Masters' thesis

Knowledge transfer in mergers and acquisitions

A case analysis of Cisco

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This masters' thesis is carried out as part of the education at the University of Agder and approved as such. However, this approval does not imply that the university represents the methods applied and the conclusions drawn.

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Acknowledgement

The Master thesis is the final step towards my M.Sc degree in Business Administration at the University of Agder. The Master thesis counts for 30 ECTS, and is written over a full semester. The main objective of the Master thesis is to apply scientific methods to a specific problem. The research problem of the Master thesis should be related to the student's specialization, in my case; International Management and Strategy.

Throughout the masters I have gained interest in knowledge transfer, as the field of strategic management. It has been an interesting journey with a lot of challenges on its way. The working process has given me new knowledge and understanding of both theoretical literature and application in practice. The Master thesis is due 1st of June 2012.

I would like to thank my supervisor Professor Joyce Falkenberg. She has guided me with her knowledge and questions. The thesis would not have been the same without her advice and constructive feedback

I would also like to thank Irene Bredal for comments and proofreading. And finally, thanks to my family and friends for support during this semester.

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Executive summary

Knowledge transfer in mergers and acquisitions can be a challenge, but vital and essential for organizations when used in a beneficiary way. The main focus of this thesis is to look at what factors facilitate transfer of knowledge in the case of a merger or acquisition, with an emphasis on tacit knowledge transfer in new product development.

The method I have used to find answer to the research question is to focus on some acquisitions made by the high-technology firm Cisco. In high-tech industries it is important to be in front and develop new technology and products. To be able to do this many companies make acquisitions to keep up and get a competitive advantage in its industry. Over the years, Cisco has made a great amount of acquisitions, mostly in the U.S. but also in other parts of the world. This makes them an interesting company for this thesis.

My findings indicate that what Cisco does when it comes to knowledge transfer is much related to the research done in this field.

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1 Introduction

1.1 Purpose of the study

The main purpose of this study is to look at what factors which facilitate knowledge transfer successfully in the event of a merger or acquisition.

Research questions: The question I would like to get an answer to in this thesis is to find out "*what facilitates knowledge transfer in the event of a merger or acquisition*".

The focus of the thesis is to look at post-merger integration processes in high-technology acquisitions and focus on new product development. High-tech companies are using mergers and acquisitions as a strategy for gaining access to innovative technology and processes. To do this, the companies need to facilitate for transfer of knowledge and tacit knowledge to gain the competitive edge they need in this industry. Which factors is Cisco using to facilitate for knowledge transfer?

To be able to answer this I will use public available data and compare Cisco's acquisition strategy with focus on knowledge transfer and new product development. The acquisition strategies and knowledge transfer would be showed through examples of acquired companies at Cisco.

The research model is a model based on literature on knowledge transfer in mergers and acquisitions.

1.2 Background

"Knowledge transfer has always been a challenge for organizations. Its importance has grown in recent decades for related reasons. First, knowledge appears to be an increasing proportion of many organizations total assets. Second, organizations have moved away from hierarchical methods of control toward more decentralized organizational structures and increased employee involvement." (Levine, 1995)

In strategic management literature knowledge transfer is a topic which has been of interest.

A lot of the studies done on knowledge transfer have been within and between multinational corporations. Only in the last years knowledge transfer in mergers and acquisitions has been given more attention.

A large portion of the mergers and acquisitions that has taken place the last years are in technology-based industries. “Many of the acquisitions in the 1990s appeared to be motivated by firms’ need to obtain critical technologies or capabilities. Many acquisitions are attempting to obtain highly developed technical expertise and skills of employees, high-functioning teams for product development or other functions. Acquiring firms may not have the ability to develop these valuable knowledge-based resourced internally or, alternately, internal development may take too long or be too costly.” (Ranft and Lord, 2000, p. 296)

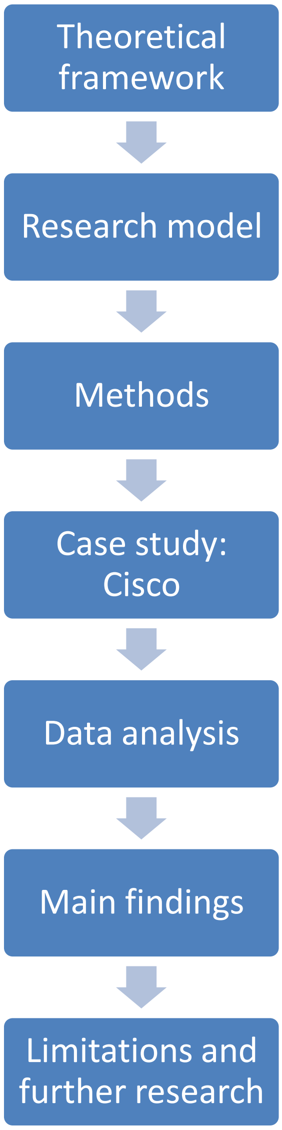
“Much of organizational knowledge is tacit (Cook and Yanow, 1993) and it is this type of knowledge that has strong potential to be a source of competitive advantage, because it is difficult to assess from the outside.”
“Because they are difficult, costly, and time-consuming to obtain, tacit forms of knowledge may be of paramount strategic value and may be a relatively strong and lasting source of competitive advantage.” (Ranft and Lord, 2000, p.298)

“A key reason for an acquisition has often been to gain access to knowledge in the acquired company and to transfer that knowledge to other parts of the firm” (Bresman et al, 2010).
Or as Pablo and Javidan (2004, p.139) puts it: “*In technology-intensive industries, the issue of knowledge transfer is particularly important to acquisitions as an organization’s ability to compete is often dependent upon its abilities to develop innovative technologies which requires knowledge transfer, learning and innovation*.”

The different views over from Bresman et al. (2010), Ranft and Lord (2000), among others show that knowledge transfer is an important factor in mergers and acquisitions.

“The history of Cisco shows that it grew from a very small company in northern California, and it was present when the Internet was just getting started. Cisco has been an extremely successful networking and Internetworking company. It was there before the Internet took off as a giant industry, and it grew with the Internet. Its devices, routers and switches, are the backbone to a large percentage of the structure of the Internet. It grew by the acquisition of companies that it saw representing the future technologies." (Garza, 2011)

1.3 Overview



To be able to answer the research question the thesis starts with research and theories on knowledge transfer, mergers and acquisitions, and related theories; information about M&A and the company, and an analysis at the end with correlation to the research model.

Theoretical framework lays out theories that give background information and other information relevant to have knowledge about as a basis for the research model. In the theories there are also research on knowledge transfer in mergers and acquisitions.

The research model lays the ground for analysis of the data. The research model is based on studies done on knowledge transfer in mergers and acquisitions.

The method chapter explains what kind of method I will use and why this method is the right one to use for this type of analysis.

The next section is the case study of Cisco which includes information about Cisco, history, acquisition strategy, and the acquisitions I will focus on.

In the chapter following the data will be analyzed with focus on what I have found in correlation to the research model and factors which may not correlate to the model.

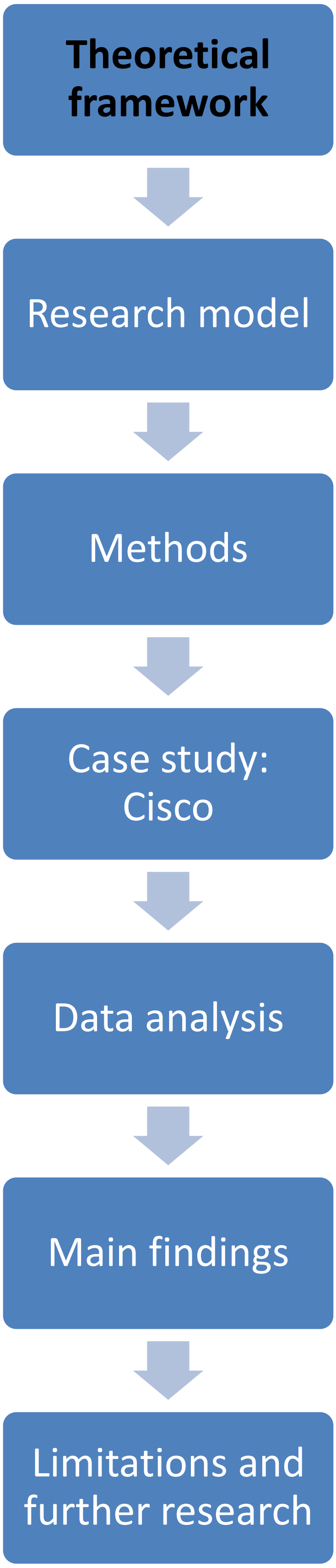
The main findings include the findings from the analysis.

In limitations and further research there will be a look at limitations of my thesis and presentation of some ideas on further research on this subject.

1.5 Contribution: The aim of this thesis is to provide a contribution to the knowledge transfer/merger and acquisition literature. In answering the research question the main goal is to develop a model of factors which impacts tacit knowledge through knowledge transfer in mergers and acquisitions.

My contribution to the knowledge transfer literature will be to further develop a view on acquisitions and its connection to knowledge transfer.

1.6 Limitations: This is a master thesis which will have limitations both in time and capacity. Another limitation is that the case study only focuses on one company in the high-technology sector, and the findings here could be different for other companies in other industries.


Theoretical framework
Research model
Methods
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Limitations and further research

2 Theoretical framework

In this part I will explain different relevant theories and define the concepts that I will use in the thesis. The theories are: resource-based view, knowledge-based theory, and social capital theory. I will explain why they are relevant in this thesis as they come up. The concepts I define are: knowledge, knowledge transfer, knowledge management, and also have a look at knowledge as a competitive advantage and knowledge transfer in mergers and acquisitions. It is important to get this basis before the analysis.

2.1 Knowledge

There are a lot of different definitions of what knowledge is and it is difficult to define. One definition of knowledge is that when you have data, this will be transferred into information which further gets into knowledge. Knowledge is information put together of data. Data is unstructured, coded raw materials that when structured and made into patterns are created into information and then into knowledge (Chini, 2004). Knowledge combines sets of information into something with a meaning and interpretation.

Another definition of knowledge comes from Davenport and Prusak (1998, p.5) which defines knowledge as

> "*A fluid mix of framed experience, values, contextual information, and expert insights that provides a framework for evaluation and incorporating new experiences and information. It originates and is applied in the minds of knowers. In organizations, it often becomes embedded not only in documents or repositories but also in organizational routines, processes, practices, and norms.*"

The definition of knowledge I will use is the one over from Davenport and Prusak. The reason for this is that this is a good definition which includes different factors which are relevant for knowledge transfer, and tacit and explicit knowledge. It is important to define knowledge because knowledge can be so many things and in different patterns and shapes. Knowledge is a mix of different elements. For the analysis it is vital to have a definition of knowledge because one should have this information as a reminder in both the data collection and analysis. For the purpose of this thesis it is important to have a clear and good definition on knowledge.

2.1.1 Tacit and explicit knowledge

It is customary to distinguish between tacit and explicit knowledge. Explicit knowledge is easy to transfer because it is usually written. Another word to use would be that it is articulated. This type of knowledge is often codified through words, numbers and codes (Chini, 2004). Explicit knowledge can be transmitted to others in the formal systems and language of the company. It is also objective.

Tacit knowledge on the other hand is subjective. It is often in the minds of the people, something you do not think that is knowledge. It is embedded in you. Tacit knowledge is difficult to transfer; it is more personal and intuitive.

Nonaka and Takeuchi (1995) stress the importance of tacit knowledge and the recognition that tacit knowledge has a number of implications which Western managers should be more accustomed to. These crucial implications are:

1. *It gives rise to a whole different view of the organization.*

2. Think about innovation in a whole new way.

3. Western managers need to "unlearn" their old view of knowledge and grasp the importance of the Japanese view. (Nonaka and Takeuchi, 1995, p. 9)

Knowledge can be embedded in different part of the organization:

- "A significant component of the knowledge that organizations acquire, especially tacit knowledge, is embedded in individual members." (Argote and Ingram, 2000, p.152)
- "Knowledge can also be embedded in an organization's tools and technology." (Argote and Ingram, 2000, p. 154)
- "Knowledge can be embedded in an organization's tasks and their interrelationships." (Argote and Ingram, 2000, p. 154)
- "Knowledge can be embedded in the various networks formed by combining members, tools, and tasks." (Argote and Ingram, 2000, p. 154)

It is important to know where in an organization knowledge in embedded. This is because it could help in understanding how to transfer knowledge.

For organizational use the creation of knowledge is a "*continuous and dynamic interaction between tacit and explicit knowledge*" (Segal-Horn and Faulkner, 2010, p. 275)

There are several factors associated with the transfer of tacit knowledge (Joia and Lemos, 2010). Among them are: individual management of time, common language, mutual trust, relationship network, hierarchy, reward, type of training, knowledge transference, knowledge storage, power, media, type of valued knowledge and internal level of questioning. I would like to elaborate on two of these indicators.

According to Joia and Lemos (2010) a prime indicator for tacit knowledge is the individual management of time. "*Tacit knowledge is a direct result of experience, reflection and dialogue – three activities that require time"* (p.413). Time for the exchange to be experienced and also reflected upon is important and required. "*Primarily, the sharing of tacit knowledge requires time for contacts and personal interactions"* (p.413).

Joia and Lemos also think that mutual trust is essential for tacit knowledge transfer. For the tacit knowledge to be successful it is of importance that a relationship of trust between individuals is present, and this trust must be developed within the cultural and social context of the organization and in which they (the individuals) find themselves. "*The greater the trust between individuals, the lower the level of risk and uncertainties in tacit knowledge transfer will be"* (p. 413).

To sum up so far, the things presented over should give us a basis in what knowledge is and the definition of knowledge is important for the further chapters in the thesis. It is also important to understand that knowledge can be imbedded in different parts of an organization, and keep this in mind when it comes to knowledge transfer.

This section is relevant for the research question because it gives a definition of knowledge, which is essential for the definition of knowledge transfer and further for the purpose of the thesis. In the search of finding how and what a high-technology firm does to facilitate the transferring of knowledge in acquisitions, it is important to know the basics about knowledge, and what kind of knowledge we are after.

2.2 Resource-based view

The resource-based view is a theory with focus on the resources in an organization. The important aspect here is to have resources which give the organization competitive advantage. Sustained competitive advantage is when an organization has implemented "*a value creating strategy not simultaneously being implemented by any current or potential competitor and when these other firms are unable to duplicate the benefits of this strategy*" (Barney, 1991, p. 102).

Resources can be classified into three categories; physical capital resources, human capital resources, and organizational capital resources. Physical capital includes resources of physical technology, like geographical location and equipment. Human capital resources include experience, training, intelligence, relationships and insight of individuals in an organization. Organizational capital resources include reporting structure, planning, controlling, and coordinating systems.

For a company to reach competitive advantage over competitors, the resources should meet these four categories; valuable, rare, non-imitable, or substitutable (organizational) (Barney, 1991).

2.2.1 Valuable

The resource needs to be of value to the organization. A resource is valuable when it enables the organization to implement strategies that are effective and efficient. The resource should exploit the opportunities and/or neutralize threats. (Barney, 1991) But a resource that is valuable in one industry may not be valuable in another.

2.2.2 Rare

To create sustainable competitive advantage the resource should be rare. This means that the resource should be rare among current and potential competitors. If many of your competitors have a specific resource it is not rare, and you will not gain competitive advantage by using that resource. (Barney, 1991)

2.2.3 Non-imitable

To gain sustainable competitive advantage Barney (1991) points out in his article that a resource which is non-imitable should follow one or more of three reasons: (p. 107) *"(a) the ability of the firm to obtain a resource is dependent upon unique historical conditions,*

(b) the link between the resources possessed by a firm's sustained competitive advantage is causally ambiguous, or

(c) the resource generating a firm's advantage is socially complex."

2.2.4 Substitutability (organizational)

The last requirement for an organization to gain sustainable competitive advantage is to have a resource which is not substitutable. This means that "*there must be no strategically equivalent valuable resources that are themselves either not rare or imitable*" (Barney, 1991, p. 111). Substitutability can take to different forms:

- "Though it may not be possible for a firm to imitate another firm's resources exactly, it may be able to substitute a similar resource that enables it to conceive of or implement the same strategies." (Barney, 1991, p. 111)
- "Very different firm resources can also be strategic substitutes." Examples that Barney (1991) gives are vision and formal planning.

Considering the information on the resource-based view, Barney (1991) came up with a framework that shows the relationship between the firm's resources; value, rare, imitable, and sustainability; and sustainable competitive advantage. See the figure below.

Figure 1. (Barney, 1991, p. 112)

Knowledge is one of the resources Barney refers to in his article. A firm resource includes "*all assets, capabilities, organizational processes, firm attributes, information, knowledge, controlled by a firm that enable the firm to conceive of and implement strategies that improve its efficiency and effectiveness*" (Barney, 1991, p. 101). For knowledge to become a resource with competitive advantage it needs to be rare and difficult to imitate by competing organizations.

2.3 Knowledge-based theory

The knowledge-based theory is relevant for the research question because this theory explores the "*coordination mechanisms through which firms integrate the specialist knowledge of their members*" (Grant, 1996, p. 109). In knowledge transfer it is important to know and find mechanisms to facilitate the transfer.

As Grant (1996, p. 109) points out in the introduction to his article; "*the knowledge-based approach sheds new light upon current organizational innovations and trends*". When this view was starting to become more popular, organizations were realizing that resources were not enough. The knowledge-based theory has a different aspect of the firm than the resource-based view. The meaning behind this is that the knowledge-based theory addresses some other aspects which the resource-based view does not focus on, like organizational structure, and the role of management.

The knowledge-based view of the firm can be seen as an outgrowth from the resource-based view and other theories (Chini, 2004). To view knowledge as the primary resource for competitive advantage has become more and more popular along the years. The knowledge-based theory suggests that knowledge is by far the most important resource the firm has. This theory does not only focus on the strategic management concerns but also on other factors (Grant, 1996; Chini, 2004). These factors are: (Grant, 1996, p.110)

- "*Explain the existence of the firm as an institution for the organization of production*".
- "*Explore the nature of coordination within the firm*".
- "*Analyze organizational structure*".
- "*Determine the boundaries of the firm*".

According to Grant (1996), in the resource-based view the firm is viewed as "*a unique bundle of idiosyncratic resources and capabilities*" (p. 110) where the main task of management is to maximize value through using existing capabilities and resources, and at the same time develop the organization's resources for the future.

This fits with knowledge because in developing the firm's resources for the future, knowledge and knowledge transfer could be of use.

Transferability:

This is important regarding knowledge, both between firms and within the firm. To be able to transfer the knowledge, knowing how and knowing about. Knowing how is often referred to as the tacit knowledge and knowing about as explicit knowledge. The importance of transferability is also supported in the resource-based view, where transferability of an organization's resources is a critical determinant for sustainable competitive advantage. (Grant, 1996)

Appropriability:

Appropriability refers to "*the ability of the owner of a resource to receive a return equal to the value created by that resource*" (Grant, 1996, p. 111). As a resource, knowledge is subject to complex problems when it comes to appropriability. Referring to tacit knowledge, it is not directly appropriable because it cannot be transferred directly. Explicit knowledge has other problems, like marketing knowledge and knowledge as a public good. (Grant, 1996)

Organizational knowledge:

Grant (1996) assumes that "*knowledge creation is an individual activity*" (p. 112). It is the individual who has to be able to receive and learn. All the learning takes place inside each individual. An organization can learn in two ways; either from the individual already in the organization or from new members to the organization which can share and transfer knowledge that the organization did not have. It is important to understand the organizational processes that take place under which the organization access and utilize the knowledge of its members. (Grant, 1996)

"*The ability to transfer and aggregate knowledge is a key determinant of the optimal location of decision-making authority within the firm*". (Grant, 1996, p. 111)

2.4 Framework of knowledge transfer

To make tacit and explicit knowledge collective for the organization one can have interaction between tacit and explicit. There are four ways to do this; socialization, externalization, combination and internalization. (Nonaka and Takeuchi, 1995)

Socialization (tacit/tacit): "*a process of sharing experiences and thereby creating tacit knowledge such as shared mental models and technical skills."* (p.62)

Externalization (tacit/explicit): "*a process of articulating tacit knowledge into explicit concepts."* (p.64)

Combination (explicit/explicit): "*a process of systematizing concepts into a knowledge system. This mode of knowledge conversion involves combining different bodies of explicit knowledge through media such as documents, meetings, telephone conversations, or computer communication networks*." (p.67)

Internalization (explicit/tacit): this process involves the "*embodiment of explicit knowledge into individuals' tacit knowledge bases in the form of shared mental models or technical know-how*." (p. 69)

As pointed out by Nonaka and Takeuchi (1995), it is important to know the difference between tacit and explicit knowledge and how to convert them. This is also vital to know in the case of knowledge transfer. When transferring knowledge it is essential to know how, for example, to get tacit knowledge into explicit.

In her studies Chini (2004) found that the most frequently used knowledge management tools to transfer knowledge were face-to-face meetings, on-the-job training, and learning-by-doing. When looking at the four ways to make knowledge collective, the management tools Chini used in her studies were divided between the four ways. Face-to-face meetings, on-the-job training and learning-by-doing are examples of internalization. This is results from research of knowledge transfer within a multinational organization. (Chini, 2004)

The presentation of Nonaka and Takeuchi's framework should give us an understanding of the dynamics between tacit and explicit knowledge.

2.5 Social capital theory

When one has to find ways to transfer knowledge, the social capital theory could be of help. Nahapiet and Ghoshal (1998, p. 243) defines social capital as

> "*the sum of the actual and potential resources embedded within, available through, and derived from the network of relationships possessed by an individual or social unit*."

Social capital has several attributes. The concept of social capital identifies determinants that could contribute to knowledge transfer efficiency through encouraging cooperation between people. Three dimensions of social capital can be distinguished; the structural, the relational, and the cognitive. (Nahapiet and Ghoshal, 1998; Gooderham, 2007)

The structural: "The structural dimension of social capital refers to the presence or absence of specific network or social interaction ties between units of the multinational company (MNC) and the overall configuration of these ties" (Gooderham, 2007, p. 37).

The relational: "The relational dimension of social capital refers to such facets of personal relationship as trust, obligations, respects and even friendship, which together increase the motivation to engage in knowledge exchange and teamwork" (Gooderham, 2007, p. 37).

The cognitive: "The cognitive dimension refers to shared interpretations and systems of meaning, and shared language and codes that provide the foundation for communication" (Gooderham, 2007, p. 37).

2.6 Effective knowledge transfer

"*Knowledge transfer occurs when experience in one unit of an organization affects another unit*" (Argote and Ingram, 2000, p. 151). The unit is affected by the experience of another unit. This would also be the same if there were two organizations, like in joint venture and strategic alliance.

According to Argote and Ingram (2000, p. 150) "*the ability to transfer knowledge from one unit to another has been found to contribute to the organizational performance of firms*."
It might be difficult for an organization to get the knowledge transfer to be effective. One often do not need to question if organizations are able to transfer knowledge they have, but a question to be asked might be if the knowledge transfer is effective or not.

Figure 2

For knowledge transfer to happen, people need to be willing to share that knowledge. This willingness is affected by different factors; economic reasoning, emotional factors. (Junni, 2005)
"*The effectiveness of knowledge transfer is likely to be influenced by two moderators – organizational distance and cultural distance*" (Chini, 2004, p.65). (See "challenges and barriers".)

According to Minbaeva et al. (2003, p. 587) knowledge transfer in Szulanski's view is "*a process of dyadic exchange of knowledge between the source and recipient units consisting of four stages: initiation, implementation, ramp-up and integration*." Figure 2 is in a way a simpler version of figure 3. Figure 3 explains how the exchange of knowledge works between the sender and the receiver.

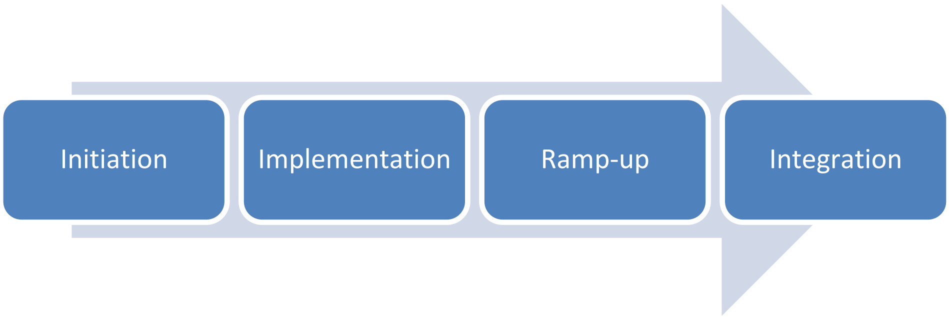


Figure 3. Knowledge transfer process. (Szulanski, 2000, p.13)

Initiation: "*Initiation is the difficulty in recognizing opportunities to transfer and in acting upon them. The eventfulness of the initiation stage depends on how difficult it is to find an opportunity to transfer and to decide whether to pursue it*." After this the decision to transfer knowledge is made. (Szulanski, 2000, p. 13)

Implementation: Exchange of information. The focus is to implement the knowledge with careful planning so that earlier problems regarding the same knowledge is avoided. Also as help so that the introduction of new knowledge would not be frightening. (Szulanski, 2000)

Ramp-up: Once the implementation stage is done, and the recipient starts using the knowledge, the main concern in the ramp-up stage is to identify and resolve unexpected problems. This stage allows for an opportunity to see if the recipient is using the new knowledge ineffectively, and with the help of external assistance this can be fixed. To have expertise present during this stage could be important for the outcome, to avoid delays and extra costs. (Szulanski, 2000)

Integration: When the problems are dealt with in the ramp-up stage, the next phase is to get the knowledge gradually routinized and integrated. For this stage to be successful it depends on the effort required to "*remove obstacles and to deal with challenges to the routinization of the new practice*". (Szulanski, 2000, p. 16)

Knowledge transfer can be broken down into stages. Levine and Gilbert (1999) recommend five steps to use in this process: idea creation, sharing, evaluation, dissemination, and adoption. These stages can overlap, be combined or one can skip one if that stage is not relevant in a specific case. This 5 step process could also be used in product development.

- Idea creation: Promotion of creativity.

- Idea sharing: This step can be combined with the next two steps. It is important that people share their ideas and feel comfortable sharing them with others. The difficult part here is to find a way to share the tacit knowledge. Knowledge transfer of this type requires face-to-face contact and need to be in a form which others will understand. The sharing means that the knowledge should be exposed to others for it to be evaluated, which is the next step.
- Evaluation: Each idea goes through an evaluation stage which is important because not all ideas are good ideas.
- Dissemination: If the knowledge is explicit this stage would be easier to go through.
- Adaptation: This stage is important because even if the knowledge has gone through the stages of sharing, evaluation and dissemination, it could be transmitted but not transferred to others.

These five stages can be adapted and used in other settings which do not include new knowledge to be transferred, but knowledge transfer in general.

2.7 Knowledge as competitive advantage

If one integrates the resource-based view and the knowledge-based view, one can get to a point where the knowledge becomes a competitive advantage for the organization.
Organizational knowledge; competencies, capabilities, routines, or innovations; is in an important position to be a resource of competitive advantage (Argote and Ingram, 2000).

In the field of business strategy, there has been more research on knowledge as a basis for competitive advantage, and not so much focus on how to develop, retain, and transfer this knowledge (Argote and Ingram, 2000). One of the reasons that there has not been as much research done on the transferring of knowledge is that it can be difficult to trace and document. In the later years more research has been done in this field. There are several studies that "*recognize the relevance of knowledge embedded in tasks*" (Argote and Ingram, 2000, p. 158). It seems that it is easier to transfer knowledge in new organizations than in well established ones, a reason for this might be that new organizations has not established routines and networks. Conflicts will not rise. New organizations seem "*open to learning from the experience of others*" (Argote and Ingram, 2000, p. 158).

Resources developed or made valuable inside the organization should be the focus for competitive advantage rather than those purchased outside the organization (Argote and Ingram, 2000)
"To be the source of competitive advantage, resources must also be difficult for competitors to imitate." (Argote and Ingram, 2000, p. 155)

To conclude the last sections, I want to explain the relationship and differences in the theories and studies I have included so far in the thesis. The resource-based theory, knowledge-based theory and social capital theory gives understanding about and foundation for the rest. What separates these theories from each other is that they focus on different things, but these things can at the same time be connected; like resources and people.

What you can find out from sections 2.6 and 2.7 is that when used right, knowledge can be of competitive advantage to a firm. As mentioned in chapter 2.6, the resource-based view and the knowledge-based view integrated could give a firm the competitive edge over its competition. When the resource in an organization, in this case the knowledge, is valuable, rare, non-imitable, and non-substitutable they can be of competitive advantage to the firm. If the transfer of the knowledge at the same time is effective, the firm could get an advantage of that.

As Davenport and Prusak mentioned in the introduction in their book from 1998:

"Recently many firms have come to understand that they require more than a casual approach to corporate knowledge if they are to succeed in today's and tomorrow's economies. This understanding accord with a renewed emphasis among strategists and economists on ideas associated with a competency-based or resource-based theory of the firm. Traditional economics looked at the firm mainly as a "black box" and examined the resources going in, the products coming out, and the markets in which the firm participated. Today, theorists of many disciplines are turning their attention to one of the essential dynamics inside the box: the knowledge embedded in routines and practices that the firm transforms into valuable products and services."

What is important to pull out of the theories is that when used correct and efficient, knowledge and knowledge transfer can be very useful and gives advantages to the organizations.

2.8 Knowledge management

When finding out how to manage knowledge transfer in an acquisition, knowledge management could provide a basis with tools which could help in making it effective.

According to Mertins et al. (2003) knowledge management is as follows:

> *"Knowledge management includes all methods, instruments and tools that contribute to the promotion of an integrated core knowledge process – with the following four core activities as a minimum, to generate knowledge, to store knowledge, to distribute knowledge and to apply knowledge – in all areas and levels of the organization in order to enhance organizational performance by focusing in the value creating business processes."*

"Knowledge management provides a kind of toolbox with several generic methods, instruments and tools to improve the handling of knowledge in daily routine" (Mertins et al 2003). One can use knowledge management to transfer knowledge in an effective and efficient way.

A high development of knowledge management infrastructure positively affects the perceived benefit of knowledge transfer (Chini, 2004). This is part of the results from studies done on knowledge transfer between MNC units.

Knowledge management is important for knowledge transfer because through managing knowledge it would make it applicable to transfer. The toolbox of knowledge management can be vital in the transferring process and could make it effective and efficient.

2.9 Domestic vs. international knowledge transfer

The knowledge transfer in a domestic situation is different from an international. In an international knowledge transfer there are other factors that affect the transfer than what affects a domestic knowledge transfer. In a globalized world firms today are more often organized on an international basis so they can take advantage of differences in expertise, access to markets, and labor costs (Argote et al., 2000).

Cultural difference is an aspect in which international knowledge transfers can be challenging. In their study Sarala and Vaara (2010) outlines how national and organizational cultural differences and cultural integration may affect knowledge transfer.

Organizational cultural differences have been frequently used as indication and explanation of post-merger problems. In international settings, researchers have concentrated on national cultural differences and their implications. Different studies recognize that national culture can both have a positive and negative impact on the organizations involved in the knowledge transfer. (Sarala and Vaara, 2010)

The national culture is reflected in values; right and wrong, good and evil. People tend to associate cultural similarities with attractiveness, whereas differences often can lead to negative associations. However, there are also positive outcomes from having different national cultures. If the differences between the cultures are large it is more likely that they will have different routines and different knowledge stock. If the knowledge stocks that the firms have are different, it is more likely that they are less duplicative and can complement each other and increase the overall potential for knowledge transfer. (Sarala and Vaara, 2010)

The Dutch scholar Geert Hofstede developed a highly useful classification scheme for different cultures, 5 cultural dimensions: (Hofstede, 2005)

Power distance: it refers to the degree of inequality among people that is viewed as being acceptable. Societies that are high in power distance tolerate relatively high social inequalities. Everyone has his or her rightful place in society. Low power distance societies tend to be more egalitarian. The rich and powerful in low power distance societies try to look less powerful.

Uncertainty avoidance: referring to the extent to which people in a given culture feel threatened by uncertainty and rely on mechanisms to reduce it. Societies with strong uncertainty avoidance possess a need for rigid rules and formality that structure life. In weak uncertainty avoidance cultures people tend to be more easygoing, innovative and entrepreneurial.

Individualism and collectivism: Individualism describes the degree to which people prefer to act as individuals rather than as a group member. In societies that are high on individualism, the focus is on people's own interests and their immediate families. There is little need for loyalty to a group. In collectivism the interests of the group take center stage. Members in such societies differentiate between in-group members who are part of its group and all other people. They remain loyal to their group throughout their lives.

Masculinity vs. femininity: Masculinity considers the importance of "male" values such as assertiveness, status, competitive drive within society, and achievement. Femininity is "female" values, like a people orientation, solidarity, and quality of life.

Long-termism vs. short-termism: Long-termism refers to the distinction between societies with a pragmatic, long-term orientation. People in long-term oriented societies tend to have values that center around the future. Short-term oriented cultures are concerned about values that reflect the past and the present.

One needs to keep in mind that these dimensions have been criticized, and there could be differences inside the different countries. The research was done on one company.

This chapter is important because in the analysis I will compare different acquisitions that Cisco has made, and they are both domestic and international.

2.10 Mergers and acquisitions

A definition of mergers and acquisitions is one from Investopedia:

> "*A merger is a combination of two companies to form a new company, while an acquisition is the purchase of one company by another in which no new company is formed*".

According to Segal-Horn (2010, p. 222) "*An acquisition is an outright purchase of one company by another. It occurs when one company acquires enough of another company's shares to gain control or ownership. A merger is in theory a collaborative agreement by two companies to combine their interests, ownership and company structures into one company*."

Motives for organizations to merge or acquire another could be:

- Economies of scale
- Economies of scope
- Market share
- Knowledge
- Research and development

In general, mergers and acquisitions are presented as highly rational strategies which have clear objectives and goals (Segal-Horn, 2010).

Trends show that in the last 20 years there has been a boom of mergers and acquisitions. Especially in the high-technology industry acquisitions is a way to gain new knowledge and expertise to be able to keep up with competitors. To have competitive advantage over your competitors, mergers and acquisitions are ways of getting there faster than to develop new products internally. Globalization is a factor which has encouraged this.

2.11 Knowledge transfer in mergers and acquisitions

The focus of my thesis is to look at knowledge transfer in mergers and acquisitions. In this section I will discuss and share some of the research/studies that have been focusing on knowledge transfer in mergers and acquisitions, both domestic and international.

"Knowledge transfers play an important role in the creation of synergies in mergers and acquisitions. Acquisitions are often justified by accessing and creating new knowledge, because they provide an opportunity for learning." (Junni, 2005, p. 1)

According to Sarala and Vaara (2010, p. 1367) researchers have suggested that "*knowledge transfer is an important motive for acquisitions*". Gaining knowledge through an acquisition may enable the firm to expand its product lines without the risk involved in internal innovation. Some have described acquisitions as vehicles to access and transfer tacit knowledge. In a multiple-case study, referred to in their study, the importance of knowledge transfer for value creation in acquisitions in general was highlighted (Sarala and Vaara, 2010). Acquisitions are seen as an important means of corporate renewal, which takes place through post-acquisition integration, and leads to competitive advantage. Communication, visits, and meeting between the merging or acquiring companies facilitates knowledge transfer. Knowledge transfer also depends on "*the perception of employees about each other and about the value of each firm's knowledge base*". (Sarala and Vaara, 2010, p. 1367)

Immediately following an acquisition, the flow of information between the two parties/organizations will be very limited. But this will gradually increase as the organizations become a single social community (Bresman et al, 2010).

Bresman et al (2010) found in their studies on knowledge transfer in acquisitions that international knowledge transfer increased over time. In early stages of the acquisition, the knowledge transfer was mostly one-way communication from the acquiring company, and often imposed. However, in later stages the knowledge transfer went both ways.

The anticipation that the acquisition will result in value creation of some kind is a fundamental reason for all acquisitions. "*From a knowledge transfer perspective, value creation results from the integrated organization's ability to share and leverage information, resources, and expertise in order to identify and implement new products and processes that will increase the competitive advantage of the organization*." (Pablo and Javidan, 2004, p. 137)

Relevant literature on knowledge transfer in mergers and acquisitions:

Study	Variables	Context	Findings
Junni, 2005	Socialization, organizational characteristics, motivation. Control variables: communication, size, geographic scope, organizational difference.	Mergers and acquisitions	The amount of knowledge transferred in domestic acquisitions was greater than in international ones. Organizational difference had a negative effect on knowledge transfer from the target. Better communication facilitates knowledge transfer.
Bresman et al, 2010	Geographical and cultural distance, social community, organizational learning. Facilitators: communication, articulability of knowledge, time elapsed, and visits and meetings.	International acquisitions. Swedish MNCs	Communication, and visits and meetings are important. Elapsed time is positively related to the level of technological knowledge transfer.
Sarala and Vaara, 2010	Cultural difference (national and organizational)	International mergers and acquisitions. Post-acquisition integration.	National cultural differences were positively associated with knowledge transfer. Organizational cultural differences were not related to knowledge transfer. The control variables; size, industry, and time elapsed since the acquisition, were not significant.
Ranft and Lord, 2000.	Individual and collective human capital. Builds on the knowledge-based view of the firm. Retention of key employees, financial incentives.	Mergers and acquisitions. Technology-based industries.	Retention of specific types of human capital is critical for determining the success of the acquirers' effort to gain valuable new technological capabilities.

2.12 Successful knowledge transfer

For knowledge transfer to be successful one need to create conditions which let individuals and organizations transfer the knowledge as effective and successful as possible. Conditions and factors that could contribute to this are: organizational learning/training, management support, corporate culture, motivational mechanisms, and retention of employees. These conditions and factors are from the relevant theories on knowledge transfer in mergers and acquisitions presented on the previous page.

2.12.1 Organizational learning, training

In the literature reviewed over organizational learning is one of the factors which recur. Organizational learning is defined as: "*organization-wide continuous process that enhances its collective ability to accept, make sense of, and respond to internal and external change. Organizational learning is more than the sum of the information held by employees. It requires systematic integration and collective interpretation of new knowledge that leads to collective action and involved risk taking as experimentation*." (businessdictionary.com)

A part of organizational learning is absorptive capacity. Absorptive capacity is defined as the "*ability to recognize the value of new external information, assimilate it, and apply it to commercial ends*" (Minbaeva et al, 2003, p. 588).

This section is also connected to one of the factors in the knowledge-based view, organizational knowledge. It is important that learning takes place; this learning means that the knowledge is being transferred and shared with other individuals in the organization. In the case of mergers and acquisitions, knowledge transferred to and from new employees to and from the organization.

The human resource department can contribute to knowledge transfer by creating atmosphere in the organization and contribute with training and learning. With training I mean that the HR department for example creates a program for which one could learn how to absorb knowledge and at the same time learn how you yourself can transfer tacit knowledge to others. There are different models which can be used to facilitate learning. And one can use training programs as a way to articulate and transfer a lot of knowledge. In this sense one could also have training program in how to transfer knowledge. A framework for training programs is created by Jon Werner, “A DImE”; assessment of need, design, implementation, and evaluation. (Lecture notes, Management 753, University of Wisconsin – Whitewater, 2011) This framework is a good model to use for example if the knowledge transfer is aimed at new employees to the organization. How this framework can be used for mergers and acquisitions is that when a firm acquires a company they can use a training program which can contain training in how to absorb and transfer knowledge that is relevant for example for new product development. In a training program the participants would get to know each other, and this can help in gaining trust which could help in transferring knowledge. Another area which is important in HR perspective is to have good HRM practices.

“*HRM practices influence employees’ skills and competencies through acquisition and development of a firm’s human capital*”. (Minbaeva et al., 2003, p. 590) In addition, performance appraisal can provide with help in establishing good knowledge transfer routines.

Training in how to manage, share and receive knowledge is important so that knowledge becomes a competitive advantage.

2.12.2 Management support

By management support it is meant that the management is part of the post-acquisition process when it comes to knowledge transfer. it is a facilitator and support creates an environment for knowledge to be transferred.

If there is not any support from management, there would also not be much knowledge transfer in the organization. Knowledge transfer is beneficial for both management and employees. A way that management can show their support is by being role models for the employees. By being role models management can participate in knowledge transfer processes and show that by transferring knowledge to people in the acquired/acquiring firm would help the organization. The people in management positions usually have a lot of knowledge about the organization and this knowledge can be important for the organization.

Top management plays an important role in mergers and acquisitions by ensuring proper leadership and leading. In Asia, successful mergers and acquisitions have top management executives who spend a large portion of their time communicating with people, listening to them, and showing empathy to create the conditions for all employees to engage in both knowledge and learning transfer. According to Stahl and Mendenhall (2005) employees are likely to refrain from fully engaging in necessary integration activities without a genuine involvement from the firm's leaders, and this could maintain barriers between the merging teams.

A survey on post merger integration done in India in 2010 by PwC shows that very few companies involve the board and the merger acquisition team in the post merger process. Management involvement is important. "Both the executive team and merger acquisition team need to continuously support the post merger process. While the merger acquisition team brings in valuable insight of why the deal was structured and the strategic thinking behind the deal, the executive committee has to support the process with timely decisions. The CEO's involvement in making sure that the plans and budgets are being managed and the pressure is maintained is also critical." (Survey, PwC, 2010)

2.12.3 Corporate culture

The culture in the organization needs to be in a way that allows for knowledge to be shared and transferred. A good corporate culture affects the communication in the organization in a positive way. With socialization in the organization people get to know each other and this makes it easier to share and transfer knowledge. Trust in an organization is very important.
According to Junni (2005, p. 4), in mergers and acquisitions "*trust, shared norms and identification with individuals in the other organization create strong ties that facilitate knowledge transfer*".

2.12.4 Motivational mechanisms

There is also need for a mechanism which creates motivation to transfer knowledge. One should give the employees behavioral incentives which give them motivation to transfer knowledge (Gooderham, 2007). "*The effectiveness of even highly skilled employees will be limited if they are not motivated to perform*" (Minbaeva et al, 2003, p. 590). Motivational factors which could have an effect are: (Wang and Noe, 2010, pp. 120-121)

- Beliefs of knowledge ownership: "Research has shown that when employees believe that when they owned information (rather than the organization) they were more likely to report that they would engage in knowledge sharing".

- Perceived benefits and costs: "Research shows that perceived benefits are positively associated with knowledge sharing while perceived costs have a negative influence on knowledge sharing".
- Interpersonal trust and justice: "Research has shown that affect- and cognition-based trust have positive influence in knowledge sharing at the dyadic and team levels. Further, referred to in Wand and Noe (2010), Bakker et al. (2006) found that individuals tended to share less knowledge with team members whom were perceived to be very capable and share more knowledge when they believed other team members were honest, fair, and followed principles (integrity)."
- Individual attitude: "Overall, it appears that job and organizational attitudes have a significant influence on knowledge sharing."

Junni (2005, p. 5) argue that "*motivational factors play a more important role in knowledge transfer in the post-merger context*". According to her the reason for this is that it is "*frequently characterized by high uncertainties and ambiguities for the parties involved*". If one then has good motivational factors the uncertainties can be prevented.

2.12.5 Retention of key employees

In several studies, employee retention was found to be important for mergers and acquisitions in high-tech companies. Managers and executives from the firms that are being acquired are a vital component of the acquired firms' resource base and their retention is therefore an important determinant of post-acquisition performance. When it comes to knowledge transfer, retention of key employees is important because if you cannot keep the people in the organization, you will lose the knowledge imbedded in these people.

According to Ranft and Lord (2000, p. 313) "*higher retention of key employees throughout the acquired organization does result in significantly greater transfer of knowledge-based resources to the acquirer, at least in the sample of high-technology acquisitions*."

But one also needs to remember that valuable knowledge may reside in individuals and relationships throughout the organization, in different functions and areas and levels, and not just at the upper levels of the organization. When it comes to the transfer of knowledge the knowledge in individuals is important.

The people who possess expertise about certain technology or those individuals who are part of important teams which plays a critical role in the value creating at the organization are key employees which are important to keep. Losing these people can lead to a situation where the acquiring company will lose the whole reason for the acquisition, because this might be what motivated the acquisition in the first place. (Ranft and Lord, 2000)
"In high-technology industries, for example, the use of financial incentives to retain highly skilled workers sometimes is a key component of retention strategies." (Ranft and Lord, 2000)
Results from the empirical tests shows that "higher retention of key employees throughout the acquired organization does result in significantly greater transfer of knowledge-based resources to the acquirer." (Ranft and Lord, 2000) The key employees to retain were: Research and development employees, middle managers, and engineering personnel.

"Convincing people in the acquired company to accept the change is essential to making high-tech purchases work. Talented employees can quickly jump ship if they are unhappy with the changes. Successful acquirers go out of their way to retain these people, make their transition as smooth as possible, and keep their development energies focused." (Chaudhuri and Tabrizi, 1999, p. 9)

2.13 Barriers and challenges

There are barriers and challenges in transferring and sharing knowledge. How to measure the knowledge transfer is an important challenge.

If the knowledge is to be transferred internationally there could be a challenge and barrier with different cultures. If the contact is not face-to-face, the cultural difference may cause confusion and misunderstanding. The cultural norms and values could be different; for example in a merger the organizational culture and identity can be very different even if the two merging organizations have the same national culture.

See chapter 2.8 for more information on how national culture can affect knowledge transfer.

A challenge in acquisitions is that "*acquisition implementation problems often arise because of clashes of organizational cultures, systems, or strategies and because of the loss of key executives in the acquired firm*". (Ranft and Lord, 2000, p. 296) This means that the acquiring firm needs to have a good strategy on how to keep the people in the acquired firm to stay. The relation to knowledge transfer is that by keeping key people you get to tap the knowledge these people possess, which again would be beneficial for the acquiring firm in managing knowledge transfer and take advantage of it.

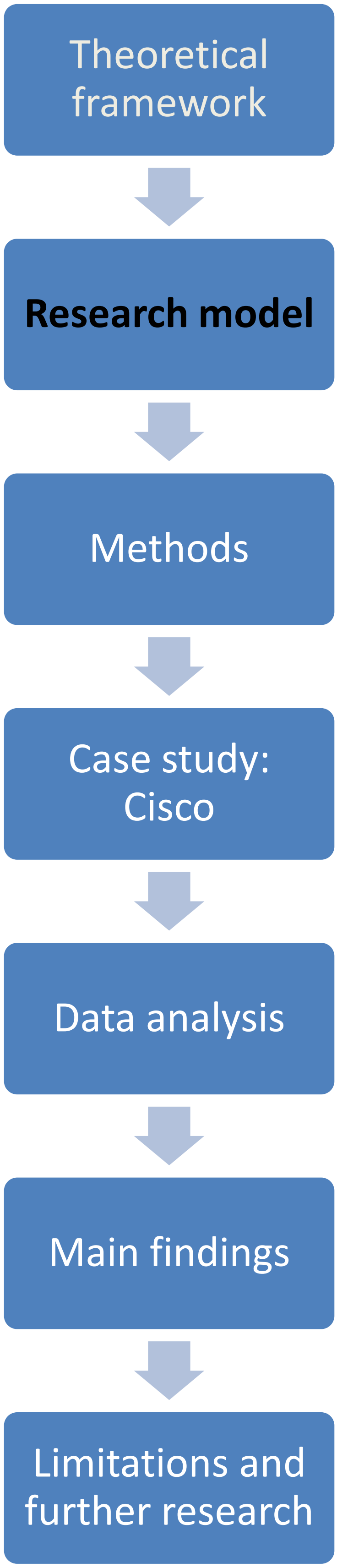
This is referring to the knowledge-based view of the firm.

A survey done in India by PwC in 2010 shows that to ensure success there are some challenges that need to be faced. The focus of the survey is post merger integration. PwC points out that: "One of the biggest challenges organizations face during an acquisition is people and culture. The cultural differences between the two organizations need to be managed and addressed." In cross-border mergers and acquisitions this challenge is critical for success, especially if there are large differences between the cultures. "It is important that the cultural differences are mapped and plans need to be drawn up to manage the difference." (Survey, PwC, 2010)

2.13.1 Organizational and geographical distance

"Geographical distance between acquirer and target can be expected to have an inhibiting effect on knowledge transfer" (Junni, 2005). A reason for this is costs associated with for example face-to-face communication. According to Junni (2005), there have been different opinions on the effect of organizational cultural distance. In her analysis, Junni found that organizational differences had a negative effect on knowledge transfer from the target (Junni, 2005).

Organizational and geographical distance is also connected to culture.


Theoretical framework
Research model
Methods
Case study: Cisco
Data analysis
Main findings
Limitations and further research

3 Research model

This model is made with a base in empirical research on mergers and acquisitions done the last 10 years. The different factors are based on studies done on mergers and acquisitions. But several of the points are also common for intra-firm, inter-firm, strategic alliances, and MNCs (*Gooderham (2007), Chini (2004), Gupta and Govindarajan (2000), Lucas (2006), Dyer and Nobeoka (2000), Meier (2011), Pérez-Nordtvedt et al. (2008), Ambos et al. (2006), Minbaeva et al. (2003)*).

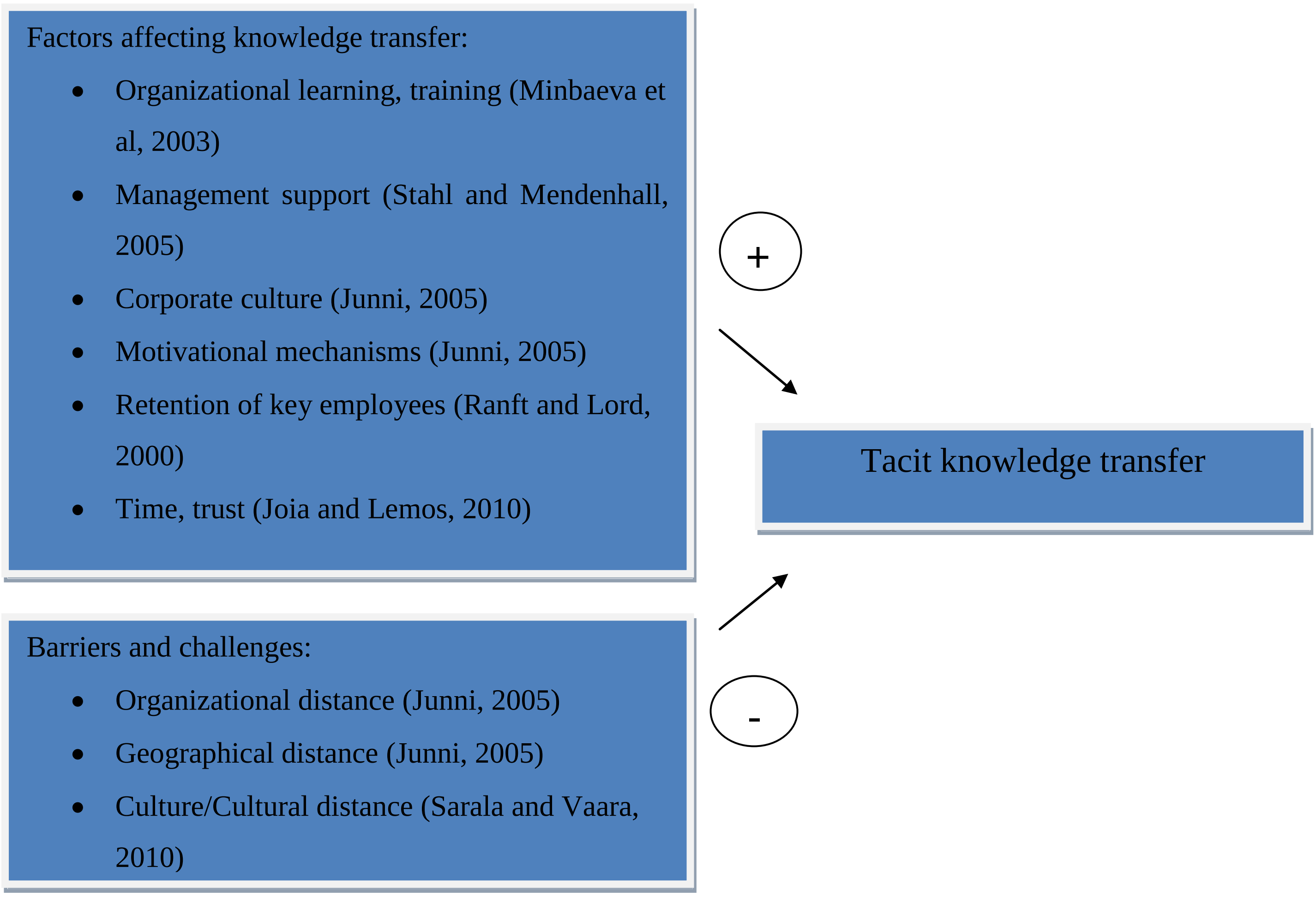
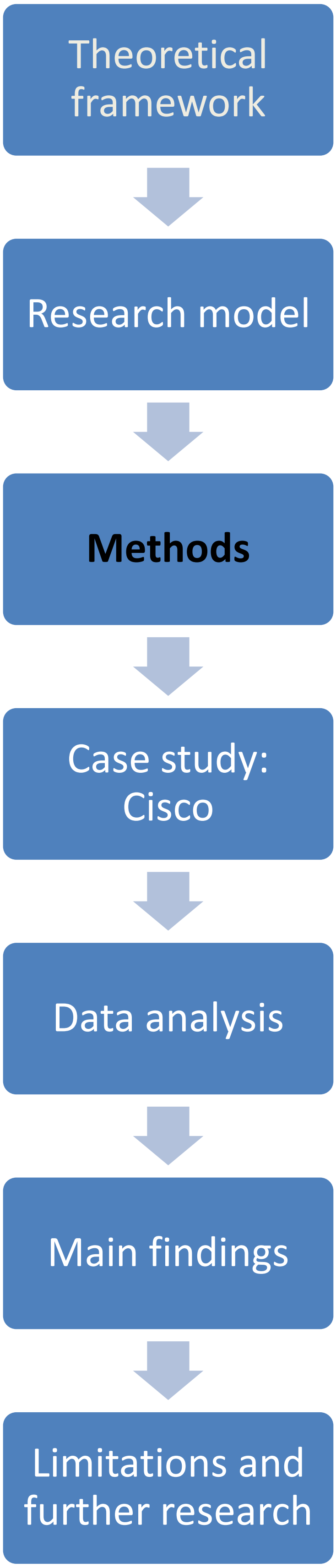


Figure 4. Source: Own

In the theoretical part I have several variables which I have not included in the model. The reason I have chosen these factors is based on the review of previous empirical studies done on knowledge transfer in general, and in mergers and acquisitions I picked the factors which were repeated in several of the studies done on mergers and acquisitions.

This research model differs from previous models in empirical studies because here the focus is on tacit knowledge transfer in the case on new product development, which to my knowledge has not been studied before.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4 Methods, qualitative research

There are different forms of research one can use to conduct business research, qualitative and quantitative research.

In quantitative research the focus is on numerical data. In qualitative research the focus is on words and data rather than numbers. Qualitative is a method that generates or uses non-numerical data. (Saunders et al, 2009)

4.1 Research design

The research design is "the logical sequence that connects the empirical data to a study's initial research question and, ultimately, to its conclusion" (Yin, 2009).

Study question: The purpose of this case is to see if the theories and empirical research on mergers and acquisitions can explain what Cisco is doing in their acquisitions –or if there are other aspects uncovered in the data analysis which is not found in previous literature.

I want to look at how to manage knowledge transfer successfully in the event of a merger or acquisition. Cisco is a company which is well established when it comes to acquisitions, and is a good company to analyze in this case study.

The case study method is appropriate to use when one have "how" or "why" questions, which is the case here (Yin, 2009).

The focus of the thesis is to look at post-merger integration process in high-technology acquisitions and focus on new product development. High-tech companies are using mergers and acquisitions as a strategy for gaining access to innovative technology and processes. To do this, the companies need to facilitate for transfer of knowledge and tacit knowledge to gain the competitive edge they need in this industry.

I hope to bring something new to the literature by focusing on Cisco, tacit knowledge transfer, and look at their mergers and acquisitions. My research model might change after the data analysis.

In order to answer the research question, this thesis is based on qualitative research. The reason for this is that the subjects in this thesis involve understanding of management, human resources, social capital. These are issues that are difficult to measure in a quantitative manner. The use of quantitative data would give the analysis restrictions, as this type of analysis is based on numbers and is statistical.

4.2 Data collection

The research process will be qualitative. The data collection process of this thesis has been focused on both primary and secondary data.

Primary data

The primary information for the analysis will be data collected through the use of information on the web page of Cisco, annual reports, studies done with Cisco as case-company and so forth. Cisco is, as mentioned before, a well established company which has done many acquisitions through the years, and there are good sources on mergers and acquisitions on their web page. In these sources I will be looking for Cisco’s acquisition strategy and examples from their acquisitions which would fit or not fit with my research model. The data I need is based on the research question and will be related to that. The public information available will give information to answer my research question. There have been done several studies where Cisco has been the company of focus, and these sources could be useful.

This thesis also involves data, which will be collected from different sources, like articles, books, newspapers and other relevant literature on knowledge transfer, mergers and acquisitions to give a broader view and picture of the reality.

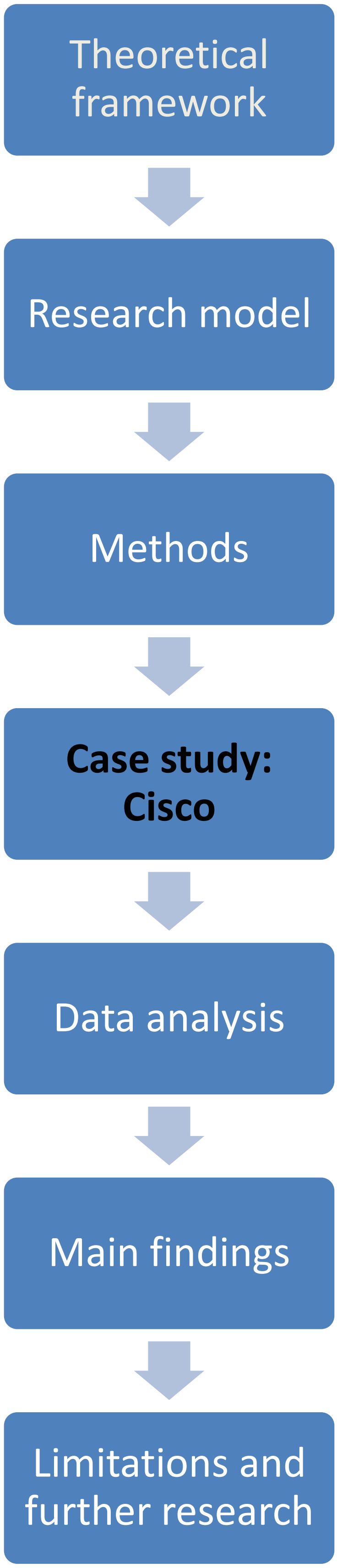
In the data collection I will use a systematic analysis/review of the literature review in search of answers on the research question, both the secondary data and previous studies.

A thing that could be challenging when it comes to the data collection is how to “measuring knowledge transfer in organizations through measuring changes in knowledge is that knowledge in organizations resides in multiple repositories.” (Argote and Ingram, 2000)

I have chosen three of Cisco’s acquisition to focus my analysis on. These acquisitions were acquired at different times; 1995, 1999, and 2010. These acquisitions are from different parts of the world and have had different levels of success at Cisco.

In the theoretical part, absorptive capacity is mentioned under chapter 2.12.1. Absorptive capacity is a complex organizational characteristics, research on this is often done by direct empirical observation. In this thesis the data collection is not through method observation, so absorptive capacity will not be analyzed as a separate point, but mentioned in that chapter because it is an important part of organizational learning for the data analysis.

In the data analysis I will first give some general information about factors in the model before I go specifically into each of the three acquisitions with focus on the research model and the theories I have presented earlier.


Theoretical framework
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5 Case study: Cisco

5.1 Aim of this chapter

The aim of this chapter is to give information about the company which would be of help and as a basis for the analysis. Section 5.2.1 is data and background information which is important for the analysis.

5.2 Case study

5.2.1 Company information and history

Cisco Systems, Inc. is an American MNC with headquarters in San Jose California, USA. They design, manufacture, and sell networking equipments. Cisco has more than 60 000 employees and as of 2011 their annual revenue was of USD 43 billion. (cisco.com)

History

Cisco is one of the world's leading suppliers of computer networking products, systems and services. They serve three main market segments: large organizations, service providers and small and medium-sized businesses.

Cisco Systems was founded in 1984 in Menlo Park, California by husband and wife Leonard Bosack and Sandra Lerner. Lerner and Bosack tried to sell the internetworking technology that Bosack had developed to existing computer companies, but there were none interested. They then decided to start their own company, Cisco Systems. (Chatman et al., 2005)

Cisco's primary product from the beginning was "*the internetworking router, a hardware device incorporating software that automatically selects the most effective router for data to flow between networks*" (fundinguniverse.com, 2000).

Cisco shipped its first product in 1986. A year later, Cisco was selling $250 000 worth of routers per month. Sales for the fiscal year ending July 1987 were $1.5 million, and the company had only eight employees at the time. (foundinguniverse.com, 2000)

“By the late 1980’s, when the commercial market for internetworking began to develop, Cisco’s reasonably priced, high-performance routers gave it a head start over the emerging competition.”
In February 1990, Cisco went public, after Bosack and Lerner began selling their shares. While new communication technologies became widespread, Cisco adapted and added the capabilities of handling new protocol to its products.

“International sales became an important part of Cisco’s business. Subsidiaries were established in Japan and Australia, and a European Technical Assistance Center was established in Brussels, Belgium.” Most of Cisco’s international sales were through distributors, whereas the majority of sales were made directly to the end user in the United States. “In 1993 Cisco began contracting with major European telecommunication companies about the same time as they signed marketing agreements with U.S. companies. Cisco made strategic alliances to position itself better in the manufacturing internetworking market.” (foundinguniverse.com, 2000)

Acquisitions:
Cisco has acquired a variety of companies to bring in new products and talent to the organization. In September 1993, Cisco made its first acquisition. They acquired Crescendo Communications. Crescendo’s switching technologies under development were later incorporated into Cisco’s routers. Cisco made its second acquisition, Newport Systems Solutions, in August 1994.
The same year Cisco moved its headquarters from one end of the Silicon Valley to the other, from Menlo Park to San Jose, California. Two more acquisitions were completed later in 1994. (Chatman et al, 2005)

In early 1995 John T. Chambers became CEO of Cisco. Chambers increased the Cisco’s acquisition pace to keep ahead of their competitors and to fill in gaps in their product line, aiming to provide customers with one-stop networking shopping. The company completed 11 acquisitions in 1995 and 1996, including Grand Junction purchased in September 1995.

Cisco continued its acquisition pace the next years with 15 deals in 1997 and 1998, and further 19 companies in 1999. By this they gained access to several emerging areas.

"*By early 2000 Cisco's value surpassed $450 million, making it the third most valuable company in the world, behind Microsoft and General Electric Company*" (foundinguniverse.com).

Rather than slowing it down, Chambers planned to increase the company's acquisition pace, and in 2000 they acquired 25 companies. From 2001 to the present day, Cisco has acquired an additional 80 companies, including the Norwegian company Tandberg in 2010. The companies acquired are mostly of U.S. origin, the others are from these countries: Canada, Denmark, Italy, Scotland, Israel, Sweden, China, Norway, and Finland.

5.2.2 Cisco's acquisition strategy

"*Cisco's approach to acquisitions began with the acknowledgement that most mergers and acquisitions are plagued with problems and do not provide the value hoped for. The company fully recognizes that their majority of deals mainly involve acquiring people. Therefore Cisco focuses first on these people and how to incorporate them into the overall company, and only then on how to drive the business*." In the average acquisition, many of the top management and key engineers leave in the first years after the acquisition, and by Cisco's metrics this would mean a failure of the acquisition.
"*This has led to an acquisition strategy in which ensuring that people stay, feel at home, and can use their knowledge to make contributions to the new company, play a central role. Only when retention is high and the acquired employees' way of working is preserved, it is possible to transfer the acquired company's knowledge to the overall company*."

Cisco's first acquisition set in many ways the standard for future acquisitions. Their "*current acquisition and integration strategy did not spring forth fully formed, rather it evolved in a path-dependent manner and the early acquisitions were critical for creating the future path*". (Mayer and Kenney, 2004, p. 305) In the beginning there were hesitation and resistance among the employees. A former CEO, John Morgridge, said in 1995 that:

> "*At the time we made our first acquisition we had a wonderful asset in form of a channel to sell, install, and service products for the global market. As a result, there was tremendous leverage in acquiring a product that met the market requirement and to put it through our channels. We can take a new product and leverage it very*

dramatically. To a large degree, that has been our strategy with most acquisitions." (Mayer and Kenney, 2004, p. 305)

Cisco believes that their acquisitions will be more manageable if they purchase small startups, rather than firms at their size. "*They would acquire small startups that they believed would be amenable to and indeed expecting major changes to occur when the firm went public or was acquired*." (Mayer and Kenney, 2004, p. 305)

Until 1997 Cisco had no formal acquisition integration process. But after that year the number of acquisitions increased and the HR vice president appointed a full-time acquisition manager, and by 2001 the HR devoted to acquisitions was of 21 people.

In 1997, CEO John Chambers, made a guideline of five points to use in judging the desirability of potential acquisitions, these guidelines were more related to social and cultural issues that economic. The guidelines include: "*share similar visions", "the chemistry has to be right", "geographic proximity is important", "quick wins", and "long-term wins for shareholders, customers, employees*". (Mayer and Kenney, 2004, p. 306)
Cultural fit is very important for Cisco, because when you have acquired a company you do not get a second chance. Assessing cultural fit early on in the acquisition process is essential.

According to Mayer and Kenney (2004), the historical records suggest that Cisco only gradually became aware of the fact that acquisitions were a form of recruitment of new employees. Cisco also found that retaining the leaders increased the retention of other people in the acquired companies. With all its acquisitions and retention of employees, Cisco created a "buddy" system, where current employees (which had been in the same situation themselves) would integrate new employees into Cisco. (Pablo and Javidan, 2004) "*Those who had experienced a prior acquisition could counsel those considering an acquisition offer*." (Mayer and Kenney, 2004, p. 307)

"*Cisco involved a portfolio of tactics, formal and informal, to tap the knowledge and capabilities that are constantly emerging in its ecosystem*." (Mayer and Kenney, 2004, p. 307)

Cisco applies companywide experience for integration acquired companies. "*Acquiring other companies is an important strategy for Cisco to rapidly offer new products.*" New products

are here products made after the acquisition, with people originally from both companies. During their first acquisitions they soon realized that they "needed an integration approach that would be consistent across the company, repeatable for each new acquisition, and adaptable as Cisco began to acquire large companies with different operational parameters." (Cisco IT Case Study, 2007)
As Graeme Wood, Director, Acquisition Integration, Cisco Business Group said:

> "*We centralize acquisition integration for several good reasons: It is efficient, and it allows us to capture best practices, use our skills and resources most effectively, and apply discipline and oversight to the entire acquisition process*." (Cisco IT Case Study, 2007)

Undertaking the acquisition:
Target identification: When identifying new market opportunity or a missing product, the different business units at Cisco come together and discuss the need for new technology. Primarily, this is an informal meeting and considers whether this should be developed internally or via acquisition. If an acquisition is the preferable strategy, then specifications for possible targets are expressed. Using internal information that they already have and a market study, a list of possible candidates is drawn up. At Cisco, acquisition is an organizational process. Therefore, assuring that the acquisition and subsequent integration process gets executive-level attention, is vital. Several studies show that "*after the deal is completed the acquiring management team shifts attention to other issues leaving the newly acquired firm to flounder and often fail*" (Mayer and Kenney, 2004, p. 310).

Due diligence: In this part one establishes the real conditions in and around the target company. Product development teams are very important in a high-technology industry. Cisco's due diligence process examines "*the organizational health of the firm, the goals and aspirations of its key employees, and its ability to function as a part of a much larger firm*." (Mayer and Kenney, 2004) It is vital for Cisco to get hold of this information, as it is important for acquisition success.
In the due diligence process one often starts with informal meetings between senior management from both companies. During this informal discussion the acquisition team

considers the quality and character of its interaction with the target's management, and how well the management interacts with each other.

"*The human relations issues are critical, because the value of the firm is in the ability of the team to deliver next-generation products*." This is evidence of the importance of acquisitions for knowledge transfer. As Mayer and Kenney (2004) puts it: *If the team fails, then the acquisition fails.*

Retention of employees is vital and for that reason it is necessary to thoroughly understand how the distribution of a firm's equity and stock options are. Through this one can see which individuals in the firm that management thinks are most important. The HR team in Cisco then takes a closer look on these individuals and their background to see if they would fit into a larger company. The human relations negotiate directly with key individuals to get an understanding of their post-acquisition intentions and plans for the future.

Prior to deal announcement: When an agreement is about to happen, which typically is around six to eight weeks before the announcement, integration preparations begins. There are two units involved in this; the merger and acquisition unit, and the merger acquisition integration unit. These units consist of around 60 people and their purpose is to see the acquisition process through. They are also responsible for ensuring that the interaction between Cisco and the acquired company is done in a frequent and direct way. "*The aim is to create a shared understanding and mutual trust."*(Mayer and Kenney, 2004, p. 312)

To discuss the process meeting are held every week by the integration team. There is also an acquisition integration website which is used to keep an eye on different areas, like human resources, finance, product marketing, and etcetera.

The announcement and closing period: Employees at both firms and the public are informed about the acquisition with an announcement. Strait after the announcement, the HR department have meetings with the employees at the acquired company so that they are provided with information on essential issues concerning the acquisition and "*the reasons for the deal, the impact upon them, their role and location in Cisco, how their compensation and benefits will be affected, their new titles, etcetera*." (Mayer and Kenney, 2004, p. 313)

First 90 days: During the first 90 days the business integration teams takes over most of the post-acquisition integration responsibilities. The employees from the acquired company are in a continuing integration process, which should be experienced as a professional process.

90 – 180 days: The acquisition should be fully integrated at the end of this period. This is often with the same executive team and a somewhat changed culture. A former CEO of an acquired company described the situation like this:

> "*With Cisco, because they have these business units each with its own culture, you have to be able to adapt how you do things to the Cisco way in terms of a level of services, but you do not have to change the culture within your own business unit for the most part*." (Mayer and Kenney, 2004, p. 314)

Due diligence early on helped on emphasizing a cultural fit and continuing good communication throughout the acquisition, which reduces doubt and confusion. The acquisition and integration process was "*choreographed to retain the employees, and not interrupt the acquired firm's product development*" (Mayer and Kenney, 2004, p. 314).

According to Mayer and Kenney (2004) retention is central in Cisco's acquisition success.
Cisco believes that retention is closely linked to success.
As Craig Griffin, director of corporate development explains:

> "*If a deal is not succeeding then generally people leave. If a deal is very successful then people stick around. Generally turnover is strongly correlated to success*."
> (Mayer and Kenney, 2004, p. 315)

In 2001, over 90 % of the entire Crescendo workforce was still with Cisco (Mayer and Kenney, 2004).

According to Ned Hooper, Chief Strategic Officer at Cisco, their strategy is as follow:

> "*At Cisco we drive our strategy first based on our customers' requirements. Service provider, enterprising, commercial, small end consumer looking for opportunities to improve their productivity, their competitiveness, and quality of life. Fundamentally, driving is our mission set to change the way the world lives, learns, works, and plays.*

To build our businesses we look for market transitions that give us an opportunity to truly transform experiences for our customers. We have identified three (3) major macro transitions which have implications all across all of our segments; video, collaboration, and datacenter and virtualization." (Cisco.com, 2010)

After each acquisition they learn different stuff and get new experiences which one can use and have in mind for the next acquisition that comes.

For each acquisition Cisco has an acquisition committee: This committee has the authority to review and approve mergers and acquisitions and investigate possible candidates. Their responsibilities and duties are to review acquisition strategies, recommend acquisition strategies and candidates. (Cisco.com)

But there will always be barriers and challenges one needs to consider. There is a reason many acquisitions fail.

Following is descriptions of three acquisitions which I studied more closely and uses as examples in the analysis. I will also compare these to each other and look at the similarities and differences.

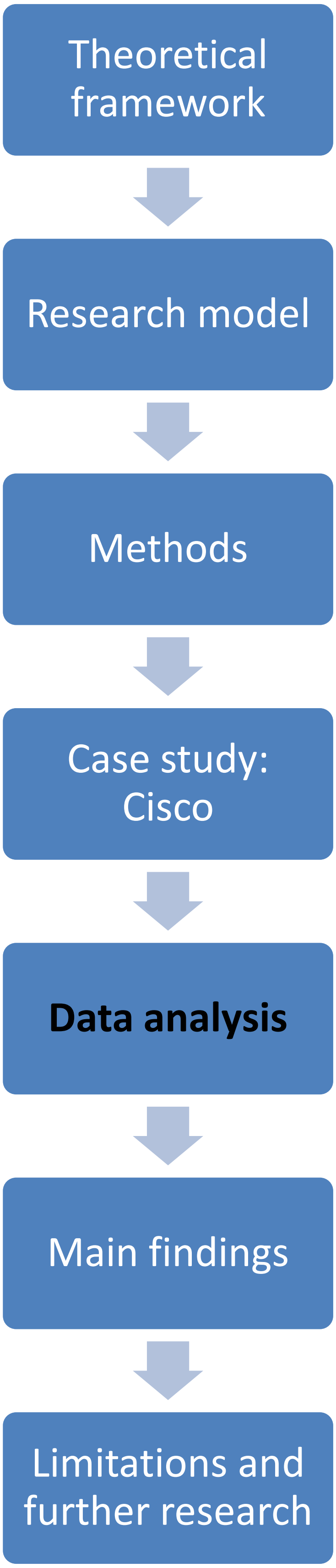
Grand Junction: Grand Junction was acquired in 1995. The U.S. company was based in Fremont, California. Grand Junction was the first company to create and market Ethernet desktop switching products. The reason for the acquisition was that Cisco wanted to fill an important product gap. With this acquisition Grand Junction would bring in "complementary products" to those that Cisco had. After the acquisition was closed, Cisco put Grand Junction in its workgroup business unit. Early on in the acquisition process the "strategic vision of the acquisition and the process for determining the purchased people's new positions" were explained to the acquiring business unit as well as target employees. The total amount of Grand Junction employees was at that time 85. (Stahl and Mendenhall, 2005)

Pirelli: Pirelli was acquired in 1999, and it is an Italian company based in Milan. When they were acquired, Pirelli was at that moment in time "a recognized innovator in both optical

component technology and optical systems for service providers. The purchase of Pirelli Optical Systems was Cisco's first multi-billion dollar acquisition in Europe and Cisco's first entry into the dense wave division multiplexing (DWDM) market." (findthedata.org)
At the time of the acquisition Pirellis optical equipment unit included around 700 employees.

Tandberg: Tandberg was acquired in 2010, and is a Norwegian company based in Oslo. Their focus is on video conferencing, using video to make the corporate life easier. (Annual Report Tandberg, 2008)
Ned Hooper, Chief Strategy Officer at Cisco describes Tandberg as: "*A key leader in driving innovation across global video communications*". (Cisco.com, 2010)
He also mentions that:

> *"...acquisition is always here about the talent we bring in, the leadership that joins Cisco that is going to drive us, not only over the short term, but over the longer term as we look to build masker leadership in the collaboration market segment*." (cisco.com, 2010)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5.3 Data analysis

The data analyzed will be the information publically available through Cisco's webpage, annual reports, press releases, studies, and so forth.

The reason for this is that there is good and broad information about acquisitions, case studies which are relevant for my study available publicly through Cisco's webpage and different books which have used Cisco acquisitions as examples.

It is in the post-acquisition integration process that successful knowledge transfer happens. There is product development that is taking advantage of knowledge transfer between the acquirer and the acquired company. The knowledge transfer is successful when new product development leads to outcome and competitive advantage for the company. And the knowledge that is being transferred is from both the acquirer and the acquired company.

Organizational learning, training

Stahl and Mendenhall (2005, p. 287) found out in their case analysis on Cisco that "the integration team develops and communicates to all the acquiring and purchased employees the product road maps, as well as revenue projections and other goals, in addition to the new organizational structure post close."

As seen in the section above, HR has been important in the whole acquisition process, and could be a separate chapter not underlying organizational learning and training. The human resource department in Cisco has an important role which affects other points in the research model, as retention, motivation, and culture. HR facilitates for learning and training, which is useful in transferring tacit knowledge.

HR is very important for Cisco. The reason for this is as Mimi Gigoux, HR team, describes: "*we don't care about the product that is on the manufacturing floor. The second and third generation product is locked up in their heads*." (Mayer and Kenney, 2004, p. 311)

Management support

For Cisco the management has through the acquisition committee been in good control and through a good CEO, Chambers, Cisco has managed this part very well.

In the theory part, management support and involvement is characterized as very important for acquisition success. Management support is also important for the employees trust and this could in turn affect the knowledge transfer.

In every acquisition Cisco is open from early on about their intentions and as soon as an acquisition is known to the companies and the public, they go out and talk to the employees of the acquired company to quickly create an environment of trust.

Corporate culture

Cisco acquires mostly U.S companies which have the same national culture as Cisco. But in a lot of their acquisitions Cisco has been good at including the employees from the acquired companies and made them see that they are useful for Cisco. By doing this the transfer of knowledge would be easier. To be able to transfer knowledge, people need to trust each other. A good corporate culture could facilitate this in a manner which leads to knowledge transfer.

Cultural fit is important for knowledge transfer. As Cisco is acquiring more foreign companies and larger ones, one need to keep in mind that for the acquisitions to gain their full potential and be successful, culture and having similar corporate culture is essential. In the integration process, during due diligence, Cisco assess cultural fit, and through the HR-team they find out how the corporate culture is at the companies they acquire. The more similar the corporate culture between the acquirer and acquiring firm, the easier it would be to establish trust and further transfer knowledge.

Motivational mechanisms

A way which Cisco motivated the employees were by financial incentives, a part of "retention of key people" is a motivational mechanism.
The rational dimension of the social capital theory is a good fit with motivational mechanisms.

Retention of key people

John T. Chambers:

> "*When we acquire a company, we aren't simply acquiring its current products, we're acquiring the next generation of products through its people. In the average acquisition, 40 to 80 % of the top management and key engineers are gone in two years. By those metrics, most acquisitions fail*." (Mayer and Kenney, 2004, p. 316)

This statement confirms the importance of employee retention and doing it in the rights way so you get knowledge transfer to be able to get the new products.

Culture

Cross-border differences are important to keep in mind in international types of acquisitions. There are cultural differences between USA and Italy, USA and India, etcetera.

It is important to create a shared language and use experiences which would be common for both parties.

However, according to Sarala and Vaara (2010) national cultural differences were positively associated with knowledge transfer. This means that cultural differences do not necessarily mean that it would be difficult to transfer knowledge.

5.3.1 Grand Junction

Through **management support** Cisco's CEO, Chambers, have put managers from acquired companies in leading positions in different departments in Cisco. Examples of this are: Grand Junction's CEO, Howard Charney, became vise-president in the WBU (workgroup business unit) desktop division (Stahl and Mendenhall, 2005).

In the literature; **retention of key people** is very important. Examples can confirm this. All of Grand Junction employees became part of Cisco. Cisco offered them "*salaries similar to their prior contracts plus attractive stock options in Cisco, and gave them titles and responsibilities commensurate to what they enjoyed previously*." (Stahl and Mendenhall, 2005, p. 287)

"In product development Cisco ensured a high retention of employees, strong learning effort, medium degree of human integration, and moderate speed of human integration to preserve the tacit knowledge of Grand Junction but also to transfer and apply it effectively and efficiently. Given the generous salaries with attractive stock options to be vested in future, that is, strong financial incentives, led to satisfaction, long-term commitment, and focus in the Grand Junction employees, as did the offer of equivalent or promoted positions within Cisco, as well as the crucial role accorded to Grand Junction in realizing the vision of the merger's product output. Such responsibility and high relative standing encouraged them to stay, as it represented recognition of their abilities and an expressed need for them as well as respect and clear direction without uncertainty, leading to psychological ownership and hence a desire to work on the task at hand. High retention hence translated into the preservation of the tacit knowledge." (Stahl and Mendenhall, 2005, p. 289)

5.3.2 Pirelli

In the case of Pirelli, Italian acquisition made in 1999, there was both organizational and **geographical distance** which created some challenges that Cisco had to overcome. First of all, the size of Pirelli was against the initial general directions for acquisitions. Cisco's plan is to acquire small companies, but Pirelli was large. Pirelli was also among Cisco's first acquisitions in Europe.

There are little **cultural differences** between USA and Italy. Looking at Hofstedes cultural dimensions there are not that much differences between the U.S. and Italian national culture.
Power distance: not so much difference, there is a little bit more power distance in Italy than in the U.S. For individualism vs. collectivism dimension there are also few differences, where the U.S is a little bit more individualistic than Italy. The third dimension, masculinity vs. femininity there are also just a little difference, where Italy is higher on masculinity. However, there are larger differences when it comes to the uncertainty avoidance dimension. Here there is higher uncertainty avoidance for Italy that for the U.S. Looking at the last dimension, long-term vs. short-term orientation, this also shows that there is not much difference between USA and Italy. Both are relatively short-term orientated. (Hofstede, 2005)

	Italy (rank and score)	USA (rank and score)
Long term oriented	22, 34	31, 29
Masculinity	7, 70	19, 62
Uncertainty avoidance	33, 75	62, 46
Power distance	51, 50	57-59, 40
Individualism	9, 76	1, 91

According to Paulson (2001) there have been some reports saying that the acquisition of Pirelli has not meet expectations, especially on the product side.

According to Mayer and Kenney (2004, p. 319) “Pirelli was very hierarchical and operated according to the long decision cycles of the telecommunications monopolists. Pirelli did have customers, but it was not a market leader, and therefore significant market share was not acquired. Though Cisco would not confirm the success or failure of the acquisition, in mid-2001 it was widely reported that the Pirelli acquisition had failed.” (Mayer and Kenney, 2004, p. 319)

5.3.3 Tandberg

As mentioned under Cisco’s acquisition strategy, it is important for Cisco to acquire companies which have about the same **corporate culture** as them. Before Cisco decides to acquire a firm they look closely at their culture to find a fit. In the case of Tandberg, Ned Hooper, Chief Strategy Officer at Cisco (2010) says that:

> *“…and fundamentally they have a strong culture, and a culture that align with Cisco’s culture looking at marking transitions, driving stretch goals, and truly look to transform our opportunities for our customers. This acquisition is a great example of how we can apply our build-by partner strategy to take advantage of a new marketplace… …It [Cisco] got a common vision with Cisco about how we can transform together the entire collaboration market…”* (cisco.com, 2010)

This show that having a common vision and culture between the acquirer and acquired company is an important factor which shows that corporate culture is vital in facilitating for knowledge transfer.

However, looking at Hofstedes cultural dimensions there are some differences between Norway and USA. The dimensions where there is difference are long-term vs. short-term orientation and masculinity vs. femininity. Norway is more long-term, and femininity versus USA which is more focus on masculinity and is short-term oriented. On the other dimensions the two countries are almost the same. (Hofstede, 2005)

	Norway (rank and score)	USA (rank and score)
Long term oriented	13-14, 44	31, 29
Masculinity	73, 8	19, 62
Uncertainty avoidance	57, 50	62, 46
Power distance	67-68, 31	57-59, 40
Individualism	16-17, 69	1, 91

The rank shows the number on the list among countries. (Hofstede, 2005)

A way that Cisco managed to cover the **geographical distance** in the acquisition of Tandberg was the use of the technology which Tandberg is good at; videoconferencing.
"The most obvious challenge in the acquisition process was the significant geographical and time difference between the Tandberg and Cisco corporate sites. It was important for both Cisco and Tandberg executives to maintain face-to-face communication during the negotiation and integration process. While travel was mandatory for critical steps in the acquisition process, it was challenging for executives at both companies to make frequent trips between San Jose and Oslo without delaying or disrupting the process" (Cisco IT and Internet Business Solutions Group Case Study, 2010)

As Jawahar Sivasankaran, Senior Manager at Cisco IT puts it:

> *"By using video technologies we were able to break many of the barriers in each phase of the acquisition process. The 'visual touch' that video provided helped us tremendously, and use of video will play an integral role in future acquisition integrations."* (Cisco IT and Internet Business Solutions Group Case Study, 2010)

Overall, when one looks at the three acquisitions, one can see that there are similarities and differences. The factors which stand out are culture and geography. The three acquisitions are from different parts of the world. Grand Junction was a company located in the Silicon Valley. When Cisco acquired Tandberg in 2010 they had gained some experience in acquiring companies outside the U.S. and this experience was used in the acquisition of Tandberg. I would think that Cisco gained knowledge when they acquired Pirelli, which was made 11 years prior to the Tandberg acquisition.

From the analysis of these acquisitions Grand Junction was a successful acquisition with focus on knowledge transfer. And one can see when looking at the different factors in the research model and others which have been presented during the analysis that the acquisition of Grand Junction have given Cisco the knowledge transfer they needed to make new products. However, the same cannot be said about Pirelli. As mentioned over, Cisco has a set of guidelines for the acquisitions they make. This guideline has an effect on knowledge transfer. In the case of Pirelli, Cisco went outside this guideline, which not gave so positive results as other previous acquisitions.

A result from Sarala and Vaara's research (2010) is that national cultural differences were positively associated with knowledge transfer. The greater the difference, the better the knowledge transfer process were. As one can see from the examples on the acquisitions here, this is what the analysis shows. The one acquisition where the cultural differences were the biggest was the one which it seems have good knowledge transfer. Nevertheless, a thing to look at is that corporate culture and national culture may not be the same. As Hofstedes cultural dimensions show, Italy and USA do not have such different national cultures, as Norway and USA. But still the corporate culture was a better match between Cisco and Tandberg than the case was for Cisco and Pirelli.

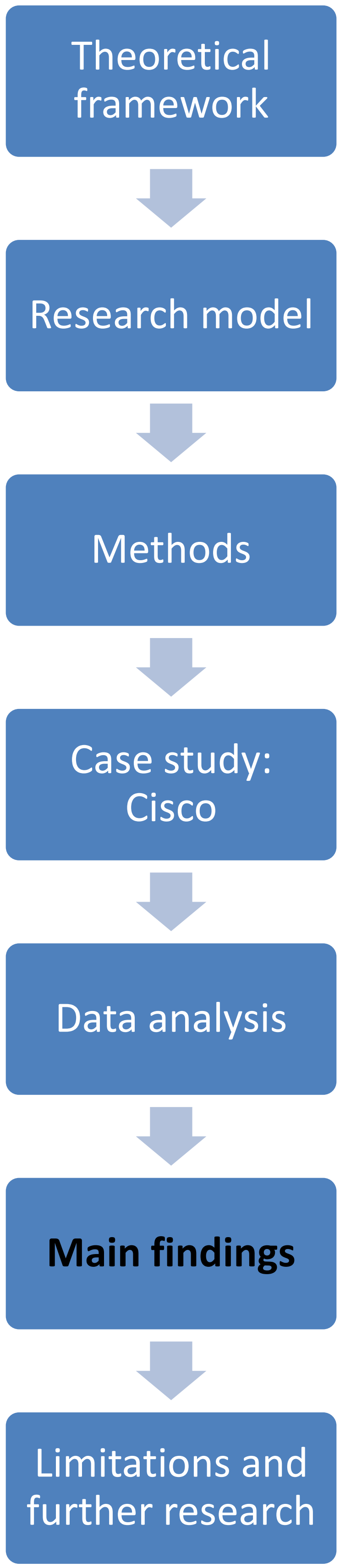
This shows that corporate culture is more important for knowledge transfer than national culture.

5.3.4 Other factors of interest

An impression I have gained when reading cases about Cisco and its acquisitions is that the post-acquisition integration process goes quickly. They want everything to be in place as soon as possible. In some ways this would be beneficial, but in other it might not. In the theoretical part under chapter 2.1 "knowledge", individual management of time was one of the indicators associated with the transfer of tacit knowledge. Maybe the knowledge transfer could be better if Cisco used more time so that the knowledge actually transferred could be better managed. They could also let individuals have more power over how and the time they want to transfer the knowledge they possess. In the sources for the analysis there is not any data about how efficient the knowledge transfer is, how much knowledge is transferred, and if the results would be different if other companies approached would be used in the post-acquisition integration process.

A thing that Cisco does which was not focused much on in the theories I have covered is the due diligence process. This process is important for Cisco in their acquisitions because the due diligence gives Cisco information about if or if not the companies they want to acquire fits with them or not. As mentioned earlier, cultural fit is important to build relationships among coworkers and build a good corporate culture, which will make people trust each other which again will lead to the tacit knowledge being transferred.

Another thing I noticed in the analysis is that the HR department was involved in the whole acquisition integration process than what the theories focused on it. This involvement is important for the knowledge transfer process. By having the HR department’s involvement gives a broader base for how to transfer knowledge and in what way.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6 Conclusion

6.0 Introduction

In this chapter I present the main findings of my analysis of knowledge transfer in Cisco acquisitions with relations to the research question and research model. In the main finding the final research model is adjusted for the results from the case study of Cisco.

6.1 Main findings

The things that Cisco does in the early integration process could have an effect on the post-acquisition integration process and knowledge transfer. The whole process from finding a company to it being fully integrated is important for the knowledge transfer process.

The factors in my research model is somewhat connected to each other. Motivational factors are part of retention of key employees. You would not get retention of key employees if HR and management were not involved in the process, etcetera. That is an impression I get looking at Cisco's acquisition strategy and the different factors I use.
Cultural and geographical barriers and challenges are points one can fix along the way, but if you cannot retain key people from the acquiring company the knowledge transfer might not be as good as it could be. The acquisition could fail and then there would not be any knowledge to transfer.

The human resource department, through a separate team from that department, plays an important part in the integration which is vital for knowledge transfer to be successful. But what one does not know from the research is what effect this will have on new product development for all acquisitions. The reason for a lot of Cisco's acquisitions is to get knowledge about new technology to develop new products or improve the products they have. If you are not able to transfer knowledge from acquired employees; the point of many acquisitions is gone. Knowledge transfer is very important. This is, in the end, why Cisco acquires a lot of companies.

Following under one can see the new research model. In "factors affecting knowledge transfer" I have added human resources and due diligence. In my analysis of Cisco I found that human resources play an important role in the acquisition integration process. I have also removed “barriers and challenges”. Instead of having two boxes, one positive and one negative, I only now have one. This is because several of the factors both can have positive and negative effect on knowledge transfer, depending on the company acquired. Geography was not an issue in the case of Tandberg, but seems to have had a bigger impact on the Pirelli acquisition.

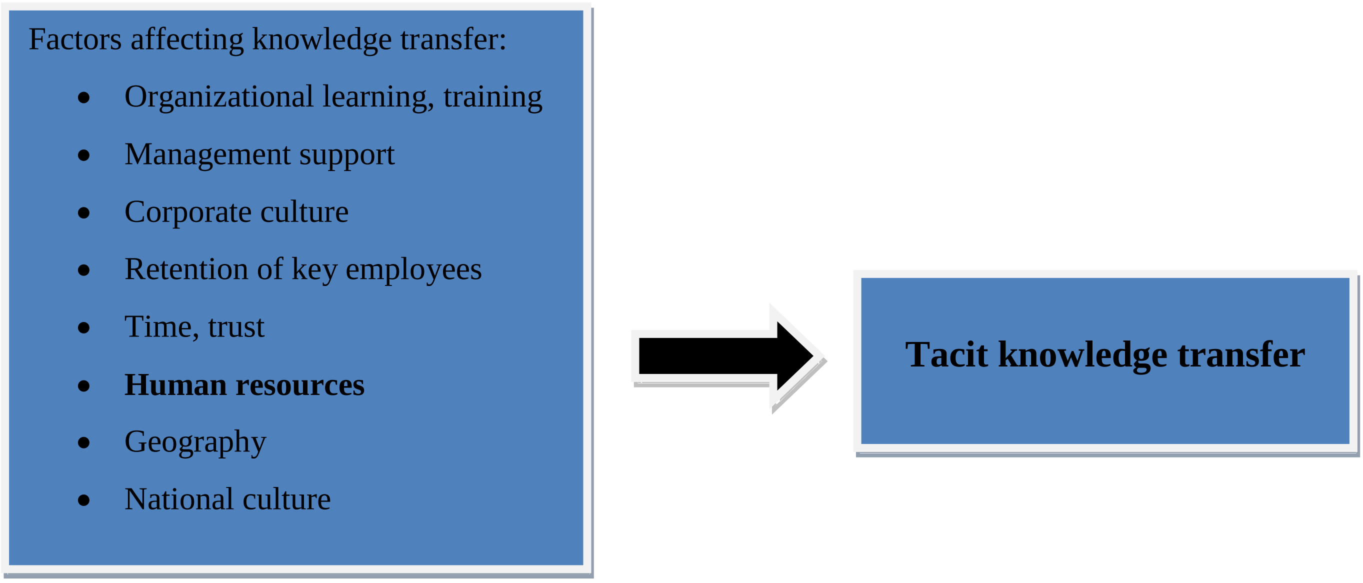
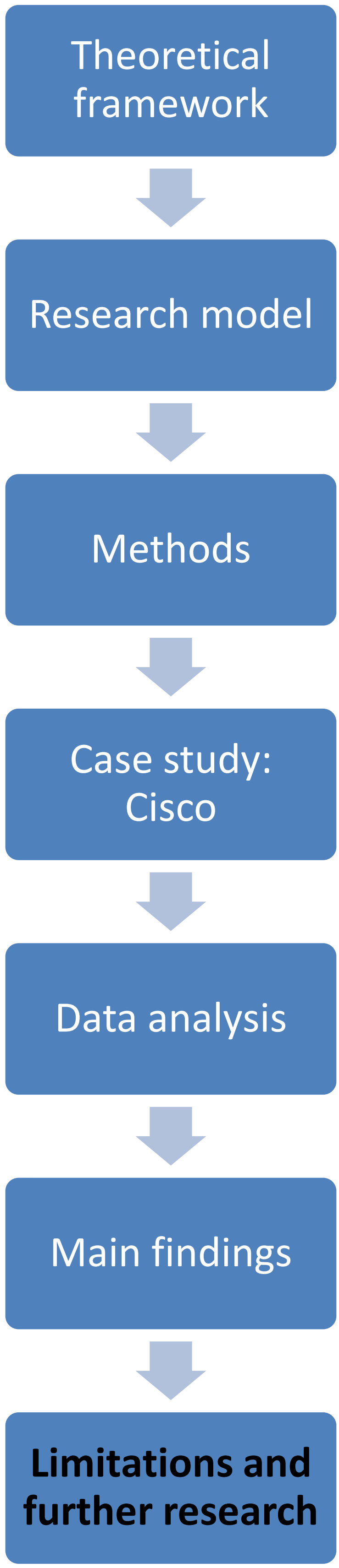


Figure 5. Source: Own

In the model I have removed motivational mechanisms, because this is in many ways included in retention of key people. To retain people you need motivational mechanisms.

I have changed some of what originally were the barriers and challenges. This is part because there was not a lot of information available on these issues and also previous studies have had trouble in finding what challenges Cisco have had in the acquisition integration process related to knowledge transfer (Mayer and Kenney, 2004). Organizational distance does not seem to be a factor of discussion in Cisco acquisitions.

One thing which makes Cisco so good at acquisitions is that they learn from everything they do, and use that knowledge to their benefit.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7 Limitations and further research

Limitations in my research is that when looking at publicly available information you might not get the whole picture of the reality. And it is difficult to find sources which have information about barriers and challenges Cisco have or are facing with its acquisitions. One needs to consider that this study is based on one organization in the high-technology industry. The results might be different for another organization in the same industry or in another sector. My focus has been on tacit knowledge and not so much on explicit. Methods to use in transferring knowledge and facilitating for transfer could be different for explicit or it might be the same. This could be a topic for further research, to see if there is a difference between tacit and explicit knowledge.

Another limitation for this study is embedded in the research method used. Because this study was limited within five months, it might have failed to capture some important processes concerning knowledge, as it is said to be growing with time. Time and resources are limited in a masters' thesis, and need to be considered in the election of methods to use. I recommend using depth interviews for the analysis because that would give more in-depth information and with this type of study one might not get the whole picture by looking at public information. With in-depth interview one could get more accurate information about barriers and challenges.

While I acknowledge these limitations, I believe the findings from this study do provide insight into how to manage tacit knowledge transfer in the case of an acquisition.

Further research in this field could be to look more closely on mergers and acquisitions and knowledge transfer. Previous studies on knowledge transfer have a focus on what knowledge and in what way the knowledge is transferred. For example if face-to-face meetings is the best way to transfer knowledge or another way. There has been a lot of focus on the transfer part of knowledge transfer and not so much on the knowledge part and what's included in that.

One could look at another industry than high-technology. Could the results be different if I would have focused on another sector? The development of my research model is based on studies done on knowledge transfer in high-technology mergers and acquisitions. It would be interesting to do the same study, but with a different industry of focus.

One could look more closely on the contribution of the human resource department and their role in acquisition processes.

While there continues to be a great deal of research on mergers and acquisitions, there are still important aspects of different processes that are not well understood. There could be emphasis on the knowledge transfer process and not just whether it leads to value creation or not. In addition, one could focus more on the emergent nature of value creation following an acquisition.

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