gathering respondents. People within sites that are relevant for the study are selected. In this study the researcher initially made contact with a few respondents at the authorities. The researcher was then guided further on through the respondents to find advisors. This method is called snowball sampling and according to Bryman and Bell (2015) it is the only approach to use when the population is hard to define.

AT the beginning of the interviews the researcher described the study and several respondents provided the researcher with names and contact information of other individuals that were of

interest for this study. The researcher continued the process with contacting a few directly by phone and a few by email. In table 2 a list of actors that are of significance for the instruments for energy savings is presented. As previously mentioned the actors have come up through interviews and also from websites about the instruments. The table displays the actors that are central to this study. The actors in bold text are represented in the study.

Table 2. Central actors for the instruments for energy savings

Authorities	**Advisors**	**Others**
- Swedish Board of Agriculture	***- Hushållningssällskapet***	***- Federation of Swedish Farmer***
- County of Administrative Board	***- LRF Konsult***	*- KRAV and other certifications organs*
- Swedish Energy Agency	***- HS Konsult***	*- Municipalities*
- Energy Agencies of Sweden	***- HIR Skåne***	*- Research*
- Swedish Environmental Protection Agency	***- Sjuhärad***	*- Producers*
	- Other Agriculture Advisory organizations	*- Consumers*
	- Self-employed Advisors	*- Farmers*

From all the contacted persons for this study, a few had retired or started working in a different area and a few did not have time for an interview. The main focus was advisors working with the instruments for energy savings and the interviews with advisors landed in 8 respondents. For wider understanding individuals at the authorities were contacted and 10 interviews were made with respondents at FSF, Swedish Board of Agriculture and the Swedish Energy Agency. Table 3 illustrates information about the respondents. The respondents are anonymous and the information about them is therefore limited. The purpose with the Table 3 below is to present what the different respondents are named in this thesis and when the interviews were performed.

Table 3. The interviewed respondents

Respondent	***Position***	***Date***
Advisor 1.	Advisor in a organization	2018-03-07
Advisor 2.	Advisor in a organization	2018-02-01
Advisor 3.	Advisor in a organization	2018-03-26
Advisor 4.	Advisor in a organization	2018-03-22
Advisor 5.	Advisor in a organization	2018-03-01
Advisor 6.	Self-employed advisor	2018-01-25
Advisor 7.	Self-employed advisor	2018-02-05
Advisor 8.	Self-employed advisor	2018-02-27
SBA 1.	Swedish Board of Agriculture	2018-02-14
SBA 2.	Swedish Board of Agriculture	2018-02-08
SBA 3.	Swedish Board of Agriculture	2018-03-26
SBA 4.	Swedish Board of Agriculture	2018-03-09
SBA 5.	Swedish Board of Agriculture	2018-03-12
SEA 1.	Swedish Energy Agency	2018-03-09
SEA 2.	Swedish Energy Agency	2018-03-01
SEA 3.	Swedish Energy Agency	2018-02-08
FSF 1.	Federation of Swedish Farmers	2018-02-01
FSF 2.	Federation of Swedish Farmers	2018-02-01

Semi-structured and unstructured interviews

According to Robson (2011), there are roughly three interview techniques that can be used, *unstructured*, *semi-structured* and *fully structured*. In unstructured interviews, the interview stays formal. In semi-structured interviews the interviewer has a checklist with topics or questions. During the interview the topics can also be changed (Bryman & Bell, 2015). The interviews in this study have been made in both unstructured and semi-structured ways, usually a combination of them both. The ambition with the interviews was to reach an understanding for more than specific activities the different respondents do. Further the researcher for this study was out of experience for the specific phenomena. Thus interviews, where the respondents were allowed to speak openly about the subject, were in favour of the study. The researcher had the flexibility to clear out misunderstandings directly for a better understanding of the respondents "situation". Complete interview guides were never made for the interviews in this study. Instead, the researcher tried to stay open to where the respondents carried the interviews. As described in the process for this study, one respondent revealed the way to the next respondent, in a snowball method.

The interviews were held by telephone. Since it became clear that the amount of advisors, working with these specific instruments for energy savings, were a just a few in Sweden the goal was to get interviews with as many as possible. Thus, interviews by telephone gave the opportunity to reach respondents from both the south to the north of Sweden. Interviews by telephone are limited in such way that the researcher cannot see the respondents' reactions in facial expressions and body language (Bryman & Bell, 2015). In this study, the disadvantages of telephone interviews are by the researcher considered to be of minor importance than the advantages of being able to reach respondents in an easy way. The interviews were held in Swedish and were recorded, except for three interviews. The recordings provided good conditions for the researcher to stay focus in the interviews and allowed the researcher to listen to the interviews later. For the interviews that were not recorded, the researcher took

notes and went through directly after when the interviews were fresh in mind.

Anonymous
Early in this study it became distinct that the respondents would be anonymous. As established earlier in the study, there is a small number of advisors in the agricultural sector in Sweden working with these instruments. Since the study focuses on depth in a critical view the researcher found it substantial that the respondents could speak freely and open about the subject. According to Bryman and Bell (2015) anonymous of respondents can be difficult to ensure. Even without mention the respondents by their name or position in an organization in this study it can be possible to reveal individuals. In this study the researcher considered this issue by asking the respondents if they wanted to be anonymous. Since a few preferred to be anonymous all respondents in this study are anonymous. Although an individual whom works close to the respondents may identify them in the thesis. The respondents are well aware of this issue since the researcher informed them about this dilemma during the interviews.

2.3.4 Data analysis
In a qualitative research it is often words rather than numbers that is analysed (Robson, 2011). Thematic coding can be used to label the data in themes, which helps the researcher to analyse data (Braun & Clarke, 2006). By going through the data several times the researcher becomes more and more familiar with the collected data, which Robson (2011) stresses is important in qualitative research.

The empirical data of this study was analysed in an experimental and uncertain way, which follows the research approach as very inductive. Furthermore the researcher went through the data several times, starting the analysing process during the interviews, which were either recorded or notes where taken. After the interviews a summary from the recordings and notes were made and already during this step the interviews were compared with each other. When all interviews were completed another thoroughly summary of the text was performed with the theoretical perspective in mind. The first themes the data was labelled after followed the structure of the interviews where questions about how they work, what they see as positive and working and what they believe need to be in another way. The data was finally labelled in different themes accordingly with the theories and the empirical findings. The themes were; *descriptive, field, habitus, capital, instrumental* and *difficulties.* In these themes the empirical findings are presented in chapter three, where difficulties is the theme that cannot be connected straight to the theories.

2.4 Method discussion

According to Robson (2011) it is important that the researcher reflects about how quality in a flexible design can be ensured. The following section provides a discussion of the methods used in this study and how they impact the quality of the study and ethical considerations.

2.4.1 Quality assurance
In order to ensure the trustworthiness and quality it is of great importance that researchers reflect about their impact on a study (Bryman & Bell, 2015). According to Robson (2011) the researcher can have a tendency to ignore unusual findings and neglect information that conflicts with the researchers' hypotheses. Hence it is essential to know what affects the researcher to reduce the human deficiencies. It is also desirable to attain a feasible amount of data for the researcher to handle. Otherwise there is a risk that the researcher starts to exclude

irregular data or might become over-confident when judging what is insignificant (*ibid.*). Consequently it is substantial to remember that a researcher cannot be absolutely objective.

In this study, the inability of being objective has been considered *throughout* the whole study to ensure high quality. By summarising interviews shortly after they have been performed, and going through the whole interviews again in a later nonce, a process where the risk that the researcher ignores findings is reduced. On the other hand, his study has followed an unstructured process where a finding has led to new findings. The early interviews that were performed have interpreted with the later interviews. By describing the process for this study, as this chapter has, and by acknowledging that the researcher cannot be objective the findings can be accepted for this particular study. With that said, the reliability of this study, which can be explained as the possibility to repeat the study with the same outcome, is delimitated (Drost, 2011). To achieve reliability, the steps for the study have to be carefully described. This has been explained for the study, and also why some choices have been made. However, for this study the difficulty for the researcher to stay as objective as possible, can be seen as very problematic and therefore the probability that the outcome would be the same for another researcher is reduced. Although due to the aim of this study the researcher explains the subjective perception from the interviews where the whole process has followed new findings during the interviews.

If the study would have had a more structured approach, other findings and other respondents could have been used. For example where only advisors or only authorities had been interviewed. Or analyzed a specific tool for energy savings had been studied. This could have led to more specific findings. In order for the researcher to stay open to information, it is important that the researcher is able to adapt to the context (Robson, 2011). For this study an extensive part of the study was to unravel what different instruments for energy savings that exists, what actors are essential for these instruments and how they are connected. This had to be understood before the interviews so the researcher could preserve a better understanding of the respondents.

2.4.2 Validity

According to Bryman and Bell (2015) validity and reliability are two terms for measuring and demonstrate quality in a flexible design. To strengthen a study, several of ways can be used, where one of them is triangulation (Robson, 2011). By triangulation, the researcher uses different references to prove a certain point, which can increase the validity of a study. According to Robson (2011) validity in a flexible design can be debated since the researcher by words, interprets the results. In this study various references have been used to ensure quality.

To achieve external validity, the instruments for energy savings and the actors working with the instruments are described, which helps the uninformed reader to understand the context and also to judge whether the results of this study can be transferred to another context or not (Bryman & Bell, 2015). Furthermore, the choice of respondents that can be a representative sample is important to improve the generalization to other contexts. In this study a specific appearance is studied, which implies that it could be hard to generalize it to another context. With that said, this study does not aim for any generalization, yet the need for a representative sample was still essential. The choice of respondents was directed by interviewed respondents, which was able to name-drop most of the actors working with the instruments for energy savings. Therefore, the respondents for this study cover some of the advisors and authorities that, according to the respondents, they are individuals who have the most

knowledge about the work. Alternatively it is possible to reach a certain level of generalization with a theoretical framework (Flyvbjerg, 2006). Hence, the theoretical framework for this study can be used and reprocessed for other studies. Thus, this study can achieve a certain degree external validity and generalization.

2.4.3 Ethical considerations

Ethical considerations are commonly discussed in research and it is important to respect the respondents and make sure that they are well aware of what interviews are for (Bryman & Bell, 2015; Robson, 2011). The researcher needs to considerate the ethical issues that can occur regarding the design and the participation of the interviews (Bryman & Bell, 2015). It is also important that consideration is taken regarding consequences and desires for the respondents.

In an early stage of the process for this thesis the researcher found out that the numerous of actors, working with the instruments for energy savings, are only a few. The potential risk that some of the respondents would desire to be anonymous was seen as high, which followed that the researcher decided to make all respondents anonymous. According to Bryman & Bell (2015) it is often easier to anonymize the respondents in a qualitative research. In this study the respondents are aware of the dilemma with few actors, who works with the instruments for energy savings. Hence the confidentiality of the respondents cannot be guaranteed. This especially concerns if the readers are engaged in the subject.

In this study all the respondents were asked whether to be recorded or not during the interviews. Some of the respondents argued that they were more comfortable to speak freely if they were not recorded. This requires more from the researcher, which has to take notes during the interviews. On the other hand it provides a relaxed situation for the respondent, which is more likely to give trustworthy answers (Bryman & Bell, 2015). Furthermore, the researcher started the interviews with an explanation of the purpose of the study and how the data would be handled. Developing a good relationship with the respondents was highly valued by the researcher for this study. This provided findings that otherwise might not would been raised.

During interviews it occurs, and seems to be quite widespread, that researchers provide the participants a limited understanding for the research (Bryman & Bell, 2015). In this way the respondents can respond more naturally to the questions they are given and not personally affect the results. There is a dilemma with this type of research, where social researchers had a duty to not pursue methods, which can infringe human values. In this study, the researcher started the interviews with explaining the purpose of the study and what different types of respondents the researcher aimed to interview. In this way, the respondents got a wide understanding for the questions and the researchers ambitions with the study.

3 Theoretical perspective

In this chapter a theoretical introduction is presented where the researcher also argues for the relevance of the chosen theories. It follows by the Stakeholder Theory and Theory of Practice. At the end of the chapter a theoretical synthesis is presented. The theoretical synthesis is a combination of the previously mentioned theories and is used in this study to analyze and discuss the empirical findings to give this thesis an academic depth.

3.1 Theoretical introduction

Governance has for a long time been seen as clearly identifiable, formal and static entities (Kemp *et al,* 2005). Today's view understands governance with a more complex approach, which one gets to act, by what types of interactions and who takes decisions for collectives. Governance set standards, organize negotiation processes, influence motivations, perform allocation functions, monitors, initiate or reduce conflict and resolve disputes among actors (Eden & Hampson, 1997). For a more sustainable environment, a lot is expected from governance (Kemp *et al,* 2005). It requires sectorial specialization for considerations of different problems. These specializations have led to developing a good response to specific problems, thus the broader aspect can get lost and partial solutions can be damage from a broader view of a more sustainable environment. Sustainability requires improved interplay between governance and non-governance actors. With environmental efforts there is a need for acceptance of common overall objectives and that elaboration and integration comes through engaging multiple actors. In practical implementations of regulations, education programmes and power-sharing processes the market-based decision-making plays a major role in governance (Kemp *et al,* 2005). It is a challenge to evaluate and identify external costs, usually because of limited knowledge and moral dilemmas. A common way is to impose the polluter pays principle, but it seems like carefully integrated systems with application of multiple instruments are necessary.

The researcher for this study argues that theory, which describes what individuals within this study's context "do", is a way to understand today's view of the work. Stakeholder theory can bring out an understanding for actors within the context (Freeman, 2010). The Stakeholder Theory is also useful for this study since the actors' plays different roles that can be seen as hard to separate. Practice theories do more than just describe what actors do (Nicolini, 2012). A practice theory opens up space for the individual agents. By a practice-based approach, Nicolini (2012) suggest that practices and not practitioners are the unit of analysis (*ibid.*). It follows for this study's approach, where the practice for instruments for energy savings is studied and not the peculiar respondents. Anderson and Ronteau (2017) see a lack in existing theories of entrepreneurship in unique circumstances. The same approach to this study's phenomena can provide more understanding in its context. By the Theory of Practice it is possible to comprehend more than only what the individuals working with instruments for energy savings in the agricultural sector "do".

3.2 Stakeholder theory

Stakeholder theory has an additional interest in understanding different stakeholders, their needs and behaviours, which are affected or can affect an organization (Freeman, 2010). It can also be seen as a roadmap over the internal and external stakeholders where the stakeholders can have more or less influence in the organization (Orts & Strudler, 2009; Bakka et al, 2011). By mapping these stakeholders, researcher can be guided to explore questions concerning strategies and power structure (Mintzberg, 1983).

3.2.1 Definitions

The concept of the stakeholder theory has been used in many different settings (Orts & Strudler, 2009; Hörisch *et al.*, 2014). Orts and Strudler (2009) argue that the concept of stakeholder theory has been used too widely and in expansive versions within different business contexts. It has provided a satisfying approach to many researchers, which also has led to many different definitions (Weyer, 1996). A general and broad definition of the stakeholder theory from Freeman (1984) can be seen as a starting point:

"an inclusive definition of stakeholder including as stakeholders, those groups who can affect or are affected by the achievement of an organization's purpose."

*(*Freeman, 2010, p 49)

Rhenman (quoted in Näsi, 1995, p. 22) defines stakeholders as "*the individuals and groups who are depending on the firm in order to achieve their personal goals and on whom the firm is depending for its existence*". According to Ackoff (1974) stakeholders are groups that the company needs in order to exist and consists of people and individuals in groups, such as suppliers, employees, customers and communities. The words stakeholder theory, stakeholders and stakeholder management are used with different meanings in the literature although they circle around the same meanings. It is essential to be aware that the unit of analysis for the stakeholder theory is the relationships between the organization and the stakeholders and not the company itself (Freeman et al., 2010).

3.2.2 Stakeholder theory in practice

In environmental, social and sustainability management research, one of the most common approaches is the stakeholder theory (Frynas & Yamahaki, 2013; Montiel & Delgado-Ceballos, 2014). The stakeholder theory can here be used with a focus on the relationships between the stakeholders and how they are involved in a certain activity (Hörisch, Freeman & Schaltegger, 2014). Their inputs are important to identify since they both bring value to an organization and receive a positive output (Philips et al., 2003; Donaldson & Preston, 1995). The stakeholder theory is limited to the interest of stakeholders, in other words, human beings (Orts & Strudler, 2002). Therefore the theory must be extended with environmental aspects to function for an environmental and sustainable approach.

The stakeholder model presented below in Figure 2 describes the inputs and outputs in all variations (Donaldson & Preston, 1995). The arrows between run in both directions, from and against the firm. In this figure, all stakeholder relationships are described in the same size, which is the conventional conception. Donaldson and Preston (1995) further argue that stakeholders' issue in organizations are fundamentally different from each other and the variety of stakeholder relationships can be as many as the number of stakeholders.

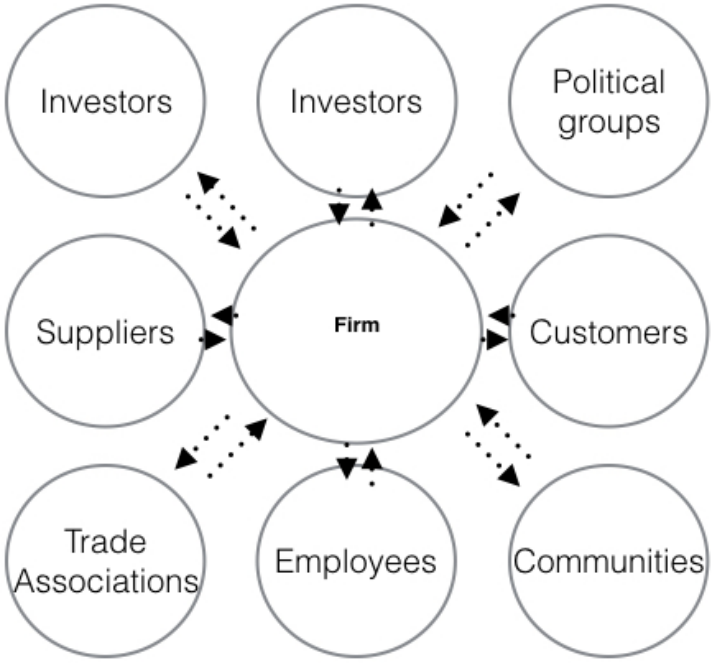

Figure 2 . Stakeholder model (Donaldson & Preston, 1995, 69)

Stakeholder theory can be divided into three different divisions, descriptive, instrumental and normative (Donaldson & Preston, 1995; Freidman & Miles, 2006). The descriptive is used to describe how an organization is managed (Reed *et al.,* 2009). It can be performed by mapping out stakeholders and describe their relationships. Sometimes it can also explain specific characteristics and behaviours (Donaldson & Preston, 1995). The instrumental is used to identify connections or lack of connections between stakeholder management and achievements in an organization, such as profit and growth. The third and normative use of the theory has the purpose of resting on a general belief that decision maker's act in a way because it is morally right and fair (Donaldson &Preston, 1995; Freidman & Miles, 2006). With an integrative stakeholder theory, all three, previously mentioned divisions are used (Hörisch *et al.*, 2014).

3.3 Theory of Practice

According to Grenfall (2012), the things we know in the world is developed and established by individuals' acts of perception. There are structures in different social universes that are evolving and pre-constructed by the individuals. The product and the process in these social universes are structural relations, followed by conditions and regularities that are created as a guide to action and thoughts for the individuals. This can also be illustrated as the understanding of a culture (Bourdieu, 1968). By the structuralist tradition, culture can be seen as an instrument of knowledge and communication, which is based on a shared consensus of the world. By the functionalist tradition, culture is formed by human knowledge and is a product of social infrastructure. This is what Pierre Bourdieu tries to reconcile with a theory that breaks the subjectivist and objectivist approaches outlined above (Grenfall, 2012). With the Theory of Practice Pierre Bourdieu sought to gain complex, broadly and holistic understanding of social happenings and contexts (Moyle & Coomber, 2017). Theory of

Practice is classified as a Grand Theory (Walther, 2014), which is described as an "abstract and normative theory of human nature and conduct" (Skinner, 1985, p 1) and can be applied to different situations and areas of research. It has been used as a theoretical framework in Human Resource Management, Marketing and in Organizational Studies (Nahapiet & Ghoshal, 1998; Holt, 1998; Mayrhofer *et al,* 2007).

The primary methodological aim from Bourdieu is an approach that can capture and analyze individuals in their everyday practices in an intricately way (Moyle & Coomber, 2017). Structuralism can see structures as rules in which individuals follow and behave like a programmed robot, following patterns (Walther, 2014). The opposite would be voluntarism that sees individuals as completely free in alternatives and choices. In Bourdieu's Theory of Practice, he attempts to overcome these two dualities by explaining practice by the interpenetrative relationship between them. The three constructs that are the main concepts of Bourdieu's Theory of Practice is field, habitus and capital (Thatcher *et al,* 2016). It represents a theoretical approach that is flexible and consists of main elements that must never be taken from each other (Walther, 2014). Thus it is difficult if not impossible to explain one element without referring to the other elements. In figure 3 Bourdieu's construct of practice is presented.

$$[(\text{Habitus})(\text{Capital})] + \text{Field} = \text{Practice}$$

Figure 3. Bourdieu's construct of practice (Moyle & Coomber, 2017).

3.3.1 Field

The field is the playground where actors interact (Walther, 2014). The amounts of interactions are infinite and can be discussions, negotiations or conflicts. The fields are shaped by the actors' practice and are seen as dynamic (Chudzikowski & Mayrhofer, 2011). There are different *social fields* and they consist of different interactions. These social fields stand for the more structural part of Bourdieu's Theory of Practice. Each social field has specific rules that are tacit in nature and are internalized by the actors. This enables the actors to envision future opportunities and tendencies. Within the field, actors follow rules of the game with their individual strategies (Walther, 2014). The rules are defined by the set of capital each actor is endowed with, relevant for the field, and with the capital actors in these playgrounds try to advance in position (Chudzikowski & Mayrhofer, 2011). These battles give the structure for what actors in the playground can do or cannot do. The competitions are structured by rewards where the actor gain more capital and by sanctions where the actor loose capital (Chan, 2004).

Grenfall (2012) compares the field with a football field. The football field stands for boundaries where the game can be played. The players have positions, which are predetermined places on the football field. The specific rules for the game have to be learned to play, together with basic skills. The fields' physical conditions, as in well grassed, wet or dry also affect what players can or cannot do. And just like the football field, the social fields in Bourdieu's Theory of Practice do not work alone. There are other surroundings.

3.3.2 Habitus

Habitus is the most widely cited concepts in Theory of Practice (Grenfall, 2012). The habitus can be explained as values, norms and dispositions embedded by the family, education and the environment (Thatcher *et al,* 2016). It is the "*ensemble of schemata of perception, thinking, feeling, evaluating, speaking and acting that structures all expressive, verbal, and practical manifestations and utterances of a person"* (Krais, 1988, p. 169). According to Grenfall (2012) habitus intend to explain that individuals are shaped by ways of thinking about the world. Individuals may often feel like free actors that freely make decisions, yet the base of decisions is assumptions of others behaviors and attitudes in an everyday situation. Social practice is characterized by predications, "*working-class kids tend to get working-class jobs, middle-class readers tend to enjoy middlebrow literature, and so forth – yet there are no explicit rules dictating such practices*" (Grenfall, 2012, p. 49). Habitus is the property of actors, the past and the present circumstances is what structure the actors (Grenfall, 2012). The educational experiences are a form of actors past, which helps to shape the actors present and future practices. Habitus is built by structure, which generates appreciations, perceptions and practices and is durable over time. Although it is durable and has the tendency of actors to act similarly in situations they crossed before, it is not eternal and continually adjusts and evolves by further experience (Walther, 2014). Further Bourdieu (1977) argues that although habitus is seen as an evolving concept, it sometimes does not adapt to the modified field conditions. Bourdieu's example is generation conflicts where actors' habitus has been adjusted over different times (Grenfall, 2012). The development of understandings of reasonable practice, habitus, has become different for two generations. One practice that is reasonable for one generation can be scandalous and unthinkable for another generation.

To understand actors and to explain their actions in a field it is necessary to have information about their competence, which is their capital and habitus (Chudzikowski & Mayrhofer, 2011). Actors' patterns of actions adjust to the context and changes over time. By an actor's involvement in a field, an actor can gain or lose capital. The rewards or sanctions of capital are what constantly modifies the actors' habitus during the whole life. However, the habitus does not work alone (Grenfall, 2012). Figure 4 shows how the circular relationship between the field and habitus.

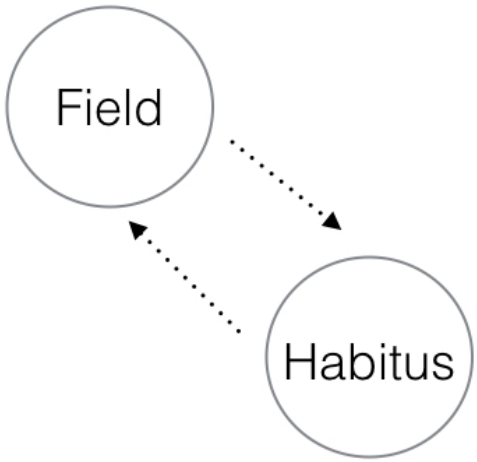

Figure 4. The circular relationship between Field and Habitus (Walther, 2014)

There is an unconscious relationship between the field and the habitus and the two of them have a circular relationship (Chudzikowski & Mayrhofer, 2011; Grenfall, 2012). Thus, practices cannot be described only by the habitus, which is only one part of the equation (Grenfall, 2012). To understand everyday practices, we need to understand both the fields in which actors are situated in and the habitus that actors bring to the fields. The description of habitus and field is further complicated in the ways that field is a context which structures the habitus. At the same time actors understanding for their decisions comes from the habitus, included by the field. In a more simple way it can be described as an "Involvement in a field shapes the habitus, which in turn shapes the perceptions and actions" which leads to a reproduction of the fields rules (Crossley, 2001, p. 101). Bourdieu also describes it as a train that brings its rails (Grenfall, 2012).

3.3.3 Capital

As previously mentioned, capital is the third construct in Bourdieu's Theory of Practice. The capital describes how actors organize to move on or enter a field (Walther, 2014). Capital has been classified into three or four types of capital (Walther, 2014; Chudzikowski & Mayrhofer, 2011). Capital appears as economic, cultural and social capital where symbolic capital can be seen as the fourth (Bourdieu, 1986). Yet the symbolic capital is described as a reflection of the usefulness of the other capitals in the field and is valued by the system and its actors (Walther, 2014). An actor's structure and volume of capital as compared to other actors and Bourdieu portray economic and cultural capital as the most crucial types of capital.

Economic capital is linked to an actor's fortune (Walther, 2012). It can easily be engaged to other forms of capital than vice-versa, for example when buying a book. Social capital involves relationships and social connections and is an actor's entire network with both actual and potential resources (Bourdieu, 1986). By an actors social capital it can access to resources, knowledge and information (Gretzinger, Hinz & Matiaske, 2010). Cultural capital is particularly formed by family and education and is the primary cause for an actors position on a field (Walther, 2014). Cultural capital appears in three forms (Chudzikowski & Mayrhofer, 2011). Incorporated, which can be competence and skills, objectivized through books, paintings and institutionalized, which stands for degrees and academic titles.
Figure 5 summarizes Bourdieu's different types of capital.

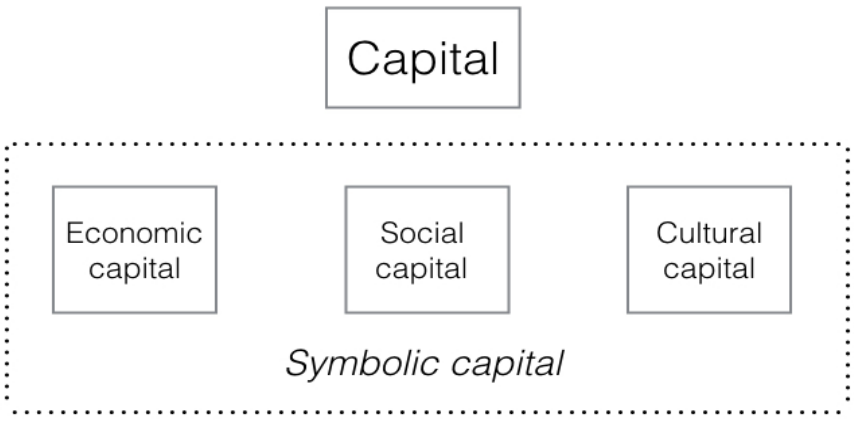

Figure 5. Bourdieu's types of capital (Walther, 2014)

3.4 Theoretical synthesis

With support from the explained theories earlier in this chapter, the researcher has designed a theoretical synthesis. The purpose with the theoretical synthesis is first, to ease the presentation of the empirical findings, which are divided in the same structure, secondly to interpret the empirical findings. The theoretical synthesis is adapted and based on the unit of analysis for this study, which is the practice of instruments for energy savings. More specifically the context, which advisors and key-actors that works with the instruments for energy savings are located in. Figure 6 below presents the theoretical synthesis in this study.

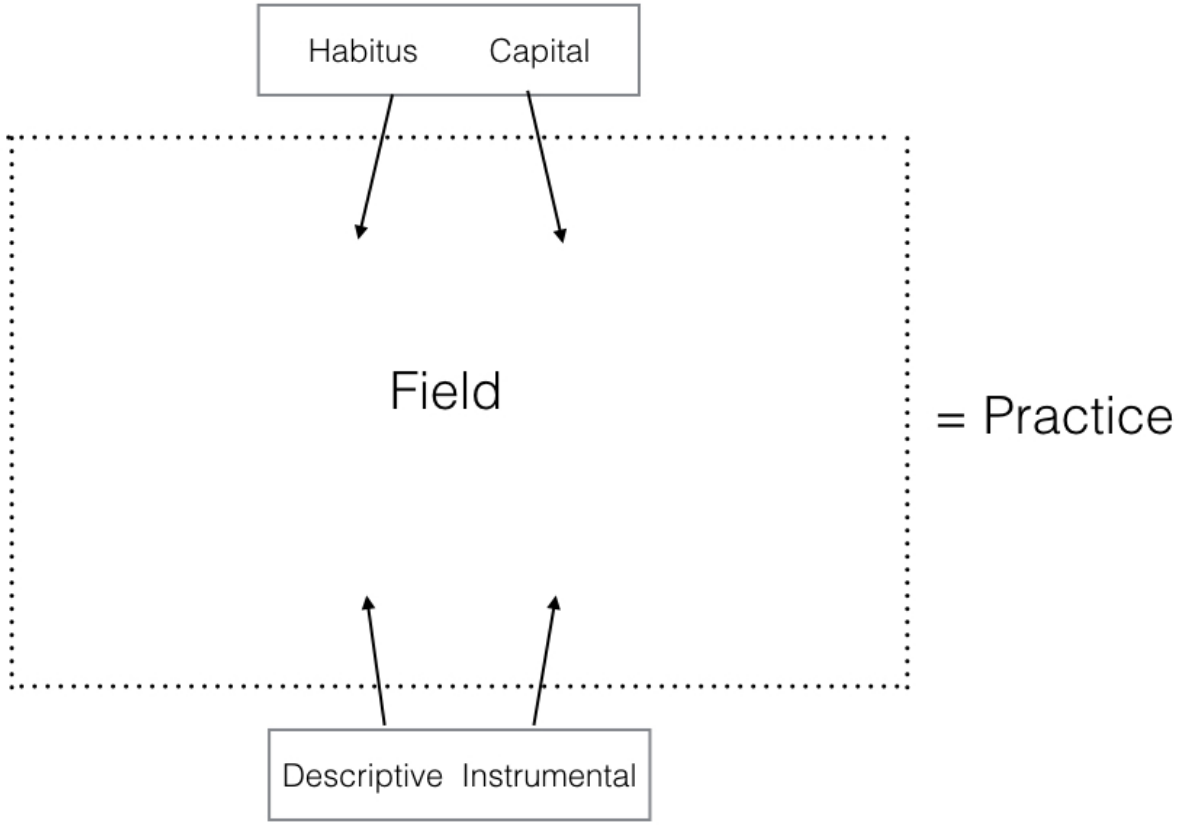

Figure 6. Synthesis of theory

The theoretical synthesis illustrates how the two theories, Stakeholder theory and Theory of Practice are combined. By these two theories an analyze of what the actors do, what their relationships to each other are, the context and the specific instruments for energy savings can be made. In the theoretical synthesis the Theory of Practice is the fundamental theory where a practice is described by the field, the habitus and the capital (Grenfall, 2012). The primary methodological aim of the theory is an approach that can capture and analyze individuals in their everyday practices in an intricately way (Moyle & Coomber, 2017). It is a rather broad theory that has been used in many different fields and can be applied to research, which aims to understand a phenomenon (Nahapiet & Ghoshal, 1998; Holt, 1998; Mayrhofer *et al*, 2007). By combining the Theory of Practice with Stakeholder Theory, a wider and more descriptive

perspective of the practice for the instruments for energy savings can be obtained. In this study the “firm” in the Stakeholder Theory is described as the farmers whom the different respondents in this study provide with the instruments for energy savings. Yet the farmers are not in focus in this study and are not presented as respondents. Therefore the Stakeholder Theory is used to look into the characterizations of the stakeholders and their relations and not the “firm” it self. Two divisions, the descriptive and instrumental, from Stakeholder Theory are used to develop the Theory of Practice to study the advisors and key-persons in this study. The descriptive is used to describe how the work with instruments for energy savings for farmers are managed, where the actors are mapped out and described (Reed *et al.*, 2009). The descriptive division of the Stakeholder Theory is useful for this study since the actors play different roles that can be seen as hard to separate. The instrumental strives to identify connections or lack of connections between the actors (Donaldson & Preston, 1995). By combing these theories the theoretical synthesis for this study is composed, which is used in chapter three to help structure the empirical findings in this study and in chapter four to assist the empirical findings in analysis and discussion.

4 Empirical findings

In this chapter the interviews with the respondents for this study is presented. The empirical findings from the interviews are structured in line with the theoretical framework provided in chapter three. The categorization is Descriptive, Field, Habitus, Capital and Instrumental. The empirical findings are built on the interviews with the respondents for this study, which are individuals at the Swedish Board of Agriculture, the Swedish Energy Agency, the Federation of Swedish Farmers and advisors. Some of the empirical findings also represent the outcome from the readings the researcher has made on the Internet about the instruments for energy savings and the impression from the respondents' engagement towards this study.

4.1 Descriptive

The descriptive division's purpose is to map out the actors and describe how they are connected to the work with instruments for energy savings provided for farmers. It follows by a presentation of the empirical findings connected to how the respondents work. There are numerous actors involved in the instruments for energy savings. The actors also have multiple of different ways to engage with the farmers. According to the respondents during the interviews and the websites that provide information about instruments for energy savings, the actors that provide the instruments are listed below in table 4.

Table 2. A summary of the providers for instruments for energy savings

Providers of instruments	**Instruments for energy savings**
Focus on Nutrients	- Climate check-up - Eco-driving
Swedish Board of Agriculture	- Contributions to renewable energy and efficiency
Swedish Energy Agency	- Energy Audit

4.1.1 Structure

It is the authorities that provide the instruments for famers. The Swedish Board of Agriculture stands for a substantial amount of the instruments for energy savings. They also have a considerable role for Focus on Nutrients, which provide Climate check-up and Eco-driving. The other authority, which provides instruments for energy savings is the Swedish Energy Agency. Below the authorities the County of Administrative Board helps the Swedish Board of Agriculture and the same with the Energy Agencies of Sweden for the Swedish Energy Agency. In table 5 a summary of the actors that are engaged with the instruments for energy savings is presented. Among the authorities, the Swedish Environmental Protection Agency is listed. In this study, they are not given any particular attention since they provide a tool that is very wide in what can be applied for. Thus, makes it difficult to promote directly to farmers and is also challenging to take into account in this kind of study. Yet, the listed actors in table 5 represent the actors, which have arisen by the respondents during the interviews.

The advisors represent some of the advisory organizations, which are included as respondents in this study, yet some are self-employed advisors. There are also other advisors that not are

listed in table 5 since some advisors were engaged with the work for the instruments for energy savings one year ago, but not today.

The other actors, which are listed are the once who do not fit into authorities or advisors. The Federation of Swedish Farmers is a part of this study since two interviews were performed. They act as a support but have no obligated responsibility to marketing the instruments for energy savings. They obtain a good insight from farmers, advisors and authorities. The following actors of others can have different forms of interest for the instruments for energy savings. KRAV has during the interviews been named as an organization with significant influence at the Climate check-up since they require that farmers perform this. In some parts of Sweden the Municipalities has a more meaningful engagement in marketing the instruments for energy savings or demanding some business to take part of some of the instruments for energy savings. Research, producers, consumers and farmers have an interest in the instruments for energy savings, yet not necessary has to be engaged particularly. The farmers who apply for or is provided with some tool for energy savings is central for the instruments. They also have a substantial impact on the instruments for energy savings since they are provided for the farmers. Producers in this table are referred to the organizations that provide farmers with the necessary equipment for different investments. Can also be named retailers. Consumers can be seen as engaged in the way that they buy products from farmers and if they want them to be produced in an energy efficient way, they can also be seen as a stakeholder for the instruments for energy savings.

Table 3. Central actors for the instruments for energy savings

Authorities	**Advisors**	**Others**
- Swedish Board of Agriculture *- County of Administrative Board* *- Swedish Energy Agency* *- Energy Agencies of Sweden* *- Swedish Environmental Protection Agency*	*- Hushållningssällskapet* *- LRF Konsult* *- HS Konsult* *- HIR Skåne* *- Sjuhärad* *- Other Agriculture Advisory organizations* *- Self-employed Advisors*	*- Federation of Swedish Farmer* *-KRAV and other certifications organs* *- Municipalities* *- Research* *- Producers* *- Consumers* *- Farmers*

One of the constant findings during this study was that multiple of the names on advisors that the researcher has been provided by Focus on Nutrition are working only partly with energy counseling. A few have retired and a few have changed profession completely or working with energy in another form than as an advisor (Advisor 4). Compared to advisors for crop production, it is difficult to have advisors for energy counseling employed at smaller regions (Advisor 5). The government mostly finances the energy counseling. Thus this business is very sensitive in a period with EU-subsidies and new program period. It is a time where the

counseling within Focus on Nutrients stops for a while and it can be a challenging time for self- employed advisors.

4.1.2 Communication

The agricultural sector as often called as a “small world”, where the same actors for advising keep appearing in the context (SBA 3). For energy counseling it is even more so. The Swedish Board of Agriculture communicates through their website, by email and telephone (SBA 5). They handle applications, which farmers send in for the different types of contributions and they have telephone and email contact directly with farmers (SBA 4; SBA 2). They mainly communicate with farmers, which are their primary clients. Advisors sometimes make contact with the Swedish Board of Agriculture regarding questions about specific claims in the regulation of certain contributions. Sometimes the task is to send an email and remind farmers about the applications or certain information they need to send in to get their payment, which they are entitled for. They make brochures about Focus on Nutrients, which they have on fairs and courses and advisors can hand out when they visit farmers (SBA 2). The county of administrative boards also have these brochures. A few times they have gone more widely with an annex in the newspaper Land.

Together with the Energy Agencies of Sweden the Federation of Swedish Farmers inform about the contributions for Energy Audit, provided by the Swedish Energy Agency (FSF 2). When the farmers have a smaller energy use, they inform about the Climate check-up. According to the respondents FSF 1 and FSF 2 there is a substantial responsibility for the advisors themselves to implement marketing for Climate check-up. The Federation of Swedish Farmers has no specific promotions. They work with networking and spread information about the instruments for energy savings, which farmers can apply.

According to SEA 3 energy is a resource that farmers themselves own. With a resource as ground, it is possible to produce renewable energy. Farmers can sell the energy or use it to convert their current energy production. The fact that farmers own their energy production makes it more difficult to market energy efficiency. Further, the energy use on a farm is usually very scattered and the farmers rarely see them put together. On the other hand, there are many arguments for farmers to work with their energy use, thus there are usually good potentials for energy savings. Farmers are often interested in both environment and technique, yet energy efficiency seems to require more marketing.

4.1.3 Functions

The main work for the Swedish Board of Agriculture is to report statistic and other administrative tasks (SBA 1). The administrators for investment contributions usually handle questions from farmers (SBA 4). The questions are usually about what information should be put in the forms farmers send in with their application. They manage statistic about farmer’s application for contribution. The statistic is the basis in their work to justify that the contribution that is divided to the farmer is in accordance with the goals of the rural development programme. The statistic is unavoidable if the farmers are going to be continued provided with the instruments from Focus on Nutrients (SBA 3). It is understandable that it is troublesome according to many advisors and farmers. However, we are obligated to report the benefits that arise from the money that is paid. Further, the statistic is relevant and meaningful for advisors. Some larger advisory organizations get enough material by themselves, which can be used to compare between farmers. Other advisors need access to others data to be able to compare farmers. For example, it is difficult to get access to satisfying data for meat production since this type of production varies a lot from farm to farm. Information that

advisors think is inconvenient and takes a lot of administrations to report about is the traveling to farmers (SBA 3). Hence without this, they cannot be provided with any funds.

Climate check-up and Eco-driving is reclaimed by advisors in different counties (SBA 1). The Swedish Board of Agriculture provides the advisors with the material they need. It is thereafter the advisors who are responsible for the primary marketing of the instruments. The Swedish Board of Agriculture is experienced as harsh when they state that it is the advisors responsible for marketing the instruments (Advisor 4). They seem to have difficulties to understand the advisors' dilemma. According to SBA 3 there is an understanding of the dilemma the advisors meet and that they respect that the advisors think it is a lot. There is a substantial amount of things the advisors need to comprehend and to give an account.

The Swedish Board of Agriculture is going to have counselling during this spring to spread information about the contributions farmers can apply for (SBA 5). All the county of administrative boards differs very much from each other (SBA 3).
Work that has been performed by the Swedish Energy Agency earlier is for example brochures with information, collaborated work with Focus on Nutrients, Farm and Animal Health and Swedish Sigill, where they have had newsletters or information on their websites (SEA 2). The operational method varies a lot in the country (SEA 3). Some Energy Agencies of Sweden search for clients in a more intense way by calling companies. One advisor obtained a mission from one of the Energy Agencies of Sweden (Advisor 8). The assignment was to call farmers to spread information about Focus on Nutrients and Energy Audit. Hence the advisors got in contact with a fairly amount of farmers who were interested.

The Energy Agencies of Sweden has had workshops designed to attract farmers in geographical locations where there are a lot of larger scale farmers, such as Skåne and Östergötland (SEA 2). As an example, there was a workshop in Skåne about drying grains with a focus on energy efficiency. The Energy Agencies of Sweden participated at business days for dairy farmers by VÄXA. They have also had ideas on collaborations with KRAV and Nordic Swan, yet they could not be performed due to the set of regulations.

Advisor 1 believes that advisors can experience some differences in what the advisors' role is. The traditional role of an advisor is to be a link between the authorities and the farmers and also between the researchers and the farmers. Advisors should interpret the information from authorities and researchers. Yet be closer to the "reality" to clarify and explain for farmers what causes and effects different things can have. Sometimes it can be the other way around where an advisor has to explain for the authorities what happens in the "reality".

4.2 Field

The field is used to describe the playground, in which the actors working with the instruments for energy savings are located.

4.2.1 External factors

There are numerous of factors that are of significance for the tool Climate check-up (SBA 2). The access to advisors, farmers time and interest etcetera. What is being discussed in media is something that effects farmer's decision. "*There was a period where the climate were discussed a lot, then the demand on climate advisory went up, when phosphor were discussed, the advisory about it followed. So the farmers demand also follows the media"* (SBA 2).

A problematic with the instruments for energy savings is that the process is handled by the European commission (SBA 3). Sweden has a very limited influence yet is affected a lot by decisions. It follows that there is an uncertainty for how much money will be available in the future. Public procurement takes a long time and the process is usually slow (SBA 3). A purchase with negotiation and processing between the County of administrative board and advisors can take long time. The fallout is often that a year has passed before the actual work is started. From the Swedish Board of Agriculture they frequently sees that advisory organizations have an abundant of other missions and the purchased mission can be haltingly.

On the other hand we have the Global Goals and the 2030 Agenda for Sustainable Development where energy is highly prioritized (SBA 3). From the European commission's perspective a considerably burden is given to questions about energy efficiency, stabilizing the energy production, etcetera. A lot points towards a positive future for energy in the forthcoming. The current situation can seem to be less positive, where it is difficult to motivate new advisors to learn about energy and to maintain the existing competence. The Swedish Board of Agriculture endeavor for a higher priority of this and SBA 3 believes that there is a bright future for these instruments.

KRAV is recognized to have great influence on the numbers of Climate check-up performed (SBA 2). It is a certification organization, which require an energy check where Climate check-up has been approved. This has meant a great deal for the instruments, hence many farmers reach out to advisors on their own initiative. *"The number of Climate check-up that is performed is usually dependent on advisors who find it pleasant to call farmers and marketing the tool"* (SBA 2).

Farmers with organic production usually contacts advisors on their own initiative since it is required for the certification *KRAV* (Advisor 2; Advisor 8). Some farmers have a financial purpose, which encourage them to save energy (Advisor 5). Others have an organic certification where it is mandatory to perform energy counseling. When advisors work with farmers, the have to adapt to the subjects the particular farmers is interested in. It can be to talk about money or the environment for example.

4.2.2 Changes

There are some complains from advisors that the Swedish Board of Agriculture has faded away and that they are not communicating any longer (SBA 5). The dilemma is that some actors asks for workshops, yet the Swedish Board of Agriculture has no subject or need to have workshops. Thus they are interested to participate if other actors arrange one. Within the communication from the Swedish Energy Agency there is barely no specific effort aimed at farmers (SEA 1).

The instruments for energy savings provided by the Swedish Energy Agency have changed during the programme time (SEA 2). For example the projects that are based on collaboration and not contributions are not allowed to be marketed to farmers by the Swedish Energy Agencies administrator's, such as Energy Agencies of Sweden and County of Administrative Board. The contributions from the Swedish Energy Agency, which are financed by Swedish Agency for Economic and Regional Growth, is not allowed to be applied to primary producers (SEA 3). Contributions for Energy Audit is an exemption and the Swedish Energy Agency can still inform farmers about the instruments. The instances aimed at farmers are today at a diminished effort (SEA 2). The tool Energy Audit from the Swedish Energy Agency has about 10 percentages of applications from farmers (SEA 1). Energy Audit is

designed for industries with a higher volume than what most agriculture facilities use (SEA 1). Consequently most farmers do not reach the margin for energy use to be accepted for Energy Audit (SEA 1; SEA 2; SEA 3). All companies who want to work with improvements for the environment should receive help for it (SEA 3). Yet this limit excludes some companies, especially farmers with meat production. Climate check-up is a god alternative solution for this issue. The disadvantages with Climate check-up are that the Swedish Board of Agriculture controls it strictly and the access of advisors is limited, especially at some geographical locations. Closeness to service and working collaborations is important in consulting services. Services through Focus on Nutrients are great alternatives, yet there is a difference in quality. Climate-step that can be applied for by the Swedish Energy Agency handles more applications about conversion to renewable energy (SEA 1; SEA 3). There can be some applications from farmers for electric vehicles or biogas, yet the Swedish Board of Agriculture traditionally handles biogas (SEA 3).

4.2.3 Future

It can be troublesome for administrators at the Swedish Board of Agriculture when farmers ask about how the future looks like (SBA 5). As an authority they shall not give false assertions and contribute to farmers investing in the biogas industry. There are lot of contribution to hand out to farmers, although most biogas facilities are not profitable. Farmers might decide to build a biogas facility even if they later on would not receive contribution for the production, they cannot know about what will happen when this programme ends and the contributions runs out. It is therefore complex to talk about the future with farmers. "*The communication of support for producing biogas is well communicated from the Swedish Board of Agriculture. The questions about what happens when this period runs, especially about if they should invest or not, are still hard to answer*" (SBA 5).

4.2.4 Location

The actual bottleneck is the limited access to advisors with qualified competence (SBA 2). A lot of the counselling that is performed, depends on where the advisors are situated. Some has been on tour to other geographical locations, which is great. At the same time there is a distinct correlation between advisors location and where Climate check-up has been performed. Advisory organizations can apply through the Swedish Board of Agriculture for having responsibility for Eco-driving in different geographical areas through a bidding process (Advisor 4). The advisors can then have other advisors, performing the counseling. In some advisory organizations there seems to have been some turbulence lately (SBA 3). This can affect how they cooperate and supply each other with missions or if they do not collaborate at all.

4.3 Habitus

The habitus is used to present the empirical findings about how the individuals act.

4.3.1 Authorities observations

When it comes to information and communication from the Swedish Board of Agriculture, they have a unit that works more active and tactful (SBA 4; SBA 5). This unit is also helpful regarding help with formulations in texts (SBA 5). The information on the website is planned in such way that multiple news are not published at the same time. There is also a specific channel, which is designed for advisors (SBA 4; SBA 5). To ensure that information on the website is correct from all administrators on the Swedish Board of Agricultures perspective, there are multiple of instances that are involved when they change or put up information on

the website (SBA 4). This is because there are different individuals who handle different parts of the instruments. Applications for investment contribution is handle by one and the payment another.

Difficulties with the investment contributions are to be explained to farmers what the requirements in the application are and what needs to be fulfilled (SBA 4). In the text they try to construct the information as simple as possible. They try to refer to the specific contribution that is relevant for the farmer. By presenting the information computed with no unnecessary information they hope farmers will read it. Yet, the texts are usually some pages and often perceived, by the farmers, as too long. And at the Swedish Board of Agriculture they receive indications for that farmers do not read these texts or that they do not understand them.

At the Swedish Board of Agriculture there are a minor of individuals working with instruments for energy savings (SBA 3). They put a lot of time at starting up processes, which can seem as invisible efforts although it generates something in the end. When they try out new modules that can be used for the Climate check-up for example, are also dependents on the people working at the Swedish Board of Agriculture. A person's absence can lead till delays, just like it is for the advisors. The people at the Swedish Board of Agriculture working with energy are also usually working with many different projects, and it is usually very large projects.

SBA 3 states that the advisors expertise can be at a very high level, yet how far they extend in advises to farmers about proposal for actions vary. This can be connected to advisors personality more than their competence. Hence what the advisors dare to give advice about. There are examples where an advisor has seen potential actions that could be done although they have felt like they do not dare to give the proposition. It can be on the account of that the farmers has poor profitability and a proposition would involve an investment. This can also be connected with farmer's personality. This concern is something that is challenging to intercept with and is more about a sense for why some counseling is vague. When advisors perform *Climate check-up* there are some regulations to follow (Advisor 8). When there is a farmer who is collaborating and interested the advisor sometimes develops the counseling more, compared to the farmers who are only willing to do the minimum.

4.3.2 Farmers' interest

The bottleneck has not been the shortage of work for advisors (SBA 3). On the contrary the Swedish Board of Agriculture can see that there are multiple of things advisors could do. The difficulty is to match the requests with a shortage of time. For the tool Eco-driving the lack of funds is not a problem now. Hence the advisors might means that farmers' lack of interest would be the problem. SBA 3 means that everything can be sold with some marketing. Marketing is included within the purchases an advisor has done. The Swedish Board of Agriculture can help with some parts, for example providing a website where farmers can report their interest.

There are farmers who are genuinely interested in energy that wants to perform an energy counseling to install for example solar panels (Advisor 2). According to Advisor 8, there is a potential to work fulltime with this, yet it would entail more marketing. On the other hand Advisor 2 states that there are enough farmers who are willing to do energy counseling, thus marketing for these instruments for energy savings are not necessary for the advisor to stay active at work. The longer time advisors has been working with energy, the more work there

is to do since farmers' affects by other farmers in their local surroundings. *Eco-driving* has been performed in a period of time now in some parts of Sweden and the activity has been positive in the amount of farmers performing it in those regions. Advisor 5 believes that it is important to have more counseling for farmers and that advisors think in long term strategies to accomplish improvements.

4.3.3 Advisors dilemma

There are some examples where the advisors, which have purchased for advising within Focus on Nutrients, have not fulfilled their work and there has unfortunately not been a "plan B" (SBA 3). The process, as previously mentioned is long and it takes long time before they can provide another advisor for that location. "*This is very person depending, since there are such a few individuals in this field and it takes a while before it has been settled"* (SBA 3). There can always happen things for the advisors that change the situation. The distance also makes it difficult for advisors to work with the counseling through Focus on Nutrients since the payment for transport is limited for the advisors (Advisor 4). This dilemma has occurred from the changes with advisors in the country. Advisors have purchased counseling for different areas, when changes have occurred within advisory organization the closeness to the farmers has been affected. Meaning the advisors are located further away from the farmers.

It is preferable to have good examples for farmers (Advisor 8). If the advisors have some good examples of investments, more farmers could be interested. Within the Network for energy efficiency there is a lot to learn, for the participators in the network but also for the advisors and coordinators (SEA 3). The participating farmers in this network are also valuable for other farmers, as good examples in energy efficiency. "*Do not think there will start more networks with farmers, the existing ones are good examples to spread. And spread a good energy method*" (SEA 3). Good examples, as in farmers who are precursor for the energy efficiency are needed to make more farmers interested (Advisor 7).

Advisors in a larger organization can divide missions and become more specialized in certain areas, compared to self-employed advisors (Advisor 5). To maintain specific knowledge and competence it is important for advisors to be able to work with it on the field, which makes it difficult to obtain knowledge in several areas (Advisor 1). Advisors in larger organizations can work with specific areas and help each other with one client. When a farmer needs another type of counseling an advisor can send the farmer forward to other advisors within the organization. As a result advisors in larger organizations can maintain specific competence in an area to a higher extent than advisors whom are self-employed. However it is difficult to find missions within the area for biogas. There are a few biogas facilities built every year where nothing exceptional seems to be happening. There are courses through Focus on Nutrients for advisors. According to Advisor 8 they can be very basic. As a result a feeling of lack of potential to contribute to farmers can emerge. The scope for working with energy is small and most advisors have to complement with other tasks to fill their schedules (Advisor 4).

4.3.4 Researcher's perception

According to the researcher the respondents are very engaged with the question on how their work could be improved. This is based on their engagements during the interviews where they for example provided the researcher with plenty of more information than was asked for. Almost none of the persons the researcher have been in contact with has given a glimpse of unwillingness to give their time to talk about this even though they have been filled up to their ears with other things.

4.4 Capital

The capital is used to present the empirical findings that can describe the different types of capital that can be identified.

4.4.1 Collaboration

Some Energy Agencies of Sweden collaborate, for example with other businesses and enterprises, office and municipal energy, climate advisors and other networks (SEA 3). The Federation of Swedish Farmers is the largest farmer's organization in Sweden, which the Energy Agencies of Sweden has a lot of contact with and spread information through. There are many benefits with cooperated activities and they have had workshops together. The Swedish Board of Agriculture work a lot through their collaborators, county of administrative board, Federation of Swedish Farmers and Advisors (SBA 2). Besides farmers, they communicate with advisors and actors who are connected to the agriculture (SBA 4). The Federation of Swedish Farmers is helpful in providing farmers contact information to advisors (SBA 3). For certain contributions the contact is directly between the Swedish Board of Agriculture and the farmers (SBA 5). Specifically competence from advisors might not be seen as necessary. The farmer can have a small-scale farm with an ordinary advisor. The farmers usually take direct contact with the Swedish Board of Agriculture in these situations. It happens that farmers calls to ask about the contributions, how they should think about investing or not and what the future looks like for the contributions.

A lot of the farmers in Focus on Nutrients who used services from Focus on Nutriens are easy to reach for advisors (Advisor 3; Advisor 8). Advisors can receive a list with farmers who are listed at Focus on Nutrients, which they can use to call farmers to ask if they want a service, for example Climate check-up.

Collaboration between advisory organizations is common (Advisor 7). It is an important contact to have and they give each other work they cannot perform themselves (Advisor 4; Advisor 7). Advisor 8 has contact with other advisors to consult on thoughts and ideas. The advisors have a useful network and collaborate with many other actors (Advisor 5). At the Federation for Swedish Farmers there are some who work with energy. Advisor 4 experiencing good collaboration with the Federation of Swedish Farmers, yet there are no particular events that are performed together with them. Other self-employed advisors are also collaborating with advisory organizations (Advisor 5). There are no formal agreements with the actors they collaborate with. Sometimes they can benefit of each other and sometimes they are competitors.

The communication about these instruments for energy savings by advisors in larger organization can be applied when farmers are consulted for other reasons (Advisor 5). There is no general marketing such as advertisements in ATL (agriculture newspaper). Instead some advisors speak about it when they participate to an exhibition for example. The mouth-to-mouth spread by farmers is a part of the marketing strategy.

Farmer's network has a positive effect on spreading information (Advisor 7). They have contact with neighbors and clients. A farmers accounting consulter can spread information to another farmer about contribution that can be applied for. Farmers with the same production tend to have good connection with other farmers in other parts of the country as well.

4.4.2 Limited reach to farmers

Fallout from the lack of advisors within the country is that they need to work in other counties (SBA 3). It can be problematic to establish contacts in a county where the advisors are not usually working. A sort of competiveness between advisory organizations can also be assumed although the existing advisors in the county might not have the competence for energy counseling. One reason for that some counseling cannot be performed is the cost that comes with the distance (Advisor 4).

According to SBA 2 the Swedish Board of Agriculture do not have so much contact with the Swedish Energy Agency. They have had some contact through the years but no coordinated collaboration. Still they try to notify farmers about the instruments that the Swedish Energy Agency provides for farmers, for example when there is a bigger facility and the Energy Audit could be used. It was easier before when the advisors could perceive a list of farmers (Advisor 4). Today they cannot be provided with this according to the personal data act and the advisors contact with the authorities is almost entirely formal.

There is an underlying aspect about the environment (Advisor 1). Many farmers have the preconceptions that biogas is very unprofitable, instead the circumstances for investments in facilities for biogas has improved by the contributions that can be applied for. It can be considered that either advisors or authorities have reached farmers with the current more favorable situation, which has endowed with these instruments for energy savings (Advisor 1). According to Advisor 6, it is difficult to reach the farmers with Climate check-up. "*There was a 'first wave' where it was relatively easy to get contact with farmers interested in energy and early adopters. Organic farmers has a demand, but now it starts to get more difficult to reach out to farmers."* (Advisor 6). Today there are a decreasing number of advisors for the counseling within *Climate check-up* (Advisor 6). Education for new advisors is an ongoing process. Biogas is still a young industry and farmers do not always have access to advisors with the right competence at the farm (Advisor 1).

Farmers are perceived as interested and pleased for the counseling they receive for energy savings (Advisor 4). On the other hand there is an invisible work and more troublesome to promote. "*It is not flashy to work with energy savings, much more flashy to put up solar panel, which in my world is to start at the wrong spot" (*Advisor 4). Yet, after the counseling the farmers' talks enthusiastically about the adjustments they have succeeded with.

4.5 Instrumental

Instrumental is used to present the empirical findings about connections or lack of connections between the stakeholders, such as collaboration.

4.5.1 Communication

There is a lot of work that can be done with the communication of these instruments (Advisor 7). Clearness in what is being communicated and to find favorable collaborates to work with from a farmer's perspective. It is important that advisors and authorities both listen to each other and cooperate with one another (Advisor 1). There have been projects that only focused on farmers and researchers. Advisors were excluded and this might work well in some cases yet the advisors are an essential and necessary resource within the agriculture sector.

It seems to be difficult for advisors who want to perform counseling in groups with farmers (Advisor 6). A solution could be that the County of administrative boards would help out to gather groups of farmers. The concept for energy efficiency and production should be promoted close to the farmers together with the savings that can be done (FSF 2). It would be desirable to have better instruments during the counseling in *Climate check-up* (Advisor 8). It would facilitate the possibilities to make simple calculations directly at the farm.

The amount of advisors within this line of business is too few and too far away from each other (Advisor 4). Multiple advisors has retired or changed profession. Due to the distance between the advisors, marketing in other counties that the advisors are not well established is crucial and on the contrary challenging for advisors. The county of administrative boards could be more helpful with this.

The experience from the Federation of Swedish Farmers is that there are few farmers who have been interested in energy counselling (FSF 2). The main issue according to FSF 2 is that the farmers have a smaller energy use, and only the large farms can apply for the contribution. The Federation of Swedish Farmers inform about the Climate check-up in such cases, since it is a simpler version. If the restraint on the energy use would be cut by half it would include a lot of more farmers and would be easier to reach the farmers with.

4.5.2 Statistic

The Climate check-up is provided with a benchmarking function, which advisors can use for the farmers (SBA 3). Yet it is troublesome that there are almost as many different opinions about how the Climate check-up should be structured as there are advisors working with it. Climate check-up is understood as problematic in the amount of data the Swedish Board of Agriculture needs to collect from farmers (Advisor 8). It is a sufficient way for the Swedish Board of Agriculture to collect data, which can be considered as good as long as it does not become too much.

There are two sides with the statistic information the authorities collect from the counseling (Advisor 5). One is that it is understandable that they need to be able to show that the money spent on these instruments is useful. On the other hand it takes resources from actually doing changes at a farm. The instruments that are used for Climate check-up are mostly shaped in order to provide the authorities satisfying information, instead of the most suitable information for the farmers to follow up the business. Conversely the authorities provide the instruments almost for free for the farmers. The advisors needs to marketing the instruments for energy savings, otherwise they would not have any jobs (Advisor 4). It is essential to capture farmers that are considerate as potential need of this type of service.

4.5.3 Slow process

One observation with Climate check-up is that the Swedish Environmental Protection Agency handles the application faster than the applications at the Swedish Board of Agriculture does with their applications (Advisor 7). On the other hand the competence for farmers business is limited at the Swedish Environmental Protection Agency thus there is a poor understanding for the applications from farmers. The Swedish Board of Agriculture is seen as more problematic compared to the Swedish Energy Agency (Advisor 1). It can be imagined that the Swedish Board of Agriculture is closer to the agriculture sector and farmers, yet this is not always the case. Similarly Advisor 1 points out the problem with slow process for handling applications for contributions for biogas in some counties. Farmers can often start to build

before they get response on their application. On the contrary it is a substantial investment that few farmers are willing to take.

The county of administrative boards has to make call off for counseling through Focus on Nutrients (Advisor 4). There is a dilemma when the county of administrative boards has not made this despite there are farmers who wants to have energy counseling. One example is in Norrbotten where this has not been prioritized. Then there are only two solutions for the farmer, to either apply for the Energy audit, which not all farmers can, or to pay the actual cost for and Climate check-up. Here, the farmers need to put pressure on the county of administrative boards themselves. There is not much the advisors can do.

5 Analysis and discussion

In this chapter the empirical findings and theory are analyzed and discussed accordingly with the researcher's perception. The chapters firstly presents the aim and research questions of this study. Then a short discussion of the empirical problem is presented, which confirms the motives for this study. It follows by a presentation of the theoretical synthesis that outlines in figure X, which is the theoretical synthesis in this study. The five divisions; descriptive, field, habitus, capital and instrumental in the theoretical synthesis is analyzed and discussed.

The aim of this study is to explore advisors and key-persons activities working with instruments for energy savings for reducing GHG emissions on farms. The following research questions have to be answered to reach this aim.

- *What characterize the advisors and the key-persons work around the instruments for energy savings?*

- *What are the key-factors for improving the work with instruments for energy savings?*

From this study it arises that there are instruments that can be used to a larger extent by farmers. The focus on identifying farmer's motives for energy savings is in this study neglected and the respondents appreciate the focus of advisors and authorities. The problem statement in this study is that there are uncertainties about the responsibility the actors have and there are few advisors who work with the instruments for energy savings. From the empirical findings the researcher's understanding is that the respondents agree with the dilemma with an inadequate amount of advisors, working with the instruments for energy savings provided for farmers. The researcher's experience that has derived from this study is that the respondents are very motivated and engaged in the work with the instruments.

5.1 Theoretical synthesis

The Stakeholder theory is used as a roadmap where the researcher can be guided to explore different strategies and work within different business contexts (Mintzberg, 1983; Orts & Strudler, 2009; Freeman, 2010). The researcher for this study decided to apply the stakeholder theory in another aspect than with a firm. Hence, famers are described as the "firm" and actors who are involved in the work with the instruments for energy savings are the stakeholders. A stakeholder brings value to a "firm" and it is essential to identify their inputs and activities (Donaldson & Preston, 1995; Philips et al., 2003). In this study there are two types of stakeholders that are in focus for the instruments for energy savings, authorities and advisors. The authorities are the actors that provide the different instruments, which farmer can apply for. The advisors are the actors whom often work between authorities and farmers.

Donaldson and Preston (1995) state the difference between stakeholders and that the variety of stakeholder relationships can be as many as the number of stakeholders. The advisors and authorities within this study do not only differ from each other. This study implies that almost

every advisor has an own method for practice. Likewise, the individuals at the authorities have different views and understanding for how the work is implemented for these instruments for energy savings. The Field, Habitus and Capital in Bourdieu's Theory of Practice can describe the way authorities and advisors practice. Despite, it is difficult to explain one element without referring to the other elements (Walther, 2014), the data for this study is divided into the categorization which Bourdieu implies is the construct of practice.

The theoretical synthesis, also presented in chapter three, consists of the descriptive and instrumental divisions from the stakeholder theory together with field, habitus and capital, which is the categorization from Bourdieu's Theory of Practice. In figure 7 the theoretical synthesis for this study is presented. The theoretical synthesis has derived from the theory and the empirical findings of this study, where the researcher aims to understand the practice for the instruments for energy savings by explaining the five divisions in the theoretical synthesis. The first research question is in focus when descriptive is analyzed and discussed. The second research question is in focus for analyze and discussion in capital and instrumental. The habitus and field overlap both research questions.

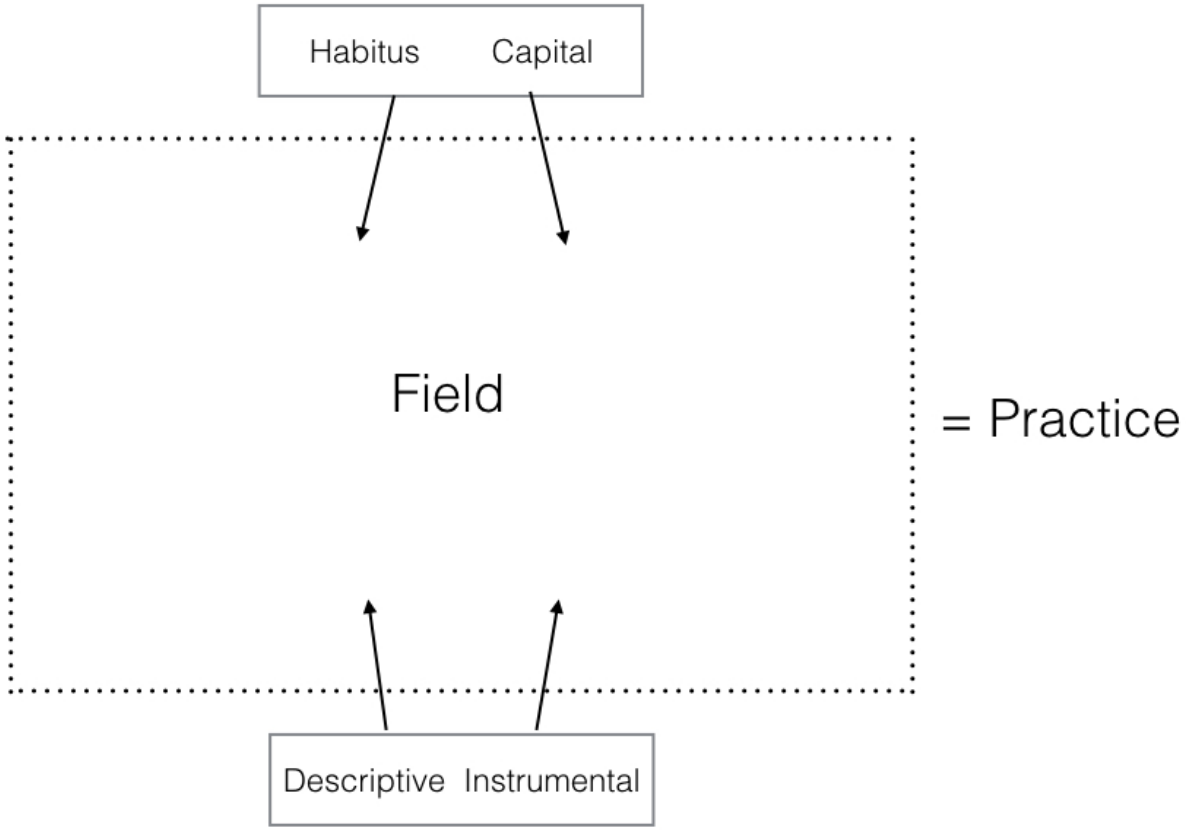

Figure 7. Theoretical synthesis

5.2 Descriptive

The descriptive approach is used to explain the relationship and characteristics of the authorities and advisors regarding the instruments for energy savings for farmers (Donaldson & Preston, 1995).

During this study one of the constant findings was that multiple of the names on advisors that the researcher had ben provided by Focus on Nutrition are only working partly with energy counselling or not at all. According to Advisor 4 many advisors has retired or changed profession. Further, it is difficult for advisors, which perform energy counselling to stay active in smaller regions (Advisor 5). In addition this business is very sensitive in a period with EU-subsidies and new program period (*ibid.).* The advisors' role is seen as very important for the instruments for energy savings, yet it is a precarious context for the advisors to stay in. The characterization of advisors the advisors in this context is that there are many advisors working in more areas than just energy. Suitable conditions for advisors where they could focus on energy would be preferable to develop the instruments for energy savings.

It follows that the energy counselling for farmers is not always simple. According to SEA 3 the energy is a resource that farmers themselves own. Farmers are often interested in both environment and technique, yet energy efficiency seems to require more marketing. From this study is has arisen that the actors who are engaged with the instruments for energy savings, more specifically the advisors, authorities and the Federation of Swedish Farmers, has multiple of different ways to approach the farmers. Websites, information meetings and by calling farmers directly are some of them. The agricultural sector is often called "a small world" (SBA 3). For energy counselling it is even more so (*ibid.).* This characteristic for the context, in which advisors and the authorities are located in, seems to be troublesome. To reach farmers interest it is essential to know what the farmer focus on. These findings reveal that energy is difficult to market. At the same time the advisor cannot know if the farmer is interested in counselling with a focus on the environmental or the financial spectra. However, the "small world" dilemma should be considered when implementing marketing for the instruments for energy savings. If there are shortcomings in marketing the reputation for advisors or the instruments can be affected. The same thing should be considered regarding relationships within this context, both with farmers as well as with other advisors.

The information from the Swedish Board of Agriculture is mainly directed at farmers and is presented on their website (SBA 2). Their brochures are handed out to farmers. The characteristics for the authorities from advisors are that it can be harsh to put the responsibility for marketing the instruments for energy savings at the advisors (Advisor 4). There are also presumptions about that the Swedish Board of Agriculture has a lack of understanding for the advisors perception about this (*ibid.).* The authorities describe themselves like helpful by providing material to the advisors, yet they agree that they are few and cannot accomplish everything they would like to. These findings reveal an emerging issue for the instruments about the lack of resources. From the perception of many advisors the authorities do not provide the advisors with the right guidance, so the advisors more easily could reach farmers. Instead the advisor should implement more marketing. The advisors role has been difficult to define. According to Advisor 1 the role is to be a link between the authorities and the farmers (*ibid.).* In this context it can be difficult since some of the instruments for energy savings is informed directly from the authority to the farmer, and the advisors role is therefore diffuse.

The authorities, mainly the Swedish Board of Agriculture is understood to focus a lot on the data they need to collect (SBA 1). Several advisors have through the interviews perceived as annoyed at the amount of statistic that is wanted from the authorities (Advisor 4). From the authorities' aspect, it is understandable that it can seem to be a lot of procedures for the advisors, yet it is essential to report statistic to maintain funds for the instruments for energy savings in the future (*ibid.).* This is a dilemma, which most respondents raise although they

are aware of the situation with maintaining funds. Furthermore the statistic can be favourable for advisors whom are self-employed and not able to share the same amount of data, which larger advisory organization may have.

5.3 Field

The field is explained as the playground where actors interact (Walther, 2014). Certifications like KRAV have a great influence for the Climate check-up (SBA 2). For some farmers this is the only thing that makes it worth the advisory for the tool, hence the field for the specific tool becomes very dependent by the certification. Within the field, actors follow rules of the game with their individual strategies (Walther, 2014). According to SBA 3, the Swedish government has a limited influence for how some of these instruments are constructed. Further SBA 3 stresses that the energy is highly prioritized by the European Commissions and predicts a positive future (*ibid.).* Accordingly with the theory things such as legislation affect the field. KRAV is a certification and will not affect the field directly, yet it affects the surroundings for the instruments. Farmers who are obligated to perform the Climate check-up will contact the advisors directly, which is positive for the adoption of the instruments, yet not something the advisors or the authorities can control. A positive outcome can come for the instruments if energy is higher prioritized by the European Commissions since they control the contributions.

The amounts of interactions are infinite in the field and can be discussions, negotiations or conflicts (Walther, 2014). What is discussed in media is also a splitting partition, whether farmers obtains a positive belief for the instruments for energy savings or not (SBA 2). Not only is the farmers own interest significant for the instruments (*ibid.).* A discussion outside the field is also something that affects the field. When the interest about climate is higher, the instruments for energy savings get a lift and become easier to marketing. Thus the variety of things that affects how the authorities and advisors should work for the instruments is plenty.

From this study is has arisen that the Swedish Energy Agency instruments based on collaboration are not allowed to be marketing to farmers (SBA 2). The Energy Audit is a contribution and is therefore an exemption (*ibid.).* The fact that the Swedish Energy Agency has delimitations in their marketing towards farmers can affect the outcome of how many farmers applies for their instruments. The field for the Energy Audit is also very limited for advisors to marketing towards farmers since many farmers do not reach the limitations to apply. Instead the actors, both advisors and other, play an important role to inform farmers about the Climate check-up instead.

According to SBA 2 the amount of qualified advisors in Sweden is seen as the actual bottleneck. This affects the performance of the marketing for the instruments. SBA 3 stresses the fact that there has been some turbulence in some of the advisory organizations, which can affect how they collaborate (*ibid.).* The fact that the advisors are such a few can be connected with the later presented division, habitus. The habitus and the field have a circular relationship where the habitus can explain what the individuals brings to the field (Chudzikowski & Mayrhofer, 2011; Grenfall, 2012) (*ibid.).* In this situation the advisors personal beliefs in how to cooperate and supply other with missions can be argued to be the most critical aspects to have working collaborations between the advisors. Yet, the actors are shaped by the field, which can lead to unwanted actions.

5.4 Habitus

The habitus is explained as the most widely concept in the Theory of Practice (Grenfall, 20012). With the habitus the individuals thinking about the world is explained by values, norms, education and environment. How far advisors decides to extend in proposing actions for the farmers during counseling vary (SBA). This is connected to their personality more than competence, hence what the advisors dare to give advice about. This concern is something that is challenging to intercept with and is more about a sense for why some counseling is vague (*ibid.)*. The advisors habitus should be seen as a vital detail to understand the context. It might be difficult to change, yet describes the performance and practice for the work with instruments for energy savings. If advisors cannot give farmers proposal for actions, the farmers can perceive the counseling as unnecessary.

The habitus is durable over time and has a tendency on actors to act similarly in situation they have crossed before, yet it is not eternal (Walther, 2014). The unit at the Swedish Board of Agriculture that works with communication and information helps to coordinate the website (SBA 4; SBA 5). When publications on the website are made there are multiple of instances involved (SBA 4). The Swedish Board of Agriculture has a structure in their communication which work as a control for the information on their website. By using several instances before publishing they have a higher level of security that the information being published is correct. This secure functioning can be seen as ineffective, yet might be necessary since they can be pretty criticized by farmers and advisors if they provide the wrong information (*ibid.)*. The pattern of how the authorities act can be seen as a form of tendency to act similarly in situation. Safe communication ways can be a way to establish high quality, yet also slow down processes. At the same time the authorities presents the information on their website as simple as possible (SBA 4) (*ibid.).* This is accordingly to the habitus and the field something that has affected the acts and the beliefs from the authorities, which has lead to a change in practice. Yet the texts are still several pages and often perceived, by the farmers, as to long (SBA 4).

The field and habitus is usually very close connected (Walther, 2014). The individuals working with the instruments for energy savings at the authorities are only a few (SBA 3). A person's absence can lead till delays, just like it is for the advisors (*ibid.).* The individual's habitus is in this consideration very close connected to the field. If the authorities cannot proceed with paragon it is laborious to think that other actors would do more.

In the same way, as described above with the authorities, there is a frustration that is derived from the Swedish Board of Agriculture when advisors cannot fulfill their obligations (SBA 3). Since there are such a few advisors, working with the instruments for energy savings, the individual's actions affect the closeness to the farmers (*ibid.)*. If there are advisors who do not prioritize to provide the farmers with their attention, for any kind of reasons, the trust for the instruments for energy savings by farmers can be compromised. The goal is to have good examples so farmers can see the benefits with energy efficiency and become more interested (SEA 3) (*ibid.)*. Since there is a minor amount of advisors the risk can be seen as quite high that there are troublesome amount of advisors that do not fulfil their obligations. Thus, risk for poor reputation for the instruments for energy savings.

From this study it has derived that the authorities and the advisor has different views about how much work the advisors can have with the instruments for energy savings. According to most of the respondents, working at an authority, there is plenty of work for the advisors if

they want it (SBA 2). At the same time advisors states that it is difficult to fill a fulltime work with this (Advisor 2) (*ibid.).* The different views on the possibilities can be reflected in their work. It is important to work with long term strategies where the marketing for the instruments for energy savings are necessary for advisors to stay active at work.

The advisors competence can be tricky to maintain (Advisor 5). Advisors in larger organizations can work in more specific areas than most self-employed advisors. The courses for the Climate check-up are seen as to basic (Advisor 8). This can contribute to a feeling of lack of potential from the advisor can emerge (*ibid.).* The perceived competence by the advisors can be seen as important both for the current and for the future work with the instruments for energy savings. The competence, both from education and from working experience is connected to the individual's habitus. Thus, linked to the practice by the advisors.

5.5 Capital

By the capital actors way to organize themselves to be able to enter a field or to move in the field can be described (Walther, 2014). Social capital involves actor's relationships and social connections (Bourdieu, 1986). The collaborations with others in the business are common (SEA 3). The Federation of Swedish Farmers has contact with the authorities and helps to inform farmers about the instruments. They also provide advisors with contact information to farmers. Collaboration between advisory organizations is also common (Advisor 4; Advisor 7). They do not have any particular events that they perform together or stated collaborations. Instead they have a convenient network to use when they need it (*ibid.).* The collaborations with other actors are very widespread among the actors working with instruments for energy savings. This implies that most advisors have a strong social capital. Yet this finding also stands for a lack of stated collaborations, which can be seen as weak social capital and can be inconsistently with what could be imagined to be found. The instruments for energy savings are relatively new, which can be an explanation for the lack of stated collaborations.

Despite the good network advisors have with each other, a result of the lack of advisors within the country is that advisors need to work in other counties (SBA 3). According to Advisor 4 it was easier before when the advisors could perceive a list of farmers, which they could call to check their interest (*ibid.).* In this aspect the advisors social capital does not seem to be enough for good practice.

The economical capital is linked to an actor's fortune (Walther, 2012). According to Advisor 4 the limitation to being able to work in other counties is directly connected to the cost for transport (*ibid.).* If advisors do not have favorable circumstances to work in other counties the marketing and the chances that advisors enters other counties is limited. The cost for travelling is not a direct cost for the advisors, yet more a limitation in the provision of funds for travelling. It implies that the farmer would have to pay for the advisors travelling cost, and since the advisor experience this as a limitation, the economic capital can be seen as low.

Cultural capital can be incorporated by competence and skills or stand for degrees and academic titles (Chudzikowski & Mayrhofer, 2011). According to Advisor 1, there is an underlying aspect about the environment. The first wave of farmers was relatively easy to reach, since there were many farmers who were interested in energy and early adopters (Advisor 6). The aspect with organic certifications has also facilitated for the advisors (*ibid.).*

In this aspect the advisors cultural capital can be seen as highly valuable, if they can convince farmers about the good effects the instruments can have for the farmers. There are a decreasing numbers of advisors and an ongoing process for education of new advisors (Advisor 6) (*ibid.)*. The cultural capital can be connected to the numbers of experienced advisors that vanish and it might be difficult to replace the competence for a newly educated advisor. Further the energy savings farmers can achieve by energy counseling is not "*flashy*" enough (Advisor 4). Although it is often heard that farmers talks enthusiastically about adjustments they have succeeded with after the counseling (*ibid.*). The advisors competence for energy counseling might be neglected in the marketing for the instruments for energy savings. The skill an advisor possesses is something that the farmers take part of first when the counseling is performed.

5.6 Instrumental

By the instrumental approach actions of authorities and advisors are identified, which they both agrees are important for a positive develop of the instruments for energy savings for farmers (Donaldson & Preston, 1995). The instrumental approach can also provide insight about lack of connections. According to Advisor 7 there is a lot of work that can be done for better communication. It is important that advisors and authorities listen to each other and cooperates with one another (Advisor 1). Advisor 6 sees difficulties with performing counselling for farmers in groups and a solution could be that the County of administrative boards would help out to gather groups of farmers (*ibid.).* The researcher's understanding from the respondents is that they put responsible on other actors when they explain how the marketing for instruments for energy savings should be performed.

Further the experience from the Federation of Swedish Farmers is that there are few farmers who have been interested for energy counselling (FSF 2). If the restraint on the energy use would be cut by half it would include a lot of more farmers (*ibid.*). Since all the instruments for energy savings is not formed to fit farmers, which definitely affects the number of farmers who applies for the instruments.

The Climate check-up is provided with a benchmarking function, which advisors can use (SBA 3). According to advisors the statistic that needs to be filled in to provide this function is burdensome (Advisor 8). According to SBA 3 the different opinions about how the Climate check-up should be structure are almost as many as there are advisors working with it (*ibid.).* These different views on how the Climate check-up should be structured might seem to be an insignificant point, yet several of the respondents has pointed out the problem, where they seem to disagree with each other.

According to Advisor 5 there are two sides with the statistic the authorities needs to collect. It is understandable from the advisors that they need to report statistic to retain funds, yet the resources it takes, instead of actually doing changes at a farm comes to a cost (*ibid.).* Each and every respondent in this study understands the need for statistic, yet it is something that has been raised several times. If could be favourable for the advisors attitude to the instruments if it was possible to unease the task for them.

From this study it has arisen that the handling of application by the Swedish Board of Agriculture is a slow process (Advisor 1). It can be a preconception that the Swedish Board of Agriculture should have a better understanding for farmers, yet this is not always the case

(Advisor 7) (*ibid.)*. By the respondents the researcher comprehend that the Swedish Board of Agriculture is the more persuasive, compare to example the Swedish Environmental Protection Agency. Since it often is substantial investments for farmers to take, it is understandable that they wish to get response on their applications before they start to build. There is a dilemma when the Counties of Administrative Boards has not made call off for the counselling through Focus on Nutrients (Advisor 4). The only solution is for farmers to apply for Energy Audit, which they might not fulfil the requirements for, or to pay the actual cost for the Climate check-up (*ibid.).* There seem to be an unspoken miscommunication between how the advisors perceive the problem and what the authorities sees as a problem. If the authorities want to push for more counselling by the advisors, it is also important that the advisors are provided with good conditions.

6 Conclusions

The aim of this study has been to explore advisors and key-persons activities working with instruments for energy savings for reducing GHG emissions on farms. To reach this aim, the work by advisors and authorities has been investigated. In this last chapter the major findings are presented to answer the research questions and end with suggestions for future research in the subject area.

6.1 What characterize the advisors and the key-persons work around the instruments for energy savings?

This study confirms that authorities are understood as strict and are often associated with slow processes. The numbers of individuals, working with the instruments for energy savings are few which also affects the activities and each's presence is essential for the development. The authorities do not have resources to implement more marketing of the instruments, although they are helpful in providing advisors with material and answering questions.

The field of people working with energy within the agricultural sector is referred to as a small group where a substantial part of the individuals are well known with each other. Therefore it exists a lot of collaboration between the actors even if it is interesting to note that the collaborations might not be of official nature. This finding cannot be extrapolated to all respondents since officially stated collaborations exist as well.

The advisors function as a transmitter between the authorities and the farmers as well as energy counselors. The procurement process between authorities and advisors further complicates the complex context that the advisors are located in, between authorities and farmers. Yet, the obligations from advisors are not clearly stated, which has led to unsatisfying results from some advisors. Additionally, the most obvious finding to emerge from this study is that the amount of advisors has decreased, which is in agreement with the problem statement in this study. In larger advisory organizations the advisors have potential to work with more specific areas in their advising since they can divide the workload within the organization. Therefore, it can be assumed that for the self – employed advisors it is more crucial to have an extended network to collaborate with. This combination of findings provides some support for the conceptual premise that the advisors portray a meaningful role for how the instruments for energy savings will further be adapted. Advisors interest and competent performance are therefore essential.

6.2 What are the key-factors for improving the work with the instruments for energy savings?

From this study it has arisen that it is troublesome to attain a satisfying overview of the instruments for energy savings. This finding is rather disappointing since a crucial factor for successful adaption of the instruments for energy savings is that farmers are aware of the instruments. The individuals working with the instruments are not always unanimous about how good the opportunities are for advisors to work with the instruments. Some mean that there is a favourable situation for the advisors while others complain about the need for marketing. For advisors, it can be less encouraging to work with the instruments if they need to put the effort into marketing them first. The energy counselling can therefore be less

prioritized by advisors. The instruments for this study are a compilation of instruments that goes in line with energy use and farmers. The expectation was therefore not to find a website with information about all the instruments for farmers, yet it is something that can be recommended.

Some of the issues emerging from this study reveal specific shortcomings with the tool climate check-up. Many advisors seem to think that the instruments they are provided with when they perform the climate check-up counselling to farmers is too simple. This finding does not directly relate to the practice for the instruments for energy savings, yet it provides an insight that there might exist a need for further development of the tool and a need for the actors to discuss the instruments together.

Since the advisors do not have obligations to perform a certain amount of counselling the result varies a lot. In this study this is understood as an important explanation to the lack of farmers' adaption of the instruments for energy savings. It has arisen that some procurement with advisors has had an unsuccessful outcome. It would therefore be desirable for the authorities to have alternative options with advisors.

6.3 Methodological considerations and future research

An exploratory approach characterizes the method for this study. The researcher tried to stay open to new findings in a context that was unfamiliar and under-researched. The insights gained from this study may be of assistance to provide a broad perspective. The divisions; descriptive, field, habitus, capital and instrumental have been used as a theoretical concept for practice in this study. The divisions have been used to guide the researcher through the empirical findings. By the divisions the researcher has enriched the consisting literature, limited to the practice of advisors and key-persons in this specific context.

As far as the researcher in this study knows the Theory of Practice has been used in a new field. The Stakeholder Theory is used with a slightly different view of the firm than most existing literature, with the farmers as the "firm". This study, in spite of its limitations, certainly adds to our understanding of the practice of the instruments for energy savings provided for farmers.

This research has thrown up many questions, in need of further investigation. For example, it would be interesting to follow how the instruments for energy savings are developed over time. A greater focus on advisors could produce interesting findings that account more for their complex role. A preconception by the researcher was that the environmental perspective would arise in a larger extent during the interviews. Since this study only is a snapshot of how the individuals work, the focus was not to talk about the environmental aspect. Yet, it would be interesting to further investigate what different aspects are important for the advisors in the marketing of the instruments for energy savings.

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