The role of trust, communication, and intrinsic rewards in knowledge sharing within Food Community Networks

The Case of Self Harvesting Community Supported Agriculture "De Nieuwe Ronde" in Wageningen

MST–80436 (MSc Thesis Management Studies)

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Supervisor II: Dr. Valentina Materia

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MSc Program – Food Technology
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ABSTRACT

The aim of this study is to investigate the factors which can facilitate knowledge sharing within Food Community Networks (FCN) as one type of an informal organization in terms of the agri-food sector. Based on the organizational science approach for describing the governance structure in FCN, communitarian is one of the primary elements which constitutes the organization. Furthermore, the communitarian elements can be effective if there are trust, communication, and intrinsic rewards between communitarian practice participants. Those three elements are the types of organizational culture that might facilitate knowledge sharing within FCN. Trust is classified into three dimensions, namely, benevolence, integrity, and ability. Meanwhile, intrinsic rewards refer to the pleasure or satisfaction gained from knowledge sharing.

A number of hypotheses are presented concerning the influence of trust, communication, and intrinsic rewards on knowledge sharing within FCN. These hypotheses are tested through a case study of Community Supported Agriculture "De Nieuwe Ronde" in Wageningen within three mechanisms, namely farmer-consumer, consumer-farmer, and consumer-consumer. The results show that there are significant positive correlations between trust and intrinsic rewards with knowledge sharing in farmer-consumer and consumer-consumer mechanism respectively. In contrast, there is no significant positive relationship between communication and knowledge sharing in all the three mechanisms. Therefore, it can be concluded that trust facilitates knowledge sharing between farmer-consumer within FCN. Meanwhile, knowledge sharing between consumer-consumer within FCN is driven by intrinsic rewards.

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Chapter 1

Introduction

1.1 Background

Knowledge is the most crucial resource for an organization (Nahapiet and Gosal, 1998). If an organization is involved in knowledge creation activities, then it must be also engaged in the activities relating toshare that knowledge (Cao and Xiang, 2012). Knowledge sharing within an organization can improve productivity and efficiency of operations which can lead to a sustainable competitive advantage (Istrailidis *et al*., 2015; Osterloh and Frey, 2000; Cao and Xiang, 2012). Moreover, knowledge sharing can leverage innovation capabilities into product and service development within an organization (Ologbo, 2015). Knowledge is not only shared between two individuals, but also between individual within teams or groups in an organization, and even among organizations (Bender and Fish, 2000).

Lim, (2002) stated that individual knowledge refers to the part of knowledge which resides inside humans brain. It involves all the knowledge which belongs to the individual that can be applied to specific tasks and problems. Moreover, research is providing increasing empirical evidence of important factors that can facilitate knowledge sharing between individuals (Andrews and Delahaye, 2000). In addition, Polanyi (1967) stated that all knowledge in an organization is found at the individual level (Alvesson, 1995; Brown and Woodland (1999); Nonaka (1994); and Weiss (1999)) and successfully managing knowledge depends on the connection between individuals within an organization (Brown and Duguid, 1991). Finally, if the organization wants to get the potential benefits of sharing knowledge, it is so important that each individual can share the knowledge which he has and build on the knowledge of others (Ipe, 2003).

Knowledge governance refers to the both formal and informal mechanism that describes how an organization manages the activities relating to knowledge, including knowledge creation and sharing (Cao and Xiang, 2012, Foss *et al*., 2010). In addition, according to Grandori (1997), knowledge governance builds up an intellectual activity and guides the exchange, transfer, and knowledge sharing in an organization. Thus, an organization should have a proper understanding of knowledge governance mechanisms. Formal

knowledge governance involves organizational structure, extrinsic rewards, and leadership. Meanwhile, informal knowledge governance involves organizational culture, e.g. trust, communication, and intrinsic rewards (Cao and Xiang, 2012; Reilly, 1989). Trust refers to a willingness to make one person vulnerable to others (Mishra, 1996). On the other hand, communication is the connection between people and places, process for reaching mutual understanding by information, news, ideas, and knowledge exchange (Business dictionary, 2016). Meanwhile, intrinsic rewards refer to non-monetary rewards and the pleasure or satisfaction gained from knowledge sharing, such as recognition, reputation, respect, and reciprocity (Herzberg, 1987).

However, research in the knowledge sharing field has been done so far mostly in certain types of *formal* organization, for example in companies or educational sector (Wang and Noe, 2010; Jahani *et al*., 2013). Furthermore, based on the research done by De Long and Fahey (2000) in 50 companies, they emphasized that organizational culture can affect knowledge sharing more than the existence of information technology. However, the factors which can facilitate knowledge sharing within an *informal* organization, for example, networks and community of practice, especially in the agri-food sector still have been under-researched. Therefore, the aim of this study is to mitigate the gap by investigating which factors that can be adopted to facilitate knowledge sharing in informal organization. In particular, this thesis focuses on the agri-food sector since it is still be understudied. In addition, knowledge sharing on this sector can be implied to create and commercialize of intagible assets, such as business methodologies and brand recognition which lead to add consumer value and competitive advantage (Sporleder and Peterson, 2015).

The focus of this research is on Food Community Networks (FCN). FCN is a new model of network that developed worldwide in food production and distribution. FCN is also a representation of community based-organization where consumers and producers share valuable and scarce sources, such as knowledge and time (Lombardi, 2013). Based on the organizational science approach for describing the governance structure within FCN, communitarian is one of the primary elements that constitutes the organization. Communitarian elements involve several things, such as organizational practice, infusing cohesion, and aligning interest through value and knowledge sharing (Grandori and

Furnari, 2008). Furthermore, the communitarian elements can be effective if there are trust, communication, and intrinsic rewards between communitarian practice participants in the organization (Lombardi, 2013; Israel *et al.*, 1998). Hence, it can be concluded that trust, intrinsic rewards, and communication are the three variables that might facilitate the knowledge sharing within FCN. Furthermore, according to Lombardi (2013), knowledge sharing within FCN can be divided into three different mechanisms, namely producer-consumer, consumer-producer, and consumer-consumer. Therefore, these three mechanisms are also studied in this research.

There are several kinds of FCN organization, including Community Supported Agriculture (CSA), organic farming movement, collective purchase group, and farmers market (Pascucci, 2010). CSA is based on a partnership between farmers as producers and consumers that is formalized by an individual contract between each consumer and farmer lasts for several months, a season, or a year (Lombardi, 2013; Volz *et al.*, 2016). In this study, CSA is selected as study case. The number of CSA projects has increased and make this type of organization has become the most studied type of direct agreement in many regions, including in Asia, America, and European countries (Pascucci, 2010). In addition, in this informal organization the relationship between consumer and farmer is based on trust and intrinsic rewards (Lombardi, 2013). Also communication is a primary element for maintaining consumers participation in CSA (Cone and Myhre, 2000). Hence, it is possible to examine the role of trust, intrinsic rewards, and communication in influencing knowledge sharing in FCN through taking CSA as a unit analysis.

The content of this research is divided into six chapters.The first chapter accommodates the background and objectives of this study, the research questions and the research framework. The second chapter discusses the theoretical framework and the literature review which mainly engages informal knowledge governance and governance mechanism in FCN. The methodology is revealed in the third chapter. The fourth chapter shows the results, followed by discussion in the fifth chapter. Finally, the sixth chapter engages the limitation and the conclusion.

1.2 Research Objectives

The main aim of this research is to analyse the factors which can facilitate the knowledge sharing within FCN. The following objectives are mentioned below:

1. To understand the role of trust in influencing knowledge sharing among farmer-consumer, consumer-farmer, and consumer-consumer within FCN.
2. To understand the role of communication in influencing knowledge sharing among farmer-consumer, consumer-farmer, and consumer-consumer within FCN.
3. To understand the role of intrinsic rewards in influencing knowledge sharing among farmer-consumer, consumer-farmer, and consumer-consumer within FCN.

1.3 Research Framework

The purpose of the research framework is to describe the research activities which are carried out in order to achieve the research objectives. It involves theoretical research, empirical research, data analysis, results and discussion, and conclusions. In the theoretical research, a literature study is done to find out the factors which might be adopted to facilitate knowledge sharing within FCN. In the literature research, two types of governance are discussed, specifically, governance structure within FCN and knowledge governance, also how they are interfaced. First, the literature study focuses on governance structure within FCN to determine the knowledge governance mechanism which can induce knowledge sharing within FCN. Second, based on that perspective, we narrow down the study into trust, communication, and intrinsic rewards since these three factors are the types of knowledge governance mechanism which can induce knowledge sharing within FCN.

For the empirical research, a case study of CSA in the Netherlands is selected ("De Nieuwe Ronde"). Considering that this country has the biggest sector in agrifood, we decided to choose the Netherlands and moreover, CSA "De Nieuwe Ronde" in Wageningen is one of the very first CSA in the country who introduces self harvesting concept which enhances the interaction between farmer and main public (Markiet, 2011). In this study, quantitative data collection is conducted through using online survey. Moreover, the survey is in Dutch since almost of the targeted respondents are Dutch elderly people. The data collection is followed by statistical techniques for analysing the results and proving the hyphothesis. Discussion relating to the results is done afterward to

conclude how trust, communication, and intrinsic rewards can facilitate knowledge sharing within FCN.

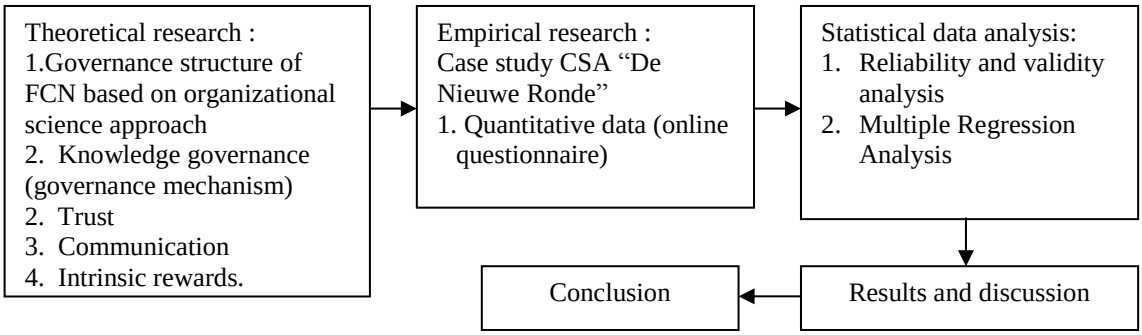

Figure 1 Research Framework

1.4 General Research Question

What are the factors that can facilitate knowledge sharing within FCN?

1.5 Specific Research Questions

1. How does trust influence the knowledge sharing among farmer-consumer, consumer-farmer, and consumer-consumer within FCN?
2. How does communication influence the knowledge sharing among farmer-consumer, consumer-farmer, and consumer-consumer within FCN?
3. How do intrinsic rewards influence the knowledge sharing among farmer-consumer, consumer-farmer, and consumer-consumer within FCN?

Chapter 2
Literature Review

2.1 Dimensions of Knowledge

According to Davenport and Prusak (2005), knowledge refers to the mixing of expert insight, experiences, values and contextual information which leads to a framework for incorporating new experiences and information. Expert means the person with in-depth knowledge of a subject and he has been tested and trained by experience. Experience leads to the historical perspectives from what has happened in the past. Knowledge which is created through experience can make a connection about what is happening now and what happened in the future. Meanwhile, values refer to what people see, absorb, and conclude from observation. Then, by these values, people can organize the knowledge. Knowledge is closer to action than information and data. Hence, knowledge can be evaluated based on the actions to which it leads (Davenport and Prusak, 2005). Furthermore, knowledge can be classified into two classes:

2.1.1 *Tacit Knowledge*

Tacit knowledge is commonly defined as knowledge which is difficult to describe into words. It appears naturally, helps the organization in decision-making, affects the collective behaviour among individuals in an organization, and is hard to imitate (Liebowitz and Beckman, 1998). In addition, tacit knowledge engages with both cognitive and technical elements. Cognitive elements included analogies, schemata, paradigms, beliefs, and viewpoints which are difficult to formalize. On the other hand, technical elements included to skills, crafts, and concentrated know-how which refers to the particular context (Nonaka, 2002). Moreover, Nonaka *et al* (1996) emphasized that tacit knowledge is revealed through practice, routines, action, values, commitment, and emotions.

2.1.2 *Explicit Knowledge*

Explicit knowledge is the knowledge that can be revealed in formal language through manuals, procedure, copyright, and patent. Creating explicit knowledge needs formal education and structured study (Smith,2001). Furthermore, explicit knowledge is

distinguished into object-based and rule-based. Object-based is bounded into artefacts and using symbols. For example, product, patents, software code, computer databases, prototypes, and photographs. On the other hand, rules-based involves rules, routines, and operating procedures (Choo, 2000).

2.2 Knowledge Governance and Knowledge Sharing

2.2.1 Knowledge Governance

Knowledge governance can be described as the deployment of knowledge processes, including creating, retaining, integrating, and sharing knowledge. In addition, knowledge governance adopts both formal and informal mechanism to define how the organization manages the intellectual activitity relating to knowledge, including exchange, transfer, and sharing the knowledge (Cao and Xiang, 2012). Besides governance mechanism, knowledge governance is also determining a governance structure. Both aspects are important because they coordinate the actions of individuals in an organization in knowledge processes. However, the literatures which discuss the relationship between governance structures (e.g. market, hierarchy, hybrid) and knowledge sharing is somewhat scarce and need much more attention as a subject of research (Foss and Mahoney, 2010).

The examples of formal knowledge governance are extrinsic rewards, leadership, and job design (Foss *et al*., 2010). On the other hand, informal knowledge governance involves organizational culture, managerial support, and management style (Cao and Xiang, 2012). As this research uses FCN as the scope of study, we just narrow down the discussion about the knowledge governance mechanism in this organization.Then, based on that, we determine the factors which can facilitate the knowledge sharing within FCN. However, before going further to that chapter, the concept of knowledge sharing is explained below.

2.2.2 Knowledge Sharing

Knowledge sharing is the process by which individuals mutually exchange knowledge with each other and collaborate to create new knowledge (Van den Hoff and De Rider, 2004). Moreover, de Vries *et al*., (2006) have analysed two concepts of knowledge sharing, namely knowledge sharing attitudes and knowledge sharing behaviour. Knowledge sharing attitudes are relating to eagerness and willingness to share knowledge.

Whereas, knowledge sharing behaviour is the act of transferring or disseminating acquired knowledge with other individuals in an organization which can contribute for achieving organizational goals (Yi, 2009). Knowledge can be shared among individual, unit or group, within, and even across organizations (Ipe, 2003). Knowledge sharing starts from the owner of knowledge who transfers the knowledge consciously or not to the receiver, who responds after absorbing the new stimulus (Hendricks, 1999). There are three main conditions for supporting effective knowledge sharing. First is the knowledge source must be willing to share the knowledge, the second is the receiver must be willing to receive and use the knowledge. The third is the receiver also must perceive the knowledge as being useful for receiver's individual work and the whole organization (Evans, 2012).

2.3 Governance Mechanism in FCN

FCN can be described as a *"club"* where producers and consumers strongly integrate their function, more specifically, preserving local producers and engaging with local communities at the same time. FCN is based on pooling specific resources and assigning decision and property rights by using a formal membership. There are several kinds of FCN organization, including Community Supported Agriculture (CSA), Consumer Buying Group (CBG), and Farmers Market (FM) (Pascucci, 2010).

In FCN, farmers as producer provide land, capital assets, specific skills, and knowledge. On the other hand, consumers provide time, knowledge, and financial risk so the farmer can increase income stability. Moreover, consumers are involved in the different stages of supply chain, with the result that this collaboration will reduce the transaction cost (Pascucci, 2010). In return, consumers receive leisure time, credence food, and high quality products (Lombardi, 2013).

The involvement of consumers in the supply chain is distinct for each type of FCN. Commonly, CSA allows a direct involvement and participation of consumers in food production. Moreover, the consumers in CSA can contribute for decision-making process. In contrast, CBG and FM involves more in marketing phase instead of food production phase and the decision making is mainly driven by farmer (Pascucci, 2010).

Describing governance mechanism with organizational science approach is often used for new types of organization with limited empirical research, including FCN. This approach uses four basic elements that constitute an organization, namely: *market-like*, that involves price-like; *bureaucratic*, that involves formal plan, rules, and articulation of the division of labour; *communitarian*, that involves knowledge and values sharing; and *democratic*, that involves the allocation of ownership, decision, and representation rights (Grandori and Frunari, 2008).

Communitarian elements are fundamental elements of FCN which are mostly related to informal rules. Communitarian elements have a function to facilitate, motivate and coordinate types of actions which are managed by community members. Hence, they can build trust and trustworthiness and can reduce the transaction cost of relationships (Noteboom, 2007). Trust is an important aspect in FCN because it will lead to a greater involvement and commitment for member's loyalty. In addition, it is should be emphasized that trustworthiness among communitarian practices participant are not driven by control mechanism or economic incentives but mainly upon intrinsic rewards which refer to to the pleasure or satisfaction gained from knowledge sharing (Sajeva, 2014). Moreover, knowledge sharing among paticipants can control member's reputation (Lombardi, 2013). By sharing knowledge, a member can gain respect and a better image from other members (Constant *et al*., 1996).

Besides trust and intrinsic rewards, knowledge sharing in FCN is also influenced by a partnership which is built among community members, for example between farmers and consumers (Meyer *et al*., 2005). Partnership is described as a purposive strategic relationship between independent firms which share goals for mutual benefit (Mohr and Spekman, 1994). Moreover, creating an open and accessible communication is one of the leading principles in the partnership that can facilitate knowledge sharing among community members (Meyer *et al*., 2005). To sum up, based on the governance mechanism in FCN, knowledge sharing in this type of organization is related to trust, intrinsic rewards, and communication.

Eventhough there are many research in knowledge sharing, many previous studies only examined the perceived cost of knowledge sharing based on time, effort, and extrinsic

rewards. Yet the number of studies which focus on perceived cost of knowledge sharing within the context of affectional organizational commitment are still limited (Casimir *et al*., 2012). Hence, combining the effect of trust, also with intrinsic rewards and communication within informal organization can give a contribution to mitigate this gap.

2.4 Informal Knowledge Governance Mechanism in FCN

2.4.1 Intrinsic rewards

According to Bussines Dictionary (2016) reward system is allocation of benefits and compensation to employees which are according to procedures, rules, and standards. Some empirical evidence reveals that reward system has a relationship with knowledge sharing in an organization (Al-Alawi *et al*., 2007; Jahani *et al*., 2013). Hence, the arrangement of reward system in an organization should be used to encourage knowledge sharing among individuals in an organization. Regarding the knowledge sharing, there are two types of reward which are usually being investigated, namely extrinsic and intrinsic rewards. Extrinsic reward means tangible rewards, which organization such as firms gave it to their employees. For example, salaries, bonuses, promotion, commissions, and an educational opportunity.

Many studies reveal that extrinsic rewards have negative impacts on knowledge sharing (Bock *et al*., 2005, Cabrera *et al*., 2006), because the rewards is perceived as a manipulative and controlling action (Bock and Kim, 2001). Moreover, extrinsic rewards just have a short time effect (Huysman and de Wit, 2002). According to Foss *et al* (2010), extrinsic rewards are categorized as formal knowledge governance.

On the other hand, intrinsic rewards refer to the pleasure or satisfaction gained from knowledge sharing (Sajeva, 2014). According to Bartol and Srivastava, (2002) intrinsic rewards can build expertise and provide recognition for feeling competent to do something. Intrinsic rewards are classified into informal knowledge sharing since Reilly (1989) stated that this type of reward characterizes organization culture.

Organizational culture is the characters of an organization or norms and values in the organization that people accept, live by, and do as routines (Blake and Mouton, 1985). Based on the research done by Al–Alawi *et al* (2007), organizational culture is one of critical success factors to facilitate knowledge sharing. In this chapter we just discuss

intrinsic rewards, trust, and communication since these three factors that could facilitate the knowledge sharing in FCN.

Intrinsic rewards are more effective in facilitating knowledge sharing instead of extrinsic rewards. Recognition due to good work is one example of this type of reward that can encourage knowledge sharing because every person in an organization needs to be appreciated (Sutton, 2006). Also, expectation from a person that the knowledge which he shared will be useful for another person can also encourage knowledge sharing (Bock and Kim, 2001). This concept is explained as *self-efficacy*, which means people perceive what they can do with the skills they have. Moreover, *self-efficacy* will increase when they can gain confidence based on what they are able to do (Constant *et al*., 1994).

In addition, a person will be more willing to share knowledge if he expects to get valuable knowledge from another person in return. This concept is often called as *mutual benefit* or *reciprocity* (Lin, 2007). Below is the list of intrinsic rewards based on the literature research that has a significance positive effect on knowledge sharing among individuals (Sajeva, 2014):

1. Sense of belonging, by sharing knowledge with others, individuals feel being connected and accepted within an organization.
2. Sense of achievement and success, by sharing knowledge with others in the decision-making process or problem solving, individuals feel that they give a contribution for achieving organization goals.
3. Sense of competence, by sharing knowledge with others, individuals increase their competence and self-confidence because before sharing the knowledge, they go deeper into the knowledge for better understanding.
4. Sense of usefulness, by sharing knowledge with others, individuals feel satisfied due to the meaningfulness of their help and usefulness of their knowledge.
5. Sense of respect and recognition, by sharing knowledge with others, individuals gain respect and recognition from other members.

2.4.2 Trust

Trust is one of the elements of organizational culture (Heejun *et al*., 2004). Empirical evidence reveals that trust has a positive effect on knowledge sharing (Cowdury, 2005; Ruppel and Harrington, 2001). There are two main actors who play role of trust, namely trustor and trustee. Trustor is the person who creates the trust and trustee is the person who is given the trust by the trustor. Trust can be defined as the extent to which a person (*trustee*) is confident in and willing to act based on the words, actions, and decisions of the *trustor* (MC. Allister, 1995 and Mayer *et al*., 1995). According to Mishra (1996), trust is classified into three dimensions, namely benevolence, integrityand ability. Each factor is explained as follows:

1. Mayer *et al* (1995) describe benevolence as "*the extent to which a trustee is believed to want to do good to the trustor, aside from an egocentric profit motive*". It also relates to "*the perception that trustee would keep the best interests of the trustor at heart*". Moreover, high benevolence in a relationship has the negative effect of motivation to lie. This concept is consistent with the view that benevolence plays an important role in the assessment of trustworthiness (Hovland *et al*.,1953).
2. Integrity means that the trustor has a perception that the trustee engages to a set of principles that are acceptable by the trustor. There are four principles the trustor uses to judge the integrity of the trustee: through the consistency of the trustee's past actions, through the credibility of the trustee, the trustee's actions match their words, and the trustee understands a strong sense of right and wrong (Mayer *et al*., 2005).
3. Ability-based trust exists when an individual believes that another individual has a group of skills, competencies, and characteristics within some specific domain. The domain is specific because it is possible that the trustee is highly competent in some technical areas (Mayer *et al*., 2005). This concept is related to the fear of losing face which is identified by Ardichivili *et al* (2006). For example, if an individual is perceived as with a competence in doing his work is lower than the competence of another individual, his motivation for sharing his knowledge will be lower due to the fear of criticism. Both benevolence and competence can avoid *"the fear of losing of face"*. It means that if someone feels that his contribution may not be sufficiently important or relevant, he will not be motivated to share knowledge (Usoro *et al*, 2007).

2.4.3 Communication

According to Cushman (1997) and Fine (1979), most organizational culture elements are built as part of a communication system, for example code of conduct and unspoken rules. Those culture elements are also maintained by defining, learning and revising how people interact with each other (Spradley, 1979). In addition, communication is a tool to form a social networking in the organization and promoting knowledge sharing (Al Alawi *et al*., 2007). Besides trust, communication between individuals in an organization can facilitate the knowledge sharing by using conversation and body language (Smith and Rupp, 2002). There are three fundamentals which lead to a successful communication between individuals, namely the high level of face to face interaction (Smith and Rupp, 2002), teamwork discussion and collaboration (Goh, 2002), and use of common language. Common language refers to the extent which the knowledge source and receiver understand each other and use similar symbols and specific terms (Levin, 2002). According to Zenger and Lawrence (1989), the common language has a function to determine the efficiency of communication by action as a guide for how knowledge is interpreted and responded.

Moreover, information systems as one of communication method are used to facilitate the knowledge sharing by managing people, information, and processes for supporting daily routines, problem-solving, and decision making (Whitten *et al*., 2001). Usually organizations uses different information system through creating specific knowledge database where the members can share knowledge electronically (Conelly and Kolleway, 2003).

2.5 Hypothesis

Based on the existing literature review, we can infer the influences of three informal knowledge governance mechanisms, namely, trust, intrinsic rewards, and communication on knowledge sharing. Therefore, to determine the relationship between those mechanisms with knowledge sharing in a context of FCN, four hypotheses are developed and tested in this study. Those hypotheses are listed below:

1. Intrinsic rewards, trust, and communication can facilitate the knowledge sharing within FCN.
2. The higher the level of trust, the higher level of knowledge sharing within FCN:

(2a). The higher the level of trust between farmer-consumer, the higher the level of knowledge sharing between farmer-consumer.

(2b). The higher the level of trust between consumer-farmer, the higher the level of knowledge sharing between consumer-farmer.

(2c). The higher the level of trust between consumer-consumer, the higher the level of knowledge sharing between consumer-consumer.

3. The higher the level of intrinsic rewards, the higher the level of knowledge sharing within FCN.

(3a). The higher the level of intrinsic rewards between farmer-consumer, the higher the level of knowledge sharing between farmer-consumer.

(3b). The higher the level of intrinsic rewards between consumer-farmer, the higher the level of knowledge sharing between consumer-farmer.

(3c). The higher the level of intrinsic rewards between consumer-consumer, the higher the level of knowledge sharing between consumer-consumer.

4. The higher the level of communication, the higher level of knowledge sharing within FCN.

(4a). The higher the level of communication between farmer-consumer, the higher the level of knowledge sharing between farmer-consumer.

(4b). The higher the level of communication between consumer-farmer, the higher the level of knowledge sharing between consumer-farmer.

(4c). The higher the level of communication between consumer-consumer, the higher the level of knowledge sharing between consumer-consumer.

2.6 Theoretical Framework

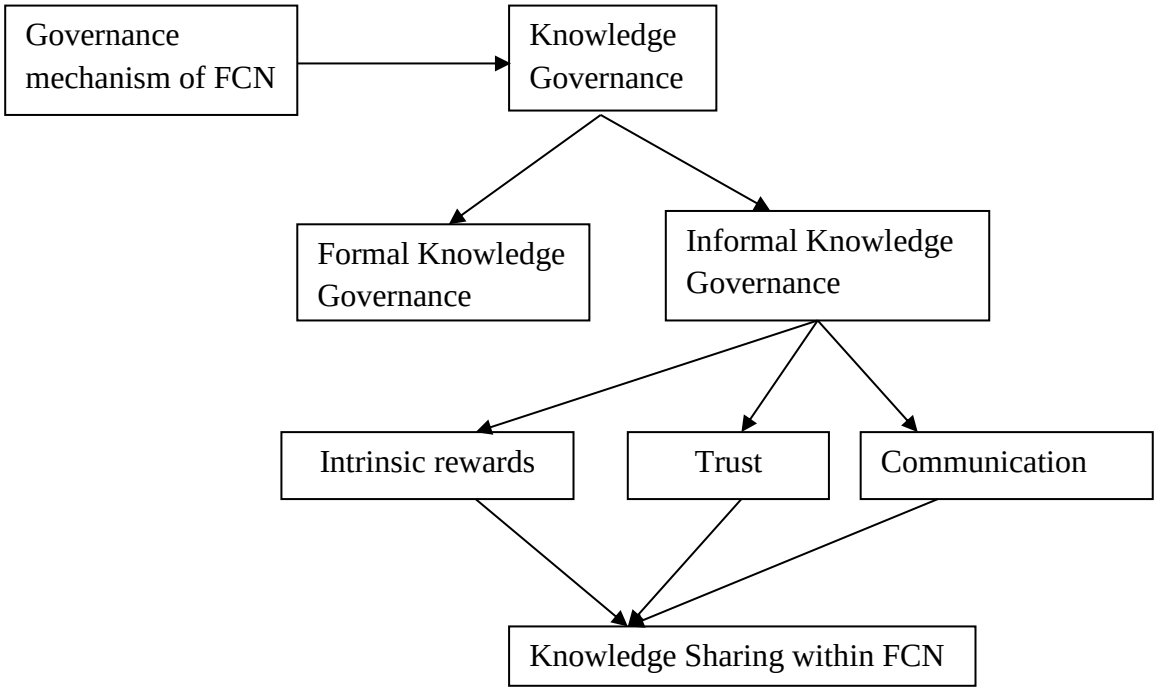

Figure 2 Theoretical Framework

Chapter 3

Methodology

The purpose of this chapter is to give an overview of the research method which is used for this study. To study how knowledge is shared within FCN, a deductive approach is adopted in this study. Deductive approach means theory testing process, which starts with an existing theory and seeks to see if the theory can be applied to specific instances (Hyde, 2000). So far, no study has been done on knowledge sharing in *informal* organization, and the lack of evidence is especially clear in the agri-food sector. Therefore, to cover this gap and present some empirical evidence, we adopt some theories from previous similar studies in formal organizations to know what happens in a context of FCN. In this research, quantitative method for answering all of the research questions is used. Quantitative study is explaining phenomena by using numerical data and analysed by mathematically based methods, in particular, statistics (Creswell, 1994).

3.1 Case Selection

Furthermore, in this research, we use a CSA example as a case study. A case study allows us to obtain an overview and better understanding of cases, process, and interactional dynamics within a unit of study (Kumar, 2011). CSA is selected because this type of FCN is widely available in Europe and it presents both communitarian and partnership elements, namely intrinsic rewards, trust, and communication. In addition, for the CSA to operate successfully, communication between the members has to be strong (Lombardi, 2013).

CSA is a direct partnership between a group of consumers and farmers without intermediaries whereby the risk, responsibilities, rewards are shared together in the farming process (Volz *et al*., 2016). The farmers usually produce vegetables, fruit, meat, and dairy product to supply the local community members directly (Cicia *et al*., 2011). Without hierarchy, the farmers and consumers relationship is based on direct person to person contact and trust so the transaction cost, more precise, monitoring cost can be reduced (Urgenci, 2013).

There are two common types of CSA in the Netherlands, namely vegetable box scheme and self-harvesting (Sevikul, 2014). In vegetable-box scheme, the farmer has full control of the land and the product which will be distributed to the consumers. The consumers pay a subsription fee at the beginning of the season and in return, they can pick up the weekly vegetable box in the certain time and place. On the other hand, self-harvesting scheme allows the consumers to access the land and to harvest fresh produce on a daily or weekly base under the farmer's supervision after they pay annual subscription fee (Markiet, 2011).

Self-harvesting type enhance more the interaction between the farmer and the consumers and also focus more on participation and raising awareness and responsibility of consumers (Markiet, 2011). Therefore, in this study, we take only this type CSA as unit of analysis. Moreover, the sampling case of CSA's is just conducted at one CSA, more specifically, CSA "De Nieuwe Ronde" in Wageningen, considering that this CSA initiated self-harvesting CSA concept in the Netherlands and it is suitable as a representative to study knowledge sharing between the farmer and the consumers within FCN.

3.2 Operationalization

This section is divided into two subsections. Sub-section 3.2.1 explains about the scale and measurement used to answer the research questions, including the indicators for intrinsic rewards, trust, and communication which are extracted from different existing studies. Sub-section 3.2.2 provides a method for data collection and design of questionnaire. The complete questionnaire can be seen on Appendix 1 and 2.

3.2.1 Scale and Measurement

Based on the literature study, intrinsic rewards, trust, and communication can facilitate the knowledge sharing within FCN. Hence, in this study, these three factors becomes independent variables and knowledge sharing is the dependent variable to be measured. In this section, the items mentioned for measuring both dependent and independent variables are also used for building the questions in the questionnaire.

- Knowledge sharing

As mentioned before, knowledge sharing involves three important factors: (1) the knowledge source must be willing to share the knowledge, (2) the knowledge receiver must be willing to receive and use the knowledge which is shared, and (3) the receiver must perceive the knowledge as being useful to their individual work (Evans, 2012). Hence, in this study, we use these factors to measure knowledge sharing, namely, willingness to share knowledge, willingness to use knowledge, and perceived receipt of useful knowledge. The items of each factor for knowledge sharing are adopted based on the research done by Evans (2012) which examines the knowledge sharing in the law firms. Since might be the items are unknown for the potential respondents so they should be adjusted into the things which are specifically related to the self-harvesting CSA (Cox et *al*.,2008; Markiet, 2011; Perez *et al*., 2003; Russell and Zepeda, 2008; Sevikul, 2014; Volz *et al*., 2016; Goland, 2001; Wells *et al*., 1999).Those items are mentioned in Table 1-3.

For knowledge sharing variable, we test the hypothesis in three different relationships, namely farmer-consumer, consumer-farmer, and consumer-consumer. In the case of farmer-consumer, we take the farmer as reference, his willingness to share knowledge with consumers and to use knowledge from the consumers. On the other hand, in the case of consumer-farmer and consumer-consumer, the focus is on the consumer.

Table 1. Measurement indicators for knowledge sharing between farmer-consumer

Factor	Adopted Items (code)
Willingness to share knowledge	The farmer takes the initiatives to provide the consumer with useful knowledge, for example on production process, seasonal availability, or recipes (K1FC)
	The farmer allows the consumer to visit the farm to get insight about growing process of the crops (K2FC).
Willingness to use knowledge	The farmer receives and considers any ideas or suggestions from the consumer, for example on production process, seasonal availability, or recipes (K3FC).
Perceived receipt of useful knowledge	The suggestions or ideas from the consumer can give a contribution to increase farmer's performance, on the production process and subsequent product quality (K4FC).

Table 2. Measurement indicators for knowledge sharing between consumer-farmer

Factor	Adopted Items (code)
Willingness to share knowledge	The consumer takes the initiatives to provide the farmer with useful knowledge, for example on the production plan, voluntary works, social events, or others (K1CF).
Willingness to use knowledge	The consumer receives and considers any knowledge from the farmer related to how agriculture works, food distribution, and product preparation, for example recipes or others (K2CF).
	The consumer learns from the farmer about the production process during farm visiting (K3CF).
Perceived receipt of useful knowledge	Knowledge from the farmer can increase consumer's ability in preparing food, adopting healthier eating habits, understanding the production processes, and becoming more aware of agricultural and environmental issues (K4CF).

Table 3. Measurement indicators for knowledge sharing between consumer-consumer

Factor	Adopted Items (code)
Willingness to share knowledge	The consumer takes the initiatives to provide other consumers with useful knowledge, for example on local environmental campaigns or events, eco-friendly products, recipes (K1CC).
	The consumer is willing to share any ideas with other consumers related to the CSA as a whole (K2CC).
Willingness to use knowledge	The consumer receives and considers any knowledge from other consumers (K3CC).
Perceived receipt of useful knowledge	The knowledge from other consumers can increase ability to be more aware of agricultural and environmental issues (K4CC).

- Trust

The items for measuring trust are distinguished into three factors, namely benevolence, integrity, and ability. Those indicators are adopted based on the research conducted by Mayer and Davis (1999), Levin and Cross (2004), and Levin *et al* (2006) which examine the relationship between knowledge sharing and trust in several types of formal organizations. Since might be the items are unknown for the potential respondents so they should be adjusted into the things which are specifically related to the self-harvesting CSA (Cox et *al*.,2008; Markiet, 2011; Perez *et al*., 2003; Russell and Zepeda, 2008; Sevikul, 2014; Volz *et al*., 2016; Goland, 2001; Wells *et al*., 1999).

For trust variable, we test the hypothesis in three different relationships, namely farmer-consumer, consumer-farmer, and consumer-consumer. In the case of farmer-consumer, we take the farmer as trustor and the trustee is the consumer. On the other hand, in the case of consumer-farmer and consumer-consumer, the focus is on the consumer as the trustor. The items for each scheme can be seen in Table 4-6.

Table 4. Measurement indicators for trust between farmer-consumer

Factor	Adopted items (code)
Benevolence	The farmer trusts that the consumer is taking care of garden, for example by removing weeds, cleaning, or through other tasks (T1FC).
	The farmer trusts that the consumer is willing to do voluntary works if asked, such as helping with the field work, recruiting members, or others (T2FC).
	The farmer trusts that the consumer is understading the risk's involved as being part of the CSA (T3FC).
Ability	The farmer trusts that the consumers are able to help with the field work, recruiting members, or others if asked (T4FC).
Integrity	The farmer trusts that the consumer pays the subscription fee on time (T5FC).

Table 5. Measurement indicators for trust between consumer-farmer

Factor	Adopted items (code)
Benevolence	The consumer trusts that the farmer does not use pesticide and takes care of his land and the ecosystem (T1CF).
	The consumer trusts that the subscription fee for the farmer is in proportion to the work he delivers (T2CF).
Ability	The consumer trusts that the farmer is able to provide consumers with helpful informationon the production process, availability of products, and recipes (T3CF).
	The consumer trusts that the farmer approaches his or her job with professionalism and dedication (T4CF)
Integrity	The consumer trusts that the farmer always provides high quality products from sustainable agricultural practices (T5CF).
	The consumer trusts that there is always a transparency from the farmer about CSA as a whole. For example, sharing financial report and update news about garden condition (T6CF).
	The consumer is willing to renew the membership with the CSA in the future based on personal experience with the farmer (T7CF).

Table 6. Measurement indicators for trust between consumer-consumer

Factor	Adopted Items(code)
Ability	The consumer trusts that other consumers are able to support the farmer in field work if asked (T1CC).
Integrity	The consumer trusts that other consumers just harvest the number of products which they need and take into account the other consumers (T2CC).

- Intrinsic rewards

Based on the research done by Sajeva (2014) and Jehani *et al* (2013), they conclude that organizations should give a main priority to non-monetary rewards or intrinsic rewards because intrinsic rewards are mostly related to satisfaction and interest derived from knowledge activity. Thus, in this study, we adopt some items which are developed by them and Kankanhalli *et al* (2005) for measuring intrinsic rewards among farmer-consumer, consumer-farmer, and consumer-consumer relationshipwithin CSA as listed in Table 7-9.

For intrinsic rewards variable, in the case of farmer-consumer,the consumer is a person who receives the intrinsic rewards through sharing knowledge to the farmer. Meanwhile, in the case of consumer-farmer, the farmer is a person who receives the intrinsic rewards through sharing knowledge to the consumer. Finally, in the case of consumer-consumer, the consumer is a person who receives the intrinsic rewards through sharing knowledge to other consumers.

Table 7. Measurement indicators for intrinsic rewards between farmer-consumer

Variable	Adopted Items (code)
Intrinsic rewards	The consumer feels closer to the farmer when sharing knowledge with him (I1FC).
	The consumer feels satisfied when sharing knowledge with the farmer (I2FC).
	The consumer feels useful when sharing knowledge with the farmer (I3FC).
	The consumer enjoys helping the farmer by sharing knowledge with him (I4FC).

Table 8. Measurement indicators for intrinsic rewards between consumer-farmer

Variable	Adopted Items (code)
Intrinsic rewards	The farmer feels closer to the consumer when sharing knowledge with him (I1CF).
	The farmer feels satisfied when he shares knowledge with the consumer (I2CF).
	The farmer feels useful when he shares knowledge with the consumer (I3CF).
	The farmer enjoys help the consumer by sharing knowledge and giving advices (I4CF).

Table 9. Measurement indicators for intrinsic rewards between consumer-consumer

Variable	Adopted Items (code)
Intrinsic rewards	The consumer feels closer to other consumers when sharing knowledge (I1CC).
	The consumer feels satisfied when sharing knowledge with other consumers (I2CC).
	The consumer feels useful when sharing knowledge with other consumers (I3CC).
	The consumer enjoys helping other consumers by sharing knowledge (I4CC).

- Communication

In this study we use items for measuring communication developed by Smith and Rupp, (2002); Levin *et al*, (2006); Goh, (2002); and Connelly and Kelloway, (2003). They emphasized face to face communication, use of common language, and an existence of knowledge sharing technologies respectively. Moreover, common language is divided into two specific items, namely, understand each other, and use similar jargon and terminology (Levin *et al*., 2006). The adopted items for measuring communication among farmer-consumer, consumer-farmer, and consumer-consumer relationship within CSA are listed in Table 10-12.

Table 10. Measurement indicators for communication between farmer-consumer

Variable	Adopted items (code)
Communication	The farmer often interacts with the consumer face-to-face, for example, during social events, farm visits, regular meetings, or others (C1FC).
	The farmer uses various tools and technologies to facilitate communication with the consumer, for example, email, blog, social media, or others (C2FC).
	When talking, the consumer perceives that the farmer fully understands what he means (C3FC).

Table 11. Measurement indicators for communication between consumer-farmer

Variable	Adopted items (code)
Communication	The consumer often interacts with the farmer face-to-face, for example, during social events, farm visits, regular meetings, or others (C1CF).
	The consumer uses various tools and technologies to facilitate communication with the farmer, for example, email, blog, social media, or others (C2CF).
	When the farmer is talking, the consumer can fully understands what he means (C3CF).

Table 12. Measurement indicators for communication between consumer-consumer

Variable	Adopted items (code)
Communication	The consumer often interacts with other consumers face-to-face, for example, during social events, farm visits, regular meetings, or others (C1CC).
	The consumer uses various tools and technologies to facilitate communication with other consumers, for example, email, blog, social media, or others (C2CC).
	When other consumers are talking, the consumer can fully understands what they mean (C3CC).

3.2.2 Method for data collection and design of questionnaire

We use an online structured closed questionnaire in this study for primary data collection. In particular, we use the program Qualtrics since this software has a feature to prevent a respondent for completing the survey more than once and can be accessed through IOS and Android App. easily. To adopt a questionnaire method has proved to have several merits, such as the freedom with which the respondents answers, which reduces interviewer's biases, and most of all it is not time-consuming (Sahu, 2013). The questionnaire is divided into three parts, a short introduction about this research and an invitation to participate open the survey, followed by the questions about knowledge sharing, trust, intrinsic rewards, and communication between farmer-consumer, consumer-farmer, and consumer-consumer respectively. Moreover, each question which contains the adopted items above isaccompanied with a likert scale that allowed respondents to choose from strongly disagree (score 1) to strongly agree (score 5). Meanwhile, the last part of the survey asks about the demographic of respondents, which are the consumers of the CSA.

The language of the questionnaire is Dutch: the original version, in English, has been translated into Dutch by two native speakers. Before sending it to CSA's consumers, the content of the questionnaire is validated by a farmer and a consumer from De Nieuwe Ronde. A screening of items which are redundant, irrelevant, or difficult to understand has been done. After that, the questionnaire was distributed through email to the consumers of De Nieuwe Ronde. The questionnaire was active for three weeks. Then, the results is analysed by statistical techniques which are explained in the next section.

3.3 Statistical Techniques

3.3.1 Validity and Reliability Test

Validity refers to how well an item or a scale measures what it aims to measure (Litwin, 1995). This study uses construct validity since the adopted items which are used to measure the variables had been tested in the previously empirical study that confirmed their operationalizations through factor and reliability analysis (Evans, 2012). Therefore, Principal Component Analysis is done by conducting factor analysis. Before conducting a factor analysis, KMO and Bartlett's test should be conducted first. KMO test compares the correlation between two variables by removing the effect of the remaining variables. The higher the KMO value (≈1), the more PCA can act efficiently. Otherwise, the lower the KMO value (≈0), the less PCA can act efficiently. On the other hand, Bartlett's test checks the significance of the study and therefore shows the validity and suitability of the recorded responses to the problem which is addressed through the study. The KMO measure of sampling adequacy should have the value greater than 0,5 (Kaiser, 1974) and Bartletts's test should be significant at the 0.05 level ($p<0,05$) (Field, 2009). According to Stevens (1992), a factor loading above 0,4 is set as cut off point for inclusion of an item in a factor.

Reliability can be defined as consistency of a measure. It means that the measurement should have approximately the same responses each time the test is completed. One attribute of reliability which is used in this study is homogeneity or internal consistency (Heale and Twycross, 2015). Internal consistency refers to the extent to which all the items on a scale are achieving their measurement purposes with the relative absence of error. The most common statistical technique for checking this type of reliability is Cronbach's alpha model (Straub *et al*., 2004). The minimum acceptable range of factor should be 0,65-0,70.

Moreover, the item that does not exceed of minimum acceptable should be excluded from further analysis (De Vellis, 1991).

3.3.2 Multiple Regression Analysis

In order to examine the hypothesis about the relationship between knowledge sharing and trust, communication, and intrinsic rewards respectively, a multiple regression analysis is conducted by using Statistical Package for Social Sciences (SPSS) version 24. This analysis is done to measure a correlation between the dependent variable with each independent variable while controlling for the impact of the other independent variables (Usoro *et al*., 2007; Evans, 2012). This means that in this study, all the independent variables, more precisely, trust, communication, and intrinsic rewards are calculated together in one equation. Therefore, all the independent variables are used to predict the value of knowledge sharing as the dependent variable (Sevikul, 2014). Based on the calculation from this method, the value of beta weight (β) reveals which of independent variables has the most influential effect compared to other (Field, 2000).

Chapter 4

Results

This chapter reveals the quantitative results which are divided into three sections. First, the demographic information of the respondents, followed by validity and reliability test in order to explore how valid, consistent, and stable the items are. Finally, the relationship between trust, intrinsic rewards, and communication as independent variables with knowledge sharing are shown, and the results of the hypothesis test are also described.

4.1 Demographic of Respondents

The online questionnaire was distributed to 400 customers of CSA "De Nieuwe Ronde" with 66 recorded responses, yet only 43 responses are usable for further analysis. The majority of the respondents are female which reaches 65,1%, and the rest are male. Moreover, in terms of age, most respondents are 60 years old or older (41.9%). Approximately the respondents (48.8%) have already participated as consumers for 2-4 years, and the rest are five years or longer and still one year or shorter. Furthermore, regarding the level of education, majority of the respondents (74.4%) had completed the degree in scientific education. Moreover, the top three work status of the respondents who were contributed in this study are part time worker (34,9%), followed by retired (27.9%), and fulltime worker (25.6%). The complete summaries from demographic of respondents are presented in Figure 3-6.

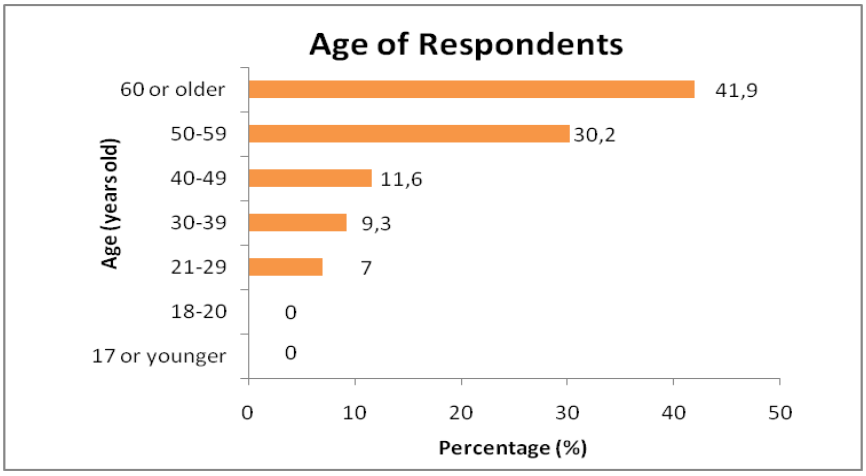

Figure 3 Summary for Age of Respondents

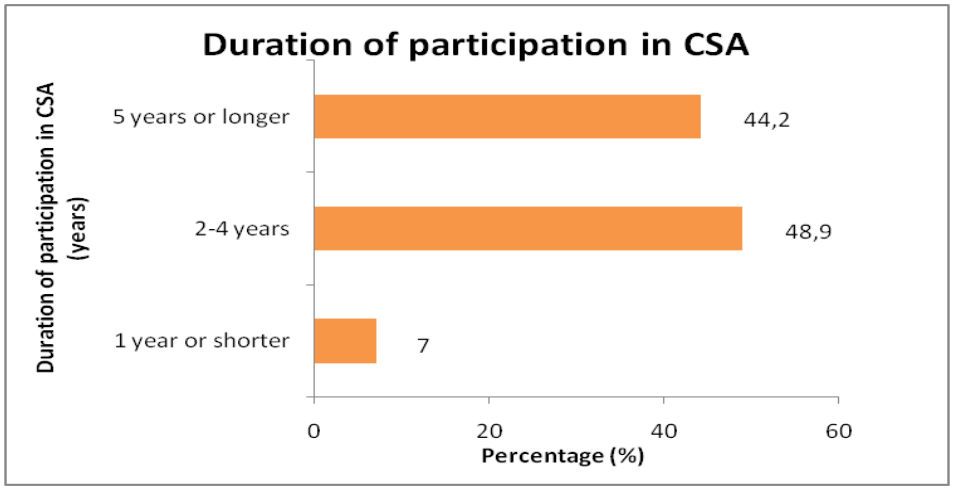

Figure 4 Respondents Summary for Duration of Participation in CSA

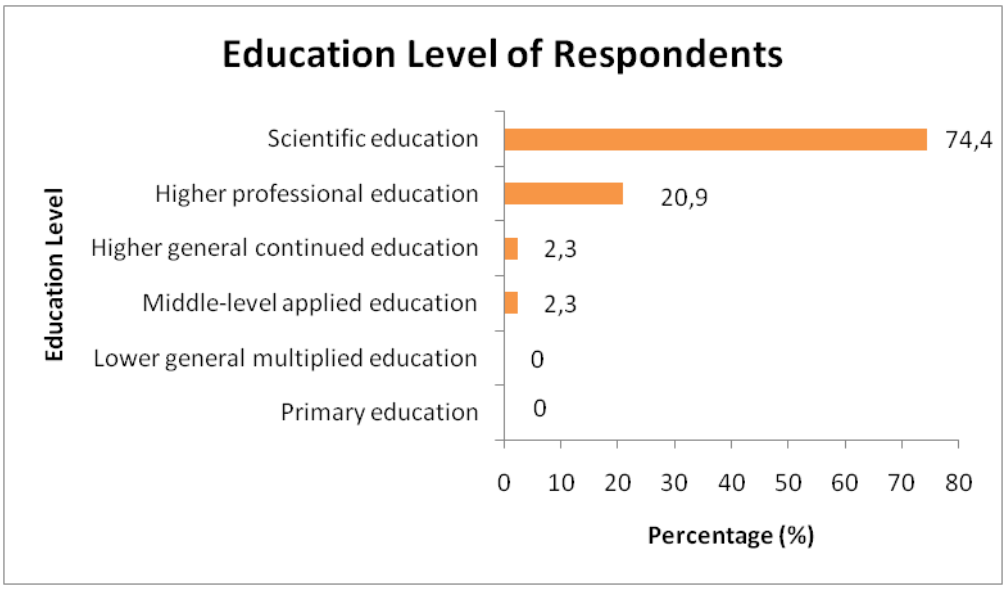

Figure 5 Summary for Education Level of Respondents

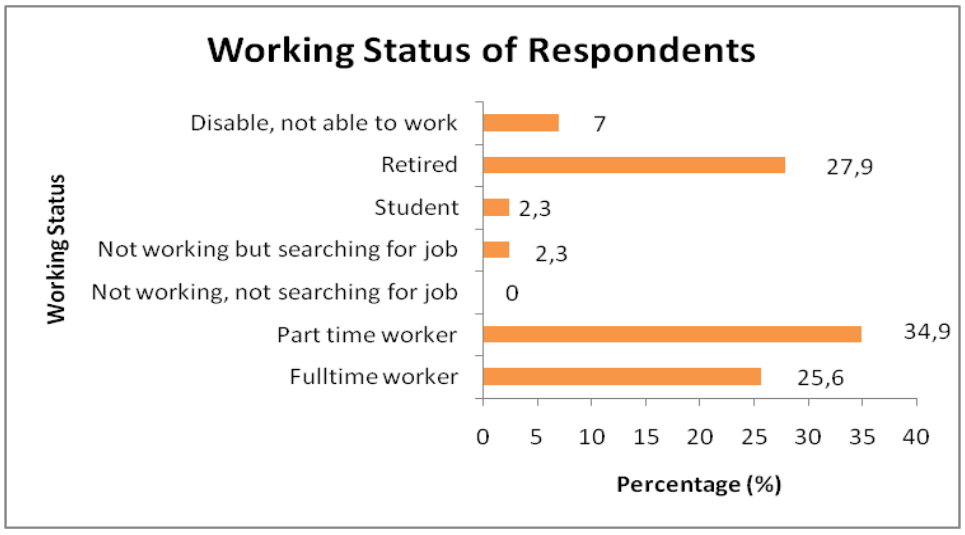

Figure 6 Summary for Working Status of Respondents

4.2 Validity and Reliability Test

Table 13 reveals the results of validity and reliability test by using KMO Bartlett and Cronbach's Alpha method respectively. Moreover, Table 14-17 describes the factor loadings for every item in one component.

Table 13. Cronbach's Alpha and KMO Bartlett Test Results

Variable	Number of items	Cronbach's Alpha (α)	KMO test	Barlett test (sig.)
Knowledge sharing farmer-consumer	4	0,718	0,582	0,582
Knowledge sharing consumer-farmer	4	0,492*	0,498**	0,000
Knowledge sharing consumer-consumer	4	0,851	0,802	0,000
Trust farmer-consumer	5	0,761	0,787	0,000
Trust consumer-farmer	7	0,888	0,870	0,000
Trust consumer-consumer	2	0,420*	0,500**	0,500**
Intrinsic rewards farmer-consumer	4	0,912	0,788	0,000
Intrinsic rewards consumer-farmer	4	0,875	0,793	0,000
Intrinsic rewards consumer-consumer	4	0,929	0,829	0,000
Communication farmer-consumer	3	0,710	0,655	0,000
Communication consumer-farmer	3	0,607*	0,522	0,000
Communication consumer-consumer	3	0,502*	0,536	0,011

Note : * : Cronbach alpha results do not exceed the minimum value to be acceptable

****** :KMO test results do not exceed the minimum value to be acceptable

*** : The significant value in 0.05 level is not acceptable

Table 14 Factor Analysis for "Knowledge Sharing" Variable

Item	Factor Loading	Item	Factor Loading	Item	Factor Loading
K1FC	0,834	K1CF	N/A	K1CC	0,860
K2FC	0,648	K2CF	0.816	K2CC	0,866
K3FC	0,751	K3CF	0.902	K3CC	0,814
K4FC	0,701	K4CF	0,561	K4CC	0,805

Table 15 Factor Analysis for "Trust" Variable

Item	Factor Loading	Item	Factor Loading	Item	Factor Loading
T1FC	0,791	T1CF	0,846	T1CC	N/A
T2FC	0,856	T2CF	0,471	T2CC	N/A
T3FC	0,810	T3CF	0,782		
T4FC	0,873	T4CF	0,823		
T5FC	-0,133*	T5CF	0,792		
		T6CF	0,897		
		T7CF	0,871		

Table 16 Factor Analysis for "Intrinsic Rewards" Variable

Item	Factor Loading	Item	Factor Loading	Item	Factor Loading
I1FC	0,862	I1CF	0,874	I1CC	0,916
I2FC	0,929	I2CF	0,863	I2CC	0,931
I3FC	0,889	I3CF	0,911	I3CC	0,859
I4FC	0,879	I4CF	0,767	I4CC	0,929

Table 17 Factor Analysis for "Communication" Variable

Item	Factor Loading	Item	Factor Loading	Item	Factor Loading
C1FC	0,841	C1CF	0,882	C1CC	0,833
C2FC	0,801	C2CF	0,812	C2CC	0,806
C3FC	0,744	C3CF	0,525	C3CC	0,449

Note : *: Factor loading do not exceed the minimum value to be acceptable

As noted in Table 13, all of the variables well exceeded the minimally acceptable range of KMO and Bartlett test (KMO>0,5; p<0,05), except for variable "trust consumer-consumer" and "knowledge sharing consumer-farmer". However, if item K1CF is removed, the value of KMO and Bartlett's test for variable "knowledge sharing consumer-farmer" becomes minimally acceptable (KMO=0,509) and increasing Cronbach's α value from 0,492 into 0,592. Therefore, K1CF is removed for further analysis so factor analysis for variable "knowledge sharing consumer-farmer" can be done.

Moreover, almost of all variables is reliable for further analysis since the Cronbach's α values well exceeded the minimally acceptable range of 0,65-0,70, except for four variables: "knowledge sharing consumer-farmer", "trust consumer-consumer", "communication consumer-farmer" and "communication consumer-

consumer". However, according to Nunally (1967), in the early stages of research on predictor test or hypothesized measures of a construct, instruments that only have modest reliability, for which purpose reliabilities of 0,6 or 0.5 will suffice. Considering that this research is still at an early stage in terms of examining knowledge sharing within an informal organization in the agri-food sector, even the Cronbach's α value below 0.65-0,70 can be seen as acceptable in this study. Therefore, variable "knowledge sharing consumer-farmer", communication consumer-farmer, and "communication consumer-consumer" are sufficiently reliable to be analyzed further.

In addition, based on the results in Table 14-17, it can be seen that factor analysis categorized principal factors comprising items for each variable, namely, knowledge sharing, trust, intrinsic rewards, and communication. It can be seen that all the items are loaded satisfactory (factor loading>0,4), except T5FC, which has "poor" factor loading in variable "knowledge sharing farmer-consumer". Hence, this item is removed and the initial number of scales is reduced from five to four items. To sum up, based on the overall result of the validity and reliability tests, "trust consumer-consumer" is the only variable which is removed for multiple regression analysis, since both Cronbach's αvaluen and KMO Bartlett's test for this variable are too low to be acceptable.

4.3 Multiple Regression Analysisand Hyphotesis Testing

The research questions in section 1.5 focus on whether trust, intrinsic rewards, and communication as independent variables can facilitate knowledge sharing among farmer-consumer, consumer-farmer, and consumer-consumer within FCN. We hypothesize therefore that each of our independent variables is positively correlated with knowledge sharing, the dependent variable. Therefore, to answer the research questions, a multiple regression analysis is executed. The sig. values and unstandardized regression coefficient (β) are listed in Table 18.

Table 18. Multiple Regression Analysis (MRA) Results

Mechanism	Dependent Variable	Independent Variable	β	Sig.
Farmer-consumer	Knowledge sharing	Trust	0,324	0,008*
		Intrinsic rewards	-0,010	0,940
		Communication	0,207	0,145
Consumer-farmer	Knowledge sharing	Trust	0,100	0,641
		Intrinsic rewards	0,328	0,098
		Communication	0,055	0,759
Consumer-consumer	Knowledge sharing	Intrinsic rewards	0,729	0,000**
		Communication	0,034	0,850

Note: $p < 0,01$*, $p<0,001$**

As can be seen in Table 18, the results of MRA indicated that trust only has a significant positive correlation with knowledge sharing between farmer-consumer ($p<0,01$; $\beta=0,324$), thus hypothesis 2a is supported. In contrast, trust has no significant correlation with knowledge sharing between consumer-farmer ($p>0,05$; $\beta=0,100$) so hypothesis 2b and 2c are not supported since also variable "trust consumer-consumer" could not be further analyzed.

Meanwhile, for intrinsic rewards, it only has asignificant positive correlation with knowledge sharing between consumer-consumer ($p<0,001$; $\beta=0,729$), thus hypothesis 3c is supported. However, intrinsic rewards has no significant correlation with knowledge sharing between farmer-consumer ($p>0,05$; $\beta= -0,010$) and consumer-farmer ($p>0,05$; $\beta=0,328$). Therefore, hypothesis 3a and 3b are not supported.

Hypothesis 4a, 4b, and 4c are not supported since communication has no significant correlation with knowledge sharing in all of three mechanism, namely,farmer-consumer ($p>0,05$; $\beta=0,207$), consumer-farmer ($p>0,05$; $\beta=0,055$), and consumer-consumer ($p>0,05$; $\beta=0,034$). Overall, based on the results of the MRA results, the first hypothesis which stated "*Intrinsic rewards, trust, and communication can facilitate the knowledge sharing within FCN*" is only partially supported.

Chapter 5

Discussion

The objective of this study is to investigate the role of trust, intrinsic rewards, and communication among farmer-consumer, consumer-farmer, and consumer-consumer within FCN. Study findings show that trust and intrinsic rewards have significant positive correlation with knowledge sharing between farmer-consumer and consumer-consumer respectively. The following section starts with the discussion of trust, followed by intrinsic rewards and communication for each mechanism, namely, farmer-consumer, consumer-farmer, and consumer-consumer.

5.1 The influence of trust on knowledge sharing within FCN

In the context of farmer-consumer mechanism, trust has a significant positive correlation with knowledge sharing. This result is in line with numerous studies which have reported positive relationships between trust and knowledge sharing (Casimir *et al*., 2012). The plausible reason is that, by having trust, people are more willing to give useful knowledge because they feel that knowledge shared is not likely to be misused by the receiver (Davenport and Prusak, 1998). In addition, they also more willing to listen and absorb the knowledge (Levin *et al*.,2002). On the other hand, without trust, even though knowledge sharing is compulsory, people would not share knowledge (Andrews and Delahaye, 2001).

Additionally, according to Mayer *et al*., 1995, a higher level of trust may decrease feelings of risk associated with the quality of knowledge shared. A reduction of this risk can improve the farmer confidence in knowledge which is received from his consumers. Therefore, both increased confidence and reduced risk in the knowledge would expectedly increase the willingness to use and the perception that the knowledge received is useful for the farmer.

Interestingly, trust has no significant positive relationship on knowledge sharing between consumer-farmer. A possible explanation for this finding is related to tie strength theory. Tie strength refers to a combination of the emotional intensity, the closeness, and interaction frequency which characterize the tie (Granovetter, 1973 and McFadyen

&Cannela, 2004). Levin and Cross (2004) determined that tie strength has a positive effect on trust. In contrast, it is also possible that weak tie becomes a barrier for trusting someone. In addition, interaction frequency is the common indicator to measure of tie strength (Marsden and Campbell, 1984). Furthermore, the authors said that the tie is formed in joint activities organized or around elements of the social environment. In the context of CSA, the strong tie among members might be built through social events, such as volunteering works and working together in the garden (Sevikul, 2014 and Russell & Zepeda, 2007). However, according to Markiet (2014), social event is not a relevant thing for CSA "De Nieuwe Ronde," like the farmer said:

"We do not force members to work on the farm. Almost no members actually do that. Also other activities, like volunteering works are almost never done by members,"

Therefore, based on that reality, it can be concluded that there is a less strong tie among members of CSA De Nieuwe Ronde. Hence, since tie strength is positively related to trust, it is also the reason why weak tie can be a barrier for knowledge sharing between consumer-farmer in the CSA.

5.2 The influence of intrinsic rewards on knowledge sharing within FCN

Based on the MRA result, intrinsic rewards have a significant positive relationship on knowledge sharing between consumer-consumer. Davenport and Prusak (1998) support this finding by introducing that primary motivation for sharing knowledge is gaining a reputation from others and deriving enjoyment in helping others. In addition, when sharing knowledge, a consumer can improve self-concept, such as earning respect, recognition, and prestige from other consumers (Hall 2001; Kollock 1999; Constant *et al*., 1994).

However, the result reveals that intrinsic rewards have no significant relationship with knowledge sharing between farmer-consumer and consumer-farmer. The plausible explanation relating to this result is that knowledge sharing is voluntary within the CSA. Therefore, either the farmer or the consumer will have no fear that his contribution for sharing knowledge would make him less valuable and less recognized. Furthermore, strong teamwork and collaboration values between farmer-consumer and consumer-farmer may decrease the need for gaining intrinsic rewards, such as respect and recognition through sharing knowledge (Kankanhalli *et al*., 2005). Moreover, according

to Bregendahl and Flora (2006), consumers in CSA appear to value their relationship with farmer more than they value their relationship with other consumers. The examples of those collaboration values are shared risk and responsibility, transparency, diplomacy, and supporting local food system.

5.3 The influence of communication on knowledge sharing within FCN

According to literature, communication should have a positive correlation with knowledge sharing (Al Alawi *et al*., (2007); Smith and Rupp, (2002); Goh (2002)). However, in this study, communication is not correlated with knowledge sharing among farmer-consumer, consumer-farmer, consumer-consumer within the CSA. A possible explanation could be that there is a lack of social interaction among farmer and the consumers in the CSA. During social interaction in an informal atmosphere which can facilitate face to face communication, a lot of knowledge get generated and shared. Moreover, social interaction makes people more likely to learn and to remember what knowledge is possessed and needed by their colleagues (Connely and Kelloway, 2003). However, in CSA De Nieuwe Ronde, the social activities, such as voluntary work and working together in the garden which can enhance social interaction is not that relevant to the members of CSA. Therefore, it might become a barrier to face-face communication.

In addition, using Computer Media Communication (CMC), such as blog and email can be an obstacle for willingness to share knowledge, especially for tacit knowledge since this type of knowledge does not reside at the conscious level and it is also harder to share rather than explicit knowledge (Polanyi, 1967). Therefore, when trying to share it, a person may face the challenge of not being able to reach a level of concreteness and detail which is needed by other people to understand, in particular through CMC. Hence, although CMC is very useful for allowing people to work without regard for their geographic dispersion, schedules, and time zones, it cannot replace the learning process through face to face interaction when sharing and receiving knowledge (Hinds and Pfeffer, 2003; Kiesler *et al*., 1984).

Moreover, the another plausible explanation regarding the results is that this study might use inadequate measurement item of the communication, according to the value of Cronbach's α. In the study that investigates the effect of communication on knowledge

sharing done in an organization by Gumus (2007), the author uses two independent variables, namely, communication satisfaction and communication styles. Communication satisfaction can be described as socioemotional outcome resulting from communication interactions. Moreover, assessing communication satisfaction can measure strengths and weakness of organizational communication (Gray and Laidlaw, 2004). One of the most comprehensive instrument to measure communication satisfaction is Communication Satisfaction Questionnaire (CSQ) which was developed by Downs and Hazen, (1977). It assesses the items of the direction of knowledge flow, the formal and informal channels of the communication flow, and the forms of communication.

On the other hand, communication style refers to "the way individuals perceive themselves communicating and interacting with others." (Weaver, 2005). Downs *et al*, (1988) categorized six dimensions to measure communication style: social composure, humor to diffuse anxiety and tension, appropriate disclosure, articulation, social experience, and social confirmation. The results in this study might have been different if the measurement items had taken into account both communication style and communication satisfaction.

Chapter 6

Limitation and Conclusion

6.1 Limitations and suggestions for further research

Eventhough this research has offered a new insight into knowledge sharing within an informal organization operating in the agri-food sector, it has some limitations that are needed to tackle in the future research. The first limitation arises from the sample size which is not sufficient to represent the results of regression analysis accurately. The relatively small sample size (43 respondents) is too small to obtain a significant result in the regression analysis, as Hair *et al* (2006) stated that by increasing sample size, the effect is more and more to be statistically significant. Therefore, in the future research, there are some suggestions that can enhance bigger sample size which are explained belows. Therefore, a bigger sample size would be necessary in order to be able to give significant analysis results in the future research. On the other hand, the small sample size in this study is likely caused by irrelevant questions in the questionnaire. It means that some questions are mostly not related to how the respondents work in CSA De Nieuwe Ronde. Therefore, in the future research, it is highly recommended that qualitative study, such as interview and focus group should be conducted before building a questionnaire in order to gain insights regarding knowledge sharing mechanisms and its predictors in CSA and also to strengthen the construct validity of the measures of variables.

The second limitation is that this study only surveyed consumers in one CSA as the unit of analysis. Moreover, this study just focused on the self-harvesting CSA and did not take another type into consideration, for example, box-scheme CSA. Therefore, it maylimit generalizability of this study to overall knowledge sharing mechanisms within FCN. In order to explain the general insight on knowledge sharing within FCN, future research should take a broader range of unit of analysis. Not only other type of CSA but also other types of FCN, such as farmers market and collective purchase group. However, this solution is not feasible for this study due to time constraint.

Additionally, throughout the finding of this study, there have been other several implications made for future research. There may also be other variables that could be

included for further research. Those variables include social tie, communication satisfaction, and communication style. Moreover, examining the relationship between each type of trust, namely, benevolence, ability, and integrity with knowledge sharing can be done in larger sample size.

6.2 Conclusion

This study has researched the effect of trust, intrinsic rewards, and communication on knowledge sharing within FCN, as representative of an informal organization in terms of the agri-food sector. The conceptual framework of this research built from theoretical foundations of knowledge governance and governance mechanism within FCN. The framework identified the factors that can facilitate knowledge sharing within FCN, specifically, trust, intrinsic rewards, and communication. In this research, we use CSA as the unit of analysis since the number of CSA projects has increased and made this type of FCN organization has become the most studied form of direct agreement between producer and consumers. In addition, knowledge sharing within FCN can be categorized into three mechanisms, more precise, knowledge sharing among farmer-consumer, consumer-farmer, and consumer-consumer.

Statistical analysis is conducted to test the hypotheses included factor analysis, reliability test, and multiple regression analysis. The regression analysis is done to examine the correlation between knowledge sharing with trust, intrinsic rewards, and communication among farmer-consumer, consumer-farmer, and consumer-consumer respectively. The major findings reveal that there is a significant positive correlation between trust and knowledge sharing in farmer-consumer mechanism. Contradictory, there is no significant relationship between trust and knowledge sharing in consumer-farmer and consumer-consumer mechanisms. It is suggested that trust can be increased by organizing more social events within CSA De Nieuwe Ronde to build stronger tie strength between those two mechanisms.

Meanwhile, intrinsic rewards have a positive significant correlation with knowledge sharing in consumer-consumer mechanism. On the other hand, there is no significant correlation in two others mechanisms. This result likely due to stronger teamwork and collaboration values between those two mechanisms rather than consumer-consumer

mechanism. Finally, there is no significant correlation between communication and knowledge sharing for all the three mechanisms. The reason for this findings might be caused by inadequate measurement item. To sum up, knowledge sharing between farmer-consumer within FCN is driven by trust. Meanwhile, knowledge sharing between consumer-consumer within FCN is driven by intrinsic rewards.

References :

Ardichvili, A., Maurer, M., Li, W., Wentling, T. and Stuedemann, R. (2006). Cultural influences on knowledge sharing through online communities of practice. *Journal of Knowledge Management*, 10(1), pp.94-107.

Al-Alawi, A., Al-Marzooqi, N. & Mohammed, Y. (2007). Organizational culture and knowledge sharing: critical success factors. *Journal of Knowledge Management*, 11, pp. 22-42.

Alvesson, M. (1995). Organizations as rhetoric: Knowledge-intensive firms and the struggle with ambiguity. *Journal of Management Studies*, 30(6), 997-1015

Andrews, K. M., & Delahaye, B. L. (2000). Influences on knowledge processes in organizationallearning: The psychological filter. *Journal of Management Studies*, 37(6), pp. 2322-2380.

Bartol, M and Srivastava, A. (2002). Encouraging knowledge sharing: therole of organizational reward systems. *Journal of Leadership and Organization Studies* 9(1), pp. 64–76.

Bender, S. and Fish, A. (2000), `The transfer of knowledge and the retention of expertise: the continuingneed for global assignments', *Journal of Knowledge Management*, 4 (2), pp.125-137.

Blake, R.R. and Mouton, J.S. (1985).The Managerial Grid III, Gulf Publishing Company, Houston, TX.

Bock, G. and Kim, Y. (2001). Breaking the Myths of Rewards. *Information Resources Management Journal*, 15(2), pp.14-21.

Bock, G.W., Zmud, R.W., Kim, Y.G. and Lee, J.N. (2005). Behavioural intention formation in knowledge sharing: Examining the roles of extrinsic motivators, social-psychological forces, and organizational climate. *MIS Quarterly*, 29 (1), pp.87-111.

Bregendahl, C.and Flora, C.B.(2006). The Role of Collaborative Community Supported Agriculture: Lessons from Iowa. ames, ia: leopold Center for Sustainable Agriculture. Available at: http://www.sociastate.edu/extension/ncrcrd/CSAReport-2006-LessonsFromIowa.pdf [Accessed 2April 2017].

Brown, J. and Duguid, P. (1991). Organizational Learning and Communities-of-Practice: Toward a Unified View of Working, Learning, and Innovation. *Journal of Organization Science*, 2(1), pp.40-57.

Brown, R. B., & Woodland, M. J. (1999). Managing knowledge wisely: A case study in organizational behavior. *Journal of Applied Management Studies*, 6(2), pp.175-198.

BusinessDictionary. (2016).Communication.[online]. Available at: http://www.businessdictionary.com/definition/communication.html. [Accessed 4 Oct. 2016].

Business Dictionary. (2016).Reward Systems.[online]. Available at: http://www.businessdictionary.com/definition/reward-system.html. [Accessed 17 March 2017].

Cao, Y. and Xiang, Y. (2012). The impact of knowledge governance on knowledge sharing. *Management Decision*, 50(4), pp.591-610.

Cabrera, A., Collins, W. C., & Salgado, J. F. (2006). Determinants of individual engagement in knowledge sharing. *International Journal of Human Resource Management*, 17(2), pp. 245−264.

Casimir, G; Ynk NG and Cheng, Clp. (2012). Using IT to share knowledgeand the TRA. *Journal of Knowledge Management*,16(3), pp.461–479.

Cicia G, Colantuoni F, Del Giudice T, Pascucci S. 2011. Community Supported Agriculture in the Urban Fringe: Empirical Evidence for Project Feasibility in the Metropolitan Area of Naples (Italy*), Int. J. Food System Dynamics*, 2(3), pp. 326-339

Choo, C.W., and Bontis,N. (2002). The strategic management of intellectual capital and organizational knowledge. New York: Oxford University Press.

Cone, C. and Myhre, A. (2000). Community-Supported Agriculture: A Sustainable Alternative to Industrial Agriculture?. *Journal of Human Organization*, 59(2), pp.187-197.

Constant, D., Kiesler, S. and Sproull, L. (1994). What's Mine Is Ours, or Is It? A Study of Attitudes about Information Sharing. *Information Systems Research*, 5(4), pp.400-421.

Connelly, C. and Kelloway, E. (2003), 'Predictors of employees' perceptions of knowledge sharingcultures'', *Leadership & Organization Development Journal*, Vol. 24 No. 5, pp. 294-301.

Constant, D., Sproull, L., & Kiesler, S. (1996). The kindness of strangers: The usefulness of electronic weak ties for technical advice. *Journal of Organization Science*,7(2), pp. 119−135.

Chowdhury, S. (2005). The role of affect- and cognition-based trust in complex knowledge sharing. *Journal of Managerial Issues*, 17(3), pp.310−326.

Cox, Rosie, Holloway, Lewis, Venn, Laura, Dowler, Elizabeth, Hein, Jane Ricketts, Kneafsey, Moya and Tuomainen, Helena. (2008) Common ground?: Motivations for participation in a community-supported agriculture scheme. *Local Environment*,13(3), pp. 203-218. ISSN 1354-9839.

Creswell, J.W., (1994). Research Design: Qualitative & Quantitative Approaches,London: SAGE Publications.

Cushman, Donald P. (1977)The rules perspective as atheoretical basis for the studyof human communication. *Communication Quarterly*, 25, pp. 30-45.

Davenport, T. H., & Prusak, L. (1998).Working knowledge: How organizations manage what theyknow. Boston: Harvard Business School Press.

de Vries, R; den Hooff, Bart; and de Rider, A .(2006). Explaining Knowledge Sharing: The Role of Team Communication Styles, Job Satisfaction, and Performance Beliefs. *Journal of Communication Research*, 33(2), pp.115-135.

De Long, David and Fahey, Liem. (2000). Diagnosing cultural barriers to knowledge management. *Academy of Management Executive*, 12(4), pp. 113-127.

DeVellis, R. F. (1991). Scale Development. Newbury Park, CA: Sage Publications.

Downs, C. W., & Hazen, M. D. (1977). A factor analytic study of communication satisfaction. *The Journal of Business Communication*,14(3), pp. 63-73.

Downs, C.W., Archer, J., McGrath, J. & Stafford, J. (1988). An analysis of communication style instrumentation. *Management Communication Quarterly*, 1(4), pp. 543-571.

Evans, M. (2012). Knowledge Sharing*:* An empirical study of the role of trust and other social cognitive factors in an organizational setting. University of Toronto.

Field, A. P. (2000). Discovering statistics using SPSS for Windows: Advanced techniques for the beginner. London: Sage publications.

Field, A. P. (2009). Discovering statistics using SPSS (and sex and drugs and rock' n' roll) (3rd ed.). London: Sage publications.

Fine, Gary A. 1979 "Smallgroupsandculture creation: The idiocultures of Little League Baseball teams." *American Sociological Review*, 44: 733-74

Foss, N. and Mahoney, J. (2010). Exploring knowledge governance. *International Journal Strategic Change Management*, 2(2/3), pp..93-101.

Foss, N., Husted, K. and Michailova, S. (2010). Governing Knowledge Sharing in Organizations: Levels of Analysis, Governance Mechanisms, and Research Directions. *Journal of Management Studies*, 47(3), pp.455-482.

Grandori, A. (1997). Governance structures, coordination mechanisms and cognitive models. *Journal of Management and Governance*, 1 (1), pp.29-42.

Grandori, A. and Furnari, S. (2008). A Chemistry of Organization: Combinatory Analysis and Design. *Journal of Organization Studies*, 29(3), pp.459-485.

Granovetter, M.S. (1973). The strength of weak ties. *American Journal of Sociology*, 78(6), pp. 1360-1380.

Gray, J., and Laidlaw, H. (2004). Improving the measurement of communication satisfaction. *Management Communication Quarterly*,17(3), pp. 425-448.

Goh, S. (2002), 'Managing effective knowledge transfer: an integrative framework and some practiceimplications',*Journal of Knowledge Management*, 6(1), pp. 23-30.

Goland, C. (2001). Community Supported Agriculture, Food Consumption Pattern, and Member Commitment, 24(1).

Gumus, Murat. (2007). The Effect Of Communication On Knowledge Sharing In Organizations. *Journal of Knowledge Management Practice*, 8 (2).

Hair, Joseph F., Black, William C., Babin, Barry J., Anderson, Rolph E. and Tatham, Ronald L. (2006), Multivariate Data Analysis – 6a edition. Upper Saddle River, NJ: Pearson Prentice Hall.

Hall, H. "Social Exchange for KnowledgeExchange," paper presented at ManagingKnowledge: Conversations and Critiques, University of Leicester Management Centre, April10-11,2001 (available online at http://www.soc.napier.ac.uk/publication/op/getpublication/publicationid/321908. (Accessed 31March 2017).

Heale, R. and Twycross, A. (2015). Validity and reliability in quantitative studies. *Evidence Based Nursing*, 18(3), pp.66-67.

Heejun Park, Vincent Ribière, and William D. Schulte Jr. (2004). Critical attributes of organizational culture that promote knowledgemanagement technology implementation success", *Journal of Knowledge Management*, 8 (3), pp. 106 – 117.

Hendricks, P. (1999). Why share knowledge? The Influence of ICT on the motivation for knowledge sharing. *Journal of Knowledge and Process Management*, 16 (2), pp.91-100.

Herzberg, Frederick. (1987). One More Time:How Do You Motivate Employees?. *Harvard Business Review*. Harvard Business School. [Accessed 21 December 2016].

Hinds, P. and Pfeffer, J. "2003), `Why organizations don't `know what they know': cognitive andmotivational factors affecting the transfer of expertise', in Ackerman, M., Pipek, V. and Wulf, V. "Eds), Beyond Knowledge Management: Sharing Expertise, MITPress, Cambridge, MA.Gamm

Holste, Scott and Fields, Dail. (2009). Trust and Tacit Knowledge Sharing and Use. *Journal of Knowledge Management*, 14(1), pp. 128-140.

Hovland, C. I., Janis, I. L., & Kelley, H. H. (1953). Communication and persuasion. New Haven, CT: Yale University Press.

Huysman, M.H. and de Wit, D. (2002). Knowledge Sharing in Practice. Springer, March 31, Business & Economics. Available on http://books.google.com. Pages displayed by permission of Springer. [Accessed 2 October 2016].

Hyde, Kenneth (2000),Recognising deductive processes in qualitative research, *Qualitative Market Research: AnInternational Journal*, 3(2), pp. 82 – 90.

Ipe, M. (2003). Knowledge Sharing in Organizations: A Conceptual Framework. *Human Resource Development Review*, 2(4), pp.337-359.

Israel BA, Checkoway B, Schulz AJ, Zimmerman MA. (1998). Health education and community empowerment:conceptualizing and measuring perceptions of individual, organizational, andcommunity control.Health Educ. Q.21:149–70.

Israilidis, J., Siachou, E., Cooke, L. and Lock, R. (2015). Individual variables with an impact on knowledge sharing: the critical role of employees ignorance. *Journa lof Knowledge Management*, 19(6), pp.1109-1123.

Jahani, S., Effendi, A. and T. Ramayah (2013). Reward System and Knowledge Sharing Behavior among Iranian Academics: Preliminary Survey Findings. *International Journal of Business and Innovation*, 1 (37), pp.51.

Kaiser, H. F. (1974). An index of factorial simplicity. Pyschometrika, 39, pp. 31-36.

Kankanhalli, Atreyi., Tan, Bernard and Kwok-Kee Wei. (2005). Contributing Knowledge to Electronic Knowledge Repositories: An Empirical Investigation. *Special Issue on Information Technologies and Knowledge Management*, 29 (1), pp. 113-143.

Kiesler, S., Siegel, J. and McGuire, T.W. "1984), Social psychological aspects of computer-mediatedcommunication",*American Psychologist* ,39(100), pp. 1123-1134.

Kollock, P. "The Economies of Online Cooperation: Gifts and Public Goods in Cyberspace," in Communities in Cyberspace, M. Smith and P.Kollock (Eds.), Routledge, NewYork, 1999, pp.220-239

Kumar, R. (2011). Research Methodology. Los Angeles: SAGE.

Levin, D. Z., & Cross, R. (2004). The strength of weak ties you can trust: The mediating role of trust in effective knowledge transfer. *Journal of Management Science*, 50 (11), pp.1477-1490.

Levin, D., Lesser, E., Cross, R. and Abrams, L. (2002), ‘‘Trust and knowledge sharing: a critical combination’’, IBM Institute for knowledge-based organizations white paper.

Levin, D. Z., Whitener, E. M., & Cross, R. (2006). Perceived trustworthiness of knowledge sources: The moderating impact of relationship length. *Journal of Applied Psychology*, 91(5), pp. 1163-1171.

Liebowitz, J. and Beckman, T.(1998). Knowledge Organizations: What Every Manager Should Know,CRC Press, Boca Raton.

Lim, T. (2002). Organizational Culture and Knowledge Management. *Journal of Information & Knowledge Management*, 1(1), pp.57-63.

Lin, H.F. (2007). Effects of extrinsic and intrinsic motivation on employee knowledge sharing intentions. *Journal of Information Science*. published online 15 February 2007.

Lombardi, A. (2013). Beyond Food Community Networks: organizational elements,participation and alternative models of consumption. University of Naples Federico II (Italy).

Marsden, P.V., and Campbell, K.E. (1984). Measuring Tie Strength. *Social Forces*, 63. pp. 482-501.

Markiet, Vincent. (2011). The Future of Community Supported Agriculture farm "De Nieuwe Ronde": A Profile Analysis of the Potential New Consumer. Wageningen University.

Mayer, R. C., & Davis, J. H. (1999). The effect of the performance appraisal system on trust for management: A field quasi-experiment. *Journal of Applied Psychology*, 84(1), pp. 123-136.

Mayer, R. C., Davis, J. H., & Schoorman, F. D. (1995). An integrative model of organizational trust. *The Academy of Management Review*, 20(3), pp.709-734.

McAllister, D. J. (1995). Affect- and cognition-based trust as foundations for interpersonal cooperation in organizations. *Academy of Management Journal*, 38(1), pp. 24−59.

Mc.Fadyen, M.A.,and Cannela, A.A. (2004). Social capital and knowledge creation: Diminishing returns of the number and strength of exchange relationship. *Academy of Management Journa*l, 47(5), pp. 735-746.

Meyer, D., Armstrong-Coben, A. and Batista, M. (2005). How a Community-Based Organization and an Academic Health Center Are Creating an Effective Partnership for Training and Service. *Journal ofAcademic Medicine*, 80(4), pp.327-333.

Mishra, A. K. (1996). In press. Organizational responses to crisis: The centrality of trust. In R. M.Kramer & T. Tyler (Eds.), Trust in organizations. Newbury Park, CA: Sage.

Mohr, J. and Spekman, R. (1994). Characteristics of partnership success: Partnership attributes, communication behavior, and conflict resolution techniques. *Journal of Strategic Management.*15(2), pp.135-152.

Nahapiet, Janine and Ghoshal, Sumantra. (1998). Social Capital, Intellectual Capital, and the Organizational. *The Academic of Management Review*, 23(2), pp. 242-266.

Nonaka, I. (1994). The dynamic theory of organizational knowledge creation. *Journal of Organization Science*,5(1), pp. 14-37.

Nonaka, I., Umemoto, K. and Senoo, D. (1996).From information processing to knowledge creation: a paradigm shift in business management. *Technology in Society*, 18(2), pp. 203-218.

Nonaka, I. (2002). A dynamic theory of organizational knowledge creation. In C. W. Choo & N. Bontis (Eds.), The strategic management of intellectual capital and organizational knowledge. New York: Oxford University Press.

Nooteboom, B. (2007). Social capital, institutions and trust. *Review of Social Economy*, 65(1), pp. 29-53.

Nunnally, J. (1967). Psychometric theory. New York:McGraw-Hill.

Ologbo, Andrew. (2015). The Influence of Knowledge Sharing on Employee Innovation Capabilities. *International Journal of Human Resource Studies*,5(3), pp. 102-110.

Osterloh, M and Frey, B. (2000). Motivation, knowledge transfer and organizational form. *Journal of Organization Science*, 11(5), pp. 538-50.

Pascucci, S (2010). Governance Structure, Perception and Innovation in Credence Food Transactions : The Role of Food Community Network, *Int. Journal Food System Dynamics*, 3,pp. 224-236.

Perez, Jan, Allen, Patricia and Brown, Martha. (2003). Community Supported Agriculture on the Central Coast: The CSA Member Experience. Center for Agroecology and Sustainable Food Systems, UC Santa Cruz.

Polanyi, M. (1967).The Tacit Dimension, Doubleday, New York.

Reilly ‘O Charles. (1989). Corporations, Culture, and Commitment: Motivation and Social Control in Organizations. *California Management Review*, 31 (4),pp. 9-25.

Ruppel, C. P., & Harrington, S. J. (2001). Sharing knowledge through intranets: A study of organizational culture and intranet implementation. IEEE Transactions on Professional Communication, 44(1), pp. 37−52.

Russell, W. and Zepeda, L. (2008). The adaptive consumer: shifting attitudes, behavior change and CSA membership renewal. *Renewable Agriculture and Food Systems*, 23(02), pp. 136-148.

Sahu, P. (2013). Research Methodology: A Guide for Researchers in Agricultural Science, Social Science and Other Related Fields. 1st ed. Delhi: Springer, p.67.

Šajeva, S. (2014). Encouraging Knowledge Sharing among Employees: How Reward Matters. *Procedia - Social and Behavioral Sciences*, 156, pp.130-134.

Sevikul, Pintip. (2014).Organization elements and participants' Entrepreneurship in the Sharing Economy: How Are They Related?:The Case of Communities Supported Agriculture in the Netherlands. Wageningen University.

Smith, E. (2001). The role of tacit and explicit knowledge in the workplace. *Journal of Knowledge Management*, 5(4), pp.311-321.

Smith, A. and Rupp, W. (2002). Communication and loyalty among knowledge workers: a resource ofthe firm theory view'',*Journal of Knowledge Management*, 6(3), pp. 250-61.

Sporleder, Thomas & Peterson, Christopher. (2015). Intellectual capital, learning, and knowledge management in agrifood supply chains. [online] Available at: http://www.wageningenacademic.com/doi/pdf/10.3920/JCNS2003.x031. Accessed 16 March 2017].

Spradley, James P. (1979). The Ethnographic Interview.New York: Holt, Rinehart&Winston.

Stevens JP .(1992). Applied multivariate statistics for the social sciences (2nd edition). Hillsdale, NJ:Erlbaum.

Straub, D; Boudreau, M; Gefen, D. (2004). Validation guidelines for IS positivist research in Communications of the Association for Information Systems,13, pp 380-427.

Sutton, M., (2006). Knowledge citizen's approach to knowledge sharing, rewards and incentive. *South Arfican Journal of Information Management*, 8.

Urgenci. (2013). European Handbook on Community Supported Agriculture Sharing Experiences. [online] Available at: http://www.urgenci.net [Accessed 15 Sep. 2016].

Usoro, A., Sharratt, M., Tsui, E. and Shekhar, S. (2007). Trust as an antecedent to knowledge sharing in virtual communities of practice. *Knowledge Management Research & Practice*, 5(3), pp.199-212.

Van den Hooff, B., & Hendrix, L. (2004).Eagerness and willingness to share: The relevance of different attitudes towards knowledge sharing. Paper presented at the Fifth European Conference on Organizational Knowledge, Learning and Capabilities, Innsbruck, Austria.

Volz, P., Philipp, W., Cressot, N. and parot, J. (2016). Overview of Community Supported Agriculture in Europe. [online] www.urgenci.net. Available at: http://urgenci.net/wp-content/uploads/2016/05/Overview-of-Community-Supported-Agriculture-in-Europe-F.pdf [Accessed 9 Sep. 2016].

Wang, S. and Noe, R. (2010). Knowledge sharing: A review and directions for future research. *Human Resource Management Review*, 20(2), pp.115-131.

Weiss, L. (1999). Collection and connection: The anatomy of knowledge sharing in professional service.*Organization Development Journal*,17(4), pp. 61-72.

Hyde, Kenneth (2000),Recognising deductive processes in qualitative research, *Qualitative Market Research: An International Journal*, 3(2), pp. 82 – 90.

Wells, B., Gradwell, S. and Yoder, R. (1999). Growing food, growing community: Community Supported Agriculture in rural Iowa. *Community Development Journal*, 34(1), pp.38-46.

Whitten, J., Bentley, L. and Dittman, K. (2001),System Analysis and Design Methods, McGraw-Hill,New York, NY.

Weaver, J.B.,III. 2005. Mapping the links between personality and communicator style. Individual Differences Research, 3(1), pp. 59-70.

Yi, J. (2009). A measure of knowledge sharing behavior: scale development and validation. *Journal of Knowledge Management Research & Practice*, 7(1), pp.65-81.

Zenger,T.R. and Lawrence, B.S. (1989). Organizational demography: The differential effects of age and tenure distributions on technical communication. *The Academy of Management Journal*, 32(2), pp. 353-376.

Appendix:

A.1 Questionnaire in Dutch

Introductie:

Welkom bij ons onderzoek naar het delen var ervaringen.

Het doel van dit onderzoek is het bestuderen van het delen van ervaringen in de Community Supported Agriculture (CSA) in Nederland. CSA is een alternatief en lokaal gericht economisch model voor landbouw-en voedsel distributie. Het meest gangbare type van CSA in Nederland is zelfoogst,waarbij de boer de consument op zijn land toestaat om zelf producten te oogsten.

In het bijzonder is dit onderzoek bedoeld om in te te zoomen op de processen van ervaringen delen binnen de CSA, dustussen boer en consument, tussen consument en boer en tussen consumenten onderling.

Het onderzoek neemt niet meer dan vijftien minuten in beslag en uw deelname is volledig vrijwillig. Uw antwoorden zullen strikt vertrouwelijk behandeld worden en gegevens over dit onderzoek zullen alleen voor het doel zelf gebruikt worden.

Dit onderzoek wordt geleid door mevr. Mary Santoso, B.Sc., onder supervisie van Dr. ValentinaMateria en Dr. DomenicoDentoni, professoren bij de Management Studies Group van Wageningen University & Research. Sinds 2011 is ditonderzoeksteam betrokken geweest bij meer dan 50 CSA groepen in Europa, waaronder die van u, met als doel om de dynamiek binnen de organisatie van de CSA te begrijpen alsook het leerproces van haar leden.

Indien u nog vragen heeft omtrent dit onderzoek , of als u commentaar of opmerkingen wilt toevoegen, schroom dan niet om contact op te nemen met de onderzoekers:

Mw. Mary Santoso: 0658996271

Dr. Valentina Materia: 0644501826

Dr. Domenico Dentoni: 0646801736

Hartelijk dank voor uw tijd en ondersteuning. U kunt het onderzoek starten door te klikken op de knop "doorgaan".

1. **ERVARINGEN DELEN**
   Ervaringen delen is het proces waarbij individuele personen ervaringen uit wisselen met elkaar. In dit verband verwijst “ervaringen” naar het combineren van deskundig inzicht, ervaringen, waarden en contextuele informatie. Er zijn drie belangrijke voorwaarden om effectieve uitwisseling hiervan te doen plaatsvinden. Deze voorwaarden zijn: de bereidheid om ervaringen te delen door de gever, bereidheid om ervaringen te gebruiken door de ontvanger, en de mate waarin de ervaringen zinvol is voor de ontvanger. Gebaseerd op uw persoonlijke ervaring als consument, zou u willen aangeven in welke mate u het eens bent met de volgende onderdelen die betrekking hebben op het proces van ervaringen delen tussen boer en consument, consument en boer, en tussen consumenten.

1.1 Ervaringen delen van boer naar consument

- Bereidwilligheid om ervaringen te delen

	volledig mee oneens	mee oneens	noch oneens, noch eens	mee eens	volledig eens
De boer neemt initiatief om mij te voorzien van nuttige ervaringen, bijvoorbeeld het productieproces, seizoensbeschikbaarheid of recepten.	❍	❍	❍	❍	❍
Door het bezoeken van de tuin oogst ik niet alleen groente maar krijg ik ook inzicht in het groeiproces van de gewassen.	❍	❍	❍	❍	❍

- Bereidwilligheid om ervaringen te gebruiken

	volledig mee oneens	mee oneens	noch oneens, noch eens	mee eens	volledig eens
De boer ontvangt en overweegt graag ideeën of suggesties van mij. Bijvoorbeeld over het productieproces, seizoensbeschikbaarheid of recepten.	❍	❍	❍	❍	❍

- Waargenomen toepasbaarheid van nuttige ervaringen

	volledig mee oneens	mee oneens	noch oneens, noch eens	mee eens	volledig eens
De suggesties of ideeën van mij leveren een positieve bijdrage aan de prestaties van de boer in het productieproces en vervolgens de productkwaliteit.	❍	❍	❍	❍	❍

1.2 Ervaringen delen van consument naar boer

- Bereidwilligheid om ervaringen te delen

	volledig mee oneens	mee oneens	noch oneens, noch eens	mee eens	volledig eens
Ik neem initiatief om relevante ervaringen over het productieplan, vrijwilligerswerk, sociale evenementen en dergelijke met de boer te delen.	❍	❍	❍	❍	❍

- Bereidwilligheid om ervaringen te gebruiken

	volledig mee oneens	mee oneens	noch oneens, noch eens	mee eens	volledig eens
Ik wil graag ervaringen van de boer ontvangen en overwegen over zaken als landbouw, voedsel distributie en product voor bereiding zoals recepten.	❍	❍	❍	❍	❍
Wanneer ik de tuin bezoek, sta ik ervoor open om van de boer te leren over productieprocessen.	❍	❍	❍	❍	❍

- Waargenomen toepasbaarheid van nuttige ervaringen

	volledig mee oneens	mee oneens	noch oneens, noch eens	mee eens	volledig eens
De ervaringenen suggesties van de boer kunnen mijn bekwaamheid verbeteren met betrekking tot het bereiden van voedsel, het aanleren van gezondere eetpatronen, het begrijpen van productieprocessen als ook het bewuster worden van landbouw en milieuproblematiek.	❍	❍	❍	❍	❍

1.3 Ervaringen delen van consument naar consument

- Bereidwilligheid om ervaringen te delen

	volledig mee oneens	mee oneens	noch oneens, noch eens	mee eens	volledig eens
Ik neem initiatieven om andere consumenten van nuttige ervaringen te voorzien. Bijvoorbeeld op het gebied van lokale milieu campagnes, eco-vriendelijke producten, recepten en andere zaken die ik belangrijk vind.	❍	❍	❍	❍	❍
Ik deel graag mijn ideeën met andere consumenten gerelateerd aan de CSA.	❍	❍	❍	❍	❍

- Bereidwilligheid om ervaringen te gebruiken

	volledig mee oneens	mee oneens	noch oneens, noch eens	mee eens	volledig eens
Ik ontvang en overweeg graag de ervaringen van andere consumenten.	❍	❍	❍	❍	❍

- Waargenomen toepasbaarheid van nuttige ervaringen

	volledig mee oneens	mee oneens	noch oneens, noch eens	mee eens	volledig eens
De ervaringen die ik kan ontvangen van andere consumenten kunnen mij mogelijk bewuster maken van landbouw en milieuproblematiek.	❍	❍	❍	❍	❍

2. VERTROUWEN

Het belangrijkste verschil tussen CSA en anderekorte-keten bedrijven ligt in de mate van vertrouwen en vrijwillige wederzijdse toewijding, vooral tussen boer en consument zonder tussenkomst van derden, of enige andere vormen van hiërarchie.

Gebaseerd op academische literatuur kan vertrouwen worden onderverdeeld in drie verschillende categorieën: welwillendheid, integriteit, bekwaamheid. Welwillendheid is de mate waarin de persoon die u vertrouwt, iets goeds voor u zal doen. Integriteit refereert aan eerlijkheid en betrouwbaarheid met betrekking tot de persoon die u vertrouwt. Bekwaamheid is de mate van competentie die de persoon die u vertrouwt, bezit. Gebaseerd op uw persoonlijke ervaringen als consument, wilt u aangeven in welke mate u het eens bent met de volgende onderdelen over vertrouwen tussen boer en consument, consument en boer, en tussen consumenten.

2.1 Vertrouwen van boer naar consument

- Welwillendheid

	volledig mee oneens	mee oneens	noch oneens, noch eens	mee eens	volledig eens
De boer vertrouwt dat ik zorg voor de tuin, bijvoorbeeld door onkruid te wieden, de tuin op te ruimen of andere taken.	❍	❍	❍	❍	❍
De boer vertrouwt erop dat ik bereid ben om vrijwilligerswerk te doen zoals het werven van nieuwe leden.	❍	❍	❍	❍	❍
De boer vertrouwt erop dat ik mij inzet voor de CSA, en dat ik volledig op de hoogte ben van de bestaande risico's.	❍	❍	❍	❍	❍

- Bekwaamheid

	volledig mee oneens	mee oneens	noch oneens, noch eens	mee eens	volledig eens
De boer vertrouwt erop dat de consument in staat is om te helpen bij werk op het land, het rekruteren van nieuwe leden, en dergelijke, wanneer dat gevraagd wordt.	❍	❍	❍	❍	❍

- Integriteit

	volledig mee oneens	mee oneens	noch oneens, noch eens	mee eens	volledig eens
De boer vertrouwt erop dat ik het abonnements geld op tijd betaal.	❍	❍	❍	❍	❍

2.2 Vertrouwen van consument naar boer

- Welwillendheid

	volledig mee oneens (1)	mee oneens (2)	noch oneens, noch eens (3)	mee eens (4)	volledig eens (5)
Ik vertrouw erop dat de boer geen chemicaliën (pesticiden) gebruikt en dat hij zorg draagt voor zijn land en het ecosysteem.	❍	❍	❍	❍	❍
Ik vertrouw erop dat het inkomen dat de boer ontvangt voor zijn inspanningen in verhouding is tot de geleverde prestatie.	❍	❍	❍	❍	❍

- Bekwaamheid

	volledig mee oneens (1)	mee oneens (2)	noch oneens, noch eens (3)	mee eens (4)	volledig eens (5)
Ik vertrouw erop dat de boer de vaardigheid heeft om mij te informeren en te adviseren overhet productieproces, het productgebruik (recepten), en seizoensbeschikbaarheid.	❍	❍	❍	❍	❍
Ik vertrouw erop dat de boer zijn werk professioneel en met toewijding uitvoert.	❍	❍	❍	❍	❍

- Integriteit

	volledig mee oneens	mee oneens	noch oneens, noch eens	mee eens	volledig eens
Ik vertrouw erop dat de boer altijd groenten van goede kwaliteit zal aabieden geteeld op basis van duurzame landbouw.	❍	❍	❍	❍	❍
Ik vertrouw erop dat er altijd transparantie van de boer aangaande CSA is. Bijvoorbeeld: financiële rapportage en nieuws updates over de conditie van de tuin.	❍	❍	❍	❍	❍
Gebaseerd op mijn ervaringen met de boer ben ik bereid om mijn lidmaatschap van de CSA de verlengen.	❍	❍	❍	❍	❍

2.3 Vertrouwen van consument naar consument

- Bekwaamheid

	volledig mee oneens	mee oneens	noch oneens, noch eens	mee eens	volledig eens
Ik vertrouw erop dat ook de andere consumenten, de boer zullen ondersteunen op het land, wanneer dit gevraagd wordt.	❍	❍	❍	❍	❍

- Integriteit

	volledig mee oneens	mee oneens	noch oneens, noch eens	mee eens	volledig eens
Ik vertouw erop dat iedereen datgene oogst dat ze nodig hebben en rekening houden met hun medeleden.	❍	❍	❍	❍	❍

3. INTRINSIEKE BELONING

Intrinsieke beloning betreft een niet-geldelijke uitbetaling. Het kan worden gedefinieerd als het plezier of de voldoening die u ervaart bij het delen van ervaringen. Gebaseerd op uw ervaringen als consument, geef aan in hoeverre u het eens bent met onderstaande beweringen over uw tevredenheid met betrekking tot de ervaringen die is gedeeld tussen u en de boer, en de andere consumenten.

3.1 Intrinsieke beloning van boer naar consument

	volledig mee oneens	mee oneens	noch oneens, noch eens	mee eens	volledig eens
Ik voel mij nauwer verwant met de boer wanneer ik ervaringen met hem deel.	❍	❍	❍	❍	❍
Ik ervaar voldoening wanneer ik ervaringen deel met de boer.	❍	❍	❍	❍	❍
Ik voel me nuttig wanneer ik ervaringen kan delen met de boer.	❍	❍	❍	❍	❍
Ik vind het leuk om de boer te helpen door ervaringen met hem te delen.	❍	❍	❍	❍	❍

3.2Intrinsieke beloning van consument naar boer

	volledig mee oneens	mee oneens	noch oneens, noch eens	mee eens	volledig eens
Ik denk dat de boer zich nauwe met mij verwant voelt wanneer hij ervaringen met mij deelt.	❍	❍	❍	❍	❍
Ik denk dat de boer meer voldoening ervaart wanneer hij ervaringen met mij deelt.	❍	❍	❍	❍	❍
Ik denk dat de boer het als zinvol ervaart wanneer hij ervaringen met mij deelt.	❍	❍	❍	❍	❍
Ik denk dat de boer geniet er van om mij te helpen door ervaringen te delen en mij advieste geven.	❍	❍	❍	❍	❍

3.3 Intrinsieke beloning van consument naar consument

	volledig mee oneens	mee oneens	noch oneens, noch eens	mee eens	volledig eens
Ik voel mij nauwer verwant met de andere consumenten wanneer ik ervaringen deel met hen.	❍	❍	❍	❍	❍
Ik ervaar voldoening wanneer ik ervaringen deel met andere consumenten.	❍	❍	❍	❍	❍
Ik ervaar het als zinvol wanneer ik ervaringen deel met andere consumenten.	❍	❍	❍	❍	❍
Ik geniet ervan om andere consumenten te helpen door ervaringen met hen te delen.	❍	❍	❍	❍	❍

4. COMMUNICATIE

Communicatie tussen de boer en consument en tussen consumenten onderling in CSA is relevant. Gebaseerd op je persoonlijke ervaring als consument, geef jouw score aan op de volgende onderdelen die gaan over de communicatie tussen boer en consument, consument en boer, en tussen consumenten.

4.1 Communicatie van boer naar consument

	volledig mee oneens	mee oneens	noch oneens,noch eens	mee eens	volledig eens
De boer heeft veel face-to-face interactie met mij, bijvoorbeeld tijdens sociale evenementen, boerderij bezoeken of vergaderingen.	❍	❍	❍	❍	❍
De boer gebruikt verschillende middelen en technologieën om communicatie met mij te faciliteren. Bijvoorbeeld: email, blog en social media.	❍	❍	❍	❍	❍
Ik denk dat de boer mij volledig begrijpt wanneer ik met hem praat.	❍	❍	❍	❍	❍

4.2 Communicatie van consument naar boer

	volledig mee oneens	mee oneens	noch oneens, noch eens	mee eens	volledig eens
Ik heb veel face-to-face interactie met de boer gedurende sociale evenementen. Bijvoorbeeld tijdens boerderij bezoek en vergaderingen.	❍	❍	❍	❍	❍
Ik gebruik verschillende middelen en technologieën om communicatie met de boer te faciliteren. Bijvoorbeeld: email, blog en social media.	❍	❍	❍	❍	❍
Ik denk dat ik de boer volledig begrijp wanneer hij praat.	❍	❍	❍	❍	❍

4.3 Communicatie van consument naar consument

	volledig mee oneens	mee oneens	noch oneens, noch eens	mee eens	volledig eens
Ik heb veel face to face interactie met andere consumenten gedurende sociale evenementen. Bijvoorbeeld tijdens boerderij bezoek en vergaderingen.	❍	❍	❍	❍	❍
Ik gebruik verschillende middelen en technologieën om communicatie met andere consument te faciliteren. Bijvoorbeeld: email, blog en social media.	❍	❍	❍	❍	❍
Ik denk dat ik de andere consumenten volledig begrijp wanneer zij praten.	❍	❍	❍	❍	❍

5. ALGEMEEN

- Wat is uw geslacht?
  - ❍ Man
  - ❍ Vrouw

- What is uw leeftijd?
  - ❍ 17 of jonger
  - ❍ 18-20
  - ❍ 21-29
  - ❍ 30-39
  - ❍ 40-49
  - ❍ 50-59
  - ❍ 60 of ouder

- Hoeveel jaren bent u al deelnemer van deze CSA?
  - ❍ 1 jaar of korter
  - ❍ 2-4 jaren
  - ❍ 5 jaren of langer

- Wat is uw hoogst genoten opleiding?
  - ❍ Basisonderwijs
  - ❍ Langer beroepsonderwijs (LBO/ MAVO/VMBO)
  - ❍ Middelbaar beroepsonderwijs (MBO/MEAO)
  - ❍ Hoger voortgezet onderwijs (Havo, VWO)
  - ❍ Hoger beroepsonderwijs (HBO, HEAO)
  - ❍ Wetenschappelijk onderwijs (WO)

- Welk van de volgende categorieën beschrijft het best uw arbeidsstatus?
  - ❍ Fulltime werkend
  - ❍ Parttime werkend
  - ❍ Niet werkend, op zoek naar werk
  - ❍ Niet werkend, niet op zoek naar werk
  - ❍ Student
  - ❍ Gepensioneerd
  - ❍ Lichamelijk beperkt, niet in staat om te werken

- Mocht u erin geïnteresseerd zijn om verdere informatie te ontvangen over deze projecten, dan kunt u het contactformulier invullen

  Naam :
  Emailadres :
  Telefoonnummer :

A.2 : Translation of Questionnaire (In English)

Introduction:

Welcome to the knowledge sharing survey

The intent of this survey is to study knowledge sharing within Community Supported Agriculture (CSA) in the Netherlands. CSA is an alternative, locally based economic model of agriculture and food distribution. Self harvesting is the most common type of CSA in the Netherlands which consumers pay a membership fee to harvest periodically the fresh seasonal products the farmer cultivates on his land.

This survey zooms into the factors that facilitate the knowledge sharing process within the CSA you belong to. You will be asked your personal experience as a consumer in your CSA and questions about your relation with the farmer and the other consumers.

The survey will take 15 minutes of your time and your participation is entirely anonymous and voluntary. Data from this research will be reported only in aggregate form and made available once the research is finished.

This research is led by Ms. Mary Santoso, Bsc. under the supervision of Dr. Valentina Materia and Dr. Domenico Dentoni, professors at the Management Studies Group of Wageningen University & Research. Since 2011, the research team has engaged with more than 50 CSA groups in Europe, including yours, to understand the dynamics linking the organization of the CSA and the learning process of their members.

If you have any questions regarding this survey, or if you would like to add your comments or remarks, please do not hesitate to contact the researchers:

Ms. Mary Santoso: 0658996271

Dr. Valentina Materia: 0644501826

Dr. Domenico Dentoni: 0646801736

Thank you for your time and support. Please start the survey by clicking on the Continue button below.

1. Knowledge Sharing

Knowledge sharing is the process where individuals exchange knowledge with each other. In this context, knowledge refers to the mixing of expert insight, experiences, values and contextual information. There are three important conditions for effective knowledge sharing to take place. These conditions involve the **willingness to share knowledge** from the source, **willingness to use knowledge** from the receiver, and **usefulness of knowledge** for the receiver.

Based on your personal experience as a consumer, please indicate the level of your agreement on the following items about the knowledge sharing process between farmer and consumer, consumer and farmer, and between consumers

1.1 Knowledge sharing from farmer to consumer

- Willingness to share knowledge
  1. The farmer takes the initiative to provide me with useful knowledge, for example on production process, seasonal availability, or recipes.
  2. By visiting the garden, I harvest not only vegetables but I also get insight in the growing process of the crops.

- Willingness to use knowledge
  1. The farmer receives and considers any ideas or suggestions from me, for example on production process, seasonal availability, or recipes.

- Perceived usefulness of knowledge
  1. My suggestions or ideas give a positive contribution to increase farmer's performance on the production process and subsequent product quality.

1.2 Knowledge sharing from consumer to farmer

- Willingness to share knowledge
  1. I take the initiative to provide the farmer with useful knowledge, for example on the production plan, voluntary works, social events, or others.

- Willingness to use knowledge
  1. I receive and consider any knowledge from the farmer related to how agriculture works, food distribution, and product preparation, for example recipes or others.
  2. When I visit the garden, I welcome the opportunity tolearn from the farmer about production processes.

- Perceived usefulness of knowledge
  1. The knowledge and suggestions from thefarmer canincrease my ability in preparing food, adopting healthier eating habits, understanding the production processes, and becoming more aware of agricultural and environmental issues.

1.3 Knowledge sharing from consumer to consumer

- Willingness to share knowledge
  1. I take the initiatives to provide other consumers with useful knowledge, for example on local environmental campaigns or events, eco-friendly products, recipes, or other things that we value.
  2. I share any ideas with other consumers related to the CSA as a whole.

- Willingness to use knowledge
  1. I receive and consider the knowledge from other consumers.

- Perceived usefulness of knowledge
  1. The knowledge that I could receive from other consumers could probably make me more aware of agricultural and environmental issues

2. Trust

The main difference between CSA and conventional direct-marketing schemes lies in the level of trust and voluntary mutual commitment, especially between farmer to consumer and the other way arround with no intermediaries or hierarchy.

Based on academic literature, trust can be classified into three different classes: benevolence, integrity, ability. Benevolence is the extent to which the person you trust will do something good from you. Integrity refers to the honesty and reliability of the person you trust. Ability is the level of competence that the person you trust has. Based on your personal experience as a consumer, please indicate the level of your agreement on the following items about trust between farmer and consumer, consumer and farmer, and between consumers.

2.1 Trust from farmer to consumer

- Benevolence
  1. The farmer trusts that I take care of the garden, for example, by removing weeds, cleaning, or through other tasks.
  2. The farmer trusts that when asked, I am willing to do voluntary works, such as helping with the field work, recruiting members, or others.
  3. The farmer trusts my commitment to the CSA and that I fully understand the risks involved.

- Ability
  1. The farmer trusts that when asked, the consumers are able to help with the field work, recruiting members, or others.

- Integrity
  1. The farmer trusts that I always pay the subscription fee on time.

2.2 Trust from consumer to farmer

- Benevolence
  1. I trust that the farmer does not use chemical (pesticide) and takes care of his land and the ecosystem
  2. I trust that the income (subscription fee) for the farmer is in proportion to the work he delivers.

- Ability
  1. I trust that the farmer is able to provide me with information on the production process, availability of products, and recipes.
  2. I trust that the farmer approaches his or her job with professionalism and dedication.

- Integrity
  1. I trust that the farmer always offers good quality vegetables from sustainable agricultural practices.
  2. I trust that there is always a transparency from the farmer about CSA as a whole. For example, sharing financial report and update news about garden condition.

3. Based on how I see the farmer, I am willing to renew my membership with the CSA.

2.3Trust from consumer to consumer

- Ability

1. I trust that other consumers are as able as me, when asked, to support the farmer in field works.

- Integrity

1. I trust that everyone harvest what they need and take into account the other members.

3. Intrinsic rewards

Intrinsic rewards refer to non-monetary reward. It can be defined as the pleasure or satisfaction gained from knowledge sharing. Based on your experience as consumer, please indicate the level of your agreement on the following items about the satisfaction gained through the knowledge sharing process with the farmer and with the other consumers.

3.1Intrinsic rewards from farmer to consumer

1. I feel closer to the farmer when I share knowledge with him.
2. I feel satisfied when sharing knowledge with the farmer.
3. I feel useful when sharing knowledge with the farmer.
4. I enjoy helping the farmer by sharing knowledge with him.

3.2Intrinsic rewards from consumer to farmer

1. I perceive that the farmer feels closer to me when sharing knowledge with me.
2. I perceive that the farmer feels satisfied when he shares knowledge with me
3. I perceive that the farmer feels useful when he shares knowledge with me
4. I perceive that the farmer enjoys help me by sharing knowledge and giving advices.

3.3 Intrinsic rewards from consumer to consumer

1. I feel closer to other consumers when I share knowledge with them.
2. I feel satisfied when I share knowledge with other consumers.
3. I feel useful when I share knowledge with other consumers.
4. I enjoy help other consumers by sharing knowledge with them.

4. Communication

Communication between farmer and consumer and among consumers in CSA is relevant. Based on your personal experience as a consumer,indicate the level of your agreement on the following items about communication.

4.1 Farmer to consumer

1. The farmer often interacts with me face-to-face, for example, during social events, farm visits, regular meetings, or others.

2. The farmer uses various tools and technologies to facilitate communication withme, for example, email, blog, social media, or others.
3. When I talk, I perceive that the farmer fully understands what I mean.

4.2 Consumer to farmer

1. I often interact with the farmer face-to-face, for example, during social events, farm visits, regular meetings, or others.
2. I use various tools and technologies to facilitate communication with the farmer, for example,email, blog, social media, or others.
3. When the farmer talks, I fully understand what he means.

4.3 Consumer to consumer

1. I often interact with other consumers face-to-face, for example, during social events, farm visits, regular meetings, or others.
2. I use various tools and technologies to facilitate communication with other consumers, for example, email, blog,social media, or others.
3. When other consumers talk, I fully understand completely.

5. GENERAL INFORMATION

- What is your gender?
  - ❍ Male
  - ❍ Female

- What is your age?
  - ❍ 17 or younger
  - ❍ 18-20
  - ❍ 21-29
  - ❍ 30-39
  - ❍ 40-49
  - ❍ 50-59
  - ❍ 60 or older

- How long have you been participated in this CSA?
  - ❍ 1 year or shorter
  - ❍ 2-4 years
  - ❍ 5 years of longer

- What is your highest degree of education?
  - ❍ Primary education
  - ❍ Lower general multiplied education
  - ❍ Middle-level applied education
  - ❍ Higher general continued education
  - ❍ Higher professional education
  - ❍ Scientific education

- Which of the following categories best describes your employment status??
  - ❍ Fulltime worker
  - ❍ Parttime worker
  - ❍ Not work, looking for work
  - ❍ Not work, not looking for work
  - ❍ Student
  - ❍ Retired
  - ❍ Disabled, not able to work

If you are interested in receiving further information about this project, please fill in the contact information:
Name:
Email address:
Telephone number:

A.3: Normality Histogram and Q-Q Plot for Variables in Regression Analysis