The Role of Knowledge Management and Knowledge Transfer in an Innovation Supporting Firm.

Case Study: Uminova Innovation AB

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Abstract

Uminova Innovation AB is an organization that helps entrepreneurs to develop and support a business idea and build growing company. The company also provides important knowledge, network and business coach which helps an entrepreneur to think bigger with free of charge (Uminovainnovation, 2013). Uminova Innovation AB also contributes commercialization of business ideas. The company offers structured process, network and creative setting. It focuses on business ideas from students, employees and researchers at Umeå University and hospital in general. Uminova Innovation creates inspiring environment which is comfortable for working process by offering full infrastructure; from conference room to fully equipped office. At the same time, they also work to develop multi-aspects in the areas of leadership, book-keeping, financing, business development, communication, sales and intellectual property.

Knowledge management made a considerable development over the last 40 years. During 1990’s knowledge management was considered as one of the critical part of service provision. In the current knowledge based economy, competitive advantage and organizational performance are highly influenced by the human capital which depends on the knowledge of the manual labor. The concept became a source of competitive advantage in the last few decades in many organizations.

This thesis investigates the role of knowledge management and knowledge transfer in an innovation supporting firm setting. It specifically deals how the interpersonal knowledge sharing perceived by the actors(employees) involved in an innovation supportive firm and how the knowledge transfer process function in the firm. The thesis aspires to contribute its role on interpersonal knowledge sharing/transfer process in innovation supporting firm as there is a limitation of study in that specific area. The purpose of the study is to explore the mechanism of knowledge sharing (transfer) in an innovation supporting firm. The study follows qualitative approach; case studies are applied by using semi-structured data collection mechanism. Furthermore, purposive sampling is used to select the five respondents for the empirical chapter. The theoretical part of the thesis is written in the way to increase the understanding of the research area and to answer the research question by examining various concepts which is related to the study. The analysis part is made incompatible with the theoretical parts which were; knowledge, knowledge management, knowledge transfer, knowledge sharing, knowledge management and innovation supporting firm and communication

The finding of the thesis shows Uminova Innovation AB has given emphasize on the interpersonal employees communication. Interpersonal communication has been characterized by open, outgoing, very informal and good climate. The main channel of communication identified in the study is: internal meetings, weekly meetings, dialogues, e-mail, conference, telephone, business coaching and intranet document save system. A similar finding shows that knowledge transfer process conducted 60% by informal and 40% formally. This study has found that generally communication, personal knowledge (tacit), socialization, Trust & culture, organizational structure and motivational factors are the factors that the study highlights would influence interpersonal knowledge sharing/ transfer process in innovation supporting firm.

Key Words: Knowledge, Knowledge Transfer, Knowledge Sharing, Communication, Knowledge Management, Interpersonal knowledge sharing, Innovation supporting firm, Tacit knowledge, Explicit knowledge, Uminova Innovation AB.
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1. Introduction

This section begins by the short introduction of the background study of selected theories that supports the up-coming chapters which also can also be a stepping stone to the problem background that follows in the next section. Besides that, we try to introduce the research gap which is the main foundation of this study. Finally, it incorporates the problem, purpose, contribution of the study and definition of key terms.

1.2 Background Study

In the current global based economy, organizational performances are highly influenced by the human capital which is dependent on knowledge (Mciver et al., 2013, p. 597). An ability to rapidly create and effectively manage knowledge is critical to organizational survival. This shift changes the nature of the work done in many aspects. It has been highlighted that knowledge is related with individuals of an organizations and those individuals are the main factors for the transfer of knowledge among innovation supporting firm (Arling & Chun, 2011, p. 231). Most of the management studies considered knowledge are fast becoming the basic instrument of competitive advantage which are highly influenced by interpersonal interaction of actors (Lin, 2006, p. 40). The study of Wah (1999, P. 20) suggest that knowledge that can be shared by actors/employees involved in a firm should be managed in an effective way for a better organizational performance. According to Madarac, Galic & Guzoviski, (2013, p. 580), knowledge management is defined as a discipline or practice which involves the interaction of people, process and technology. The term is also described by Beckman, (1997, p. 1) as a formalization of approach to experience, knowledge and expertise which opens new possibilities, enables superior performance, encourages innovation and increases the value of users

Knowledge management is a set of management activities aimed at influencing knowledge creation and integration which includes processing and sharing knowledge. It has also emerged as significantly influential component that shapes the work environment (Mciver, Hall, Ramachandran, 2013, p. 597). The concept has developed considerably over the last 40 years. Additionally, during 1990’s it was considered as one of the critical part of service provision Stewart & Waddell, (2008, p. 987). Wiig & Jooste (2003, cited in Mciver et al., 2013, p. 597) discussed the realization and understanding of how work has been organized, managed and integrated to manage knowledge management. Moreover it asserts the strategic importance of knowledge management on improving productivity, increasing agility and maximizing intellectual assets. Most of the study in the area of knowledge management mainly focuses on the importance of managing knowledge for better effectiveness of firms.

Knowledge management of firms can determine its employee communication and firm’s economy in transitional economies (Kiessling & Sund, 2009, p. 120). This knowledge-based view focuses on the values of firm’s intangible resource and recommends that the success depends on the capacity of integration of the different individual’s knowledge and across the functional unit of the organizations. According to Yang, (2012, p. 185) a firm’s knowledge management capabilities determine its product development, competitiveness and employees communication inside innovation supporting firm. Carneiro, (2000, p. 87) also highlights the interdependence of innovation supporting firms and knowledge management. Knowledge management leads managers to anticipate problems, experiment and deliver solution to a firm which requires support. In addition, it helps managers to evaluate, analyze environmental scenarios in the dynamic working environment.
Orlikowski (2002, cited in Mciver et al., 2013, p. 597), highlights the importance of tacit knowledge. It is a form of knowledge that is inseparable from action because it is constituted through doing. Tacit knowledge is a process of knowing in action that is difficult to communicate to others. Other arguments that consolidated the same theory was highlighted by Polayini (1958, cited in Mciver et al., 2013, p. 597), which described that it is difficult to capture tacit knowledge because it is hard to formalize and visible. Similarly, tacit knowledge is difficult to share/transfer with others due to the fact that it is highly contextual and dependent on a firm’s specific culture. In order to create high tacit knowledge, high knowledge transfer mechanisms should be applied to create information richness which could be supported by high training, seminars and socialization among the employees (Chua, 2004, p. 90).

A similar theory of knowledge management that can be raised side-by-side with tacitness is learnability. It is a practice consists of type and amount of effort, study, accumulated comprehension and expertise required to understand the know-how and information involved in the work activities. In a general sense, learnability can be expressed as the characteristics of knowledge involved in the work process (Mciver et al., 2013, p. 598). According to Garriga, Krogh & Spaeth, (2013, p. 1134), long time experience of knowledge which is based on learnability is very important to a firm’s ability to support innovation. This search of knowledge can be gained by sharing the knowledge of actors (employees) among each other as argued by Reid (2003, p. 43).

Knowledge sharing is the result of informal and formal communication by which the formal could be delivered by different schedule meetings and face-to-face interaction. Whereas, the informal mechanism of sharing knowledge can be performed through the interaction of employees outside the work environment (Lawson, Petersen, Causins & Handfield, 2009, p. 158). The process of socialization plays an important role in facilitating knowledge transfer and information across various organizations. By creating common values, understanding and shared language, it could be possible to facilitate the transfer of both codified and tacit knowledge among employees. In addition, it has a great role when it comes to written communication by facilitating incentives to build interpersonal trust and knowledge exchange. More recently, literatures has emerged that offers similar findings about codification that something related with capturing knowledge which occurred by socialization, externalization and combination of all. In the study of Chai & Nebus, (2012, p. 50), personalization is related with knowledge sharing/transfer which results by the combination of socialization and internalization of actors/employees inside the firm.

1.3 Problem Background

Previous research suggests that knowledge sharing/transfer is not an easy task. Historically knowledge has been shared from person-to-person particularly in complex organizations rather than by codification strategy (Bystrom, 2002, p. 158). Recently, some researchers have studied the factors that affect the process of knowledge sharing/transfer among firms. The outcomes of the study highlighted that the factors that determine knowledge sharing/transfer is dependent on the actors of the firm which makes the process unpredictable (Smith, 2011, p. 312). Though many organizations implemented knowledge management system (KMS), it has been discovered that employees do not use them. In most cases, employees avoid the knowledge management system and continue to share knowledge interpersonally. Despite, personalization knowledge transfer is affected by different other factors which can delay the process of sharing/ transferring knowledge inside the firm (Wasko & Faraj, 2005, p. 35). Key problems that are highlighted includes; lack of positive attitude around knowledge sharing, lack of creating effective process for knowledge process, personal and institutional factor are
some of them (Disterer, 2001, p. 6). Research has consistently shown that personalization knowledge transfer is highly dependent on the process of interpersonal interaction which encourages conducting a focus in the actors/employees involved in the firm (Lin, 2006, p. 34). The organizations that adopt high knowledge transfer have been researched more effective than counter parts that adopt less knowledge transfer. Knowledge transfer plays a significant role as the firm joins the global market in order to capitalize on different labor costs, expertise, and access to world market. The other trend that makes knowledge transfer very important is during the increased use of strategic alliance and joint venture business. Further study that supports the above argument noted by Malter, Jiang, Shu & Zhang, (2010, p. 74) mentioned that the internalization of employees skills will improve the firm’s ability to support innovations and to increase their knowledge sharing process. It has been suggested that in most cases firms use similar system to manage knowledge sharing and knowledge transfer since the concepts are highly interdependent in each other (Disterer, 2001, p. 7).

The two main ways of managing knowledge sharing within an organization which are mentioned in the previous studies are codification and personalization strategy (Hansen & Oetinger, 1999, p. 106). In the codification approach, organizations code the knowledge and store it in the knowledge management system. This approach enables access to knowledge by a large number of people and is considered as an efficient approach when knowledge is static. This approach is vital for organizations whose strategic focus is standardized and knowledge sharing through documents. Regarding the personalization approach, organizations establish a connection to those who have knowledge, this approach is very important for organization in which the strategic orientation is expertise. Arling & Chun, (2011, p. 231), claim that the different variety of individuals and their motivational level makes knowledge transfer difficult. Consequently, it costs firms a large amount of money to train and communicate their employees. In addition, the difficulty of sharing/transferring interpersonal knowledge makes knowledge sharing/transfer challenging in many firms (Reid, 2003, p. 7).

It has been argued by Disterer, (2001, P. 7), that the nature of knowledge sharing and individual’s social network influence interpersonal knowledge sharing process. Social network are key factors influencing knowledge-sharing practices in most organization. Another angle of research made by Lin (2006, p. 34), argued that personalization based knowledge transfer can be partly affected by cultural traditions which tend to discourage knowledge transfer in innovation supporting firms. Besides that, individual barriers like loss of power, uncertainty, lack of motivation, social problems (lack of legitimate language), bureaucracy and hierarchy are some of the factors that deter personalization based knowledge transfer/sharing process (Disterer , 2001, p. 2). It also highlighted by Nonaka (1994, p. 14) that the role of personalization knowledge transfer would be interdepeninnovation supporting firmdence on other personal and organizational factors like motivation and reward system (Swart and Kinnie, 2003, p. 74).

Young firms always need the support of other firms to boost their job creation, improve labor capital market and enhance their creativity (Wah, 1999, p. 20). Innovation supporting firms will foster economic recovery to those firms that suffers from lack of knowledge and expertise. Innovation supporting firm are those firms that nurture and support new business ideas in order to encourage entrepreneurs (Hayderbreck, Klofsten & Maier, 2002, P. 2). Innovation supportive firms could render a conceptual or infrastructural support for entrepreneurs on how to introduce the business idea in-to the market. The dynamic nature of a market makes the innovation supporting process challenging and difficult to forecast in the future (Kanten, 1985, p. 5). As highlighted by Kanten (1985, p. 47), innovation supporting firm point four different characteristics that account for the special characteristics of
management challenges: uncertainty, knowledge-intensively, competition and cross-boundary. Similarly, as argued by Hayderbreck et al., (2002, p. 1), newly established technology based firms are promoters of future economic growth. Therefore, it is very important to satisfy their needs by different innovation supporting mechanism both in type of service and quality of delivery. It has been suggested that the role of innovation supporting firm has a positive relationship with knowledge sharing/transfer process Kanten (1985, p. 90).

As demonstrated above, knowledge sharing and knowledge transfer are very similar and interdependent concepts (Swart & Kinnie, 2003, p. 65). In the argument of Abrams, Cross, lesser & Levin, (2003, p. 64) communication among the actors involved in an organization is very important for a better effectiveness of the results. In addition, informal communication of actors inside innovation supporting firms are the primary means by which employees find information, solve complex problems and shared their knowledge to others (Abram et al.,2003, p. 64). In the similar argument of (Reid, 2004, p.43), personalization knowledge transfer includes the social interaction of culture, exchange of employees knowledge, experience and skills throughout the whole organization. The study clearly highlights the role of personalization knowledge transfer could be different from organization to organization due to the disparity of personalization knowledge among employees. In the study of Lin (2006, p. 30), the effects of personalization knowledge transfer inside innovation supporting firms is unknown by the fact that the service of the firms are different managerial and economic spectrum. Having said that, there is no study exist that explores the role of personalization/interpersonal knowledge sharing/transfer in innovation supporting firm (Brown et al., 2013, p. 2023). Where this study found out as a research gap and aspires to come up with a remedy. We therefore, want to increase knowledge on the process of interpersonal knowledge sharing/transfer process in innovation supporting firm.

1.4 Purpose
The main aim of this study is to explore the mechanisms of knowledge transfer (sharing) in an innovation supporting firm. Specifically, it increases knowledge about interpersonal knowledge sharing/transfer process in an innovation supporting firm.

1.5 Research questions
The previous studies on the field of personalization/interpersonal knowledge transfer focus on the factors that affects the process (Lin, 2006, p.38). Others research on the same area turned out to show that personalization knowledge transfer could differ among different firms (Reide, 2004, p.48). As it is clearly indicated in the problem background, there is no study exist that explores the role of personalization knowledge sharing/transfer in innovation supporting firm (Brown et al., 2013, p. 2023). Moreover, it is also supported by Swart & Kinnie, (2003, p. 65), the effects of personalization/inter-personal knowledge sharing process in innovation firm is unknown. We, therefore design our research question by linking the arguments of Kinnie (2004) and Brown, et al., (2013) as follows:

This can lead us to the following two research questions:

A) How is the interpersonal knowledge sharing process perceived by the actors involved in an innovation supporting firm?
B) How does the knowledge transfer process function inside an innovation supporting firm?

The first question deals with how does the interpersonal/person-to-person knowledge sharing process operate in the innovation supporting firm. It tries to discover the mechanisms and ways of communication to share knowledge and how it is perceived by the actors (employees) of the organization. Whereas, the second research question more concerned about how the over-all knowledge transfer operates and explores the mechanism that deliver the knowledge sharing process.

1.6 Contribution of the study
This research paper contributes a significant role on theoretical and practical aspects. First and foremost, it uplifts the existing theoretical literatures and fills the research gap by assessing the role of interpersonal knowledge sharing in innovation supporting firms. The study also facilitates as spring ball for further research in the area by providing as source information to other researchers and student regarding personalization/interpersonal knowledge sharing process. Moreover, innovation supporting firms can use most of the developed finding in their operation in order to improve their interpersonal knowledge sharing/transfer process. Apparently, as the findings of the study underlines further factors like communication, trust and organizational cultures which determines the success of innovation supporting firms which could be a good theoretical contributions.

Innovation supporting firms like Uminova Innovation AB is mostly funded by governmental institutions such as local municipalities and Agency for Economic and Regional Growth. This means definitely national and local tax money are invested in this type of Innovation supporting firms in order to makes a societal contribution. To be more specific, this can be achieved through an improved management of Innovation supporting firm (Uminova Innovation AB) as a result we can see the better use of public investments. For instance, management team of Uminova Innovation use those fund in right place at the right time such as investing money during a start-up stage of business plan. Secondly, the improvement in interpersonal knowledge sharing/transfer process within actors transform the innovation support in to better possibility which finally counts as societal contribution. This reveals that our finding also contributes to the regional development and prosperity for the involved municipalities in the Uminova Innovation. In this contemporary world, societies should get innovation support from the government to tackle the start-up stage. In this regard, our thesis contributes an awareness creation in the aspects of societal and managerial practices.

1.7 Definition of Key Terms
Knowledge Management

Knowledge Management (KM) is defined broadly as a discipline or practice which involves interaction of people, process and technology. These processes and practices are related to creation, acquisition, capture, transferring, sharing and use of knowledge skills and expertise. KM improves the result of operation by increasing the capacity of organization in innovation, studying and problem solving (Madarac et al., 2013, p. 580).

Knowledge Transfer

It is the process of exchange of explicit or tacit knowledge between two agents where one agent purposefully receives and uses the knowledge provided by another. Here, agent refers to
the terms an individual, a team, an organizational unit, the organization itself or a cluster of organizations (Kumar & Ganesh, 2009, p. 163).

**Knowledge Sharing**  
Is the process of organizational activity by which skills, expertise and knowledge is exchanged among people, employees, families and different parts of the organizations. This information exchange can be delivered by formal and informal communications (Lawson, et al., 2009, 158).

**Knowledge Management System**  
Knowledge management system (KMS) is a class of information systems applied to managing organizational skills. It is a process of capturing, developing and sharing organizational knowledge in a certain firm (Wang & Noe, 2010, p. 122).

**Personalization strategy/Interpersonal Communication/person-to-person interaction**  
This is the primary mode of knowledge transfer which occurs through direct interaction among people (utilization of personal contacts). It is the strategy that supports direct communication of employees for a better flow of information/knowledge (Grover & Davenport, 2001, p.8).

**Innovation supporting firm**  
Innovation supporting firms are those firm that nurture and support new business ideas to encourage entrepreneurs. Innovation supporting firms aims to render a conceptual or infrastructural support for entrepreneurs on how to introduce the business idea in-to the market (Hayderbreck, Klofsten & Maier, 2002, P.1).

**Uminova Innovation**  
Uminova Innovation is an organization that helps entrepreneurs to develop and support a business idea and provide knowledge network, business coach which helps to an entrepreneurs to think bigger with free of charge (Uminova Innovation, 2013).

**Explicit/Codified Knowledge**  
Is the type of knowledge that can be articulated in formal language and transmitted among individuals. This knowledge can be captured and distribute within employees for instance, as best practices, business plans, rules and regulation (Mciver, et al., 2013, p. 597).

**Tacit/ Non-Codified Knowledge**  
Tacit knowledge refers the knowledge that found inside individuals. It is non-codified knowledge which includes, know-how, judgment, intuitive. Tacit knowledge is inserted in individuals mind through jobs and experience on daily basis (Smith, 2001, p. 120).
Chapter 2: Theories

This section covers different theories which further explain about the selected research area. The theories are written from general (knowledge management) to the specific element (personalization strategy) since, the study area/concepts are interdependent on each other. Finally, the chapter portrays the summery of the theories consumed in this chapter in order to understand the research gap and lead us to answer the research questions.

2.1 Knowledge

There is large volume of published studies describing about the role of knowledge on the process of knowledge sharing/transfer which mostly highlights how the terms are interrelated on each other Arling et al., (2011, p. 231), Nonaka (1994, p. 15), Reid (2003, p. 43). Studying knowledge transfer/sharing, would be difficult without analyzing knowledge as examined by (Disterer, 2001, p. 6), (Lin, 2006, p. 37). Most of the above studies conclude that personalization knowledge sharing and transfer stems from knowledge. However, the authors failed to examine the direct relationship of knowledge with personalization/interpersonal knowledge sharing process. As highlighted by Connel, Klien, Loebbecke & Powell, (2001, p. 48), knowledge becomes the source of competitive advantage in the last few decades due to the fact that firms start to give high priority to knowledge management to ensure what they can obtain maximum benefit from both internally generated and acquired knowledge. Mahrabani & Shajari (2012, p. 144) define knowledge as an organized group of data and information that people in business and organization create and maintain through rules and procedures. Both, the studies of Connel, et al, (2001, p. 48) and Mahrabani & Shajari (2012, p. 144) has a similarity of accrediting the importance of knowledge as good strength of the articles. Despite, they did not said anything about how the knowledge can be shared among the employees/actors of the firm where this study focuses. One of the strength of the articles of Connel, et al, (2001, p. 48) is that, it clearly examined the development of knowledge and how it affects the late development of personalization knowledge sharing process and knowledge transfer. Accordingly, it has been suggested that knowledge has been growing in a progressive way across different centuries (Swart & Kinnie, 2003, p. 65). The evolution of the modern society passes through three phases; the year before 1800, marked as agricultural era where society was gaining food and land for production of crops. In the late 1800s, societies entered the so called industrial era, in the late 1960s societies started to experience the new era called knowledge era (information age) which considered to be highly as a source of organizational success. According to Connel et al., (2001, p. 48) managing knowledge in most of the times are performed by both person-to-person basis or more often by machine-to-person interaction. As it is mentioned by the same authors both ways of knowledge transfer is largely unexplored. Knowledge has many parts, according to Sydanmaanlahkka, (2002, p. 12), the process of knowledge management consists of five stages which as: creating knowledge, taking the knowledge, keeping the knowledge, sharing the knowledge with others and application of knowledge. There is a consensus among the scientist that knowledge can affect the mechanisms of knowledge transfer and personalization knowledge sharing process (eg, Connel et al., 2001, Lin, 2006, Disterer, 2001). In fact, the articles did not specify the effects clearly.

The above studies increased our curiosity to study the perception of interpersonal knowledge sharing/transfer system in Innovation supporting firms. As these writers have discussed firms give more priority to manage knowledge, it gives them to an advantage over their competitors. Innovation supporting firms gather new ideas from different sources. Similarly, they hire employees from different background. So, we thought that sharing knowledge through codified system would be a challenging for innovation supporting firms. To better
understand the effects and types of knowledge, Ipe (2003, p. 15) analyzed knowledge can exist in two different types; organizational knowledge and individual knowledge that possess the nature of either tacit or explicit which has to be managed in today’s organizations in order to gain competitive advantage. In addition to this, each organization requires analyzing their organizational knowledge since, as a strategic asset it is crucial to competitive viability and development of the learning organization (Smith & Bollinger, 2001 p. 17). Similarly, Cabrera, (2002, p. 690) states that organization knowledge consists of its current and past employee’s tacit and explicit knowledge and is considered to be a strategic, non-tangible asset respectively. Accordingly, an organization that maximizes the benefit of its knowledge asset is reliant on knowledge being shared between employees. In addition, he claims that without the involvement of employees, the ability of the organization to maximize its key knowledge asset is greatly reduced. For Wang & Neo, (2010, p. 115), knowledge is a critical organizational resource that provides a sustainable competitive advantage in a dynamic economy. In order to gain this advantage, we believe organizations should emphasize on recruiting staff with specific knowledge, skills, or abilities. They should also engage on sharing knowledge between experts and employees which are already part of the organization.

The relationship exists among the above articles of Smith & Bollinger, (2001), Cabrera, (2002, p. 690) and Wang & Neo, (2010) as they agreed by the fact that both organizational and individual knowledge have a huge influence on personalization knowledge transfer. Yet the studies have not clearly specified whether organizational or individual knowledge can influence highly towards tacit and explicit knowledge. It has been mentioned by (Andersson, 2003, p. 12) that tacit and explicit knowledge can impact firms in the process of managing knowledge. In particular, explicit knowledge which states that knowledge can be articulated in formal language and transmitted among individuals whereas tacit knowledge defines as the personal knowledge embedded in individual experience. Unlike explicit knowledge, tacit knowledge is difficult to present in written format which makes it difficult to transfer to others. Similarly, Smith (2001, p. 120), reveals that tacit knowledge as a lesson learned by individuals know-how, judgment, rules of thumb and intuition. Moreover, tacit knowledge is non-codified, relies on individuals and it can be achieved through personal experiences or actions (Andersson, 2003, p. 11). On other contrast, it is hard to formalize since it is more personal and difficult to communicate to others. It is more concerned with action, commitment, values, emotions, routines, and procedures (Nonaka et al., 2002, p. 43). As matter of fact, tacit knowledge is inserted in individual’s mind through jobs and experience. It is “difficult to share across space and time (Awad & Ghaziri, 2004, p. 47)”. This type of knowledge is “used to create explicit knowledge and is best communicated personally through dialogue and scenarios with use of metaphors (Awad & Ghaziri, 2004, p. 47)”. Both authors of the articles Smith (2001) and Andersson (2003) agreed that tacit knowledge (knowledge within individuals) is more difficult to transfer than explicit knowledge which could be easily codified and transferred to others. One of the strength of the article developed by Awad & Ghaziri (2004) was that, it gives a solution for a problem of knowledge transferability; by increasing dialogues among the employees the firm will increase accessibility of knowledge.

However, in these two different types of knowledge also exists commonality that is both of them involves intangible factors such as personal beliefs and values (Stewart & Waddell, 2008, p. 989). The tacit extend to which knowledge can aid organization to gain the ability to support innovation and compete with other markets. With the help of knowledge employees can know about their customers, techniques, product and success. In today’s world, in order to achieve competitive advantage strategic assets are considered to be the most critical for a company within which knowledge is an important part of strategic assets (Nonaka, 1994, p.
Based on Andersson, (2003, p. 19), knowledge has to be shared among a co-worker considering honesty rather than capability. Moreover, personal ties, fairness capability and trustworthiness are very important between parties while sharing knowledge (Wang & Noe, 2010, p. 115). Knowledge can be presented in words and numbers and has the ability to be shared in manuals, specification and scientific data. This kind of information can be stored in different types of media and thus can be revising for many purposes within the organization. One of the strength of the articles of Andersson (2003), it clearly identifies the personal factors that supports the process of knowledge sharing/transfer. However, the overall articles presented under this topic lack the relationship of personalization/interpersonal knowledge transfer with innovation supporting firm. Most of the studies highlight how knowledge becomes important in many organizations and the factors that are important to share/transfer knowledge among firms.

In our opinion, the size of the firm plays an important role in interpersonal knowledge transfer process. If the number of employees is small, then it would be much easier to share/transfer knowledge through interpersonal system because employees contact with each other will be easy and cost effective. But, as the number of employee’s increased, the knowledge transfer system becomes more complex.

2.2 Knowledge Management’s Development and perspective

Previous studies have reported that managing knowledge is the primary focus of many organization than engaging themselves in sharing and transferring knowledge towards its employees as suggested by Arling & Chun (2011, p. 234) and Nonaka (1994, p. 15). Yet these two articles clearly highlight the importance of interpersonal communication for transferring/sharing knowledge if it is only managed well by the organization. Knowledge management is defined as a discipline or practice which involves interaction of people, process and technology. It is a function of management that strives to improvement of result of operation by increasing the capacity of organization in innovation, studying and problem solving (Madarac et al., 2013, p. 580). It also defined that knowledge management is a set of management activities aimed at influencing and designing knowledge creation and integration. This includes processing and sharing knowledge which has emerged as significantly influential component that shapes the work environment (Mciver et al., 2013, p. 597). Knowledge management has been presented normally as a discipline of inquiry and practice for decades but it more comes into practice since 1990s. Previous studies in the area of managing knowledge revealed that managing knowledge has a positive and consistent impact on interpersonal knowledge sharing, knowledge transfer and in the overall performance of the firm.

Knowledge management made a considerable development over the last 40 years, and also during 1990’s knowledge management was considered as one of the critical part of service provision (Stewart & Waddell, 2008, p. 987). In the current knowledge based Economy, competitive advantage and organizational performance are highly influenced by the human capital which depends on the knowledge of the manual labor (Mciver et al., 2013, p. 597). Again, an ability to rapidly create and effectively manage knowledge is critical to organizational survival. This shift changes the nature of the work done in many aspects. Wiig & Jooste (2003, cited in Mciver et al., 2013, p. 597) discussed the realization and understandings of how work has been organized, managed and integrated to manage knowledge. Besides, it asserts the strategic importance of knowledge management on improving productivity of many service providing organizations. The draw backs of the study
In accordance to research questions were that, none of the studies directly draw the effects of managing knowledge in personalization/interpersonal knowledge sharing process.

In the research done by Grover & Davenport, (2001, p. 120), knowledge management deals with controlling the processes of knowledge transfer and creation, which in turn assists companies in attaining a higher efficiency and innovation. Generally, there are three processes that the activities of knowledge management can be classified namely; knowledge generation (comprises processes involving the acquisition and development of knowledge), knowledge codification (conversion of knowledge into accessible and applicable formats), and knowledge transfer and realization (the movement of knowledge to its point of use (Grover & Davenport, 2001, p. 8). One of the strength of articles of Grover & Davenport, (2001), is that, it gives the general classification of knowledge management as it points knowledge transfer and realization is one of the processes of managing knowledge. On the contrary, it lacks any connection neither with personalization knowledge transfer nor with the previous arguments that claims knowledge sharing/transfer stems from knowledge itself.

In the same way, it is also equally important to distinguish how knowledge management is approached and understood in both academic and non-academic circles. This distinction reflects the way that knowledge is understood and disseminated. Again, these results two approaches of knowledge management which are humanist approach and information technology approach (Mciyer et al., 2013, p. 597). Humanist approach believes that knowledge is the results of sharing largely tacit forms of information and data between individuals, groups and organizations. While, in information technology approach believes that knowledge management is more about the collection, storage, codification and dissemination of information and data in a systematic and efficient manner (Stewart & Waddell, 2008, p. 989). There is a strong connection of the articles of Stewart & Waddell, (2008) with the research questions and previous arguments of Nonaka (1994), Lin (2006) stating that tacit knowledge is shared/transferred mainly by the interaction of individuals, employees inside the organization as it also mentioned in the humanist approach.

It has been suggested by Orlikowski (2002, cited in Mciyer et al., 2013, p. 597), that the importance of tacit knowledge; is a form of knowledge that is inseparable from action because it is constituted through doing. Tacit knowledge is a process of knowing in action that is difficult to communicate to others. Other argument that consolidated same theory was highlighted by “Polayini (1958, cited in Mciyer et al., 2013, p. 597) that is, difficult to capture tacit knowledge because it is hard to formalize and not easily visible. At the same time it is difficult to share with others by the fact that it is highly contextual dependent on a firm specific situation. Other theory of knowledge management that can be raised side-by-side with tacitness is learnability. It is a practice consists of type and amount of effort, study, accumulated comprehension and expertise required to understand the know-how and information involved in the work activities. Generally, learnability can be expressed as the characteristics of knowledge involved in the work process (Mciyer et al., 2013, p. 598). It is mentioned by Garriga et al., (2013, p. 1134), that long time consideration of knowledge external to the firm is to be very important to a firm’s ability to support innovation as also agreed by (Sydanmaanlakka, 2002, p. 1). The main conclusion of articles of Orlikowski (2002) and Polayini (1958) were that tacit knowledge can be occurred by doing (experience) which also gives an insight of difficulty to transfer/shared among the employees of the firm. One of the challenges of the articles could be, it fails to develop a strategy how tacit knowledge can be practiced and shared among employees in innovation supporting firm.
It has been conclusively been shown in the article of Sydanmaanlakka, (2002, p. 1) that the process of knowledge management which passes through numerous phases and forms in its own cycle. The five phases of knowledge process are; creating the knowledge, taking the knowledge, sharing the knowledge with others and finally application of knowledge. Knowledge management system creation can be viewed as life cycle (Gopal & Joy, 2011, p. 7). It begins with plans and justification and end with the system structured to meet knowledge management requirements for the whole company. In order to keep the success of organizations, it must be effectively and efficiently create, locate, capture and share their organizational knowledge and utilize this knowledge to solve problems and opportunities (Gopal & Joy, 2011, p. 7). Knowledge management emanated as a result of increasing environmental changes experienced recently which is unavoidable. The basic connection of the above two articles is that both of them argued that the basic phases of knowledge process and knowledge management system starts by the steps of creating (planning) knowledge. On the contrary both articles follow different steps. In fact, other similarity could be both of the articles accredit knowledge sharing as one of the process in both aspects which is relevant to the research questions.

It has been discussed that accessing knowledge is not important without assuring to use it effectively. It is important to note that, the greatest value of managing knowledge occurs when it improves productivity, work efficiency, enhance decision making and facilitates for the development of new knowledge (Cohen & Levinthal, 1990, p. 128). Significantly, many companies have become so complex in terms of knowledge’s application. However, Desouza & Paquette, (2011, p. 7) suggest that in order to be effectively manage knowledge, companies requires developing knowledge development team which assists to prepare knowledge management blueprint. This management blueprint provides a road map for building and incrementally improved a knowledge management system. Furthermore, the importance of knowledge management comes into practice since the realization of changes in management practices which is unavoidable. Indeed, the similarities of Cohen & Levinthal (1990) with Desouza & Paquette (2011) could be by the fact that both agreed that application of knowledge is more difficult than accessing knowledge. The articles that we found in this topic has no direct relationship with the mechanism of knowledge transfer/sharing process. However, they increase how/which knowledge can be transferred more easily in innovation supporting firm. Other weakness of the articles studies could be, there is no studies found that has a direct relationship with innovation supporting firm. This section shows that how the importance of knowledge management has increased tremendously during last decades. The knowledge management not only provides the competitive advantages to the firms, but it also helps to preserve the effort that companies make to apply the knowledge. New ideas are important in innovation supporting firms. We believe that innovation supporting firms are largely affected by the development of knowledge management system and application of the new knowledge.

2.3 Knowledge Transfer

The first serious discussion and analysis of knowledge transfer has emerged by Findlay in 1978 and has been variously researched as knowledge flow, knowledge sharing, and knowledge acquisition by many authors. The articles of Findlay (1978, p. 20) have reported that knowledge transfer can highly influenced by interpersonal communication of employees inside a firm. Many of the studies considered transfer of knowledge as the transmission of message from source to the recipient in a given context (Szulanski, Cappetta & Jensen, 2004, p. 600). Knowledge transfer is a process of exchange of explicit or tacit knowledge between two agents, during which one agent purposefully receives and uses the knowledge provided
by another where agent may be an individual, a team, an organizational unit (Kumar & Ganesh, 2009, p. 163). An organizational ability to transfer knowledge towards its employees, functional areas, and geographical locations is a key determinant of the success of its knowledge management activity (Desouza & Paquette, 2011, p. 179). Once the knowledge has been created then it has to be shared with the colleagues, teammates, and coworkers. Both sharing and transferring of knowledge is vital for good knowledge management and effective communication of employees based on the analysis of (Mciver et al., 2013, p. 59). Some of the knowledge is very easy to transfer like codified knowledge such as best practice, charted business plan, rules, regulations and policies and procedures. This knowledge can be captured and distributed to many members of the organizations through multiple mechanisms. In such kind of knowledge, technology-based knowledge management system can handle and becomes foundational for any knowledge management programs. Other knowledge which is more tacit and non-codifiable knowledge that exists within people are more difficult to externalize and to share inside the organization (Desouza & Paquette, 2011, p. 179). Several studies investigating knowledge transfer has been carried out on the importance of interpersonal interaction as the mechanism of knowledge sharing and transfer. In addition, the articles have a connection with the previous studies of Andersson (2003), Nonaka et al., (2002) by claiming that tacit (non-codified) knowledge are more difficult to externalize to others. We have found a relevant connection of the articles with the research question in a way how the interpersonal knowledge sharing process could be influenced by interpersonal interaction.

A surveys such that are conducted by McEvily & Reagans, (2003, p. 240) have shown that the ability of knowledge transfer among individuals is critical for the effective organizational process and transfer of best practices. The conclusion of this article claims that knowledge transfer among employees of the firm is considered to be the easiest way of knowledge transfer in certain firm setting. The ability to transfer knowledge represents a distinct source of competitive advantages. Besides that it has been researched before by Kogut & Zander, (1992, P. 104) that informal interpersonal network play a significant role in knowledge transfer process. As it is highlighted by McEvily & Reagans, (2003, p. 245) that the main factors that affect knowledge transfer are: strong interpersonal connection and social cohesion. The strong side of this article could be the fact that it specifies the factors that affect the process of knowledge transfer and sharing process. Moreover, as the articles are related to the research question and purpose this research since it claims strong interpersonal connection and social cohesion can contributes its role to the mechanism of sharing/transferring knowledge. This section shows what other researchers have found about knowledge transfer system in various business firms. Although this section does not provide much information about the interpersonal knowledge sharing/transfer process in innovation supporting firms, this information will be helpful to see the effects in the upcoming sections.

2.3.1 Strong interpersonal connection
A broader perspective has been adopted by McEvily & Reagans (2003, p.240), the strength of interpersonal connection can highly affect the process of knowledge transfer/sharing in innovation supporting firms. In broad sense, individuals that communicates with each other more frequently or individuals who have strong emotional attachment are more likely to share knowledge than people who communicate infrequently or those who are lower emotional attachment. The articles of McEvily & Reagans, (2003, p. 240) mainly suggest that individuals who have emotional attachment has to share/transfer high level of knowledge than individuals that share low emotional attachment. In other terms, it explains that the more frequent communication can lead to effective communication. Likewise in related to the
emotional aspects, the more emotionally involved with each other, the more time and effort they are willing to put on the behalf of each other. This leads to good knowledge transfer, strong interpersonal connection and so forth. Tacitness is the degree by which knowledge is difficult to codify; it can only be transferred by observation, demonstration or hand on experience. In this case the transfer of tacit knowledge would be easier among strong ties because of the strong sense of motivation (McEvily & Reagans, 2003, p. 240). It has been argued by Disterer, (2001, P. 7) that the nature of knowledge shared and individual’s social network influence employees to find more values in person-to-person knowledge sharing process which could lead to a fast flow of codified knowledge. Social network are key factors influencing knowledge-sharing practices in organization. However, little known about the factors in how they influence person to-person knowledge sharing. Teach ability and complexity of knowledge increased, similarly the size of an individual’s social network increased which leads individuals to perceive greater value from person-to-person knowledge sharing process (Arling & Chun, 2011, p. 231). Even though, the above articles did not have direct relationship on how the interpersonal knowledge sharing process perceived by the employees/actors of the innovation supporting firm, they are a connection with the previous studies of Lin (2006), Nonaka (1994) in the study area that turned out that interpersonal knowledge sharing process/transfer can be affected by different factors that impacted the employees/actors of the firm. Interpersonal connection plays vital role in person-to-person knowledge transfer system. We believe that in small firms, employees know each other background and prefer to communicate orally instead of using a codified knowledge.

2.3.2 Social cohesion
In the same vein, Wah (1999, p. 20) in his articles noted that social cohesion has a great role of influencing interpersonal knowledge sharing process and knowledge transfer. In the conclusion of the articles he suggests that individuals with high social cohesion have a high probability of sharing/transferring knowledge among individuals. Previous research suggests that social cohesion has positive effect on knowledge mainly by influencing the willing of individuals to devote time and effort to assist others (Mciver et al., 2013, p. 597). Cohesion (tie strength) affects the motivation of an individual to transfer knowledge to a co-worker or colleagues (McEvily & Reagans, 2003, p. 240). For the effectiveness of this knowledge transfer, the knowledge’s sender relationship with the receipt is the main source of motivation. In many situations, willingness to assist to other party is important since knowledge is beneficial to the recipient. At the same time, cooperative norms in an organization are important because they limit a main side effect of successful knowledge transfer within units. For instance, intense competition between different units inside organizations restricts the transfer of knowledge. The drawbacks of the articles presented in social cohesion failed to address the individual cohesion with their firm. It only addresses the importance of social cohesion among the employees of the firm which could be limited in that aspect.

A broader perspective has been adopted by Swart & Kinnie (2003, p. 42) that knowledge transfer mechanisms have multiple objectives in transferring different types of knowledge to the target group. The summery of this article of Swart & Kinnie (2003) attempted to draw different perspective on knowledge transfer/ sharing process which was codifying the best practice of knowledge through documentation allow organizations to learn from others, avoid mistakes, and identify important knowledge. Knowledge transfer process should be designed to involve multiple individuals at different levels of experience. Besides that knowledge has moved from residing disconnected individuals to being embedded in groups or communities which secure organizations the capability to communicate to the entire group than relying on
one individual in order to transfer knowledge. Desouza & Paquette, (2011, p. 179) highlights that creating effective knowledge transfer within an organization is a key component of an organization’s knowledge management strategy and activities. Facilitating the network connection between employees and external knowledge sources are critical to influencing knowledge into an organization’s core competency. Motivating and facilitating knowledge sharing process are the first step in creating a knowledge-supportive culture throughout the organizations. The article of Desouza & Pasquette (2011, p. 179) pointed out a new contribution to the study area by claiming that the knowledge transfer process should connect groups and communities than just revolving among in individuals for a better transfer/sharing of knowledge in innovation supporting firms.

2.4 Knowledge Transfer Cycle

As Desouza & Paquette, (2011, p. 179) reminds us, every knowledge transfer has five essential components that create the environment for knowledge sharing. There is always a source which possesses the knowledge and the recipient that will receive the knowledge. In addition it is important that both the knowledge source and receipt are willing to transfer the knowledge. Knowledge flow between different forms entities including humans, technology (machines) and organizations are the most common. Humans to machines transfer involves the externalization of knowledge where individuals attempt to codify or embed their knowledge in to system. The source and recipient are always connected through channels that allow the knowledge to be transferred (Smith, 2001, p. 314). This article concludes at the end that mechanism of knowledge transfer (sharing) should include steps of human and technology for better externalization of the knowledge towards others. The claim makes different in a way previous scholars argued about tacit and codified knowledge.

Reid (2003, p. 43) draws about the extensive sources to access the main mechanisms of knowledge sharing/ process among interpersonal and organizational levels. In his article, he suggested that the channels that help to transfer knowledge are different from firm to firms. In the conclusion of the articles, he noted that the channel is not always a physical medium, but it can be a virtual space, shared mindset, or environment that allow for the knowledge to be transferred among innovation supporting firms. The different forms of channel that able to transfer knowledge are called media richness. Knowledge can be transferred by personal channel like meetings, mentoring sessions, and informal get-together which allow for great tacit knowledge sharing between people. E-mailing ideas to a colleague might also transfer a great deal of explicit knowledge and possibly to attain tacit knowledge. On the other hand face-to-face communication would increase the amount of richness of tacit knowledge that is exchanged. In the argumentation of Mestre, (2005, p. 3), for the effective occurrence of tacit knowledge, people need to have the same traits (speak the same language) so that there will be effective transfer of knowledge. The best way of transferring knowledge identified is that to allow employees to identify their social network, fined people who have the same interest, projects (responsibilities) and bring them together to transfer knowledge. For knowledge to be transferred it must be proceed by the source and be in the form that can be received by the recipient. Transfer in very intentional because the knowledge is known to both the recipient and source. We found the above articles as important foundation to learn about the research question and purposes of the study. Since, it includes the most studied mechanism of knowledge transfer /sharing process and how it connected with interpersonal knowledge sharing process. On the contrary, the study excludes how the different channels can be connected with innovation supporting firms. The following diagram shows how knowledge transfer/sharing can pass through different levels according to Shannon-Weaver model of communication.
We can see from the above Shannon-Weaver communication model that the first source of information comes from the origin (sender) afterwards the message should be encoded so that it can be understandable by the other party that receives the message. In the stage of decoder (receptor) can be interpreted according to the understanding of the message. The next step is the channel, where the communication is based; finally the information reaches the final receiver (intended destination) of the information. At this stage the knowledge should be different or similar compared to the source as it can be affected its quality in the process. According to the assessment of Desouza & Paquette, (2011, p. 185), there are not always knowledge transferred from source and receipt, intermediaries do also play their role in the transfer process. Human intermediaries help in the knowledge transfer by bridging knowledge networks or facilitation between individuals. An intermediary, weather human or technology need to be considered so that knowledge must take into account to reach the recipient. Some of the intermediates simply pass received knowledge on, and others prepare the knowledge for re-use by the recipient through summarizing, packaging, translating the knowledge, such action either add clarity to the knowledge by customization or create distortion through incorrect or biased interpretation (Mestre, 2005, p. 3). Organizations must realize the implication of intermediaries on knowledge security. The more unauthorized people who in contact with the knowledge, the greater the chance of risk could occur due to the wrong access of the knowledge.

One of the good part of the articles of Mestre (2005, p. 3) was that it assumes the human factor as important factor to transfer knowledge among other. In similar aspects it has a direct connection with the previous studies of Nonaka (1994) in a way knowledge can be easily transferred by the involvement of humans. Generally, the study on this area revealed that there is a lack of previous studies on innovation supporting firm. Since most of the studies conducted in different firms outside the study focus. During our problem background and literature review, we found that many researchers have argued in favor of a clear process for knowledge transfer system. We also agree that as the number of employees increases the knowledge transfer system become more complex. In such cases a strong and clear model for knowledge transfer will be needed to manage knowledge in the organization. In our opinion,
it would be possible to build a model for codified knowledge. But, it would be difficult to build a model for interpersonal knowledge sharing/transfer system.

2.4.1 Forms of Knowledge Transfer

In an investigation of knowledge transfer Mestre, (2005, p. 3) noted that, there are five forms of knowledge transfers; serial knowledge transfer occurs by part of the organization in one setting and it’s transferred to another organization in a different setting. The knowledge might be either explicit or tacit knowledge which always stems from experience. One of the examples of serial knowledge could be post-project review where organizations documented and shared with other projects, near transfer facilitates the transfer of explicit knowledge that has been learned through the repeated process of performing certain actions. Far transfer differs from near transfer as the knowledge is related to non-routine task or situation that does not normally occur during the course of business. Strategic transfer occurs when knowledge arises from non-routine or occurs infrequently and deals with strategic level. Expert transfer facilitates the transfer of knowledge related to unusual or non-routine which occurs when organizations ask help from others (Mestre, 2005, p. 3). The good side of the articles of Mestre (2005) in the study area of knowledge sharing is that, it clearly distinguish the forms of knowledge however, it did not say anything about the role of interpersonal or the connection of the forms of knowledge transfer with employees of the firm. Moreover, it fails to specify the type of organizations the study refers. In fact, we found the information vital to design our methodological choices and developing our interview guidelines. The forms of the knowledge transfer presents as follows:

<table>
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<th>Types of knowledge transfer</th>
<th>Description</th>
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| Serial                     | -Knowledge gained in one area is transferred for use in another part of the organization in a different setting.  
-This may be explicit or tacit knowledge |
| Near                       | -Near transfer facilitates the transfer of explicit knowledge that has been learned through the repeated process of performing certain action.  
-Knowledge is easily to describe or codify and can be well supported in knowledge management system in the form of e-mail, new policy and so forth |
| Far                        | -Involves knowledge related to non-routine tasks.  
-Individuals are needed in order to establish connection to disseminate the knowledge. |
| Strategic                   | -Involves knowledge related to non-routine problems; transfer can occur when part of the organization seeking help from another.  
-This type might require multiple, high touch and complex transfer. |
Expert
- Involves knowledge related to non-routine problems, transfer can occur when one part of the organization is seeking help from another.
- Dissemination requires collaboration and integration of heterogeneous set of individuals and dynamic teams.

Table 1. Five forms of common knowledge transfer (Dixon, 2000, P. 189)

Smith (2001, p. 313) argued that most organization have a confusion to differentiate the forms of knowledge transfer which in some ways oppose the argumentation of Mestre, (2005, p. 3). In general, the articles in this area emerged holding different view. More importantly none of them did not confirm the connection of the forms of knowledge transfer with innovation supporting firms where this study focuses. Despite, we have gathered important theories that help us to broaden our study area and lead us to the process of collecting further information about the study area.

### 2.5 Knowledge Sharing

Abrams et al., (2003, p. 64) provides in depth analysis about how the process of interpersonal knowledge sharing can be impacted by formal and informal communication. This article offers a good contribution to the study area by bringing the focus of study where socialization can help formal communication in the process of knowledge sharing towards others. Whereas, the informal way of sharing interpersonal knowledge can be performed by employees communication outside their work schedule (Lawson et al., 2009, p. 158). The process of socialization has a significant role in facilitating sharing knowledge and information in several firms. By helping to create a common values and understanding shared identity, socialization procedures, facilitates the transfer of knowledge among team members. In addition, the process of socialization has a great importance when it comes to formal communication by improving incentives to create interpersonal trust and knowledge sharing flow. According to the suggestion of Chai & Nebus, (2012, p. 50) codification is something related with capturing knowledge mostly occurred by socialization, externalization and combination of all. On the other hand, personalization is related with knowledge sharing/transfer which results from socialization, internalization and combination of both processes. In his argument, unless the two concepts (codification vs personalization) understood by the actors involved in organization, it can highly impact the mechanism of knowledge sharing/transfer in the overall process of the firm. Apparently, the personalization process influences the performance of management practices. Nonaka (1994, p. 20) developed a model which suggests how knowledge sharing process is the outcomes of four different factors.
We can see from the model that knowledge sharing process is the outcome of socialization, externalization (where knowledge is transferred from outside towards the employees/actors involved inside the company. Internalization is similar with socialization where knowledge is transfer/shared among the interaction of employees; combination is a process where knowledge is shared via multiple mechanisms including the above three factors. In the model of Nonaka (1994) the role of tacit (personal knowledge) and explicit knowledge (codified knowledge) is highly discussed which has direct relationship with the articles of Hansen (1999), Bystrom (2002) & Smith (2011). Once the knowledge is created, add value to the organization then it is important to share with colleagues, teammates, and coworkers. This leads to the success of organization’s knowledge management initiatives which can be gained through an organization’s ability to transfer knowledge among its employees, functional areas, and geographical locations. It is very obvious that transferring and sharing knowledge play a significant role in innovation supporting firm. It seems reasonable to assume that knowledge sharing, knowledge flow and knowledge transfer have common features. It is important to note that “knowledge is given by one or more entities and received by others” (Kumar & Ganesh, 2009, p. 163). This article has a strong connection with the previous research of Nonaka (1994) by proposing that knowledge transfer, sharing and flow of any kind of knowledge inside the organization can be seen on the same pattern. Nevertheless the articles lack to demonstrate neither the relationship of the terms in the intensity of knowledge flow nor the type of organization they consider in a similar way.

In his classic critiques of Wah (1999, P. 20), some types of knowledge are hard to transfer such as tacit and non-codifiable knowledge which exits within people to externalize and share to others. The articles have direct relationship with the previous scientific findings of Nonaka (1994), Lin (2006) about the difficulty of externalizing tacit knowledge compared to that of codified knowledge. Therefore, the author of the article recommended that company’s management personnel’s should impose their non-technology mechanism to share knowledge. On the other hand, explicit/codified knowledge is much easier to capture and distribute within employees comparatively. For instance, best practices, charted business process, rules, regulation, and policies. This sharing can be done through multiple channels. In this form of knowledge, companies implement the technology-based knowledge system which becomes a foundational for knowledge management program (Desouza & Paquette, 2004, p. 179).
of the good contributions of this article to the study area is that it clearly confirms codified knowledge can easily transferred compared to tacit knowledge. The drawback, of the above articles could be the fact that none of them could not demonstrate how the transferability of the knowledge can neither affect the mechanism nor the type of firms. We have discussed in above paragraphs that all knowledge cannot be easily shared which ultimately become a problem in interpersonal knowledge sharing process. If information cannot be codified for future use, then one must rely on person-to-person knowledge transfer system. However, many writers have said that the company needs to use both codified and person-to-person knowledge transfer system to manage the information effectively.

Knowledge is created as an intellectual capacity through social interaction among individuals and organizations which is dynamic in nature (Nonaka & Takeuchi, 2002, p. 15). This article clearly specify the role of interpersonal interaction for knowledge transfer both in the individual and organizational level. The article concludes by pointing the interpersonal interaction should be clearly understood by all members of the firm. If an organization wants to develop its knowledge then it is inevitable for organizations not only to improve the knowledge of individuals within the organization but also equally important to disseminate it. Knowledge dissemination increases through knowledge sharing (Tsoukas and Vladimirou, 2001, p. 22). Knowledge can be either shared in formal or informal way. The formal way of sharing includes conferences, seminars, magazines, brochures, guidelines, training programs and structured groups. The later one helps individuals to develop respect and friendship. The article of Tsoukas and Vladimirou (2001) is not complete in content wise; however it offers the mechanism of where knowledge can be shared formally or informally. There has been unambiguous relationship between the articles of Tsoukas and Vladimirou, (2001) and Nonaka & Takeuchi, (2002) as this article claims there is less knowledge sharing in an organization which gives values to individual advancement. Individual can be driven by self-advancement rather than advancement of their co-workers. Instead of that, a mutual give-and-take of knowledge can be motivating factor for an individual to share knowledge with a co-worker. The individual can be motivated to share more knowledge if the perceived value brings positive change to their status and also if the resulting exchange adds value to their own knowledge (Wang & Noe, 2010, p.122).

Knowledge has been shared from person-to-person particularly in complex organizations for long time (Bystrom, 2002, p. 158). Even though many organizations implemented knowledge management system (KMS), it has been discovered that employees do not use them. In most cases, employees avoid the knowledge management system and continue to share knowledge by person-to-person. In other cases employees simply do not share knowledge (Wasko & Faraj, 2005, p. 35). Some of the key problems highlighted include, problems related with fostering positive attitude, creating effective process for knowledge process; personal and institutional factor can increase or inhibit knowledge sharing process. Recently, many high-tech enterprises give more emphasize to knowledge sharing since they realize knowledge as a most valuable and strategic resources of an organization. Knowledge transfer strategies require emphasizing on both kind of knowledge for connecting professionals across functions, platforms and geographic distances. These connections between these parties form a knowledge networks which finally play a crucial role to establish relationships for knowledge sharing within people (Desouza & Paquette, 2004, p. 179). The main weakness of the articles of Wasko & Faraj (2005) and Desouza & Paquette (2005) are it failed to ascertain the connection of the factors that deter knowledge sharing with different firms.

Similarly, Smith, (2001, p. 11) states that the main intention of knowledge sharing supposed to be enhancing the organizational knowledge and also highlights that importance of effective
communication and networking channels are essential ingredients in order to flourish organizational knowledge. Generally, according to Smith (2001, p. 11), there are four main characteristics of organizational knowledge. Inimitable refers when the organizations knowledge is unique, rare usually depend on experience and knowledge of current and past employees, valuable is about adding value in products and gaining strategic advantage, and non-substitutable is occurs due to the synergy of employees which cannot be replicated (Cabrera, 2002p. 696). The article of Smith (2001) primarily demonstrated that communication among interpersonal of the firm are important, besides that the article noted that knowledge is the outcome of employees previous experience which means the main source of knowledge based on the article is humans and their interactions.

A recent study made by Arling & Chun (2011, p. 231) involved the implementation of a knowledge management system or a new strategic more likely to emphasize on knowledge sharing through asking managers and employees to adopt new attitudes and behaviors related to knowledge sharing. Not only this much, management and supervisor support is crucial for the success of KM and knowledge sharing initiatives. For example, in order to encourage knowledge sharing among employees, it is necessary to bring motivational factors such as rewards system. The reward can be either monetary or no-monetary incentives by the motive of encouraging employees of its organization. Here, monetary rewards include cash bonuses whereas non-monetary rewards include either dinner gifts or praising certificates to acknowledge services publically. Both rewards have intrinsic or extrinsic value. Therefore, rewards system is considered as an effective tool for management to encourage knowledge sharing among employees (Bartol & Srivastava, 2003, p. 20). The articles of Arling & Chun (2011) and Bartol & Srivastava, (2003) suggests the adoption of reward system so that employees will be motivated to share knowledge to others, therefore both authors of the article took the focus of the study in to organization which is responsible to motivate their employees by offering financial and non-financial rewards. Through emphasizing on sharing “lessons learned” instead of “mistakes made” management can support for knowledge (Teo, 2005, p. 150). Through training organization can increase employee’s self-efficacy which ultimately aids in knowledge sharing and also increase the individuals' confidence in sharing useful knowledge with others. Perception by employee towards knowledge ownership plays a crucial part to enhance their knowledge sharing because of internal satisfaction. Therefore, it is suggested that facilitating and shaping employee perceptions of knowledge ownership is important. The argumentation of the above articles took the research focus from individual to organizational focus where the motivation or the mechanism where knowledge can be shared/transferred can stem from the organization. On the contrary, the study did not specify if all firms can/not motivate their employees by reward system. We believe that reward system can be very effective to a firm with large number of employees. As we have discussed earlier that person-to-persona knowledge transfer system may become less effective in a firm where number of employee is high. The two factors (interpersonal connection and social cohesion) that facilitate personalized transfer are mainly suitable for small firms. But, the employees can transfer knowledge through personalized channel if there is a suitable reward system attached to it.

The articles of Bartol & Srivastava, (2003, p. 25) concludes that knowledge sharing is basically people to people processes to exchange knowledge which is very important for an organization to have such employees who are willing to share knowledge and to get motivation. One of the contradiction of this articles comes from the fact that it start to argue primarily that motivation should start from the organization itself, later it came up with the argument that, the main factors for knowledge creation and knowledge transfer are
employees. It has been noticed that motivational factors are importance for verbally encouraging the employees to participate in knowledge sharing activities. Whereas, lack of interest or motivation from the employees could eventually lead interpersonal knowledge sharing process to fail (Evangelou & Karacapilidis, 2005, p. 50). In addition, in order to actively participate in knowledge sharing activities individuals must be aware of the need, the value and benefits of the knowledge. As researched by Wang and Neo, (2010, p. 115) individual like to share to those who were perceived as honest and less liked to share to those who were perceived as capable. They also coined that knowledge can be either a barrier or facilitator for individual knowledge sharing process. Articles of Wang & Neo (2010, P.115) highlighted in the conclusion part that the flat structure of an organization enables knowledge sharing among employees whereas hierarchical organizations structure can have obstacles in knowledge sharing process. The study lacks interpreting the impacts of sharing knowledge inside hierarchical organization. The inspiring part of the article is that, it suggests hierarchical organizations have hard time to transfer knowledge among the employees, yet it did not clarify the type of organization the study refers.

As we highlighted in the beginning of the chapter, the two main ways of managing knowledge sharing within an organization are codification and personalization. In the codification approach, organizations code the knowledge and store in knowledge management system. This approach enables to access the knowledge by large number of people and considered as efficient approach when knowledge is static (Hansen et al., 1999, p.106). Regarding the personalization approach, organizations establish a connection to those who have knowledge unlike managing the knowledge itself. This approach is very important for organization where the strategic orientation is expertise. The article of Hansen (1999) is one of the few articles that studied the two-ways of managing knowledge, however the information is scarce and have a limitation about how the interpersonal knowledge influence knowledge sharing in an innovation supporting firm.

In a broad sense, knowledge management system role is to connect knowledge seekers to people who have needed knowledge rather than sharing knowledge documents (Massey & Weiss, 2006, p. 99). The personalization approach connects people who have knowledge to those who need it. Knowledge is received from person not from document which makes the interactive than with the codification system. The knowledge user interacts with the knowledge source via face-to-face communication, over the phone or over digital communication though the interactive approach which consumes time. In fact, the above studies offer relevant input for the study area on developing the study area from general to the specific problem. However some of the literatures turned out contradictory on each other. Furthermore, they point out the limitations in the process of sharing knowledge rather than bringing solution to the problem. Until this part there is limited information about innovation supporting firm which is lagging not to integrate the knowledge theories with innovation supporting firms. Indeed there are plenty of previous studies on knowledge sharing, transfer and mechanism of transfer though they have limited relevance with interpersonal knowledge sharing process.

2.5.1 Trust and Culture

A study made by Chai & Nebus (2012, p. 35) found out that culture is an important factor that determines the norms regarding the sharing of knowledge among organization and employees. Another angle of research made by Lin (2006, p. 34) argued that personalization based knowledge transfer can be partly affected by cultural traditions which tend to discourage knowledge in innovation supporting firms. Besides cultural values of the society, individual barriers like loss of power, uncertainty, lack of motivation, social problems ( lack of
legitimate language) and bureaucracy and hierarchy are some of the factors that deter personalization based knowledge transfer (Disterer, 2001, p. 2). It also highlighted by Nonaka (1994, p. 14) that, the role of personalization process of knowledge sharing/transfer would be interdependence on other circumstances of personal and organizational factors like motivation and reward system.

The basic element of culture such as norms and values affect knowledge sharing process. It shapes communication language, formal and informal ways of communicating, rules, regulations, routines and technology which directly impacts knowledge sharing aspects. Culture is an important aspect as knowledge management is highly dependent on it and therefore a company’s culture should be analyzed in order to assess the needs of interpersonal knowledge sharing (Ipe, 2003, p.16). Neither of the study made by Chai & Nebus (2012) nor Ipe (2003) did not disclose the direct relationship of culture and interpersonal knowledge sharing process rather than highlighting how culture can simply influence knowledge sharing in the organizational level. We found out that the cultural values and trust of actors involved in a firm will impact the process of interpersonal knowledge sharing/transfer process.

Previous studies states that knowledge sharing play a vital importance to organizations, however, it would not be achieved if there is a lack of knowledge sharing culture, trust and motivations (Wang & Noe, 2010, p. 23). In existing knowledge sharing literature, culture emphasizing trust and innovation is encouraging to knowledge sharing process. Organization’s culture has direct influences on employee’s knowledge sharing behavior and also indirect effect through influencing on manager’s attitudes towards knowledge sharing process. In the same way, human resources practices also has a great influence on knowledge sharing through organizational culture such as, fairness in decision-making and open communication likely promote an organizational culture that supports knowledge sharing mechanisms (Cabrera, 2002, p. 696). The literatures presented in this part clearly show how culture, trust and motivation can influence individuals inside the organization. We believe this can result on influencing the interpersonal knowledge sharing process in innovation supporting firm. The study clearly highlights the factors that affect interpersonal knowledge sharing process.

2.6 Knowledge Management and Innovation supporting firms

Some studies has examined that knowledge management of a firm can determine the performance of innovation supporting firms in a way how they communicate among the employees/actors of the firm Kiessling et al., (2009, p. 120), Disterrer (2001, P.6). However, consider that employee’s level of transferring knowledge can be determined by their level of motivation which is connected with the previous studies of Nonaka (1994). Young firms always need the support of other firms to boost their job creation, improve labor capital market and enhance their creativity (Wah, 1999, p. 20). The articles of Wah (1999) also reveal that innovation supporting firms will foster economic recovery to those firms that suffers from lack of knowledge and expertise. Although there is evidence that shows the positive relationship of knowledge management and innovation supporting firms, there is no studies that address the relationship of interpersonal knowledge sharing process and innovation supporting firm. The study made by Reid, (2003, p. 42) examined that work environment and its participants perception will impact the flow of knowledge in that organization. This impact will be different from organization to organization depending by the actors involved in the firm.

Innovation supporting firm are those firms that nurture and support new business ideas in order to encourage entrepreneurs. It is believed that every successful idea has a challenge of
commercialization and competition from similar products/services in the existing market (Hayderbreck, Klofsten & Maier, 2002, P.1). Innovation supportive firms could render a conceptual or infrastructural support for entrepreneurs on how to introduce the business idea into the market. As highlighted by Kanten (1985, p. 47), innovation supporting firm point four different characteristics that account for the special characteristics of management requirements: uncertainty, knowledge-intensively, competition and cross-boundary. There are main challenges identified by the authors of the article where it needs focus of entrepreneurs. Some of the basic features of entrepreneurs, which are recommended by Kanten, (1985, p. 1) to overcome the above challenges are: visionary leadership, flexible planning, team stability/continuity and inter-functional cooperation among different organizational units. Similarly, as argued by Hayderbreck et al., (2002, p. 1), newly established technology based firms are promoters of future economic growth. Therefore, it is very important to satisfy their needs by different innovation supporting mechanism both in type of service and quality of delivery. The Article of Kanten (1985) gives good impression about the limitation of innovation supporting firms by presenting their challenges. In fact the relevancy of this articles with that of interpersonal knowledge sharing is weak and unassessed.

The view of innovation supporting firm focuses on the values of firm’s intangible resource and recommends the success depends on the capacity of integration of the different individual’s knowledge and functional units across the organizational boundaries. According to Yang, (2012, p. 985) a firm’s knowledge management capabilities determine its product development, the mechanisms of knowledge transfer and sharing and interpersonal knowledge sharing process.

As it is highlighted by Nonaka & Takeuchi, (1995, p. 1), the Innovation supporting of firms is built on collective knowledge sharing activities and frequent interaction of different individuals involved in the firm (Gold et al., 2001, p. 185). Mobility of personnel among the different departments affects the interpersonal knowledge sharing process and their interaction inside the firm. Similarly, it has been discussed that mobility of individuals can render potentially high value of knowledge to organization (Herrera et al., 2009, p. 510). Previous studies highlighted that knowledge management is antecedents of innovation supporting firm; knowledge acquisition will positively affect the firms though none of them has explicitly examined the relationship between the two concepts (Sinkula, et al., 1997, p. 305). The process of innovation supporting mechanism is highly dependent on knowledge whereas the management of knowledge and human capital is critical for running any innovation supporting firms (Gloet & Terziovski, 2004, p. 402). The studies conducted among the relationship of knowledge management and innovation supporting firms turned out to show that both of them has a direct relationships. Firms that engage in supporting innovation cannot conduct their work without accessing knowledge; however none of the studies clearly highlights the direct relationship of innovation supporting firm and interpersonal knowledge sharing process.

A considerable research made by Plessis, (2007, p. 23) claims, knowledge management can be applied in innovation supporting firms in three different ways. The first basic driver of knowledge management in innovation supporting firm is to create, maintain, built competitive advantage through utilization of knowledge and collaborative process. The second driver of role of knowledge management is used as a resource to reduce complexity in innovation supporting process which shows that supporting innovation is more likely dependence in availability of knowledge inside organization. The third driver of applying knowledge management is to the benefit of the innovation supporting firm in order to integrate knowledge inside and outside the organization. The articles of Plessis (2007) conclude that
both knowledge and innovation supporting firm has an effect among each other. Another study made by Cavusgil, Calantone & Zhao, (2003, p. 7), highlighted that the main role that knowledge management plays is enabling the sharing and codification of tacit knowledge as it is critical for organizations ability to share interpersonal knowledge sharing. Knowledge management plays an important role in regards to explicit knowledge through a significant contribution as tacit knowledge in the innovation process. The final and main role of knowledge management in innovation supporting firm is related to enabling collaboration. The ability of customers, suppliers and employees to form knowledge communities across organizational boundaries. Most of the articles presented in this section have good strength by covering the limitation of research in the previous studies which gives an insight about the relationship of knowledge and innovation supporting firm. As a result it helps us to design our interview guidelines and to learn more about the research gap.

2.7 Communication

According to the analysis of Mazzei, (2010, p. 223), there are two types of communication namely; internal communication; effective interaction among the participants within organization and external communication which is an exchange of information with groups, other institutions outside the formal structure. However, internal communication play important role in day-to-day operation of firms which results the proper functioning of the company (David, 2011, p. 72). It can be performed in the form of meetings, and different coordination activities. Most importantly, modern technologies such as wikis and share point integrate internal communication which facilitates to fill the gaps of communication within various organizations. Successful internal communication can result in effective image of the company which can be delivered through information exchange, achieving communication, and educating the workers to share information about their companies (Mazzie, 2010, p. 221). In the argument of Abrams, Cross, Lesser & Levin, (2003, p. 64) even though communication among the actors involved in an organization is very important for better effectiveness of the results. The role of personalization interaction in sharing knowledge should be more known in innovation supporting firms. In addition, informal network of actors inside innovation supporting firms are the primary means by which employees find information, solve complex problems and shared their knowledge to others (Abram et al., 2003, p. 64). The good part of Mazze (2010) article was that, it suggests the main ways of interpersonal knowledge transfer in a formal or informal way which could be good input to learn about our research gap. The limitation of the articles could be the lack of relevance with innovation supporting firm where this study focuses.

Gorse & Emmitt (2009, p. 983), pointed out that several authors agree and explain that communication plays an important role in the process of knowledge sharing process among different units. This implies that both formal and informal communication helps for the effective flow of information. Fischbach & Gloor (2009, p.141) consider formal communication as skeleton of the company, whereas the nervous system of the organization can be built by the help of informal communication. The common way of formal communication is face-to-face interaction which usually occurs by meetings of various types of teams whereas informal communication is more likely occur by informal discussion in the work place that allow individuals to share knowledge. The emergence of computer-mediated communication technologies (CMC) highly influence the modern communication pattern. As a result informal communication is changed from face-to-face interaction to significant use of modern computer technologies. The article of Fischbach & Gloor (2009) shift the discussion in to different aspect where it scrutinize and compare the importance of formal vs informal communication to transfer knowledge inside a firm which was vital for our empirical in order
to learn about innovation supporting firm. Smith (2001, p. 315) drawn that interpersonal knowledge sharing process of a firm could be influenced by the communication skills of its employees.

Swart and Kinnie (2003, p. 70) noted that, as far as knowledge is concerned, it is mostly exchanged by informal communication than formal although it is different in the way that circulates which is based on the type and structure of the organization. It is highly important to consider the structure of the organization because it has significant influence on the ability of work groups, employees and the whole project member on delivering performances which is based on the speed of information.

The findings of Davenport & Prusak, (1998, p. 15) indicate that informal communication network among staff members are strategically important in the current business context. But to do this, it is important to consider some important issues. For instance, strengths organizational competencies, creating eco-system to encourage spontaneous process of information exchange in all level of the organization etc. Zhao & Rosson (2009, p. 243) advocates informal communication consists unplanned conversation so, it played important role in the communication effectiveness of any firms. For example, coordination of group activities and social function like transmitting of feeling and common grounds among employees inside the organization can be one aspect. The articles presented in this section advocate the importance of informal communication than formal to transfer interpersonal knowledge sharing to others. In fact there are no evidences from the articles if informal communication could be an effective mechanism of communication across diverse organizations including innovation supporting firms.

2.7.1 Interpersonal/personalization knowledge sharing/transfer

Considerable research made by Almeida & Kogut, (1999, p. 905) illustrates that transferring knowledge via personal movement can be effective especially when it comes to interpersonal knowledge transfer. Besides that personal movement between organizations also facilitates knowledge transfer and sharing among individuals. Transferring knowledge through personal movement enables firms to alter knowledge and transfer tacit as well as explicit knowledge. Sometimes it’s difficult to express tacit knowledge in explicit mechanism such as documents and reports. Personal movement can transfer interpersonal knowledge which is difficult to transfer by other modern mechanisms like memos, diagrams, and descriptions and sometimes hired consultants. For these reasons, endorsed personal rotation perceived as knowledge mechanism (Almeida & Kogut, 1999, p. 905). A similar study made by Gruenfeld, Martorana & Fan, (2000, p. 45) turned out in different outcome by showing rotating members between groups which did not result in knowledge transfer except some indirect influence on their original group. This study also shows that groups that share the same social identity seems to transfer knowledge to other groups during the job rotation process. Social identity is an important factor that likely to affect the transfer of knowledge between groups (Kane, Argote & Livine, 2004, p. 56). In the similar argument of Reid, (2004, p. 43) personalization knowledge transfer includes the social interaction of culture, exchange of employees knowledge, experience and skills through the whole organization. The study clearly highlights the role of personalization knowledge transfer could be different from organization to organization due to the disparity of personalization knowledge strategy in different firms. In the study of Lin (2006, p. 30) the effects of personalization knowledge transfer inside innovation supporting firms is unknown by the fact that the service of the firms are different managerial and economic spectrum.
The articles of Almeida & Kogut (1999) and Mortorana (2000) have different outcomes about the role of tacit vs explicit knowledge for interpersonal knowledge/transfer process. Despite that, they have a high connection with the previous researchers on the study area by claiming that tacit knowledge is hard to externalize, as a result they recommended personal movement as a solution in order to transfer knowledge among individuals. Other strong sides of the articles was that, they point out the mechanism of interpersonal knowledge transfer can be improved by personal movement or by using modern technological mechanisms.

In the research done by Grover & Davenport, (2001, p. 8) states that personalization (interpersonal) approach is the primary mode of knowledge transfer which is achieved through direct interaction among people. It is important for managers to make explicit connection between their company’s competitive strategy and how they use knowledge in order to support it. In some companies knowledge is carefully codified and stored in databases (computer) so that anyone in the company can access and use it. This kind of strategy is codification strategy. On the other hand in personalization strategy, knowledge is closely tied to the person who developed it and is shared mainly through direct person-to-person interaction. The main purpose of computers at such companies is to help people communicate knowledge, not to store it. More importantly, company’s choice of strategy is depend in the way the company serves its clients, economics of its business and the people it hires (Hansen et al., 1999, p. 107). The article of Grover & Davenport (2001) clearly argued in their conclusion that personalization/interpersonal knowledge transfer process can be achieved by direct interaction of people. The weakness of the article was related with the lack of specifying the type of firms the study refers. Wah (1999, P. 27) developed a model that clearly distinguishes personalization and codification knowledge transfer as follows:

![Fig 3. The difference of Personalization and codification strategy (Wah, 1999, P.20).](image)

As we see clearly, the main differences of personalization and codification strategy is noted by the author. The main mechanism of knowledge transfer in personalization strategy is by the interaction of humans (employees of the firm), whereas codification strategy uses IT application and related technologies to transfer/share knowledge through others. Hansen (2004, p. 114) traces that, the personalization knowledge transfer is regarded as a utilization of personal contacts. In this strategy technology like computers is not used to store knowledge but to provide possibilities for actors in the company. The best way of sharing/transferring interpersonal knowledge in innovation supporting firms are to integrate both
personalization and codification strategy as suggested by (Wah, 1999, p. 20). Another solution to a problem is reached by communication between different organizational actors. However, this form of knowledge sharing is more costly in time and in pecuniary resources. Particularly, the process cannot be systematized which makes hard to make more efficient. On the other hand firms applying this strategy can most often charge more for their services. For firms with a personalization approach, more informal information channels are beneficial. These could be social relationship; build of trust, friendship and respect etc. As far as IT is concerned, it has a different role here in comparison to the codification approach as it is primarily used for direct communication (Hansen et al., 1999, p. 109). In personalization Approach of knowledge transfer, dialogue is an important tool for knowledge sharing where many ideas are brought forth through dialogue (Ballantyne, 2004, p. 117). This also strengthens the relationship between individuals which is an important antecedent for organizational learning.

According to the assessment of Mäkelä & Brewster, (2009, p. 593) there is a growing recognition of the importance of interpersonal knowledge sharing process as a good conduct of knowledge flow in innovation supporting firm. This interaction among employees during their daily organizational routines is fundamental mechanism to the way of interpersonal knowledge sharing process. Such kind of inter-unit flow of knowledge is made among employees, managers, or group of managers. In the argument of Mäkelä & Brewster, (2009, p. 594), interpersonal communication is significant to firms because it enables two-way communication to take place in daily forms operation unlike the more formal and detached mechanism such as meetings, top-management visits, internal conference and forums. Moreover, the personal interaction takes place in different context since the daily work is carried out in various working environments. The article of Mäkelä & Brewster (2009) has strong connection with the previous studies about the subject area, e.g Hansen et al, (1999). In general, most of the articles presented in this section show similarity with that of others. However, we found out that, previous studies that deal about innovation supporting firm are limited.
2.8 Summary of Theories

In order to make a clear understanding of the theories in related to the research area, we have reviewed some of literatures that we highlight in this Research. We have used a summary of the following articles and journals in the theoretical part; by doing that it helps the reader to distinguish the summary of the different resources we have come through to better understand the research area. The following table is written in accordance to the title of the theories, authors, year of publication and key findings (summaries).

<table>
<thead>
<tr>
<th>SN</th>
<th>Theories</th>
<th>Title Of Literatures</th>
<th>Key Concepts</th>
<th>Authors</th>
<th>Year</th>
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<tbody>
<tr>
<td></td>
<td></td>
<td>Creation of knowledge management system</td>
<td>Two types of knowledge; organizational knowledge and individual knowledge that possess the nature of either tacit or explicit.</td>
<td>Bakker et al</td>
<td>2006</td>
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<tr>
<td>2</td>
<td>Knowledge sharing</td>
<td>Knowledge sharing: A review and directions for future research</td>
<td>To achieve advantage company emphasize on recruiting staff with specific knowledge, skills, or abilities, but also on sharing knowledge between experts.</td>
<td>Wang &amp; Noe</td>
<td>2010</td>
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<td></td>
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<td>The search-transfer problem: The role of weak ties in sharing knowledge across organization subunits</td>
<td>Two high- ways of managing knowledge sharing within an organization; codification and personalization.</td>
<td>Hansen et al</td>
<td>1999</td>
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<td>Knowledge sharing In inter-organizational product development teams: The effect of formal and informal socialization mechanisms</td>
<td>Knowledge sharing is the outcome of informal and formal communication.</td>
<td>Lawson, B., Petersen, J., Causins., D, Handfield., B.</td>
<td>2009</td>
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<tr>
<td>What is Organizational Knowledge?</td>
<td>Knowledge dissemination increases through knowledge sharing and knowledge can be either shared in formal or informal way.</td>
<td>Tsoukas, H. &amp; Vladimirou, E.</td>
<td>2001</td>
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<td>Managing organizational knowledge as a strategic asset.</td>
<td>Intention of knowledge sharing is to enhance the organizational knowledge through effective communication and networking channels. Four main characteristics of Organizational knowledge (Inimitable, Rare, Valuable and Non-substitutable).</td>
<td>Smith, R.D., and Bollinger, A.S.</td>
<td>2001</td>
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<td><strong>Knowledge Transfer</strong></td>
<td>Knowledge in the firm, combinative capabilities and the replication of technology</td>
<td>Ability to transfer knowledge represents a distinct source of competitive advantages and informal interpersonal network play a significant role in knowledge transfer process.</td>
<td>Kogut, B., Zander, U.</td>
<td>1992</td>
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<td>Transfer of leaning: from a modern multidisciplinary perspective.</td>
<td>Five forms of common knowledge transfer; namely; serial knowledge transfer; near transfer; Far transfer; Strategic transfer and Expert transfer.</td>
<td>Mestre, J.</td>
<td>2005</td>
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<td>Knowledge transfer between groups via personnel rotation: Effects of social identity and knowledge quality</td>
<td>Knowledge transfer between groups is important as organizations become global and use groups to complete work. Because it has direct effects on performance, it contributes to the competitiveness of organizations.</td>
<td>Kane, A., Argote, L., Livine, J.</td>
<td>2005</td>
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<td>No.</td>
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<td>35</td>
<td>Knowledge Management</td>
<td>Knowledge transfer has five essential components that create the environment for knowledge sharing; sender; Encoder; Channel; Decoder; and Receiver.</td>
<td>Desouza, K., Paquette, S. 2011</td>
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<td>4</td>
<td>Network structure and network transfer: The effect of cohesion and range.</td>
<td>The main factors that affect knowledge transfer are: strong interpersonal connection and social cohesion.</td>
<td>McEvily, B., Reagans, B. 2003</td>
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<td>4.</td>
<td>Knowledge Management</td>
<td>Knowledge Management: The fundamental component for delivery of Quality</td>
<td>Stewart, D. &amp; Waddell, D. 2008</td>
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<td></td>
<td>Understanding work and knowledge from the knowledge In-Practice perspective</td>
<td>Dynamic knowledge-driven environment require paying close adherence to quality in order to satisfy demand and stay ahead of the competition. KM and the Quality Management is running parallel to ensure quality for competitive advantage.</td>
<td>Moyer, D., Hall, L., Hall, M., Ramachandran, I. 2013</td>
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<td></td>
<td>Harnessing value in knowledge management for performance in buyer–supplier collaboration</td>
<td>Knowledge-management processes are positively related to the performance of the manufacturers in a collaborative buyer–supplier relationship.</td>
<td>Jie Yang 2012</td>
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<td>5.</td>
<td>Knowledge Management and Innovation supporting firm</td>
<td>Tacit knowledge transfer and firm innovation capability</td>
<td>Cavusgil, S.T., Calantone, R.J. and Zhao, Y. 2003</td>
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<tr>
<td>Title</td>
<td>Abstract</td>
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<td>Knowledge Management and Innovation performance</td>
<td>Knowledge management process more effectively in order to contribute innovation supporting firm. Innovation capacity including knowledge creation, knowledge organization, Knowledge dissemination and knowledge application.</td>
<td>Shadi Ebrahimi Mehrabani and Maziar Shajari</td>
<td>2012</td>
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<td>Exploring the relationship between knowledge management practices and innovation performance.</td>
<td>The process of innovation support depends heavily on knowledge, and the management of knowledge and human capital. Integrated approach to KM in order to maximize innovation performance leading to competitive advantage. KM contributes to innovation support when a Simultaneous approach of “soft HRM practices” and “hard IT practices” are implemented.</td>
<td>Marianne Gloet and Mile´ Terziovski</td>
<td>2004</td>
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<td>How does knowledge management influence innovation and competitiveness?</td>
<td>Knowledge workers can contribute to obtain better results through adding value. Measure the degree of KM effectiveness to see the influence.</td>
<td>Alberto Carneiro</td>
<td>2000</td>
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<td>Examining the link between knowledge management practices and types of innovation.</td>
<td>Knowledge acquisition and responsiveness to knowledge are more important for innovation support than knowledge dissemination.</td>
<td>Darroch, J. &amp; McNaughton, R.</td>
<td>2002</td>
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<td>The role of knowledge management in Innovation support</td>
<td>Increased by growth in the amount of knowledge available to organizations to deal with Complexity of innovation support. KM facilitates collaboration in the innovation supporting process. KM ensures the availability and accessibility of</td>
<td>Plessis, M.</td>
<td>2007</td>
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<td>6. <strong>Knowledge Management system</strong></td>
<td>Creation of Knowledge Management system.</td>
<td>Knowledge management team prepare KM blueprint for building and incrementally improving a Knowledge Management system. Collaborative KMS should grow and adapts to changing business needs.</td>
<td>C.S., G &amp; P.A., J</td>
<td>2011</td>
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<td>7. <strong>Personalization approach:</strong></td>
<td>General Perspectives on Knowledge Management.</td>
<td>Personalization approaches is the primary mode of knowledge transfer is direct interaction among people.</td>
<td>Grover, V., &amp; Davenport, T. H.</td>
<td>2001</td>
<td></td>
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<td>Knowledge Sharing and Knowledge Management System Avoidance: The Role of Knowledge Type and the Social Network in Bypassing an Organizational Knowledge</td>
<td>Knowledge complexity and knowledge teachability would increase the likelihood of finding value in person-to-person knowledge transfer. In term of social network, individuals with larger networks tended to perceive more value in the person-to person transfer of knowledge than those</td>
<td>Brown, S., Dennis, A., Burley,D., Arling, P.</td>
<td>2013</td>
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<td></td>
<td>Management System</td>
<td>with smaller networks.</td>
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<td>8.</td>
<td><strong>Communication</strong></td>
<td>Corporate communication</td>
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<td></td>
<td>Two types of communication in an organization: internal and external communication.</td>
<td>Mazzei, A. . 2010</td>
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<td>7.</td>
<td><strong>Interpersonal Communication</strong></td>
<td>Localization of knowledge and the mobility of engineers in regional networks</td>
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<td></td>
<td>Transferring knowledge via personal movement can be effective.</td>
<td>Almeida, P., &amp; Kogut, B. 1999</td>
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2.9 Implication of the Theories in related to the Research Gap

In the above table, we have summarized the main theories discussed in the literature part. We believe, it gives an overview how the concepts are interrelated each other. Even though the concepts seem very general, it is difficult to focus only in interpersonal knowledge sharing/transfer without studying knowledge management. The summary of the table’s shows that the study of knowledge management and knowledge sharing has been studied since the late 90’s which was considered as important organizational resources. Since the information (knowledge) age requires quite sophisticated and dynamic source of information, organizations should need to study more about how interpersonal knowledge can be transferred/shared inside innovation supporting firm. We have learned from the literatures that knowledge creation without considering how to apply inside the firm is meaningless. We also noticed from the previous literatures that, there are two-ways of managing knowledge sharing/transfer which are: codification & personalization. The personalization approach/person-to-person communication plays an important role to maintain the flow of knowledge sharing/transfer in many complex organization (Reide, 2004, p. 43). However there is no study exist that explores the role of personalization/interpersonal knowledge sharing/transfer in innovation supporting firm (Brown et al., 2013, p. 2022). Therefore, as the main research gap of this study is to explore more about the characteristics of the interpersonal knowledge sharing process. The following model shows how the previous studies/theories contribute to the study area. Moreover, it draws in how this study could contribute to fill the research gap by answering the research questions.

**Figure 4. The relationship of main theories with the research gap**

Based on the above model, we examined the contemporary studies of different theories and their relationship with the research gap. In order to explain the components of the model, it is important to know the relationship of the six elements and how they can contribute more to the study area. Knowledge has been discussed as important organizational competitive advantage and strategic asset in the process of interpersonal knowledge sharing/transfer in
innovation supporting firm. As it is mentioned by (Nonaka, 1999, p. 20) the concepts of knowledge sharing, knowledge transfer and interpersonal knowledge sharing process are connected to each other. Knowledge could be either individual or organizational where both of them has a significant influence in the mechanism of interpersonal knowledge sharing/transfer process according the analysis of the theories. The next element of the process is knowledge management which includes: creating knowledge, taking the knowledge, keeping the knowledge, sharing the knowledge with others and finally application of knowledge in a desired level. This means interpersonal knowledge/sharing will be highly dependent on how innovation supporting firms manage their knowledge. Knowledge transfer becomes effective after the creation of good knowledge and its management skills. This part portrays the type of knowledge that can involve in many organizations which can be classified as tacit or non-codified knowledge. In addition, it has been discussed that tacit knowledge is difficult to externalize to others, whereas codified knowledge is set out to be transferred/shared in innovation supporting firm. As knowledge cannot be shared before creation, we discuss about knowledge sharing and its characteristics in the process of interpersonal knowledge sharing process. One of the components of the above theories is communication. Communication plays a significant role in the process of interpersonal knowledge sharing/transfer in innovation supporting firm. Moreover, the main mechanism of knowledge sharing/process is communicated by different aspects of communication. Even though, there is a growing inclination of studying about managing knowledge and its advantages. We learnt that there is a need of further study on the role of interpersonal (personalization) knowledge sharing/transfer in innovation supporting firm. Therefore, the upcoming chapters have to be expected to fill the research gap and contribute its role in the study area.
Chapter 3: Methodology

This section highlights the chosen methodologies that are applied in this research writing process. It contains the practical procedures to increase knowledge and to further explore the subject area. In addition, the section argued about the quality of the research considered during the data collection process.

3.1 Preconception

It is highly believed that the pre-conceptions of the researcher influenced the outcome of the research. Crosweel, (2009, p. 20) highlighted that the researcher previous experience can affect the process of research design. It further recommended for many researchers that good interest of the research area should be important before involving in the process of research writing as noted by (Fisher, 2007, p. 37). We agreed with the arguments of Crosweel (2009) & Fischer (2007) since we were influenced to write about this thesis based on our previous experience; however our preconception was more than the claims of the articles. As noted by the above researchers, our preconception has been influenced and developed to study more about the subject area after the prior engagement of the researchers in a similar research writing process. During the first year of master’s thesis, Hailemicheal was writing his thesis about the role of communication in managing project. Similarly, the main theory of the study was knowledge management, because of that the researchers want to investigate and learn more about the concept. After reading many literatures, we realized about the limitation of research in the area of interpersonal knowledge sharing process in innovation supporting firm. On the other hand, Arjun has learnt important concepts of knowledge management during his course “Perspectives of management and strategy”, having both our personal experiences lead us to write our second year master’s thesis about the role of knowledge management & transfer in Innovation supportive firm. However, our preconception is not only dependent only on our previous experience, it also dependent on our future aspects to establish a good network with Uminova Innovation. During the search of literatures which was after defining our research area, we had noticed that there is a research in the aspects of interpersonal/personalization knowledge sharing process, so specifically aim to explore the mechanism of knowledge sharing in innovation supporting firm. In addition, we developed an interest to base the study under the context of Uminova Innovation since we were both were involved in venture cup competition in 2011. This inspire both of us to learn more about innovation supporting firms as we have taken similar courses and motivational speeches of entrepreneurs how they develop their own business. Therefore, we thought to create a good network with the firm as we both are pursuing to start our own company in the near future. We had thought that it will give an advantage for both researchers, a good awareness about the organization and to develop a positive relationship with the company by conducting this research in Uminova Innovation. Therefore, our pre-conception of the study comes from our previous experience of the study area in our previous studies here in Umeå University. In fact, we developed the current topic of our research after many discussions and dialogues in a progressive ways. Our choice of preconception is very similar to the Gummesson (2000, p. 58) which states that having a good amount of pre-understanding of the topic in question so that the researcher does not have to spend considerable time gathering basic information. Thus, we believe that our preconception will complement our understanding through an open mind to acquire new knowledge and experience.

3.2 Research Philosophy

According to Saunders, Lewis & Thornhill (2012, p. 128), the selected research philosophy adopted for a certain research can determine the assumption on how the research plans has to be conducted which also means it can impact the research methods and strategy you choose to
undertake the study. At the same time the research philosophy which is chosen to follow will be influenced by practical consideration. As noted by Saunder et al., (2012, p. 108) most of the mistakes comes when a researcher intends to think that one research philosophy is better than others. A research philosophy should be based on achieving different things. The philosophy should be designed mainly seeking to answer the research question or fulfill the purposes. Based on the above theory, we had designed the research philosophy and methodological choices in a way to answer our research question which was to increase knowledge about interpersonal knowledge sharing/transfer process in Innovation supporting firm. The two important developments we have noticed while we research about the study area were as follows: First, Interpersonal knowledge transfer can be either conducted by either codification or personalization approach, depending by the strategy of the firms. Secondly, even though knowledge can be able to acquire and managed by many organization, it is difficult to share and transfer it to others, which makes the mechanism very challenging especially in the case of innovation supporting firm.

The different research philosophies can help to view different assumption about the way in which the world works. Furthermore, the chosen research philosophy can able to impact the type of studies and outcomes the researcher follows (Saunder et al., 2012.0. 108). Since our main purpose is to enrich the existing theory by developing new knowledge about the mechanisms of interpersonal knowledge sharing/transfer process, we were in a way of developing new stream of knowledge because we are answering a specific phenomenon that is not well-addressed by existing literature. There are two types of research philosophy; ontology and epistemology, where the former philosophizes about the nature of reality and the latter is focused on the philosophy of what we should know (Raadschelders, 2011, p. 918). Each type of philosophies influences the research in the way how the process is conducted. Ontology is concerned about the nature of reality in a way the researcher view the world and its commitments in a certain view (Shiu , Hair, Bush & Ortinau., 2009, p. 225). There are two-aspects of ontology which could be either objectivism or subjectivism; objectivism is a position by which social entities exist independently outside social actors. This view focuses on the structural aspects of organization and considers similar approach towards the management. Similarly, subjectivism assumes that social phenomena are created from the perception of social actors. In our research social actors are employees (respondents) who place different interpretations on the personalization/interpersonal knowledge sharing in innovation supporting firm. Saunder et al., (2012. P. 108) highlighted that subjectivism sometimes associated with social constructionism which views reality as socially constructed entity in many situations. Epistemology assumes acceptable knowledge in a certain field of study which could be divided as positivism (objectivism) and interpretivism. In the argument of Saunder et al., (2012, p. 134) positivism is a philosophy of natural science which collects data by observable reality or the research is conducted in a value-free way. Moreover, this philosophy considers the world as external and objective so that the observer will be independent (Carsson, Gilmore, Perry & Gronhaug., 2001, p. 10). Interpretivism considers humans as social actors and interprets everyday based on the social roles of humans.

As the main target of this study aims to increase knowledge about interpersonal knowledge sharing/transfer process, good selections of methods are significant to reach the goal. The thesis investigates the perception of actors involved inside Uminova Innovation regarding their view about interpersonal knowledge sharing process. From the ontological point of view, we have assumed social constructionism which helps us to construct knowledge by subjective interpretation of social actors (employees). That is why as a researcher we try to understand subjective reality of managers and employees in order to understand their motives, action and intention in a way that is meaningful. In this regard, we agree with Ponterotto (2005, p. 130)
also who believes that there are multiple constructed realities rather than a single true reality. This implies that it is subjective in nature and is influenced by the context of situation therefore, in our research work we consider thoroughly the individual’s experience, perceptions, the working environment, and the interaction among individuals. We also follow this philosophy by the fact that social phenomena can be developed gradually by the communication of social actors (Bryman & Bell, 2012, p. 33). From the point of epistemology, we assumed Interpretivist approach since the study is conducted among employees and managers of Uminova Innovation. That means we need to discover the meanings that are subjectively imposed by them on the phenomenon of interpersonal knowledge sharing process. Similarly, in order to explore the subjective meanings that motivate social actors (employees and manager) it is important to understand these actions which we can only ‘know’ through understanding the response of participants which were employees/managers of Uminova Innovation (Kent, 2007; Saunders et al., 2012, p. 108). We believe, it is suitable to use the subjective interpretation and roles of the social actors involved in the organization (Saunders et al., 2012, p. 108). The selected methodological choices can able to learn more about the perception of individuals about the interpersonal role of knowledge sharing process in the organization, as long as it helped us to increase knowledge about interpersonal knowledge sharing process in Innovation supporting firm.

3.3 Research approach

Drawing from Sauder et al., (2012, p. 108), if the research is developed from literatures develop theory and assume hypothesis; the research could be categorized as deductive approach. When the research assumes by collecting data’s to generate or built theory then it is an inductive approach. Finally, when you combine both inductive and deductive to generate a new or modify an existing theory which is continuously testing through additional data result it is called abductive approach. In our research paper, we commenced our research by collecting relevant data that we can consumed for the study as a theory, these developed theory will help us to either to consolidate the previous ones or develop new theories. Hence the collected theoretical frameworks built in order to contribute for the data collection process. This study follows an inductive approach which helps the researcher to analyze the collected data’s in a proper way (Saunders et al., 2012, p. 145). We believe inductive approach enables us to learn more deeply about the role of interpersonal knowledge sharing/transfer in innovation supporting firm since there is a limitation of research in the area. Furthermore the collected data’s help us to develop a new theory when it is necessary. It also noted by David & Sutton (2011, p.83) that inductive approach helps to produce effective theory with the aim of examining the research field. Therefore, we believed this research could help us to increase knowledge about the mechanism of knowledge sharing/transfer in innovation supporting firm. Drawing from the arguments of Perri & Bellany (2012, p. 78), inductive research can be assumed when there is limitation of literatures in the research area which was very important to learn more about interpersonal knowledge sharing/transfer process. Case study was effective to understand the context of a research area as the study had been undertaken among employees and managers of Uminova Innovation. In this study, case study had been applied in order to collect relevant information from certain target group and increase the reliability and validity of the research (David & Sutton , 2011, p. 83). In addition, we assume case study because, it is effective when the question is designed as ‘How’ or ‘Why in the process of data collection process (Rowley, 2002, p. 16). When it comes to selecting the samples of the study, we had chosen Judgmental sampling (purposive sampling) which helps us to pin point the right respondents among the whole employees/managers. That means the selected respondents should have a good knowledge about the knowledge management system (especially interpersonal knowledge sharing and knowledge transfer inside the firm). The
selected respondents were involved in an activity of knowledge transfer, knowledge flow and interaction of employee among each other. Hence, it is argued by Yin, (1993, p. 238) that it could give a good source of information when it is applied among limited number of people. The selection of firm chosen in the category of innovation supporting firm which was also mentioned in the preconception as we have personal exposure with the firm in our previous studies. In addition, our study is purely about the innovation supporting firm rather than only service industries. Most importantly, we were both involved in venture cup competition in 2011 and during this competition we came to know more about this firm which makes us easier to re-initiate our previous exposure. Similarly, the selected firms is engaged in providing expertise in consulting firm which means that we narrowed down our research topic by selecting expertise firm which highly share and transfer interpersonal knowledge.

The main purpose of thesis is to explore the mechanisms of knowledge transfer/sharing system in innovation supporting firms. From our literature review, we realized that many researchers have analyzed the impact of both codified and personalized knowledge transfer system in other firms. According to them both models have their own benefits, and many companies maintain both kind of system for knowledge sharing/transfer process. However, at the same time, some writers have argued that there is no fixed model for sharing/transfer interpersonal knowledge. We examined what our thesis has considered whether the innovation supporting firm (Uminova Innovation) follow the same pattern as other companies or not.

3.4 Research Strategy
According to the arguments of Saunder et al., (2012, p. 161), there are three types of research strategy. Qualitative research is a type of research that is related with non-numeric data, it is a process of data collection process where the result generates non-quantifiable data. Whereas, quantitative research approach applied when the data collection process generates or uses numerical data. The third research strategy noted is multiple methods where a researcher mixes both qualitative and quantitative at the same time. In our research thesis we had chose qualitative research strategy because it helps us to study the research area more deeply. Furthermore, as the study designed to collect non-numeric results it had been better possible option to collect the subjective views of respondents. Since, the study aspires to explore the mechanism of knowledge sharing/transfer specifically to increase knowledge about interpersonal knowledge sharing process, we believe qualitative research which supported by semi-structured interview could help us to learn the subjective views of actors which in our case are the employees/ managers of Uminova innovation. The study also assumes an exploratory study where it could able the researcher to conduct an in-depth interview to collect the relevant sources of information from the selected samples (Saunber et al., 2012, p. 377). Furthermore, in order to explore about the mechanism of knowledge sharing/transfer exploratory study helps us to collects in-depth data from the sample of respondents.

3.5 Types of data used
According to Saunber et al., (2012, p. 161), a researcher can get a data from both primary and secondary source of data. Primary data represents ‘firsthand’ raw data which enables the researcher to get information that has not manipulated (Shiu et al., 2009, p. 63). As we have already discussed in our problem background section that there is a limitation of existed study about personalization knowledge sharing/transfer in innovation supporting firms. So, we have chosen primary data to support our study as it provides more authenticity to the results than secondary data. Similarly, we followed semi-structured interview and open-ended questionnaire to collect data for our study. Since we have followed qualitative method, these
two methods of data collection were more suitable than any other method. Furthermore, the nature of our study forces us to collect the personal opinion of employees on knowledge transfer system which could only be known through well-structured interviews. Whereas, secondary data fills the gap from different sources which is not covered by primary sources. In addition to this argument, we had used secondary data to build the theory chapter and the background of the study. Similarly, we had used six books that deals about knowledge management, knowledge sharing and knowledge transfer which helps us to study more about the research area. Besides that, we had used Umeå University library search engine to find relevant articles, journal, newspapers, dissertations and annual reports in order to construct this research. We also used Uminova Innovation website to learn about the company and its employees before conducting the data collection process.

3.6 Data Collection Method
As discussed in the preconception section, we had chosen the firm Uminova Innovation to conduct this research because of our first exposure with the firm in 2011 during the venture cup competition. Consequently, we decided to based our case study in this firm after finding our research gap (lack of research in the area of interpersonal knowledge sharing process). Since, we had followed qualitative research method; semi-structured interview and open-ended questionnaire was more appropriate in the data collection process. It is important to know the fact that before we began writing our thesis; we got the willingness of Uminova Innovation’s employees to make sure that they could cooperate with the interview process. Based on the purposive sampling technique, we had chosen the right candidates for the interview process; for example, employees who have had huge exposure with the knowledge sharing and transfer process. When it comes to the respondent’s selection process, we had chosen five employees out of the total twenty employees of the firm based on purposive sampling those who works with communication, administrative, business coaching from each section of the firm in order to get details of data from all departments. Most importantly, the interview guide is made based on the theories discussed in the second chapter. The semi-structure interviews covered information relating to the role of knowledge management and knowledge transfer in an innovation supporting firm.

In order to learn the real-life information and experience of the interpersonal knowledge sharing/transfer process, we had tried to avoid the ambiguous and complex question. The questionnaires and the title of the thesis were sent earlier via email to the potential respondents. It should be no surprise, given our interest in the topic earned us good reception from respondents. Up to the point we have establish such atmosphere which was conducive for us to ask them questions that they willingly like to answered. It is obvious that, this enabled us to go into in-depth interview. In-depth interview more often refers to both semi-structured and unstructured interview or simply sometimes refers as an unstructured interview. An In-depth interview is designed especially to expose the underlying motives of the interviewee's attitudes, behavior, and perceptions (Bryman & Bell, 2011, p. 204). After the short presentation of ourselves, we began our interview process with more general question and informal conversations. For example, introduction of the topic of the research, bringing the focus over to the respondent’s background, role and their position in the organization. As a result, respondents feel comfortable during the interview process although some questions that perceived as an inappropriate by the respondent were asked as also highlighted by Trost (2005, p.64). However, we did inform all respondents that if the questions made them feel uncomfortable (e.g. something that was sensitive to the respondents or the firm) then in that case they could have right to skip the questions. Similarly, in case of
difficulties of understanding some specific question; we did offer them a freedom to ask so that we can made them understandable. In some of the questions, we made an interpretation for the question that was awkward to understood and proceed in the interview process.

3. 6. 1 Interview Guide

The interview guide was written in a more flexible way which was designed to remind certain topics, keeping the interviews on track without being too rigid. Furthermore, the questions were based on the theoretical framework and divided into sub categories in order to address the research question which was how the interpersonal knowledge sharing process perceived by the actors involved in an innovation supporting firm and how the knowledge transfer process function inside an innovation supporting firm. Since the purposes are related to the research question which was to increase knowledge about interpersonal knowledge sharing/process, it considered in the data collection process. Since, the failure of the data collection process could lead to fail the result; we got advice from our supervisor about the interview guide we had made. As explained by Eisenhardt & Graebner, (2007, P. 28) different data sources can emerge during the discussion process with respondents. In our thesis emergent ideas were very important in the interview process to understand the magnitude of knowledge transfer and sharing inside the organization. Based on the learnability of the process, the first interview increased the value of the second interview. In similar manner, the quality of the collected information is also improved after the first interview took place. The estimated time of each interview took on average from 20-40 minutes. In our interview process, we realized that the quality and improvement of the first interview affects the rest of the interviews.

Semi-Structured interview are non-standardized interviews which have a list of themes and possible key question to be covered that includes the openness and balance of the questions (Saunders et al., 2012, p. 374). In addition, the respondents had full freedom (flexibility) to answer the questions based on their personal knowledge and it enables the same kind of questions to answer by different respondents (Berg, 2004, p. 59). The other aspect of such kind of interview is to enable interviewers to ask flexible question which helps us to raise new issues (concepts) during the interview process. Fore-instance, while we were interviewing one of the interviews, we ask him to clarify the main role of Uminova Innovation whether they innovate by their own or support only innovation. Afterwards, we had gotten clarity on the role of the organization that helps us to re-design our interview guide based on the correction given by the respondents.

The interviews were conducted face-to-face in the respective interviewee’s offices. In fact, a location was also chosen by the interviewees according to their convenience room. This face-to-face interaction makes able to understand the inside feelings, signal symbol like body language, facial expression and personal communication between the interviewer and the interviewee. The interview is carried out by using tape recorder and taking notes at the same time which helps the interviewer with the evaluation of the interviews. However, in order to minimize constrains to the interviews, interviewees were given an option to record or not before the interview was made. Furthermore, elaboration was made when needed during the interview for the questions that were not clear for the interviewees. For instance, we explain the technical term in simple word so that they can understand easily. Because of the overlapping nature of the concepts, follow-up questions are made to make sure what has been said during the interview process. So, we used printed interview guide and the note book to follow-up the questions.
It should be noted that the interview was conducted without anonymous since all the respondents allowed us to disclose their personal information. As mentions early, the respondents which are selected in this thesis are those who have good knowledge about interpersonal knowledge, communication, knowledge transfer and sharing in the innovation supportive firm. The interview template is included in appendix 1. After the interview ended, the participants were more cooperative. More importantly, the respondent’s answers were very helpful to address our research question. Ultimately, the answers obtained from different interview are analyzed in order to find out the practical information on how knowledge sharing took place inside the innovation supportive firm. The following table shows the overview of respondents.

Table 2: Overview of respondents

<table>
<thead>
<tr>
<th>Respondents</th>
<th>Position in the Uminova Innovation</th>
<th>Years in the office</th>
<th>Location</th>
<th>Date and Time</th>
<th>Length</th>
</tr>
</thead>
<tbody>
<tr>
<td>Respondents 1</td>
<td>Communication officer</td>
<td>4 years</td>
<td>Uminova Innovation</td>
<td>06/12/2013 and 13:00-13:34</td>
<td>32 minutes</td>
</tr>
<tr>
<td>Respondents 2</td>
<td>Business Coach</td>
<td>1 year</td>
<td>Uminova Innovation</td>
<td>06/12/2013 and 15:00-15:37</td>
<td>35 minutes</td>
</tr>
<tr>
<td>Respondents 3</td>
<td>Business Coach</td>
<td>25 years</td>
<td>Uminova Innovation</td>
<td>09/12/2013 and 9:00-9:38</td>
<td>36 minutes</td>
</tr>
<tr>
<td>Respondents 4</td>
<td>IPR Strategist</td>
<td>5 years</td>
<td>Uminova Innovation</td>
<td>09/12/2013 and 13:00-13:34</td>
<td>32 minutes</td>
</tr>
<tr>
<td>Respondents 5</td>
<td>General manager</td>
<td>18 years</td>
<td>Uminova Innovation</td>
<td>16/12/2013 and 9:00-9:30</td>
<td>22 minutes</td>
</tr>
</tbody>
</table>

3.7 Research Quality

Generally, the quality of a business research is influenced by certain factors; namely; reliability, replication, and the validity (Yin, 2009, p. 419).

3.7.1 Reliability and Validity in Qualitative Research

In the argument of Bryman & Bell, (2011, p. 40) the results of reliable research can be accepted if the degree of replication is lower, if not it can raise a question of reliability. In other words, there is indirect relationship between secondary data and reliability of research that is; when the researcher uses more of a secondary data then the reliability of a research decreases. This study kept the reliability of the research because it used direct interview techniques that produce the data from first hand. It is important to know the fact that, the respondents will receive the copy of this study which is one of most important determinant of
reliability. Therefore, we believe this study has maintained the reliability of the data used for analysis.

Bryman & Bell (2011, p. 395) claims that, reliability and validity for qualitative research are categories into two parts. External reliability reveals the level of degree to which a study can be replicated. On the other hand, internal reliability refers to more than one members or observers ready to accept what they see and hears. Similarly, external validity is the degree to which findings can be generalized across social settings. It deals with the question; if the results of the research can be generalized to other research settings or contexts. On another contrast, finding out the matching level between researcher’s observation and the theoretical ideas developed is called an internal validly. It assures that if the results are true and conclusions are correct through elimination of systematic sources of potential bias. Regarding the generalizability of the research, this research might be generalizable or not in other innovation supporting firm depending on their size, hierarchical structure and level of interpersonal communication which leads to interpersonal knowledge sharing/transfer process.

For the purpose of maintaining the reliability and validity, we both record the interview through recorder device and mobile phone which makes us easier to write the exact word and meaning of interviewees. Furthermore, in order to make more reliable, we kept both full written notes and audio records (i.e. mp3 files) in the interview process. It can be claim that, the audio records of the interviews is not the only focus on taking notes but more on being a good listener. For instance, making keen observation or catching what might be going on as also claimed by (Yin, 2009, p. 70). This leads to big advantage that enables us to keep our transcription neutral and keep obtaining information without any bias (Yin, 2009, p.70).

In data collection and interpretation we have been focused with the issue of validity. Since the main source of data came from the interview, we have taken all appropriate measure to gather valid data. We have used credible books and articles from academic literature with critical arguments from various perspectives and different setting (empirical findings) in the area of knowledge, knowledge transfer and interpersonal knowledge sharing process. Because of general contribution to theory, it can give a more unbiased contribution which can be adapted to different context and provides a broader perspective of the subjects. Although, the result of this study is based on one innovation firm of a non-metropolitan city, it gives a more unbiased contribution which can be adapted to different context and provides a broader perspective of the subjects. However, we think that more studies are needed to further generalize our results.

3.7.2 Replication

Bryman & Bell, (2011, p. 411 ) states that replication refers to the duplication finding of other researchers; however, this research paper main contribution is to combine different theories to come up with new contributions. That means replication is not very important major criterion. Similarly, for Yin (2009, p. 54), replication is considered as criteria to evaluate multiple cases. Replication can either be literal or theoretical. Literal replication refers to predicts of the probability of producing the same result from the findings of others. As we have already discussed in validity section, more studies are needed on interpersonal knowledge sharing/transfer system to see if replication capacity affects our results. We think that other researchers should consider the subjectivity of our topic before checking the replication capacity of our results. On the contrast, theoretical replication predicts the different results. The factors affecting the first research should be taken into consideration during replication. In order to avoid bias we used treatments provided by Saunders (Saunders,
2011, p. 382) such as choosing appropriate locations for the interviews. Five interviews took place inside their office and the company’s conference rooms were provided as a calm atmosphere to conduct the interview.

3.8 Trustworthiness

It is really important for a researcher to conduct the quality of a research. According to Bryman & Bell, (2011, p. 411) there are certain criteria for evaluating a qualitative research which are: credibility, transferability, dependability and confirmability.

3.8.1 Credibility

Credibility refers to the research that is conducted as per the standards and that the information collected from the respondents has been given back to them for confirmation (Bryman and Bell, 2011, p.411). In our study, we conduct a semi-structured interview which is largely used in qualitative research because it allows us to conduct several interviews with a similar structure as also argued by (Gillham, 2005, p. 72). Since, this is primary data we tried to follow all the ethical implications of semi-structured interview as much as possible. It can be claim that our efforts are optimal level in order to generate correct information so that we can provide credibility to our research i.e., shared the findings with the respondents who participated in our research. Although, it seems that we have not conducted many interviews but up to the point, we have establish the information related to theoretical framework. One obvious conclusion is that our research is carried out according to the approach of good practices (Bryman & Bell, 2007, p. 411). More importantly, at the end of our thesis, we attach the final version of the thesis to our respondents that will able them to cross-check their responses according to our promise, which will increase the credibility of the study.

3.8.2 Transferability

In general term, it is parallel to external validity where it measure that the finding hold similarity in same context or in some other contexts (Gass & Mackey, 2005, p. 368). As part of this study, we have tried hard to give enough description on theoretical framework so that it can be referred in making possible transferability in other situations. Since, the study follows case study, it is difficult in generalizing the result to other companies. Because the situation of other innovation supportive firms may not be conclusively the same but more or less it assists in finding the connection of our theory with the empirical study. We would say that, the transferability of this research within similar organization might be valid in some context. Similarly, as this study explores the mechanism of interpersonal knowledge sharing /transfer process which is highly dependent on the actors involved in the firm which are the employees and managers of Uminova Innovation. Therefore, the transferability of the study to other innovation supporting firm are depends on many factors including their mechanism of communication, trust and motivation of the actors involved in the firm.

3.8.3 Confirmability

Regarding, conformability of the study is concerned; the researcher should not be influenced by the personal values or belief during the whole research period. This seems very hard to follow in some extent but we strictly followed our research path, trying to leave aside our values or beliefs (Bryman & Bell, 2011, p. 398). It should be noted that our research purpose was to observe how the interpersonal knowledge sharing does and knowledge transfer perceived by the actors/employees involved in an innovation supporting firm. In order to fulfil
this research purpose, we have sent the questionnaire to the respondents before the interview so that the respondents could have good knowledge and prepared for interview process. We interviewed five respondents from different categories for example, General Manager, business coach, communication manager, Incubator, support service and so on. As a result we are able to maintain the accuracy of information and avoid biasness. Similarly, in order to achieve high conformability, we did explain the questions to the respondents which were not easily understood by the respondents.

3.8.4 Authenticity

In this criterion, we present some information on the authenticity which concerned with fairness. Authenticity states that the research should be fairly represent different viewpoints of the social settings (Bryman & Bell, 2007, p. 414). In addition to this, we believe that our study has provided more of the educative authenticity through studying of innovation supporting. Firms can appreciate the perspectives of interpersonal knowledge sharing/transfer process (Bryman & Bell, 2007, p. 414). In order to be authenticated by the interviewees themselves, we sent the opinions and responses that were collected during the interviews process to the respondents. More importantly, this obvious fact leads to conclude that we had clearly argued the methods we applied in conducting the research. At the same time we were aware of the challenges of such research method and choices. That was one big reason of being able to build up the connection and compatibility between research question, purpose, epistemology and scientific approach. We went through far efforts to remember readers by getting back to the research question and the methodological choices almost in most sections in order to make the chapters connecting and to keep the right flow of the text.

3.9 Ethical Considerations

Ethical issues is extremely important for researcher throughout the whole research Saunders et al., (2012, p. 236). In particular, the researchers must make sure that the different methodological practices and procedure that used in each stage of research should be concerned about the moral correctness related to the involved participants. Furthermore, we handle the stage-specific ethical issues in proper manner. For instance, right to absence of coercion by researcher, sponsor or gatekeeper is taken into account in empirical data. To be more specific, when conducting a research there are four main types of ethical principles that supposed to be followed; harm to participants, lack of informed content, invasion of privacy, and deception (Bryman & Bell, 2011, p.128-138). We will explain the ethical consideration we had followed while collecting the data’s as follows:

- **Harm to participants:** the researcher should avoid and minimized any actions that would affect or harm the participants in the future. The issues of confidentiality and anonymity involves both legal and ethical consideration however, in our research paper, almost every participants wish not to remain anonymous which means that we can disclose identification of positions, organization and place. Despite, we are not allowed to use the name of the participants, so we did not disclose their names in the study.

- **Lack of Informed consent:** The researcher should provide the participants with full information about the research before their participation in research process where if any data is collected or used without the consent of the participants then it is not ethically acceptable. Thus, all the participants should accept to take part in the
research voluntarily. As, we mentioned previously, before engaging in any data collection process, we began our task by introducing the title of the research, purpose and the researchers background to offer full information of the study towards the participants.

- **Invasion of privacy:** This concerned with the issue of the degree to which invasions of privacy can be condoned that means the researcher should not invade the privacy of the participants. If the participants does not feel comfortable with disclose their information then researcher should be careful that is why we maintain confidentiality and anonymity as requested by the participants. In our case, we were very friendly and we developed the zone which is comfortable to our respondents. Eg, the place of interview was chosen by the respondents which was calm and far from the offices where they can mention everyone’s name and role in a comfortable way.

- **Deception:** if the data received from the participants are used for other purposes rather than what it should be then in that case deception occurs. In our research paper we try to always minimize and avoids the deception in order to get accurate findings of the research. For instance, while collecting data we consider in-depth interview rather than join online communication that means through participating and seeking consent of respondents. Therefore, we are not ‘passive analysis’ or ‘lurking’ (Saunders et al., 2012, p. 233).

To conclude, we have met these above all four principles and also the information gathered from the interviewees was used without any manipulation while conducting this research. Similarly, all literatures used in our study are cited according to the guideline of thesis manual. The participants are not affected by our study for the information they have provided to us. The information provided by the participants will be handled with care and kept in proper way. In addition, all the interviews recorded were collected by the permission of the participants.

### 3.10 Approach to analysis

There are many approached techniques available for qualitative information however, the content analysis is chosen for analyzing our gathered information. According to Hancock (1998, p. 16), content analyzing data includes, the summarization of the mass data collection and presenting the findings to the readers which communicate the significant features of the raw information. This helps to compare and reach to the desired level of increasing knowledge about the study area. We specifically had chosen a summative content analysis. This approach involves summarizing and comparison, usually of the theory and the empirical data’s. This will finally supported by interpretation of the collected data’s. Apparently, in our case, the analysis is made based on comparing the theoretical framework and the empirical data. This approach helped us to learn more about interpersonal knowledge sharing/transfer process from both the empirical and the theoretical frameworks. More importantly, it is used to categorize verbal or behavioral data to classify, summarize and tabulate the hidden information of the data in order to present in the form of knowledge (Hancock, 1998, p.17). It is also equally important to reduce the information that was collected during the interviews so that it can be classified into major themes. Before being analyzed in comparison to the literature review, the major themes were further categories in this paper. To be more specific, the comparison between the empirical findings and the literature review in detail before concluding the findings can be seen in chapter 5 (discussion and analysis).
Chapter 4: Empirical

In this chapter, we present the result of five interviews which is collected among the employees of Uminova Innovation. It commences by introducing the companies profile (Uminova Innovation) in order to give clear understanding towards readers. It also includes the background information of interviewees which helps to shows if they are relevant or not in the data collection process. The empirical is portrayed based on the same order as presented in the theoretical chapter,

Uminova Innovation AB is an organization that helps entrepreneurs to develop and support a business idea and build growing company. The company also provides important knowledge, network and business coach which helps an entrepreneur to think bigger with free of charge (Uminovainnovation, 2013). Uminova Innovation AB also contributes to commercialization of business ideas. The company offers structured process, network and creative setting. Focus on business ideas from students, employees and researchers at the university and hospital in Umeå region. Besides business incubation, the company runs projects to strengthen Umeå and Västerbotten as life science region, biotech Umeå, and an IT- region; InfoTech Umeå supports and follow up the entrepreneurs and their business ideas to make it longer. At the beginning of an early stage of businesses, entrepreneurs are mostly lonely and lack their start up support and guidance. In order to resolve this problem, an experienced business coach helps to focus on the right employees, steer towards established goals and challenge you to think different (Uminovainnovation, 2013).

Uminova Innovation AB also supports entrepreneurs by developing a model that guide through complicated regulations, strategic choice through avoiding confusion by making able to do the right thing at a time. When it comes to network and experience capacity, “the company secure more than 30 years solid network which gives priority to access the right people, organizations and business that preceded by connecting lawyers, specialists and venture capitalist” (Uminovainnovation, 2013). This helps Entrepreneurs to find their potential customers and suppliers and in organized event, coffee room and personal contact. Besides the above basic services, the company offers advice on affordable web developers, advertising agencies and accounting which is completely free of charge (Uminovainnovation, 2013). The international network career helps Entrepreneurs to find customers, suppliers, manufacturers and other crucial partners. The company also offers advice how to develop innovation, how to apply financing from the European Union, and patent application.

Uminova Innovation AB helps companies and researchers to find international partners which help them to convert their research findings and innovations into business and to apply know-how agreements. The provided advice in this regard have a pivotal role on how they can develop their innovation support, how to apply for financial aid from European Union and patent application. “Uminova innovation is a member of Enterprise Europe Network and the main contact within the network that helps entrepreneurs to fined retailers and distributors by searching through the companies database and Network” (Uminovainnovation, 2013). The service includes consultation of methods, products, services from other countries that can help to develop your business (Uminovainnovation, 2013).

Uminova Innovation creates an inspiring environment which is comfortable for working process by offering full infrastructure; from conference room to fully equipped offices. Similarly, the company work to develop multi-aspects in the areas of leadership, book-keeping, financing, business development, communication and personal relations, sales and intellectual property (Uminovainnovation, 2013).
4.1 Respondent 1

Background

The position of respondent one in Uminova Innovation is a business coach which supports innovation to take the ideas out to the market. The respondent has been working in the organization for four years, before joining the organization she has been working in the bio-tech industry and in chemistry department respectively. We have found this interviewee significant to better understand the interpersonal knowledge sharing/transfer of the organization since she has an opportunity to meet every employees of the company.

Knowledge

Regarding the first question how she understand knowledge, respondent one replied that knowledge is the accumulation of information/data inside the organization. For the questions regarding the mechanism/ ways of knowledge sharing inside the organization, respondent one replied the following:

..."The knowledge within each individual can be used in the best way as far as possible. We developed a structured-process for business development mechanism where we can share knowledge; it contains different modules which is easily described by words. If you came as new employee to this organization, it is easy to get hold of information and structure which helps new employees to be part of the organization very quickly”.

She continue to explain that, the main ways/mechanism of knowledge sharing process inside the organization is supported by internal meetings, via e-mail (among whole organization and individuals), intranet structure and by open discussing how to spread out the information during the internal meetings.

Knowledge Management

For the questions regarding how the employees manage knowledge inside the organization and its role in the organizations function, the respondent replied as follows:

.... “One of the roles of knowledge management in Uminova Innovation is to ensure quality of the support we can give to others. It should not matter if you come to me or one of my colleagues, you will get the same quality of information”.

In the response for the question how the knowledge management process looks like respondent one replied as follows:

...... “Uminova is very flat organization so, I think a lot of knowledge transfer can be made in-between colleagues and among different projects. We also have seminars: for example, before two weeks we had internal knowledge how to manage intellectual property in business development in order to educate the business coaches even more better”.

In the response of the importance of managing knowledge in the context of Uminova Innovation, the respondent replied that it helps to provide good environment for entrepreneurs that wants to commercialize their ideas and wants to support them to move out their ideas into the market. She also added that managing knowledge in a good way helps to be a good incubator.
Knowledge Transfer

For the question refers how knowledge transfer is understand and how the knowledge transfer process looks like in the firm, respondent one replied as follows:

"Knowledge transfer is a process by which knowledge is transferred from one organization (individual) to another. At the same time it could be transferring different ideas to the market in the context of Uminova Innovation. The knowledge transfer process is the outcome of our different activities. The internal meeting we have is very important in our company. We also have business coach meeting where we discuss the development process we work with; similarly, we have business coach with different background people which contributes the transfer of knowledge from one to another. Since, we have open minded atmosphere it is very easier to hold the knowledge (expertise) within the people”.

For the questions that asks the main way of mechanism/ channel to share knowledge inside the organization, the respondent suggested that the main type are; internal meeting, email, conference, telephone and business coaching. Regarding the questions about the inter-personal relationship of employees that work in Uminova Innovation and their main channel of communication, the respondent replied that the organization has very friendly environment among the employees, entrepreneurs, and other employees that share the same building as work place. The work atmosphere can be described as very open, nice and outgoing. The main channel of interaction among the inter-personal communication are; personal meetings, e-mail, and bigger meetings. Moreover, she added that they do not use telephone to communicate to other employees by the fact that the number of employees is very small and they all share the same corridor. On the reply of a question that asks the type of knowledge transfer and it’s intended destination, the respondent replied that most of the information that are transferred among the employees are; business processes, network, information, available funding, updates of internal process and innovation development.

Knowledge Sharing

Regarding the questions about how knowledge is shared in the organization and the main ways/mechanism of knowledge transfer, the respondent replied that the main source of knowledge is shared through internal meeting, telephone, conference and intranet data sharing system. Moreover, the respondent believes that the main way of knowledge sharing process includes both formal and informal way of information. She said informal way of knowledge sharing play a great role than formal as many of the employees spend time together in the coffee rooms. After we asked, if there are some sorts of effort forwarded by the firm towards the employees to share knowledge, the respondent answer as follows:

"Yes. For example, the lady works next to my office are patent engineer and she has a level of expertise in some important subjects. She might able to share some knowledge. Besides, sometimes the company facilities two business coaches to work together in order to combine different expertise or to get a hold of sharing knowledge related to the project”.

She mention that the company has no any reward system towards the employees to share knowledge but the employees by themselves has a strong motivation to share knowledge due to good environment.
Knowledge management and Innovation supporting firm

After asking the question about the effect of knowledge management in innovation supporting firm, the respondent replied as follows:

..”I think we always try to be in the front, updating ourselves in the area of innovation and new knowledge, new finding in our area of support, read related literatures, implement new knowledge in our processes in a good way”.

In addition, she added that both knowledge and innovation are very important for the success of any organization that engages in helping entrepreneurs and support innovation.

Communication

After asking questions related to the roles of communication in a firm, the respondent answers in the following ways:

…”We actually have two persons who are working with communications; one important thing Uminova Innovation wants to do is that, how we can support different individuals that might be interested to became entrepreneurs or develop their ideas. At the same time they work with students and academic researchers. You don’t need to be a student or researcher to get support from Uminova Innovation; if you have an idea that fulfills the criteria everybody is welcomed.”

She further explained that the main ways/mechanism of communication operated in the organization are mostly formal and informal communication. The company also often communicates externally with stakeholders, students and entrepreneurs.

Regarding the questions related to interpersonal communication of the firm and how does it affect for knowledge sharing and knowledge transfer she answer as follows:

....”I believe that it would be very difficult to stay as an organization as good as we are , if we did not have enough skills of managing knowledge and interpersonal communication in the structure of the organization, it would have been difficult to work efficiently . So, I believe personal communication skills play a vital role both for interpersonal knowledge sharing and knowledge transfer process”.

4.2 Respondent 2

Background

The position of our next respondent is business development officer in related to license strategy. He has been working in Uminova Innovation for one year; in addition, he has been working as an attorney and had many years’ experience in different law firms. We have found this interviewee very potential as he works with legal issues and business development process. He frequently communicate with many of the inside and outside employees which are very critical to share and transfer interpersonal knowledge in the innovation supporting firm.

Knowledge

After asked how he understood knowledge and the main source of knowledge in the organizations, the interviewee responds that knowledge is something that comes from both theory and practice in any kind of organizations similar to Uminova Innovation or other
organizations. According to him, both good and bad experience can be considered as good knowledge in many ways. He further explained that both knowledge inside the employees and knowledge that come from theories can be considered as a source of knowledge in the context of Uminova Innovation in order to create knowledge.

For the questions specifying the mechanism or ways of knowledge sharing/transfer in the organization, the respondent replied that the main ways of sharing knowledge is through communication in different forms basically verbally via personal meetings, mail, seminars, and workshops. He adds that Uminova Innovation is very open organization that helps all ways for communication to share the experience of employees in personal life and in the way of expertise transfer from one to another.

**Knowledge Management**

In the response of the questions related how Uminova Innovation does manages knowledge inside the firm and the main role of knowledge management in the organization, the second respondent replied as follows:

"...As one of the employees, I do think that we participate to manage knowledge by holding meetings, workshops and other programs in order to manage different knowledge. We manage to share our knowledge in different ways of databases in all sort of communication; particularly we share knowledge by paper work, participating in different programs and manage the knowledge inside everybody. It’s very important as a company to employ knowledge. For instance, when you hear success stories, we share it among ourselves since it brings the positive feeling. In general the main role of knowledge management is to include everyone so that everyone feels included in the organization. I also think that it enhances the organization and helps us to work together. However, as a company we have company secrecy, it doesn’t mean that we share everything in the organizations; we only share general information about what we are doing and how the work functions. We do not share partners secret and client’s details”.

In addition, he added that the process of knowledge management of the organization can be viewed as something that flows upward and downward in both ways. Besides he explained that the organizations are very open in any kind of information in general claiming that they are not hierarchical organization. According to the second interviewee, knowledge management is very vital for over-all communication of the organizations, as he mentioned that they have CRM (customer relationship management) that helps them to keep in touch with their employees.

**Knowledge Transfer**

In the response of the question related to how he understood knowledge transfer and how does the knowledge transfer process functions in the organization, the respondent replied that everyone in the organization works in accordance to the internal job description which also part of working with employees and sharing information to others. He also said that most of the information and knowledge of the organization is documented which is helpful to deal with external stakeholders such as Umeå University. Answering about the main mechanism (ways) of knowledge transfer, the respondent replied as follows:

"...”Most of the information is transferred verbally, by participating in different initiatives to improve commercialization of new ideas. It also depends where you are inside the organizations even though information transfer upward, downward, horizontal and vertically.
Regarding the questions related to how the interpersonal relationship or social ties of the employee’s functions in inside the organization and their main channel of communication, the respondent replied that the interpersonal communication is very informal and open. He also mentions that they have strong social ties among the colleagues. The main channel of communication of sharing/transferring interpersonal knowledge highlighted by the respondent is email, formal vs informal communication telephone, intranet tool and others that gears towards success. In the answer about what type of knowledge transferred usually, the respondent replied that all sort of relevant information circulated in the work environment. He further added that, the organization did not transfer client related information due to secrecy policy.

Knowledge Sharing

In the questions related to how knowledge shared in the organization and the main ways of interpersonal sharing process, the respondent replied that knowledge is shared via verbal communication, through mail, workshops, seminars, informally at lunch and fika time. According to him, they share everything except client related information. Regarding the personal knowledge sharing process he explained as follows:

...” We do share our personal knowledge with each other mostly in an informal way. Everybody knows my personal knowledge so they come to me with legal questions. At the same time, if there is something that I need to know from others, I know where to go. For the effectiveness of the communication process trust among us is very important factor”.

The second interviewee also expressed that there is no any kind of reward or effort that enforce to share interpersonal information among the employees. In fact, the organization need to share knowledge in order to make the clients ideas successful in the commercialization process.

Knowledge Management and Innovation Supporting firm

For the questions related to the effect of knowledge management in innovation supporting firm, the respondent replied that managing knowledge is very crucial during the process of innovation support in a way as knowledge adds great effect to the project by sharing it with the developer in order to improve it. In general it has been replied that knowledge is an important input for the innovation supporting firm. In the other similar question that requires explaining innovation in related to managing knowledge, the respondent replied as follows:

....” I do believe that sometimes new idea can be occurred by talking to others. For instance, we sometimes get a new idea from our clients. They sometimes tell us their needs are more than what you can offer. I have personally started a number of companies, it always started and it is going in totally different direction. We usually want certain business ideas and ending up in other business aspects. We would not attain the other business unless we had been in the first business. So, both knowledge management and innovation are interdependence”.

Communication

After asking the main role of communication inside the organization, the second respondent replied that, the main role of communication in Uminova Innovation is to spread out the values to others. In related to the main types of communication used in the organization, the respondent believe that both formal (seminars, workshops, meetings) and informal (lunch
break, fika) are the main type of communication used in the company. Similarly, we employ both internal communication (among employees) and external communication (University, clients).

After asked how the inter-personal communication looks, the respondent replied that their organization is very good, full of open relationship among the employees. When it comes to the main effect of personal communication, he replied that it enhances everyone’s knowledge. He continued to explain that value creation is one of the main processes of the organization in the start-up stage of testing ideas. In this stage, the effectiveness of the personal communication among the employees and outside with client are very important for the knowledge sharing/transfer process.

4.3 Respondent 3

Background

The position of the third respondent inside Uminova Innovation is leader of the International group. He has been working in the company in total for twenty-five years. Previously, he had run his own company that focuses on life science, beside that he was working in the finance section for newly start-up companies for five years. This candidate is the best choice to understand the subject matter deeper since he has been in the company for more than two decades. As we thought, we got important information about how the interpersonal knowledge sharing/transfer mechanism in innovation supporting firm.

Knowledge

The third respondent understood knowledge as something that stems from individuals experience. According to him, knowledge is the skills and expertise inside every member of the organization. The main knowledge of the organization comes from intranet but the other source is the personal coach system. Answering questions regarding the main source of knowledge, the respondent replied as follows:

...” The main source of knowledge in our organization comes from ‘learning by doing’ as we have been in this business for forty-four years. We started this operation in Umeå University in 1969 which make the first project in Sweden. In the last five years we have been working by taking theories from the research department as a source of knowledge”.

When it comes the mechanism (ways) of knowledge sharing inside the organization, the respondent replied that it is shared by business coach meeting, discussion in different cases, discussion of learning outcomes and by process meeting (quarterly meeting) and others.

Knowledge Management

After asked question about how the organization manages knowledge inside the firm and the role of knowledge management inside Uminova Innovation the respondent replied as follows:

...” In the process of managing knowledge is very important to consider, the right people at the right place, and the right time to the right case. We have always about 160-170 cases coming to our office every year, it also includes research result, student idea, so that we can manage all this information and sort out to members of the organization. We were very systematic in the last 5 years by the help of the research department. We try to harvest from all institutes all over the world and accumulate it in a library so that everybody reads them”.

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After asked about the process of knowledge management inside Uminova Innovation, the respondent replied that there are three stages of innovation support system which includes the testing stage that describes as developing the business in the laboratory development stage. This includes the process of incubation, external work and grows stage (which holds testing the idea). Accordingly, all of them are different in time schedule and implementation stage. Regarding the importance of knowledge management he replied that the main advantage could be that new employees can learn from the older one very easily.

**Knowledge Transfer**

In the question related to how the employee understood knowledge and how the knowledge transfer process looks like in the firm, the respondent replied as follows:

"...I believe a lot in doing things. I rather take newly recruited people with me when I go to meetings. We do things in pair so that we can learn things by doing. We have a degree of informal knowledge transfer process this means there is a learning stages in all levels of the organization, but I would say the main focus is basically on the new employees than the senior ones."

Regarding the mechanism/ways of knowledge transfer, the respondent replied that the organization has only twenty employees with a flat structure and one chief executive officer. Thus, he believes they are on the zone where everyone knows everything. He added that they are struggling to create departments in the near future to better consolidate the structure of the organization.

When asked about how the interpersonal relationship (social-ties) of the employees function inside the firm, the respondent replied that they are spread out and doing their own jobs, so they rather do not have social ties among them except some of the employees are close to each other based on the age group they share and topic they engaged in. The main channel of communication inside the firm is: meetings, e-mail and others. Regarding the form (type) of knowledge transfer, he mentioned usually it contains future-schedules of the organization. He insisted that they are working to synchronize their future plans in the calendar.

**Knowledge Sharing**

When asked a question how does knowledge shared inside the organization and what are the main ways/mechanism of knowledge can be shared, the respondent replied as follows:

"...Most of the time the knowledge inside the organizations shared formally by (meetings) and informally by coffee room discussion. As we have silent agreement (secrecy), we don’t allow discussing everything in the coffee room. The main ways of knowledge in general are 60% informal and 40% formal. Accordingly, the main factors that make the process of knowledge sharing successful are communication and trust, both of them are the building block of any organization”.

Regarding the question if there is any sort of effort forwarded by the firm towards employees to share knowledge, he believe that knowledge is like a fashion and during years knowledge can be progressive. It is a source of income for any organizations, but there is no any sort of effort by the organization as a guideline to transfer knowledge. In fact, everybody is obliged to share knowledge during the work process.
Knowledge management & Innovation Supporting firm

In the response of what the employee thinks about the effect of knowledge management in innovation supporting firms the respondent replied as follows:

"Concerning innovation support and creativity, you must be innovative in an early stage, but then you have to limit your creativity to deliver something. You could not be creative and innovative all the way, I have thousands of research cases that prove that. The main successes of all of the idea are: work with the idea for long time, listen to the customers and good timing are very important. It is the same kind of thing when you come to innovation support in related to knowledge management, It could improve innovation support to a certain degree by knowledge management. There are more than 150 different ideas and researches that come to our company every year, if you could have the perfect way of managing knowledge; you could have pick five success stories in the long run. However, since new people are involved often, it is the people of the organization that should be developed, learn as they are adoptable. In general, I can say that knowledge management can help the capability to learn and develop individual’s knowledge”.

Communication

In the questions related to the role of communication inside the firm and the main type of communication most often used among the employees, the respondent replied as follows:

"In general the main role of communication inside the firms is to deliver standardized package. You must always leave a place for people to develop their skills by communicating to others. The main forms of communication in our office as I said earlier are mostly informal (60%) than formal communication (40%). When we have a problem (difficulty) with the case of the client, we discuss and cooperate each other how to help our client”.

Regarding the inter-personal communication of the firm, the respondent replied that the communication built on informal way and also formally (meetings, dialogues, e-mail). He suggests that the organization built an intranet system that put into documentation to save the files so that it will be easy for new-comers. As a result, the interpersonal communication is very good and attractive in order to share/ transfer interpersonal knowledge. Answering the main effect of personal communication for knowledge sharing and transfer process, the respondent replied that it helps to build trust among each other. He further highlighted that trust has been the most important factor and it will always be important for many companies.

4. 4 Respondent 4

Background

The forth respondent is head of Intellectual Property rights strategist, who worked in the firm for about three years. The respondent works both in Uminova Innovation and Umeå University. She has an experience in the patent office in Stockholm; the main task of her was mainly to work with European projects to adopt the intellectual property in the business aspects. We have got very important information about the subject matter since the expertise of the interviewee is directly related to individual knowledge transfer to others.

Knowledge

Concerning the first question to explain what knowledge is and the main source of knowledge in the organization, the respondent replied that knowledge is know-how within the employees
of the organization. She believes that the main sources of knowledge inside the organization are basically the people. After asking the main mechanism/ways of knowledge sharing process in the organization she explained as follows:

"When we work with different cases, we share different knowledge with the employees but also knowledge can be shared via business coach meeting, seminars, and different value creation activities. Since we have different background it is very easy to share knowledge with each other for the sake of the project”.

**Knowledge Management**

In the response of how does the organization manage knowledge and the main role of knowledge management in Uminova Innovation, the respondent replied as follows:

"The way we manage our knowledge in Uminova Innovation is different from other organizations. We manage our knowledge through all sources of internal meetings and training programs in various projects. The role of knowledge management is to handle the knowledge in such a way that the companies can benefit from our knowledge. The knowledge is more useful for the companies than for us. We use the knowledge to develop a project instead of selling knowledge”.

The respondent believes that the main process of knowledge management is to combine group meetings, business coach meeting, process meeting, internal meeting, conferences and working in different projects. Accordingly, the main importance of knowledge management in the context of Uminova Innovation is to give good consultancy service towards all customers.

**Knowledge Transfer**

In the response of question regarding how knowledge transfer understood in the company and how does the process of knowledge transfer function in the organization, the respondent replied as follows:

"Knowledge transfer is a process how you can communicate the knowledge to others, it is related how you transfer your intellectual assets to others. I believe know-how is inside your head, but when you want to communicate it, it becomes an intellectual asset. I would express the process of knowledge transfer as both theoretical and the personal know-how”.

According to the fourth interviewee, the main mechanism (ways), a firm used to transfer the knowledge is by different project meeting, educate the employees and through sharing the documents of the organization to everyone so that all people who works in the organization could able to know about the information.

In the response of the how the inter-personal communication of the organization (social ties) of the employees function inside the firm, the respondent replied that it is basically very informal, open and good climate in general which makes the interpersonal knowledge sharing/transfer successful. The main channels of communication mentioned were meetings, e-mail and telephone. The form of knowledge that usually transferred is expertise of employees.
Knowledge Sharing

In the response of how knowledge is shared in the organization and the main ways of knowledge sharing, the respondent replied that knowledge can be shared as the same way as it is transferred which is through meetings, by formally and informal communication. Regarding the different components that make knowledge sharing process successful, it explained as follows:

..." In order to share your knowledge to others you should communicate in an open way and you have to know about different culture, this is something that I learn while I was working in European Project. At the same time there are different project secret that is revealed to me so, I need to be keep my client secret which can be kept by developing trust among our company and our clients."

Knowledge Management and Innovation Supporting firm

In the response of open question about the effect of knowledge management in innovation supporting firm and the innovation in related to managing knowledge, the respondent explains as follows:

......" To answer the question, I would say it kind of depends on how you manage your knowledge in an innovation supporting firm. In general I would say managing good knowledge in any innovation supporting firms is extremely important in order to be in the competitive market. Openness in the knowledge is also something important for the effectiveness of innovation supporting firm. Regarding innovation support in related to knowledge management, I would say when we have process meeting, we enhance our meetings and they will lead us to support the innovation we are working with."

Communication

In the response of question related to the roles of communication in the firm and the main type of communication most often applied, the respondent react as follows:

..." Communication is very crucial for organization like Uminova Innovation that engages in consultation/support because we work together with different clients and if we do not communicate together, what will happen in these different projects?. We cannot give our clients the best help that we supposed to render. When it comes to the main type of communication, we have both the formal way (working in different projects) and informal way (information sharing outside the work), it also includes internally (when we work together inside the office) and externally (exchange of information with clients, researchers and students)".

In the response of the open question how the inter-personal communication of the firm looks like and how it affects the process of knowledge sharing and transfer process, the respondent replied that, the inter-personal communication is mainly based on weekly meeting, working in smaller groups, dialogues, e-mail communication, phone calls and personal meeting with different employees. It is also mentioned that the inter-personal communication has a huge impact on the effectiveness of knowledge sharing process since there are different know-how and professional background among the employees.
4.5 Respondent 5

Background

The position of my fifth respondent is General Manager. He has been working in Uminova Innovation for eighteen years in different positions including business development, financing, international business development, life science and as business coach. Similarly, he has an experience in logistics, economics, engineering design and workshops. We have found the interviewee very crucial as he has been working in the company for many years in different section which helps the researchers to understand the research question in a concrete manner.

Knowledge

In the response of the questions regarding how knowledge can be understood by the employee and the main source of knowledge in the organization, the respondent replied as follows:

"According to me, knowledge is something you can gather in your whole life both by studying and learning from social environment, interacting with business partners, family and many factors around the environment. The main source of knowledge for this organization is the employees, of course networking specifically since the last two years we have been working a lot with intranet structure in order to get better structure and quality of the knowledge to re-use from colleagues. The main mechanism (ways) of knowledge sharing process in this organization is based on Intranet system, databases, cooperation with each other and business coaching which are the best practices to share knowledge."

Knowledge Management

In the response of the questions how the organization manages knowledge inside the organization and the main role of knowledge management in Uminova Innovation, it suggested as follows:

"We always manage our knowledge by intranet and learn from each other. When it comes to the role of Knowledge management, it helps us to deliver qualified information towards our customers. The customers in our company are the students, researchers and those who have interaction with different kind of target groups. Regarding, the process of managing knowledge, we organize it through both database and cooperation with each other."

In the answer of what the employee thinks about the role of managing knowledge, the respondent believe that it is very important since it helps organization to rely on the employees. He suggested that “if you do not have the employees, you cannot able to serve your customers so it is very important”.

Knowledge Transfer

In the response of a question about how the employee understood knowledge transfer and how knowledge transfer process looks like in the firm, the respondent replied:

"Transfer of knowledge is about a way of using the knowledge working as a business coach. It helps the company when we work with different business coaches since it is a main component. It also helps to build the business concept. For instance, I have not thought about knowledge management before the interview so I would say it is a mutual benefit for both of us. When it comes to the knowledge transfer process, most of the information is personal
According to fifth respondent, the main mechanism (ways) the firm transfer knowledge is to others is by sharing the experience of employees. Answering how the interpersonal relationship (social ties), he replied that the company has a social activities twice a year where the employees made an exchange of experience. The main channel of communication discussed here was via meetings, e-mail attachment and telephone. In the answer of the type (form) of knowledge transferred, he replied that the main form of knowledge transferred are the process by itself, samples of business plan, agreements, meetings and written presentations.

Knowledge Sharing

In the response of how the knowledge of the organization can be shared and the main ways of knowledge sharing process, the respondent answers as the follows:

”... The knowledge of the organization is shared by the help of personally and databases. The main way of knowledge sharing is formally and informally, but I would say the formal one is quickest than the informal one. Business coaches are also something that helps to share knowledge in the firm.”

The main component that makes knowledge sharing successful, which are highlighted by the respondent are: organizational culture and communication, regarding the management effort he, believes that everybody gets the right information on the right time since the organization is very flat structure with very limited number of employees.

Knowledge Management and Innovation Supporting firm

In the response of the questions about the effect of knowledge management in innovation supporting firm, the respondent replied that there are three main corner stones of effects. The first one is that knowledge can help in the growth of potential target groups, second it secures the company’s stability and third, it impact on strategic plans. In the other hand, he explained innovation support as a service (product) that exists in the market luckily, whereas knowledge management is something that supports to succeed the process of supporting innovation.

Communication

In the response of the questions how the communication of the company looks like and the main types of communication, the respondent replied as follows:

”... Communication is very important in our company because if we do not communicate with each other, we cannot have a possibility to serve our customers. Regarding the type of communication, I would say formal and informal communication are in the same level, when it comes to internal and external communication, it depends by the kind of job you are performing in the organization. Internally, we communicate with the employees whereas externally we communicate with researchers, students and partners.”

In the response of questions regarding how the interpersonal communication looks like in the organization and the main effect of personal communication towards knowledge sharing and transfer process, the respondent illustrates as follows:
"... The inter-personal communication of a firm is very positive, we basically communicates by meetings and dialogues. The main effect of personal-communication is that, it helps to learn from others and make a better service which is more adapted to the customer need. When I was employee of this organization in the middle of 1990’s the work environment was bit in a different work setting. Progressively, knowledge sharing (personal & organizational) are growing. Lately, we start to attract more customers by using researches at Uminova Innovation and the changes are made us even better to fulfill the service against our customers."
Chapter 5- Analysis

In this part, the collected data’s from the previous chapters are interpreted with the help of the theoretical framework. In order to remind the reader and to increase the coherence of the chapter, we have to discuss the main parts of the theory shortly; we summarize the theories as follows; a) knowledge b) knowledge management c) knowledge transfer d) knowledge sharing e) knowledge management & innovation supporting firm f) communication. The analysis of the interview will be presented in the aspects of the theories that have been discussed in the previous chapters. The theories are built in the way to answer the research question which is how the personalization knowledge sharing (transfer) perceived by the actors inside innovation supporting firm.

5.1 Knowledge

According to Connel et al., (2001, p. 48) knowledge have become the source of competitive advantage in the last few decades due to the fact that the firms start to give high priority to knowledge management to ensure what they can obtain maximum benefit from both internally generated and acquired knowledge. As further bolstered by Mahrabani & Shajari, (2012, p. 144), knowledge is an organized group of data and information that people in business and organization create and maintain through rules and procedures. From all the interviews we had, we noticed that knowledge plays an important role inside Uminova Innovation in order to support the interpersonal knowledge sharing/transfer process which agrees with the theories. It has been argued by the respondents that, without the accessibility of knowledge, there will not be any interpersonal knowledge sharing process. Even though all the responses of the interviewees became similar to the above theories, the way they define knowledge is contrary from the theories. Respondent two argued that knowledge is something that comes from both theory and practice, he also insisted in the interview that both good and bad experience can be considered as knowledge, while the others claims that knowledge is something that you gather in your whole life by studying and learning process.

Based to the argument of Connel et al., (2001, p. 48) knowledge transfer are performed by both person-to-person basis and more often by machine-to-person interaction. From the interviews, we noticed that the knowledge transfer mechanisms performed inside Uminova Innovation are in a different variety of ways even though it agrees with the above theories. The analysis of the interview supports the above theories. Respondent one and two argued that knowledge is mostly transferred (shared) via the mechanism of personal meeting, e-mail, intranet structure, open discussion, seminars and workshops while the third respondent argued that the main ways of knowledge transfer are by personal coach system and “Learning by doing”. Whereas respondent four argued that knowledge inside Uminova Innovation are shared (transferred) by people, especially when individuals with different background working together in the same unit. This shows that the employees/actors involved in Uminova Innovations perceived knowledge as important inputs in their day to day activities. The knowledge transfer function is also based on the daily employee-to-employee interaction inside the firm. We therefore can say that, individual knowledge among employees play an important role in the process of interpersonal knowledge sharing/transfer in an innovation supporting firm. Similarly, there is indication that shows knowledge can be highly dependent on the communication flow of employees inside the firm. In general, the mechanism of knowledge sharing/transfer shows to be inspired by the formal and informal interaction of employees in innovation supporting firm. As far as the type of knowledge concerned, tacit knowledge is perceived more effective in the process of interpersonal knowledge transfer as it is also supported by the respondents that knowledge is highly transferred through “learning by doing” process. One unexpected findings in this section was that, knowledge set out to be
transferred/shared among the interpersonal more formally than informally in innovation supporting firm. Similarly, evidences shows that codified knowledge also supports the mechanism of interpersonal knowledge sharing/transfer in innovation supporting firm. Since we have learn that there is a possibility of interpersonal knowledge sharing by codified documents, communication plan and other codified knowledge other than tacit knowledge.

5.2 Knowledge Management

Beckman, (1997, p.1) argued that formalization of approach to experience knowledge and expertise opens new possibilities, enables superior performance, encourages innovation and increase the value of the user. The result of the analysis shows that managing the right knowledge is very important for the success of any firm that engages in supporting innovation. Respondent one suggests that the main contribution of managing knowledge inside Uminova Innovation is to ensure quality of support they offer to others. Respondent two and respondent three suggests that the main ways of managing knowledge are conducted by holding internal meetings, training programs, workshops, intranet system, learn by each other and working with multi-skilled people. It has been discussed by Stewart & Waddell, (2008, p. 987) that knowledge management was considered as one of the critical part of service provision. In the current global based economy, competitive advantage and organizational performance are highly influenced by the human capital which depends on managing knowledge. Other arguments that support the above theory was highlighted by Mciver et al, (2013, p. 597) which claims managing knowledge improves productivity, increasing agility and maximizing intellectual assets. All the results of the empirical data show a direct relationship with the arguments of Stewart & Waddell, (2008, p. 987) and Mciver et al., (2013, p. 597). The first respondent believe that the main role of managing knowledge in Uminova Innovation is to provide good environment for entrepreneurs that wants to commercialize their ideas to the market. His other argument shows that it enables the organization to be a good incubator. The second respondent argued that managing knowledge will give a positive energy and enhance the organization. The third respondent claims that managing knowledge can able to facilitate when new staff join the office, they can learn easily from the senior employees how to manage knowledge. The fifth respondent also argued that the main importance of managing knowledge is to nurture Uminova Innovation to give good consultancy service. There is consensus of the theories and the empirical findings about the fact that managing the right knowledge can result on maximizing the effectiveness and efficiency of interpersonal knowledge sharing/transfer and speed up the mechanism of sharing tacit and explicit knowledge. Other finding shows that managing knowledge facilitates the creation of know-how which helps innovation supporting firms to support others.

In the theories of Grover & Davenport, (2001, p. 120) highlighted that, three process of the knowledge management existed namely; knowledge generation (comprises processes involving the acquisition and development of knowledge), Knowledge codification (conversion of knowledge into accessible and applicable formats), and knowledge transfer/realization (the movement of knowledge to its point of use. A similar study made by (Sydanmaanlakka, 2002, p.1) highlights the five phases of knowledge process are; creating the knowledge, taking the knowledge, keeping the knowledge, sharing the knowledge with others and application of knowledge. The result of the interviews seems different from what the theory says because all of the respondents perceived the process of knowledge in another angle. The first and the second respondent claims that since Uminova Innovation is a small organization with few numbers of employees (flat organization), knowledge can flow easily from one to another. The third respondent argued that the process of knowledge management
incorporates three processes which are incubation, external work and growing stage. The forth respondent suggests, the process of knowledge management is the combination of group meeting, business coach meeting, process meeting, internal meeting, conferences and working in different projects. The last respondent perceived that it is managed through both database and cooperation with each other. We have noticed that the respondents/actors involved in Uminova Innovation perceived that the structure of the organization is contributing its role in the process of creating knowledge management system. The study indicates that managing the right amount of knowledge will facilitate to transfer/share interpersonal knowledge, most importantly it leads innovation supporting firm in to higher performance and coordination. In fact, both the theory of Cohen & Levinthal (1990) and the empirical shows that accessing knowledge by itself does not lead the organization in to success without assuring to use the information. This shows that the mechanism of knowledge transfer is highly dependent of the process of knowledge management. The more knowledge is applied, the more knowledge will be transferred/shared, the less knowledge is applied, less interpersonal knowledge will be transferred/shared. Other finding shows that the human factor of sharing/ transferring interpersonal knowledge perceived as the main mechanism of sharing knowledge in innovation supporting firm. In fact, the argument of Mciver et al., (2013, p. 599) claiming that managing knowledge among multi-sectorial firms is different as also proven in the empirical analysis. In general this section demonstrates the role of tacit knowledge to transfer interpersonal knowledge sharing/transfer process in innovation supporting firm.

5.3 Knowledge Transfer

The analysis shows similarity with the argument McEvily & Reagans, (2003, p. 240), the strength of interpersonal connection can highly affect the process of knowledge transfer. Individuals that communicates with each other more frequently or individuals who have strong emotional attachment are more likely to share/transfer knowledge than people who communicate infrequently or those who are lower emotional attachment. There are several statements that confirm that strong interpersonal/personalization knowledge transfer can occurred through people who share strong connection. For instance, respondent two describes the inter-personal relationship/social ties of employees as it is very informal and open, he also claims that since the employees of Uminova Innovation are very small, It created strong social ties among them during the coffee break and other social events. The third respondent also support the suggestion of respondent two, he said that the interpersonal relationship of employees are very good because of the structure of the organization. However he noted that some employees who share the same age and social group share more information than others which consolidates the theory of McEvily & Reagans, (2003, p. 240). The fifth respondent also suggests Uminova Innovation facilitates social event twice a year to exchange experience and social ties among the employees that means the inter-personal relationship of employees plays an important role in the transfer of knowledge inside the organization. There is a strong relationship of the literatures and the empirical on the findings that knowledge transfer process will be influenced by the interpersonal connection of actors/employees involved in the innovation supporting firm. In addition, the mechanism of knowledge transfer process will be influenced by different personal and organizational motivational factors.

The finding of the observation again shows similarity with the argument of Mestre, (2005, p. 3 ), knowledge can be transferred by personal channel like meetings, mentoring sessions, and informal get-together which allows for the great tacit knowledge sharing between people. E-mailing ideas to a colleague might transfer a great deal of explicit knowledge and possibly some amount of tacit knowledge on the other hand; face-to-face communication would increase the amount of richness of tacit knowledge. There are implications that proves the
above statement. For instance, respondent one suggests that the main channel/mechanism of transferring/sharing knowledge inside Uminova Innovation is via internal meetings, e-mail, conference and business coaching. Respondent two suggest rather differently, he believes that the main ways that knowledge transfers are performed by verbally through participating different initiatives. The third respondent believes that knowledge transfer is very easy inside Uminova Innovation among 20 employees and one chief executive officer. He expressed “It’s an environment where everyone knows everything” this shows the flow of information is very effective. The fourth and fifth respondent also agrees with the rest of the respondents. They argued that the main ways of knowledge transfer inside Uminova is occurred by educating the employees, intranet document saving system and sharing the experience of employees. Surprisingly, codified knowledge shows to support the process of interpersonal knowledge transfer and the mechanism of knowledge flow in innovation supporting firms. The findings of the empirical shows that interpersonal knowledge sharing/transfer can be manipulated by conference, rules, intranet document system and other written communication system that clearly shows the impact of codified knowledge in the process of interpersonal knowledge sharing/transfer.

The analysis seems different from the theories of Desouza & Paquette, (2011, p. 179) which claims that codified knowledge such as best practice, charted business plan, rules, regulations and policies and procedures can be captured and distributed to many members of the organizations through multiple knowledge management system. Whereas tacit and non-codifiable knowledge that exists within people are more difficult to externalize and share inside the organization. Some implication proves differently according to the response of the respondents. Even though all of the respondents agreed that business process, network, available funds, agreement and business plan is transferred among them, there is no data that shows codified knowledge is easier to transfer than tacit (non-codified) knowledge inside the office. On the other hand the analysis seems similar with the argument of Mastre, (2005, p. 3) which draws that expert form of knowledge transfer is basically related with unusual or non-routine way of knowledge transfer when someone asks something from others. Some of the indication is the responses of respondent two and three shows similar result. According to respondent three, most of the employees usually ask and learn various business related concepts from her consultation. The second respondents also believe that there are lots of knowledge transfer among him and the other employees in regards of legal and license strategy. We learn that there is high perception of learnability (transfer of knowledge) among employees as they came from different professional background; this makes the knowledge transfer process every effective among the employees. The finding of this section shows that psychological factor such as emotion, motivation and satisfaction of the work could increase the mechanism of interpersonal knowledge sharing/transfer process in an innovation support firm. Strong emotional attachment with the employees (social cohesion) has been perceived as important factor to share/transfer the interpersonal knowledge among employees. Size of the organization is also other finding that could affect innovation supporting firm in their ways of sharing/transferring knowledge among each other. The more the firm is smaller the more interpersonal knowledge transfer is transferred/shared among the group.

5.4 Knowledge Sharing

Drawing on the argument of Lawson et al., (2009, p.158), knowledge sharing is the outcome of informal and formal communication where the formal could be shared by technology fairs, schedule meetings and request of information. On the other hand the informal mechanism of sharing information can be performed outside the work environment. The analysis also shows similarity with the views of all respondents. Respondent one suggests that the main way of
knowledge is shared by internal meetings, telephone conversation, conference and intranet data save system. He also suggests that informal way of knowledge sharing plays an important role in the case Uminova Innovation as many of the employees spends long time in the coffee room. The second respondent suggests that the main way of knowledge is shared through mail, workshops, and seminars and informally at lunch and coffee room. Respondent four suggests that knowledge transferred is occurred by 60% informal and 40% formal communication. The last respondent also suggests similar with the others, he believes knowledge can be shared personally and by the help of databases. The findings shows that, though both types of communication is important in the mechanism of knowledge sharing/transfer process, informal communication perceived to play a significant role in the process of interpersonal knowledge sharing/transfer in innovation supporting firm.

In the discussion of Desouza & Paquette, (2004, p. 179) knowledge are hard to transfer/share such as tacit and non-codifiable knowledge which exits within people are tough to externalize to others. On the other hand, explicit/codified knowledge are much easier to capture and distribute within employees, on the similar study made by Bystrom, (2002, p. 158) knowledge sharing is not an easy task; historically knowledge has been shared from person-to-person particularly in complex organizations. Though many organizations implemented Knowledge management system (KMS), it has been discovered that employees do not use them, in most cases; employees avoid the knowledge management system and continue to share knowledge by person-to-person basis. There are several implication of the analysis that opposes the arguments of Desouza& Paquette, (2004, p. 179). The main reason of discrepancy could be occurred by the communication strategy of the firm while the response of the respondents agrees with the argumentation of Bystrom, (2002, p. 158). For instance, respondent one suggest as follows “The lady next to my office are patent engineer and of course she has a high level of personal expertise in her profession, if I want something to know related to her profession I will not always hesitate to go to her office and ask her so that she can share me her personal knowledge. Furthermore, Uminova Innovation facilitates two business coaches to work together in order to share personal knowledge and combine different expertise”. The second respondent also suggests similar view with the previous respondent. He suggests that every employee can share personal knowledge in the organization informally since the organization is very flat and has small amount of employees. He further explained “Everyone knows my personal knowledge (expertise) which is related to law so that they came up with different personal question, at the same time I know where to go if I have some question related to my work”. Based on the above analysis, the employees perceived that knowledge is mostly shared via person-to- person basis (tacit) than by the help of codified knowledge in the day-to-day operation of Uminova Innovation. The findings of this research do not support by the previous research that claims that tacit (non-codified) knowledge is hard to externalize to others. There is a finding that shows that tacit knowledge can be easily shared among the employees of innovation supporting firms.

As noted by Wang and Neo, (2010, p.115) the flat structure of an organization enables knowledge to share among employees whereas hierarchical organizations structure can have obstacles in knowledge sharing process. The analysis also shows similar result based on the respondents of all employees, they suggest that one of the reason they share their knowledge is due to the structure of the organizational. Hansen et al., (199, p.106) argued that personalization knowledge sharing approach connects people who have knowledge to those who need it. The result of the interview confirms the arguments of Hansen et al., (199, p.106). The level of knowledge sharing among the employees is very simple and it is built on person-to-person than document to-person approach of knowledge sharing process.
Drawing from the theory of Evangelou & Karacapilidis (2005, p. 50) motivation is the most important for verbally encouraging the employees to participate in knowledge sharing activities. Whereas, lack of interest or motivation from the employees could eventually lead knowledge sharing process to fail. Wang and Neo (2010, p.115) further suggests individual link to share to those who were perceived as honest and less liked to share to those who were perceived as capable. There is no any direct implication that demonstrates the above theory, in fact the third respondents and the forth one suggest indirect argumentation about it. The third respondent highlights that everyone should share their personal/organizational knowledge so that the work should be done and to satisfy the demand of their clients. The forth respondent also suggest similar opinion to the third respondent. He believes employees share their personal knowledge to maintain healthy working environment within members of their group. An implication of the above arguments shows that organizational structure of a company impact the intensity of interpersonal knowledge sharing/transfer process in innovation supporting firm. On other hand, there is an evidence of findings that shows that motivational factors are perceived as important factor that can deter/facilitate interpersonal knowledge sharing/transfer in innovation supporting firm.

It has been highlighted by Cabrera & Cabrera, (2002, p. 696) that human resources practices has a great influence on knowledge sharing through organizational culture such as, fairness in decision making, trust, motivation and open communication. The analysis supports the theories of Cabrera & Cabrera, (2002, p. 696), after all the respondents asked the main components of knowledge sharing process. They replied that good organizational culture, trust among each other and good communication is fundamental for the organizations to continue as strong as it is now. It can thus be suggested that human resource factors e.g., decision making to share/transfer knowledge among each other, trust of others, openness of knowledge to others evidenced to affect the process of interpersonal knowledge sharing/transfer in innovation supporting firm.

In the discussion of Bartol & Srivastava, (2003, p. 20) encouraging knowledge sharing among employees is necessary to bring motivational factors such as rewards system. To motivate individuals for knowledge sharing often uses reward systems which could be either monetary or non-monetary incentives. The finding of the analysis didn’t demonstrate the observation of Bartol & Srivastava, (2003, p. 20). For the questions related, if there is any kind of effort by the organization to motivate its employees in order to share knowledge. All respondents suggest that there is no any kind of monetary or non-monetary incentives. They perceived that they have to share information in order to keep being part of the organization and in order to keep the work done effectively. We have noticed that financial motivation did not perceived to contribute interpersonal knowledge sharing/transfer process, whereas culture and trust shows positive relationship with knowledge sharing process in the process of innovation support.

The result of the study shows that there are various personal and organizational factors that can influence the mechanism of knowledge transfer (sharing) in an innovation supporting firm. The interpersonal knowledge sharing process is set out to determine by communication skills of actors involved in the innovation supporting firm. These communication could be formal and informal communication. Socialization and internalization of tacit knowledge perceived as the main mechanism of knowledge transfer (sharing) process, whereas the study did not show the importance of externalization in sharing/transferring knowledge among innovation supporting firms. Another important finding was that motivational factors of individual and organizational factors will affect the knowledge sharing/transfer process. The Individual factors (human resource factor) that influence the interpersonal knowledge sharing
process includes trust, culture, fairness in decision making process and motivation to transfer knowledge. The organizational factor includes structure of the organization and the ability of the organizational to motivate its employees will influence the process. The more the hierarchy of the organizational structure, the more it deters interpersonal knowledge sharing/transfer will be. Similarly, the more the firms reward their employees financially and non-financially to share/transfer knowledge, the better knowledge transfer/sharing occurs inside innovation supporting firm.

5.5 Knowledge Management and Innovation supporting firm

Drawing from the theories of Nonaka and Takeuchi, (1995, p. 1) the performance of innovation supporting firms depends on the firm’s ability to manage knowledge and human resource practices. Similar study made by Sinkula, et al., (1997, p. 305) suggests that the innovation supporting process highly depends on knowledge whereas the management of knowledge and human capital is critical for running any innovation supporting firm. It also highlighted that knowledge management helps to enhance firm’s innovation supporting firms. The finding of the observation seems collaborative with the above theories, but most of the respondents perceived the effect of knowledge management in innovation supporting in different ways. Respondent one suggests that Uminova innovation tries to be in the front, updating each other in the area of innovation by seeking new knowledge and findings, the second respondent also believe that knowledge is very crucial during the process of innovation supporting as knowledge serves as important input. On the other hand, the fifth respondent believes that there are three main effects of knowledge in innovation supporting firm. The first one is that knowledge helps to make target groups potentially to grow, to make the company stable and to impact the strategic plan of the company. In general, the findings show that there is a direct relationship of knowledge with interpersonal knowledge sharing/transfer process in the mechanism of sharing knowledge.

A considerable study made by Plessis, (2007, p. 23) argued that, knowledge management can be applied in innovation supporting firms in three different ways. The first basic driver of knowledge management in innovation supporting firm is to create, maintain, built competitive advantage through utilization of knowledge and collaborative process. The second driver of knowledge management is used as a resource to reduce complexity in innovation support process; the last driver is to benefit the innovation process in order to integrate knowledge inside and outside the organization. The finding of the observation do not demonstrate the above theories, even though all the respondents suggested that both knowledge management and innovation support is important, they did not clarified as the above theory claims. For instance, respondent one suggests that both knowledge management and innovation support are very important for any organizations that engage in consultancy service. The second respondent consider the two terms as interdependence which is impossible to look separately. The third respondent also react to the question that managing knowledge can improve supporting innovation in certain degree. This shows knowledge and innovation perceived interchangeably by the actors involved inside Uminova Innovation. Hence, both the concepts considered as important factor for the success of the organization. Parts of the findings did not support the findings of Plessis (2007, p. 23) that claims that managing knowledge can applied in the process of maintaining competitive advantage through utilization of knowledge. There is no direct finding that shows the relationship of the characteristics of innovation supporting firm (uncertainty, knowledge intensity, competition and cross-boundary) with the mechanism of interpersonal knowledge sharing/transfer process inside an innovation supporting firms. Mobility of personals across many departments was perceived as a factor in some part that can help to transfer /shared knowledge among innovation supporting firms.
5.6 Communication

In the discussion of Gorse & Emmitt, (2009, p. 983), communication plays an important role in the process of knowledge sharing and transfer from one unit to another unit. In other words, both formal and informal communication helps for the effective flow of information. Face-to-face interaction is the common way of formal communication usually occurs by meetings of various types of teams and informal discussion in the workplace which allows individuals to share knowledge. The finding of the observation seems in collaboration with the above theory. After the respondents asked about the role of communication inside the firm, they suggest that it is very important for the proper functioning of the organization. Respondent one mentioned that there are two employees inside the company that only works in communication, respondent two believes that the main role of communication inside the firm are to spread out the values of the company to others. Respondent three also consolidate the idea of the previous argument by facilitating a good flow of information. The last two respondents also suggest that a failure in communication means a failure to render the right service. These findings shows that communication play a significant role in the process of interpersonal knowledge sharing/transfer in innovation supporting firm as also argued by (David, 2011, p.72).

According to the findings of David, (2011, p. 72) internal communication is vital for the proper functioning of the company; it can be delivered in the form of reports, meetings, and different coordination of activities. Firms also use modern technologies like share point and wikis to integrate internal communication and to fill the gaps of communication. The finding of the analysis also shows similar result as of the theory of David, (2011, p. 72). After asked about the type of communication inside the firm, almost every respondent replied in a similar way. They suggested that formal communication is performed by meeting, business couch, seminars, workshops, e-mail and informal communications is conducted in coffee room discussion among each other. The analysis further shows similarity with the argument of Fischbach & Gloor, (2009, p. 140), “If the formal communication is important to the company, informal communication is vital that leads the actions and thoughts in to process” which explains how informal communication is more valuable than formal communication. All the respondents suggested that the role of informal communication sometimes exceeds the formal one in the context of Uminova Innovation. For example respondent three suggested that 60% of the communication is informal while 40% is formal. The evidence of the study shows that internal communication that is supported by formal and informal communication speed up the mechanism of interpersonal knowledge sharing/transfer in innovation supporting firm.

Based on the drawing of Almeida & Kogut, (1999, p. 905) transferring knowledge via personal movement facilitates effective knowledge transfer. It enables personal movement of firms to alter knowledge and transfer tacit as well as explicit knowledge which is difficult to transfer by other modern mechanism like memos, diagrams and hired consultants. The analysis of the empirical data shows similarity with the above theory, all respondents considered that the inter-personal communication of the firm as open, positive and very important to share (transfer) knowledge among the employees. The first respondent suggest that the inter-communication of employees in the company plays a vital role to transfer knowledge, the second respondent suggest, the inter-personal relationship of employees are very open and enhance everyone knowledge in the organization. Similarly, the third, fourth and the fifth respondent suggest that the inter-personal communication of the firm is built on both formal and informal communication which includes weekly meetings, dialogues, working in smaller groups, e-mail, phone calls, personal meetings and intranet document save
system. Even though, there is an evidence of findings that shows the interpersonal interaction of employees inside innovation supportive firm is open and positive, there is no direct evidence that demonstrates transferring knowledge via personal movement are effective knowledge transfer as it argued by (Almeida & Kogut, 1999, p. 905).

The findings of the observation also collaborative with the arguments of Grover & Davenport, (2001, p. 8), which states that personalization approaches main mechanism to transfer knowledge by direct interaction among people. In this approach knowledge is mainly shared through direct person-to-person interaction. In the case of Uminova Innovation, the main ways of knowledge transfer during the inter-personal communication is via formal and informal meetings which include dialogues and coffee room discussions. It also mentioned by respondent three that one of the ways that increase the inter-personal communication of Uminova Innovation was the intranet document save in system where every employees can check the stored data and update each other. This shows that the interpersonal knowledge sharing process in innovation supporting firm can constitute both tacit and explicit knowledge as we previously mentioned in the findings.

The finding shows similarity with the arguments of Hansen et al., (1999, p.109-112) which claims that informal information channels are beneficial which could be social relationship, build of trust, friendship and respect. The respondents also suggest that all the inter-personal and inter-organizational communication of the company is based on 60% informal and 40% formal way of communication which makes compatible with the arguments of Hansen et al., 1999, (p.109-112). In the highlight of Mäkelä & Brewster, (2009, P. 594) interpersonal communication enables two-way communication to take place in daily forms operation. We have not found any direct relationship that can confirm the above theory as all respondent replied differently. For instance, respondent one suggest that inter-personal communication plays a vital role in the process of knowledge sharing inside the organization, the second respondent suggest that inter-personal communication enhance the knowledge of every employees. While, the third and fourth respondent suggest that inter-personal communication helps to build trust among each other and contributes its role on the effectiveness of knowledge sharing process. The last respondent believe that the inter-personal communication help the employees of the company to learn from each other and able to deliver a better service. This means that interpersonal communication of employees will improve the process of interpersonal knowledge sharing/transfer since it’s drawn as two-ways interaction by the actors involved in innovation supporting firm.

Hansen et al., (1999, p. 107), argued that company’s choice of strategy is depend on the way the company serves its clients/customer and the people its hires. In this aspect, Uminova Innovation serves their clients/customer in customized way that means individual care to each entrepreneurs, innovators and students. This requires knowledge to be closely tied with the person who developed it and shared through direct person-to-person interaction. In such companies the main purpose of computers is to help people communicate knowledge, not to store it. Likewise in Uminova Innovation, employees are sharing knowledge via direct person-to-person interaction not only by the help of computers, these above discussion also proves that actors involved in an Uminova Innovation perceived interpersonal knowledge sharing as a personalization strategy which used in great extend rather than codification strategy (companies’ knowledge is carefully codified and stored in databases/computer so that employees can access and use it). Most importantly, Uminova Innovation did not standardized their service to the customers or clients (entrepreneurs, innovators, researchers and students) which is more likely to happen in those firms that follow codified strategy (Hansen et al., 1999, p. 106). Since, each entrepreneurs, innovators and students possess different ideas and
views that mean it is important to deal with each of them separately. Furthermore, all respondents claim that the knowledge they gain from their clients during individual consulting was shared among all employees. Here, we found out that interpersonal knowledge sharing/transfer occurs through adapting personalization strategy among the actors involved in innovation supporting firm.

The findings of the study show that communication plays a vital role in the mechanism of knowledge sharing/transfer process in innovation supporting firms. Specifically, it’s serves a bridge in the interpersonal knowledge sharing/transfer process. Formal and informal communication both accounts the mechanism of knowledge sharing process. Another finding in this section portrays that, even though there is an indication of interpersonal knowledge sharing/transfer process via both personalization strategy and codification strategy, there is a huge possibility of knowledge flow via personalization strategy in innovation supporting firm. However, the findings of the research did not support previous research of Lawson et al., (2009, p.158) that claims that, personalization strategy (person-to-person knowledge sharing) is difficult to externalize to others. Whereas, personal movement perceived as important interpersonal factor to transfer/share knowledge across innovation supporting firms.

5.6.1 Summery and Findings

To sum-up, the analysis part is constructed based on the existed theory in relation to the analysis of the empirical studies. The following diagrams show the theoretical and empirical contribution of the study in the area of interpersonal knowledge sharing/transfer in innovation supporting firm. At this stage, it is expected to present contribution of the study therefore, overall analysis are made to make diagram complete that show the relationship of theories and the research gap (diagram 1). The diagram portrays the new developed contribution of this study that also can also serve as a remedy to fill the research gap and answer the research questions.

![Diagram](image.png)

**Figure 4: Summery of findings**
We can see from the above diagram, the perception of interpersonal/personalization knowledge sharing/transfer process of Uminova Innovation constitutes different elements. Up to the point it is clear that, Uminova Innovation focuses on the effectiveness of interpersonal communication; hence they hire two-individuals that mainly focus in the communication aspect. The analysis also shows that knowledge is highly shared/ transferred by informal communication 60% and formal communication 40%. This research confirms that knowledge can be shared by two-ways learning process; this is occurred by the interaction of person-to-person communication (personalization strategy). Furthermore, the structure of an organization plays significant role for the flow of knowledge among employees. Since, Uminova Innovation operated in flat organizational structure by holding very few employees and one chief executive manager, every employee’s share knowledge easily either formally or informally. Finally, the study indicates a positive effect on organizational culture and trust in the process of interpersonal knowledge sharing/transfer. Lack of trust and organizational culture will restrain the flow of knowledge in innovation supporting firm. The study also denotes motivational factors (individual and organization) as a factor that impacts the overall process of interpersonal knowledge sharing mechanism in innovation supporting firm. In general, communication, organizational structure, trust, culture, socialization and motivation factors are perceived as significant factors that impact the interpersonal knowledge sharing/transfer in innovation supporting firm.

To clarify specifically, the study contributes a potential empirical contribution by assessing the theories in to practice through semi-structural interviews with the sample groups, weather the theories are supported by the actors or not. Theoretically, the study contributes a combination of framework in the area of interpersonal knowledge in innovation supporting firm where there was no existed study in that area before. The chosen methodology that applied in this study will contribute its role in similar studies that will focus in a similar organization.
Chapter 6 - Conclusion

The final chapter of this study highlights the key contribution and findings of this research in related to answering the research question and fulfilling the purpose of the study. In addition, it suggests future research based on the limitations of the study.

The study set out to determine how interpersonal knowledge sharing/transfer can be managed in innovation supporting firm. Limitation of previous studies in interpersonal/personalization knowledge sharing (transfer) process in innovation supporting firms leads the researchers to assess the study area. In order to remind the readers, the purpose of the research is to explore the mechanisms of knowledge transfer (sharing) in innovation supporting firm. It also aims to answer the research questions. The research questions are: (1) How is the interpersonal knowledge sharing process perceived by the actors involved in an innovation supporting firm and (2) How does knowledge transfer process functions inside an innovation firm setting. To further clarify the research questions, the first research questions more concerned about employees (Individuals) knowledge sharing process while the second questions focus about the process of knowledge transfer inside Uminova Innovation. There is a huge opportunity to grasp the possible solution from the findings of the interview which is built on the theoretical part of the chapter. The study presents different theories that deal about knowledge, knowledge sharing (transfer), personalization knowledge sharing and communication in order to observe and understand the study area from the grass root since the concepts are interrelated with each other. Both research questions can be answered after evaluating the in-depth analysis of respondent’s response by the help of the theoretical framework.

The main findings of this study shown that communication plays a significant role among interpersonal knowledge sharing/transfer process in innovation supporting firm. Both formal and informal communication perceived as important mechanism that affect interpersonal knowledge sharing/transfer process. It has been noticed also that the innovation supporting firms focuses more on informal communication to share/transfer knowledge which consolidates the argumentation of Fischbach & Gloor, (2009, P.140). Based on the findings of the study, the interpersonal communication serves an vital role to share knowledge among the employees. The interpersonal knowledge sharing/ transfer characterized by: open, outgoing, informal and very good climate to share knowledge among each other. The other outcomes of the same result show that the interpersonal knowledge sharing of employees has described as spread out and everyone only focuses on the job. This indicates some inclination that those employees who belong to the same social group, status and age share information among each other than others. The result of this investigation shows that the main channel of interpersonal communication that helps to share knowledge in the company are: internal meetings, weekly meetings, dialogues, e-mail, conference, telephone, business coaching, intranet document save system and sharing knowledge informally in the coffee room and lunch breaks. All the respondents argued in the interview that, the interpersonal communication of employees plays a critical role for both sharing and transfer of knowledge inside Uminova Innovation. In addition, there is an evidence that shows that the interpersonal relationship of employees/actors increases the personal and organizational knowledge of Uminova Innovation which has an implication of learning each other’s strategy.

The second findings of this study on investigation of interpersonal knowledge sharing/transfer process has shown that personalization strategy (tacit knowledge) has a high probability to be shared than document based (codified) knowledge in innovation supporting firm. This opposes the argumentation of Desouza & Pasquette, (2004, p. 179) which claims that tacit knowledge is hard to externalize to others compared to codified knowledge. Hence,
innovation supportive firms focus on the interaction of employees for the effective flow of interpersonal knowledge among their members.

the main ways of knowledge transfer mechanism (channels) that noticed in the study are: verbal communication, weekly meetings, e-mail, conference, telephone, project meetings, educating employees, business coaching and sharing the experience of employees formally and informally to learn from each other. The form (type) of knowledge that transfers among employee’s shows to be: business process, network, information, available fund, updates of internal process, future plans, expertise, knowledge, process, sample of business plan, agreement and written presentations. It has been highlighted that the informal communication plays a vital role (60%) to share knowledge compared to the formal one which counts 40%. It has been mentioned that, knowledge mostly shared via conferences, internal meetings, telephone conversation and intranet data save system. Based on the above findings, we make a conclusion that interpersonal knowledge can be more shared/transferred mostly by informally in innovation supporting firms.

The third indication of the study revealed that factors such as motivation of employees, organizational culture, trust and organizational structure (hierarchy) turned out to influence the intensity of Interpersonal knowledge sharing/transfer process in Innovation supporting firm. Motivational factors perceived to be created by individual’s interpersonal interaction and by financial and non-financial reward of the firm towards employees. This will highly affect the interpersonal knowledge sharing among each other. Evidences from the study suggest that mobility of individuals across different departments impact the process of interpersonal knowledge sharing/transfer in innovation supporting firm.

From the above findings, we can conclude that internal factors like motivation, trust and organizational culture determine the degree of interpersonal knowledge sharing/transfer process in innovation supporting firms. These internal factors have positive relationship with interpersonal knowledge sharing/transfer. This means if employees have high motivational factors, high level of trust and high level of cultural communication then there will be a high potential to share/transfer knowledge. Taken together, these findings suggest the impact of socialization and internalization of knowledge among the actors/employees involved to in innovation supporting firm.

6.1 Limitation and Future Implication

One of the limitations we faced during writing this research paper was time limitation. It would have been possible to use more interviewees if we would have enough time. The other limitation related with the interview was, most of the interviews were very busy working on their own priorities as we approach them one week before Christmas. In fact, some of them were also reluctant to give interview. In addition, one of the responsible employee who works in communication was in vacation. If we would have been access to interview him he could have given us more information than anyone since his job is related with one of our theories we used in the paper. Another limitation considering the knowledge sharing and transfer process in Uminova Innovation was that, knowledge sharing and transfer process took place among various actors like the customers, employees, and the firm. However in this study, the interaction among employees with their firm was only taken in to account. The interactions between employees with entrepreneurs, students, innovators were not considered.
Although, the study excluded important actors in the Innovation supporting office, future research is encouraged on the study area by interviewing the clients, students and Entrepreneurs. It could also give other opportunity to examine with the responses of the employees. As we mentioned above, since this study includes five sample sizes, future research is encouraged to use bigger samples either from the employees or externally from the clients of the company. Finally, the developed theoretical framework in this research could be tested in other companies that consult and support entrepreneurs.
References


## Interview Guide

**Institution:** Umeå University

**Program:** Master’s program in Business administration

**Topic of the research:** The role of Knowledge management & knowledge transfer in an innovative firm setting. Case study: Uminova Innovation

A. What is your role (position) in the firm?

B. Work experience in the firm in years? And other working experience before Uminova Innovation?

<table>
<thead>
<tr>
<th>Theories discussed</th>
<th>Interview question [ Open questions ]</th>
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<tbody>
<tr>
<td>Knowledge</td>
<td>1. How do you understand knowledge?</td>
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<td></td>
<td>2) What is the main source of knowledge in the organization?</td>
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<td></td>
<td>3) What are the mechanisms of knowledge sharing in the organization?</td>
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<tr>
<td>Knowledge management</td>
<td>4) How do you manage knowledge inside the firm?</td>
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<td></td>
<td>5) What is the role of knowledge management in Uminova and how does the firm utilize the concept?</td>
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<td></td>
<td>6) How does the process of knowledge management looks like inside Uminova?</td>
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<td></td>
<td>7) What do you think is the importance of knowledge management in the context of Uminova Innovation?</td>
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<tr>
<td>Knowledge transfer</td>
<td>8) How do you understand/ define knowledge transfer?</td>
</tr>
<tr>
<td></td>
<td>9) How does the knowledge transfer process looks in the firm? Codified Vs Non-codified</td>
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<tr>
<td></td>
<td>10) What mechanisms does the firm use to transfer knowledge to others?</td>
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<tr>
<td>Knowledge sharing</td>
<td>11) How does the interpersonal relationship or social ties of employees looks like inside the firm?</td>
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<td></td>
<td>12) What is the main channel of communication inside the firm?</td>
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<td></td>
<td>13) What form (type) of knowledge does transfer most? If so, where is supposed to be the destination?</td>
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<tr>
<td>Knowledge management &amp; Innovation</td>
<td>14) How does knowledge shared in the firm?</td>
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<td></td>
<td>15) What are the main ways/channels that knowledge can be shared inside the organization?</td>
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<td></td>
<td>16) How does the firm manage to share personal knowledge to others?</td>
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<td>17) What are the components that make knowledge sharing successful in the case of Uminova Innovation?</td>
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<td></td>
<td>18) Is there any sort of effort forwarded by the firm towards employees to share knowledge? If so, what is that?</td>
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<td></td>
<td>19) What is the effect of knowledge in the magnitude of knowledge sharing process in your firm?</td>
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<tr>
<td>Communication</td>
<td>20) What do you think is the effect of knowledge management in innovation, if there is?</td>
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<td></td>
<td>21) How do you explain innovation in related to knowledge management inside the firm?</td>
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<td></td>
<td>22) What are the roles of communication in Uminova Innovation?</td>
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<td></td>
<td>23) What is the main type of communication most often inside the firm?</td>
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**Thanks for the Interview**

2013-12-09