

Collaborations in the Swedish Mobile Payment Industry

The value creation alternatives for mobile payment actors given the current collaboration situation

*Master of Science Thesis in the Master Degree Programme,
Business design*

TOM BIRGERSSON

VIKTOR ERIKSSON

Department of Technology Management and Economics

Division of Management of Organizational Renewal and Entrepreneurship – MORE

CHALMERS UNIVERSITY OF TECHNOLOGY

Gothenburg, Sweden, 2011

Report No. E 2011:052

Coming together is a beginning. Keeping together is progress. Working together is success.

Henry Ford

Executive Summary

Title: Collaborations in the Swedish Mobile Payment Industry – *The value creation alternatives for mobile payment actors given the current collaboration situation.*

Background to the Study: During recent years there has been a rapid increase of new payment solutions. So-called mobile payment solutions are a category of payment solutions that utilize the rapid adoption of cell phones, especially smart phones. Since the mobile payment industry is rapidly expanding, it is an interesting industry to study. Moreover, the industry is to a large extent knowledge-based – the actors are seldom producers of physical products – and we believe that a successful mobile payment solution is often not only built on good technology, but also dependent on collaborations with several different actors in the mobile payment value network. Since the collaborations are of major importance we decided to further investigate the subject of collaborations in relation to the mobile payment industry. Further, when evaluating the collaboration structures we hope to develop an understanding of what the current collaboration structures imply for the different kind of actors in the Swedish mobile payment industry.

Purpose: The purpose of this study is to create an understanding for the use of, and the approach towards, collaborations, including collaboration strategies, among the different types of actors in the Swedish mobile payment industry. Further, the purpose is also to describe the resulting value creation alternatives for mobile payment actors that the collaboration situation gives rise to.

Method: The thesis is based on a qualitative empirical study of nine companies in the Swedish mobile payment industry. The persons that are interviewed in this study are working in relation to a current or a future mobile payment product, as business developers, product managers and CEOs.

Findings and Conclusions: The results present a thorough compilation of the current collaboration situation in the Swedish mobile payment industry. Further analysis shows that collaborations are commonly occurring in the Swedish mobile payment industry, but that the relations are structured with a low degree of formalization and inter-organizational dependence and that only few actors have an active value-positioning strategy. The complex structure and immature state of the industry results in the conclusion that there exists three major value creation alternatives for an actor in the mobile payment industry; (1) Create value through targeting and striving to control a central position in the value network, (2) Create value through leaning upon your key resources and through that utilize your power in the value network, and (3) Create value through creating new structures by innovations that leads to the generation of a new value network relatively independent of collaborations.

Suggestions for Future Research: We suggest three main areas for future research: Firstly, focused research on the advantages of collaborating in knowledge-based industries. Secondly, we suggest similar studies to this one on other industries with different characteristics for comparison. And finally, we believe it would be interesting to expand our study to other markets to investigate how the external environment affects the collaboration situation.

Acknowledgements

This master thesis was written during the beautiful spring of 2011. A large part of the project was performed in the capital of Sweden; Stockholm, but some parts were also performed in the front-face of Sweden; Göteborg. A master thesis process is never easy, and especially not if writing on your own. Consequently, *collaborations* are needed. This section of this master thesis is devoted to the people that have collaborated with us to add their valuable contributions during the master thesis process.

First of all, we would like to thank all the participants in the empirical study; the Senior Engineer at Company A, the CEO and the Marketing Director at Company B, the Product Manager at Company C, the Business Developer at Company D, the Global Customer Solutions Manager at Company E, the Business Developer at Company F, the Product Manager at Company G, the Business Developer at Company H and the Product Manager at Company I. This master thesis had literally never been possible without your valuable input.

Moreover, we would also like to thank Innovationskontoret Väst for letting us work in their innovative and creative working environment during four hectic weeks in May 2011.

Also, we would like to thank our supervisors Magnus Eriksson and Gregory Carson for the fantabulous feedback and support during the whole master thesis process.

We would also like to thank our friends and families for the support and encouragements that we have received throughout this project. Without you we would be nothing, and if we were nothing there would be no study.

Finally, we would like to thank ourselves, Tom and Viktor. We have had a great time together and will hopefully work together again in the future.

Thank you all very much!

Tom Birgersson
tom.birgersson@gmail.com
0739-89 89 62

Viktor Eriksson
viktor.pm.eriksson@gmail.com
0703-52 52 50

Table of Contents

1	<i>Introduction</i>	1
1.1	Background to this Study	1
1.2	Purpose of the Study	2
1.3	Research Questions	2
1.4	Scope and Limitations	2
1.5	Definitions	3
1.6	The Disposition of the Study	5
2	<i>Problem Discussion & Framing</i>	7
2.1	Introduction to Knowledge-based Economy	7
2.2	Introduction to the Mobile Payment Industry	8
2.3	Definition of Mobile Payment Industry	8
2.4	Research Questions	10
2.5	Prior Research	11
2.6	Relevance of the Study	11
3	<i>Methodology</i>	12
3.1	Working Process & Approach	12
3.2	Academic Approach	13
3.3	Research Method	14
3.4	Empirical Selection	16
3.5	Reference System	17
3.6	Theoretical Framework	17
3.7	Analysis	18
3.8	Credibility of the Study	18
3.9	Criticism of Resources	20
4	<i>Theory</i>	21
4.1	Value Networks	21
4.2	Collaboration	25
4.3	The Purpose with Collaborations	33
4.4	The advantages of Collaboration	34
4.5	Disadvantages and Risks with Collaboration	39
4.6	Examples of Successful Collaboration	40

4.7	Key Theory and Frameworks for the Analysis	42
5	<i>Empirical Investigation</i>	46
5.1	Introduction to the Empirical Investigation	46
5.2	Company A	47
5.3	Company B	50
5.4	Company C	53
5.5	Company D	55
5.6	Company E	58
5.7	Company F	60
5.8	Company G	62
5.9	Company H	63
5.10	Company I	65
6	<i>Analysis</i>	68
6.1	Introduction to Analysis	68
6.2	Extent of Collaboration	69
6.3	Approach to Collaboration	73
6.4	Value Network Strategy	79
6.5	Value Creation Alternatives	85
7	<i>Conclusion</i>	89
7.1	The overall Conclusion	89
7.2	Findings Leadings to the Conclusion	92
8	<i>Suggestions for Further Research</i>	95
9	<i>Bibliography</i>	96
10	<i>Appendix</i>	100
10.1	Interview Guide that was used in the Empirical Investigation	100

List of Tables

Table 1 Description of type of actors interviewed in the qualitative study.....	17
Table 2 Own table based on Lorange & Roos (1992).....	28
Table 3 Advantages of collaborations	38
Table 4 Own table based on Lorange and Roos (1992)	42
Table 5 Compilation of investigated companies	47
Table 6: The extent of collaborations in the Swedish mobile payment industry	70
Table 7 Summary of answers regarding approaches to collaboration	75
Table 8 Summary of findings regarding approaches to collaboration	77
Table 9 Matrix visualizing reasons for collaborating.....	78
Table 10 Key answers regarding value network strategy.....	82
Table 11 Analysis of value network strategy	84

List of Figures

Figure 1 Own figure based on Bell and Bryman (2007) and Davidsson and Patel (2003).....	12
Figure 2 Degree of Vertical Integration (Lorange & Roos, 1992).....	27
Figure 3 Degree of Dependence (Lorange & Roos, 1992).....	28
Figure 4 Patent licensing, based on Dratler (2006)	32
Figure 5 Summary of advantages of collaboration	38
Figure 6 Own Picture – Alternatives for Value Network Strategy	44
Figure 7 The collaboration structure of Company B.....	52
Figure 8 Collaborations regarding current product, Company E	58
Figure 9 Collaborations with competitors, Company E.....	59
Figure 10 Collaborations regarding future product, Company E.....	59
Figure 11 The structures of collaboration in the Swedish mobile payment industry.....	72
Figure 12 Alternatives for Value Creation	90
Figure 13 Alternative 1	90
Figure 14 Alternative 2	91
Figure 15 Alternative 3	92

1 Introduction

The first chapter of this thesis is an introduction to the study. It consists of a brief background presentation as well as an introduction to the purpose, scope and limitations of the study. The end of the chapter is dedicated to explaining important definitions and the thesis disposition.

Largely driven by the explosion of e-commerce stores and internet-based on-demand services, combined with consumer demand for easier and faster access to goods and services, there is currently a rapid development of new payment solutions and services. A rising trend within payment solutions is mobile payments; utilizing the increasing cell phone (especially smart phone) adaptation to make payments easier, faster and more convenient. We have seen that in some Asian countries such as Japan and Korea, mobile payment solutions have been used for about a decade. Yet, in the rest of the world these kinds of solutions are just starting to get traction¹. Currently the mobile payment market is getting flooded by many different, sometimes competing, solutions, especially many startups taking up the fight against older payment companies and IT giants. The company that manages to design a technical solution that becomes accepted as a standard for payments is in a good position to dominate the market: In the payment business the “winner takes it all”² and what company would not like to become the next Visa or MasterCard?

During an internship at a growing payment service provider we, the authors of this study, developed a great interest in the mobile payment industry³, and its abundance of products and solutions. Moreover, the industry is mostly knowledge-based – the actors are seldom producers of physical goods – and we got to understand that a successful mobile payment solution is often not only built on good technology, but also dependent on collaborations with several different actors in the mobile payment value network. Therefore the issue of collaborations will need to be dealt with by business managers in order to enable their companies to compete in the developing market. Thus, focusing on our interests, we decided to further investigate the subject of collaborations in relation to the mobile payment industry. Given our close proximity to the industry, we were interested in evaluating the collaboration structures to learn what the situation means for the different types of actors, and thus hopefully contribute to the future development of the market.

1.1 Background to this Study

For an in-depth presentation of the background, as well as to facilitate the reading of this study, we refer the reader to Chapter 2: Problem Discussion & Framing. On a more general level, this master thesis study was performed during the spring of 2011 as part of the master

¹ An exception is Premium SMS solutions that are well established in for example the Swedish market.

² CEO, Company H, Interview 2011-02-11

³ The mobile payment industry will be properly introduced in section 2.2 Introduction to the Mobile Payment Industry, and further defined in section 2.3 Definition of Mobile Payment Industry.

program *Intellectual Capital Management* at *Chalmers University of Technology* and the *School of Business, Economics and Law* at *Gothenburg University*.

Our role as researchers is to objectively examine and study the unexplored research area; how the collaboration situation in the Swedish mobile payment industry gives rise to different commercialization alternatives for mobile payment solutions. This is since we believe that it is hard for an actor in the mobile payment industry to develop, produce, market, sale and deliver a mobile payment product or solution to the market alone. Collaborations hence become essential to the value network and are therefore interesting to investigate further.

1.2 Purpose of the Study

Against the described background, the study sets out to investigate a research area that is to our understanding currently unexplored:

The purpose of this study is to create an understanding for the use of, and the approach towards, collaborations, including collaboration strategies, among the different types of actors in the Swedish mobile payment industry. Further, the purpose is also to describe the resulting value creation alternatives for mobile payment actors that the collaboration situation gives rise to.

The term *value creation alternatives* is meant to be interpreted from a holistic perspective in relation to collaborations; meaning the general kind of options an actor have in how to act towards other actors and existing structures when building their products.

This purpose was chosen so that this study would contribute to an increased academic understanding of the current collaboration situation in the mobile payment industry. Effort has been made to evaluate the situation from the perspective of all the different types of actors in the industry in order to make this report as useful as possible to these actors.

1.3 Research Questions

In order to fulfill its purpose, this study will be focused on answering four research questions; one main research question complemented by three sub-questions. The main question to be answered is:

What are the possible value creation alternatives for mobile payment actors given the collaboration situation in the Swedish mobile payments industry?

The background to this division and the three sub-research questions are further explained in section [2.4 Research Questions](#)

1.4 Scope and Limitations

To be able to deliver a master thesis study with reliable and validated discussions and conclusions, we need to define a suitable scope for this study. Firstly, this study is limited to examining *collaborations* in the mobile payment industry, and the scope does not include a

deeper study of any other aspects of the industry, or the industry in general.⁴ Secondly, collaborations is only one of the important building blocks of value networks (see section [4.1 Value Networks](#) for more details), yet this study will not investigate any of the other building blocks and will instead focus on exploring the subject of collaborations deeper.

Lastly, only the Swedish mobile payment industry will be examined in this study. This limitation was used because of it would most probably be harder to draw conclusions from an international study as the industry is not homogeneous from an international perspective. For instance, many markets have different legal frameworks and other regulatory difficulties that affect the development of the industry. In addition, the end-consumer preference and other market drivers are specific to certain geographical areas and national borders. Therefore, our approach was to perform a focused study of the mobile payment industry in Sweden, rather than a general and less detailed study of the international mobile payment industry.

1.5 Definitions

Below are definitions of a number of key concepts that we believe are important to understand as a reader. It is however important to note that the subject of this thesis is extremely dynamic, and therefore the meaning of certain concepts continuously evolve. Therefore some of the concepts below could be defined differently by other sources.

Actor – An actor in this study refers to a company, organization or other legal entity. Definitions of the type of actors that are investigated in this study can be found in section [3.4.1 Choice of Investigated Companies](#).

API – the API (Application Programming Interface) is a set of rules that states how a certain application or software can communicate with another application or software.

Applications – An application (short for Application Program, also commonly referred to simply as App) is a program that is designed to execute a precise task directly for an end-user or directly for another application program.

Collaborations – Collaborations are efforts that are performed by a two or more organizations or companies with a common purpose or objective. See section [4.2 Collaboration](#), for more details.

eCommerce – eCommerce (also defined as e-comm, e-commerce or electronic commerce) is the general term for purchases made through electronic platforms that are designed to be accessed through a computer.

Industrial Economy – The industrial economy refers to an economy where value is mainly created through production and transactions of material products.

⁴ The mobile payment industry will however be defined in section 2.3, Definition of Mobile Payment Industry, with the help of prior research.

Knowledge-based Economy – The knowledge-based economy refers to an economy where value is mainly created through production and transactions of knowledge.

mCommerce – We have decided to define mCommerce (or M-commerce, m-Com etc.) as the general term for purchases made through electronic platforms that are designed to be accessed through a mobile phone.

Mobile Payment Industry – The mobile payment industry refers to the group of companies that already have or are developing business activities that are specifically meant to part of a mobile payment solution.

Mobile Payment Solutions – In this study, a mobile payment solution is defined as a solution for handling purchases where a mobile phone is somehow involved in the money transaction process. See section [2.3, Definition of Mobile Payment Industry](#), for more details.

Near Field Communication – NFC (Near Field Communication) is a high frequency wireless communication technology that enables exchange of data between enabled devices. The technology is very short range (about 4 cm), and is therefore often considered to be a good choice for development of contactless payment solutions built into mobile phones. Such a solution could for example convert a NFC-enabled mobile phone into the equivalent of a credit card, only the transaction would be initiated by holding the phone close to a NFC payment terminal.

Payment Solutions – A payment solution enables a money transaction through being an intermediary between a buyer and a seller. The money transactions are processed through the payment solution, where often the seller often pays a transaction fee. Examples of well-known payment solutions are the cash system, credit cards and premium SMS (see below).

Person-to-Person (P2P) – P2P often refers to a technology, product or solution that allows two individuals (not businesses) to transfer funds between each other, for example, via the Internet or a mobile phone.

Point of Sale – In this study we define Point of Sale as purchases made at the geographical point of sale. An example is when a consumer purchases a shirt in a H&M store.

Premium SMS – Premium SMS (could also be called CPA – Content Provider Access) is a payment solution that is initiated through a sending a code by SMS to a specific number. The money transaction is often cleared through the mobile network operator bill. Examples of services where the Premium SMS are used are for instance when purchasing subway tickets in Stockholm through a mobile phone or when voting in television shows such as *Idol* or *Melodifestivalen*.

Value Creation – In this study, the term value creation has been assigned as an important element, since it is both part of the title and the purpose. The term value creation is a superior umbrella term that however can be used in many situations and therefore is broadly defined.

Therefore it is important that we give our view of how we use the term in this study. We define value creation as an umbrella term for all the activities that can be performed by an actor in a value network in order to facilitate the process of taking an innovation or solution into a value proposition (often in the form of a product or a service) towards an end-consumer.

Value Networks – A value network is a set of organizations and firms that are interlinked through relationships and collaborations with the purpose to deliver a common value proposition to a specified end-consumer or market.

1.6 The Disposition of the Study

When choosing the disposition of the study, we intended to follow a traditional and logical academic structure. In this structure, we first give an introduction to the thesis, followed by an introduction to the central problem. Thereafter, a theory chapter is set-up in order to introduce a framework and structure around the problem. This is followed by an empirical investigation that makes up the research contribution in this study. Finally, an analysis is performed, and the major findings of this analysis are then presented in the concluding chapter.

Chapter 1 – Introduction

In the first chapter of the study (i.e. the current chapter), the background to the study is briefly presented. Moreover, the purpose of the study is introduced together with the scope and limitations of the study.

Chapter 2 – Problem Discussion and Framing

In the second chapter we aim to expand the introduction chapter focused on the central research questions and improve the background to the study. By this we hope to provide a good initial substance to the reader that will improve the reading experience. The chapter gives an introduction to the knowledge-based economy and the mobile payment industry, which then leads into the research questions of the study. Lastly the relevance of the study is presented.

Chapter 3 – Methodology

In this chapter, the method used by us in the study is presented and the quality of the research is discussed and analyzed. The chapter first explains the overall working process before going into the academic approach and research method. Finally, the validity and reliability of the study is discussed.

Chapter 4 – Theory

In chapter 2, the subjects knowledge-based economy and mobile payment industry are presented. The theory chapter intends to expand a broader theoretical framework by describing in detail the subjects of value network and collaborations. At the end of the chapter, the key frameworks and theories that we will use in the analysis are highlighted.

Chapter 5 – Empirical Investigation

The empirical investigation chapter presents the empirical findings from the interviews with the nine companies involved in the empirical study. Each interview is summarized by using the structure outlined in the introduction to the chapter.

Chapter 6 – Analysis

This chapter intends to be a bridge between the theoretical framework and the empirical investigation. Each of the research questions that are presented in Chapter 2 are analyzed separately by using the theoretical framework and empirical data. Also, research questions 2 and 3 are broken down into more specific sub-questions with the purpose of improving the analysis of the study.

Chapter 7 – Conclusions

In the last chapter, the key take-outs from the analysis are presented as the conclusions of this study. Furthermore, the conclusions summarize an answer to the overall research question. Finally, suggestions for future research are presented.

2 Problem Discussion & Framing

The aim of this chapter is to explain the context that is the base for the research question of this study; namely the knowledge-based economy in general and the mobile payment industry in particular. This will be put in relation to the research question and why we believe this is an interesting subject to investigate. Lastly, we discuss the relevance of this study in relation to existing academic investigations.

2.1 Introduction to Knowledge-based Economy

In contrast to the industrial economy's focus on physical production, the knowledge-based economy has acquired its name from businesses' increased dependence on knowledge to achieve growth (OECD, 1996). Indeed, the fundamental difference between the industrial and knowledge economy is the carrier of value: whereas the industrial economy is characterized by production and transactions of material products, the knowledge-based economy is primarily driven by production and transactions of knowledge.⁵ Naturally, the two co-exist, but according to Petrusson (2004) "the focus on the firm as producer of physical goods has to be replaced, or at least complemented, by a focus on the firm as a creator of knowledge and other intellectual capital [... and] it is only a question of time before business actors in all sectors will consider this to be evident."

Given that knowledge is created and controlled very differently from physical goods, the increased focus on knowledge has many implications for businesses; among other things an amplified need to build value networks. According to Chesbrough (2006), building strong connections to third parties who are outside the immediate value chain can increase the value of a technology. Therefore management is increasingly shifting their focus from the effective production of physical goods to aspirations "to control networks that generate experienced technical functions, utilities and goodwill" (Petrusson, 2004,). In other words, Petrusson thinks that in the future "business is going to be more network-oriented". Blaxill and Eckardt (2009) follow the same line of thinking when they name "delivering complex solutions to the market" as one of the main reasons for collaborating. Thus, in complex knowledge intensive industries the network of relations becomes an important part of a firm's business model. As the value creation increasingly involves transactions between actors, business models can be analyzed, and even defined, by mapping the collaborations and flows of value between actors in the value network.⁶ Adapting to these changes in the economy, Blaxill and Eckardt (2009) suggest that collaborating should become an essential part of business strategy, and that getting a central position in a value network can be an effective way to achieve competitive advantage.

⁵ Lindgren, Jonas (2009) Lecture; Introduction to value creation in the industrial economy, Chalmers; 2009-09-02

⁶ Sundelin, Anders (2009) Lecture; Business Models for ICM, Chalmers; 2010-04-08

2.2 Introduction to the Mobile Payment Industry

The wide adoption of mobile phones has opened up for the development of many new services, utilizing the personal nature of these ever-present digital devices and their increasingly more powerful computing power. One thing that has gained traction in recent years is the purchasing of goods and services using the mobile phone (m-commerce)⁷. This development has called for a parallel development for ways of using the mobile phone to pay for the purchases: mobile payment solutions.

One of the oldest and most common mobile payment solutions is the so-called Premium SMS, where an SMS containing a code is sent to a specific number as a purchase order. The cost for the service or good is then added to the consumer's mobile phone bill. However, because of limitations these payment solutions are only suitable for small transaction amounts and certain purchases (Van Bossuyt and Van Hove, 2007). Thus the mobile payment market can still be considered to be immature in many markets⁸, with several solutions competing for market share, and even more being developed (Boersma, de Bel, and Screpnik, 2011). These are often complex technology solutions, connecting information and services. Hence, the mobile payment industry could be described as being knowledge-based and would be expected to be characterized by value networks and a high dependence on collaborations.

When studying collaborations, the choice of an industry that is in need of collaborations is obviously important, yet there are additional reasons why the mobile payment industry is interesting to study. In the current immature development state, without a clear standard business model, it should be possible for actors to try very different strategies when trying to get a strong position, compared to a more mature industry where solutions would generally be expected to be more similar. Moreover, the many options and early state make it possible for new companies, largely dedicated towards mobile payments, to enter the industry and contrast older companies that see mobile payments as just another possible diversification. Differences regarding collaborations could be evident here if the old, financially stronger actors turn out to have different incentives for collaborating compared to the less stable actors. Thus, to know what different actors to compare, the mobile payment industry must first be defined.

2.3 Definition of Mobile Payment Industry

There is no precise universal definition of mobile payments, but a general definition of mobile payments is a solution utilizing mobile devices to make transactions, for example, banking transactions or pay bills (Gerpott and Kornmeier, 2009). A narrower definition was made by Karnouskos (2004), who defined it as a transaction of money in return for goods or services,

⁷ IT manager, Company H (2011) Interview 2011-02-24

⁸However, the development level of the mobile payment market is very diverse when looking from a global perspective. As put by Boersma, de Bel and Screpnik (2009):

Different geographies have different levels of progress and maturity in different applications of mobile payments. For example several African countries make use of mobile payments for peer to peer remittance and to reach the un-banked. Asian countries such as Japan and South Korea are well advanced in the use of the mobile phone for Point of Sale payments and the mobile device in these geographies is slowly morphing into a single device with multi – payment applications. Europe is actively experimenting with Point of Sale NFC payments.

where the initiation, authorization and confirmation are carried out using a mobile device. Here a mobile device can be any portable device that has access to telecommunication networks, most commonly a mobile phone but could also refer to other devices such as PDAs or tablets.

From the interviews made in this study there seems to be a general understanding that referring to *mobile payments means purchases where a mobile phone is somehow involved in the money transaction process*. This approach is also the one adopted in this investigation as this definition limits the study to mobile phones while keeping the way the phone is used variable. Some of the companies that were interviewed used a narrower definition, for example, Company E confined mobile payments to when money is cleared from the account or bill connected with the mobile phone.⁹ In contrast Company H had the more general view of a payment process being independent of geographical location.¹⁰ Efforts were made to adapt to these differences when analyzing and comparing the outputs from the interviews.

Similarly, it is hard to define exactly what type of commercial actors that are/will be stakeholders in the mobile payment industry as a standard solution has yet to emerge, and as new mobile payment solutions enter the market, so might new types of actors. However, there are some types of commercial actors that are considered to be main stakeholders in current and/or future solutions. For example Camponovo, Ondrus, and Pigneur (2005) mention the following main stakeholders: *mobile Payment Service Providers (PSPs)* (that could be *financial institutions* such as banks and card issuers), *Mobile Network Operators (MNOs)*, *technology suppliers*, *intermediaries* and *newcomers* (not defined further). On the same line, Au and Kauffman (2006) talks about *MNOs*, *technology vendors*, *financial services institutions*, *mobile payment systems solution creators* and *specialized intermediaries*. Using slightly different notations, this investigation will thus be looking at the following stakeholders when answering the research questions:

- *technology providers*
- *Mobile Network Operators (MNOs)*
- *payment aggregator* (an intermediary),
- *banks* (financial institutions) and
- *mobile Payment Service Providers (PSPs)*.

In section [3.4.1 Choice of Investigated Companies](#) the selection process to the empirical investigation is further explained. Also, in section [5.1.1 Overview of Investigated Companies](#), it is possible to find a summarizing table of the companies included in the study.

⁹ Global Customer Solutions Manager, Company E (2011). Interviewed 2011-03-31

¹⁰ Business Developer, Company H (2011). Interview 2011-03-08

2.4 Research Questions

The current state of the Swedish mobile payment market provides an opportunity to investigate how the relevant stakeholders use collaborations and the implications of this for creating their solutions in the industry. Thus, as stated in section [1.3 Research Questions](#), the main research question of this study is:

What are the possible value creation alternatives for mobile payment actors given the collaboration situation in the Swedish mobile payments industry?

This question will be answered by investigating the collaborations in three steps, corresponding to three sub-research questions, starting with looking at to what extent collaborations exist and ending with how they are used from a strategic perspective:

- (1) *To what extent do collaborations exist between different types of actors in the Swedish mobile payment industry, and what is the structure of these collaborations?*

Besides contributing to the overall purpose of this study to create an understanding of collaborations in the mobile payment industry, the purpose of this question is also to give a view of the current collaboration situation between the types of actors in the industry. This will provide the basic understanding for answering the main research question.

- (2) *What are the approaches towards collaborations among the different types of actors in the Swedish mobile payment industry?*

Aims to qualitatively understand what motivates the actors to collaborate. This gives additional understanding to why the current situation looks as it does, as well as to assess insight into what possible arrangements the different types of actors might be willing to get into in the future.

Research question 2 is further decomposed in the Analysis chapter into three specified questions in order to improve and strengthen the analysis of this study. See section [6.3 Approach to Collaboration](#), for further information.

- (3) *What are the different actors' collaboration strategies in relation to the commercialization of mobile payment products?*

Answering this third question will reveal the actors' views of the possible commercialization options (regarding collaboration structures) given the current use of and approach towards collaborations for the different types of actors. Focus will be on trying to understand the actors' opportunities and threats and how they deal with these.

Research question 3 is further decomposed in the Analysis chapter into three specified questions in order to improve and strengthen the analysis of this study. See section [6.4 Value Network Strategy](#) in the analysis for further information.

2.5 Prior Research

Investigating prior research was carried out in parallel with establishing the theoretical framework of this study. A more thorough introduction to the method for establishing the theoretical framework is however in the section [3.6. Theoretical Framework](#). In light of the identified prior research we argue that there exists very limited research in the topic that this study intends to focus on:

There is research focused on the mobile payment industry, the business models of the mobile payment industry and possible structures of mobile payment value networks. We want to highlight two good examples of these studies; firstly, Bouwman et.al (2008) give a good view of the different structures of the mobile payment value network that have been dominating the industry during the last years. The authors moreover explain how technological and strategic developments enable new structures of the mobile payment value network that will bring new billing and payment alternatives for content and service providers in the industry.

Secondly, Van Bossuyt and Van Hove (2007) explain the different kinds of payment models and business models that a new generation of mobile platforms could have. Among other things, the paper gives two examples of business models; carrier centric models and payment service provider (PSP)-centric models that will in different ways offer new compelling value propositions to the end-users.

Consequently, we consider that the prior research gives good views of the possible future structures of the mobile payment value networks and the possible future mobile payment business models. However, the researchers do not highlight nor describe how the different type of actors collaborates, what their approaches to collaboration are or what their value network strategies are. Neither do the researches explain what this situation will imply for the different type of actors in the future. We will attempt to cover this area in this study.

2.6 Relevance of the Study

Given the limited research on this area, we argue that this study is relevant since it highlights and investigates an unexplored research area and focuses on unsolved research questions. Moreover, since the mobile payment industry is immature and in an expanding state, the general utility this study will provide is an increased understanding of the collaborations in the mobile payment industry. This is interesting since we believe that collaborations are an important building block for the industry to function.

Moreover, the interviewees in this study had a positive attitude towards the studied subject. There is an interest in getting an increased understanding of the collaboration situation in the mobile payment industry and what the current situation will imply for the different type of actors in the industry. Therefore we hope that this study will not only be interesting for the academy but also for the actors in the industry. In addition, we hope that the conclusions from our study could be applicable for other industries, especially other emerging technology-based markets, and that it could provide some insights into how these industries work.

3 Methodology

The third chapter explains the methodological choices made in this study and the procedures that have been used. First the working process is described, followed by the academic approach and the research method. The final part of the chapter will discuss the validity and reliability of the study.

3.1 Working Process & Approach

The working process of this thesis consisted of a number of phases, and was designed to be continuous. Consequently it was crucial that these phases were dynamic and overlapping. Therefore we chose a research process that was developed by taking inspiration from Davidsson and Patel (2003) and Bell and Bryman (2007). We believe that by having a set working process early in the study the quality of the master thesis was increased. Therefore, the developed working process functioned both as a facilitator as well as a quality assurance of the study.

An overview of the research methodology is shown in Figure 1 below.

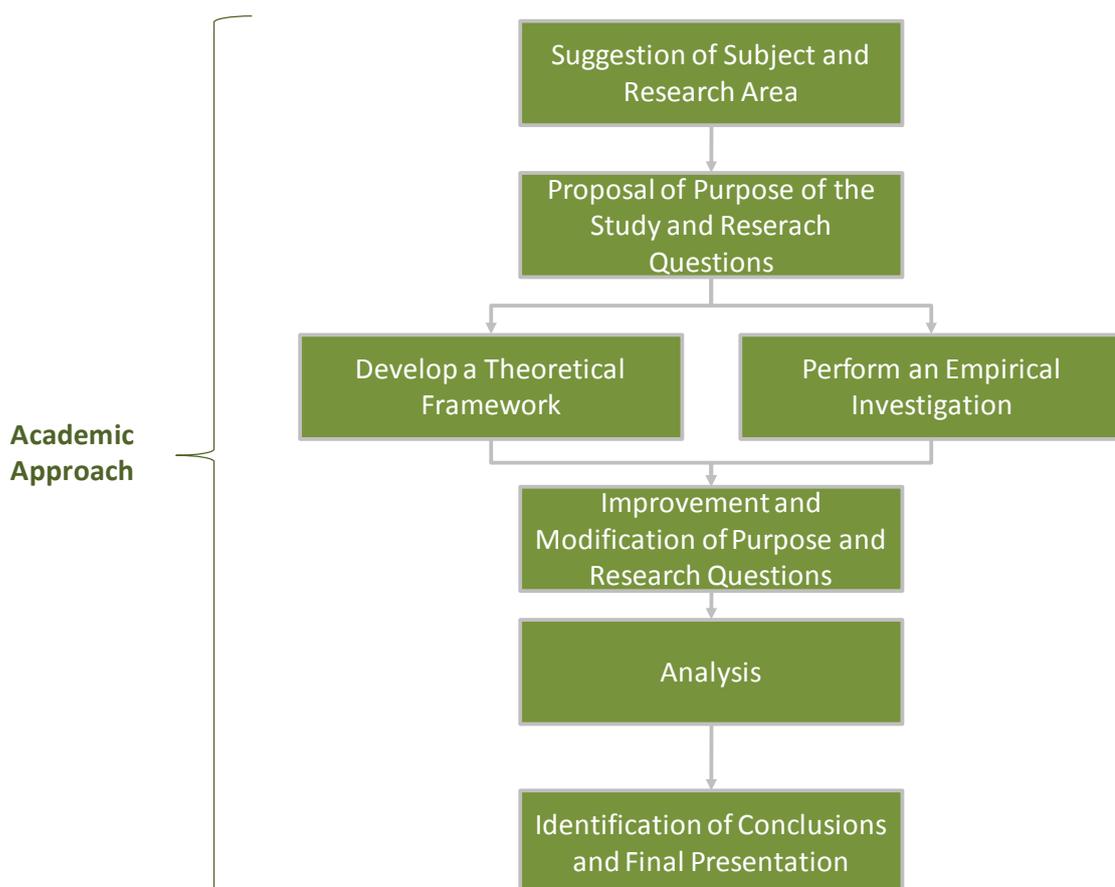


Figure 1 Method overview based on Bell and Bryman (2007) and Davidsson and Patel (2003)

The initial stage of the master thesis project was devoted to developing an overview of the study. This was followed by a parallel process where the theoretical framework and the

empirical investigation was created, which led to a refinement of the purpose and research questions, before the analysis of the study. Finally the analysis was used to identify the conclusions of the thesis.

3.2 Academic Approach

Two general approaches are often mentioned in academic literature; theory and empiricism. These are complemented by a number of developed methods on how to relate between theory and empiricism (Wallén, 1993). In the following sections of this chapter, we will further present and explain these academic approaches and their relation. Here we will also specify the academic approach that we have chosen in this study.

3.2.1 Theory

The term theory generally refers to a function the purpose of which being to explain the nature of a studied phenomenon. The theory should also explain the studied phenomenon's features. As an example, the theory should cover the following; how the phenomenon is perceived, its essential characteristics and how different circumstances are interrelated and how they can be clarified (Wallén, 1993). Wallén also explains that the theory should consist of four elements that we use in order to increase the quality of the theory chapter:

- Concepts
- Context and Structure
- Models
- Explanations

3.2.2 Empiricism

The term empiricism refers to the work that derives from the practice of examining and investigating phenomena, trends and objects. Therefore there is a major difference between theory and empiricism, where theory instead derives from an academic construction or model (Wallén, 1993). Wallén further argues that the empirical study includes two successive parts; first the empirical study includes data collection where different characteristics are identified. Secondly, the empirical study includes a description part, where the data is compiled into information in a systematic and descriptive way.

3.2.3 The Relation between Theory and Empiricism

In the selection process of the academic approach, it is important to consider the relation between theory and empiricism. In this context there exist two general approaches towards methodology; (1) the inductive approach and (2) the hypothetical-deductive approach. In the inductive approach a researcher should initially start with data collection in order to draw general and theoretical conclusions. In contrast to the inductive approach, the hypothetical-deductive approach means that theory should have a more significant and more substantial role. The theory should derive empirical consequences that at a later stage should be examined against collected data (Wallén, 1993).

3.2.4 The Academic Approach of this Study

This thesis has both an empirical and a theoretical approach: We have created a theoretical framework in parallel to making the empirical study that is the foundation for the analysis of the study. From this starting point, a hypothetical-deductive methodology could be used. However, as is further explained in the Problem Framing chapter, there is only limited research in the research area, and therefore this study has an explorative approach (Davidsson and Patel, 2003).

We argue that the area that we intend to investigate is not mature enough to derive empirical testable hypotheses about. Therefore the intention is to have an open approach to the research area and furthermore to have a holistic perspective on the scope of our study. We therefore hope that our study, including the conclusions, can be a basis for potential future research.

3.3 Research Method

There are two general methodological approaches towards research; quantitative and qualitative methodology. Qualitative methodology has a strong focus on studying soft data and a small number of respondents exhaustively (Eriksson and Wiersma, 1991). A qualitative method suits a research question with an objective to understand, see patterns or describe (Troost, 2005). Instead quantitative methodology focuses on hard data and a larger amount of respondents in order to clarify a general picture. This method best suits research with an objective to describe “how many”, “how often” or “how common” (Eriksson & Wiersma, 1991).

Since the purpose of this thesis study is to describe and analyze, we argue that our study is designed in such a way so that the qualitative method is the most beneficial method. Hence a qualitative method is used in this study, which is further described and motivated below.

3.3.1 Qualitative Methodology

Within the term qualitative methodology several data collection methods are included as in-depth interviews, field studies, intervention studies and participating observation. In qualitative methodology, situation dependent factors play a crucial role. In addition to this, it is also important to alternate between proximity (trust and engagement) and distance (methodical awareness, self-absorption and theoretical framework) (Wallén, 1993). The chosen qualitative methodology in this study is in-depth interviews. Below, we will further explain the term in-depth interviews.

A major advantage with in-depth interviews is that they can be used regarding more complicated issues, especially if the respondent has received the questionnaire from the researchers in advance and has been given time to prepare himself before the interview. In addition to this, an advantage with in-depth interviews is that the researchers are given opportunities to analyze the body language of the respondent and to ask follow-up questions about areas that the researchers might find interesting or needs to be complemented (Eriksson and Wiersma, 1991). We argue that the research area of this study is complex; also

there are definitions in this study that could be interpreted differently among different persons. Therefore, in-depth interviews would give the researchers a better control of the research process.

In an in-depth interview, researchers should not only ask questions from a standardized interview guide. Instead, there are opportunities to have a low degree of standardization. This implies that an interviewer should adjust to the interviewee's language usage and the interviewer should manage the interview process of the questions so that it suits the study. During in-depth interviews and low degrees of standardization, the diversification opportunities are thus large (Trost, 2005).

In relation to interviews, it is important to investigate the term structure, which discusses if the questions in an interview guide should have static or dynamic response options. If an interview only has static response options it is referred to as structured, and if the interview has totally dynamic response options it is called unstructured (Trost, 2005). Denscombe (2000) mentions a third option; the semi-structured interview. A semi-structured interview is a hybrid of between a structured and a structured interview. In these interviews, there should exist a list of subjects and questions that should be answered. However, the researchers should be open to let the respondents develop their ideas, and it is important to leave room to develop their own aspects and standpoints. In order to deliver the best results for this study, we argue that a semi-structured approach to the interviews is to be preferred. This is because the research questions are to a large extent open as well as to a large degree complex. Therefore, a semi-structured approach would catch the ideas and thoughts of the respondents in the empirical study.

Voice recording during an interview offers the researchers a documentation of the whole conversation so that it can be reviewed and used continuously during the research process. However, it is also important to consider some disadvantages with voice recordings. First, it only records the conversation and therefore leaves out the contextual situation as well as the non-verbal communication. Second, it can be a disturbing moment for the respondent. These disadvantages can be managed by carefully asking if voice recordings are acceptable, and make sure that the recording is made tentatively (Denscombe, 2000).

The researchers argued that the advantages that exist with voice recording outweigh the disadvantages if the issue is managed carefully. We have used voice recordings during the study, and have not found any problems with this during the interviews.

3.3.2 The Interview Process

In order to ensure the quality of the interviews, we chose to use the interview guide developed by Trost (2005) as a tool. The interview guide consists of seven steps:

1. Thematising - First the interviewers should consider the theoretical perspective and formulize the purpose with the interview investigation

2. Design – The study should be planned from the purpose of the interview investigation, and the questions of the interview should be chosen and arranged.
3. The Interviews – The execution of the planned interviews. It is important to consider both the answers, and the interviewers’ relation to the interviewee.
4. Processing and Analyzing – From the theoretical framework, the data collected should be processed and analyzed.
5. Results – The analysis should lead into the conclusions of the study. It is also important to assess if the conclusion hold for a critical investigation
6. Reporting – This step is when you get the result into the report. It is important to follow the theoretical perspective that the theoretical framework has provided the study.

3.4 Empirical Selection

Building on the explanation of the relevance of the mobile payment industry in [chapter 2: Problem Discussion & Framing](#), this section aims to introduce the investigated companies and the corresponding interviewees.

3.4.1 Choice of Investigated Companies

This study is limited to the Swedish mobile payment industry. Consequently, the companies selected for interview are all actors in the Swedish market. Another criterion is that the investigated companies should be a part of a current mobile payment product or solution on the market, or part of a future mobile payment product or solution. Thus, in the interviews we confirmed that the companies considered themselves to either be part of a current or future mobile payment product.

In the empirical investigation we interviewed five types of actors from the mobile payment industry; technology providers, mobile payment operators, payment aggregators, banks and payment providers. Below an explanation and definition of each type of actor is presented.

Type of Actor	Definition
Technology Provider	The technology provider develops, produces, manufactures, provides or offers technology or technical solutions (hardware or software) that are enabling technologies for a mobile payment products or solutions. The technology provider can perform either one, a few or all the activities above (Bouwman et.al, 2008).
Mobile Network Operator	The MNO provides mobile services for internet access, data transfer or voice transfer. The MNO can buy capacity in another MNO’s network and construct its own mobile network (Oxford Reference, 2011).

Bank	The bank is a corporation that has received permission from the Swedish Financial Supervisory Authority to perform banking and financial operations (Nationalencyklopedin, 2011).
Payment Aggregator	The payment provider has an intermediary role between the content and service providers and the mobile network operators and enables content and service providers the service of billing end-users through a network operator. The payment aggregator often uses billing platforms and SMS-short codes (Bouwman et.al, 2008).
Payment Service Provider	The PSP can handle financial transactions such as payments on behalf on other firms or actors. The PSP can also by themselves, offer payment products directly to content or service providers and can manage the risk of fraud (Bouwman et.al, 2008).

Table 1 Description of type of actors interviewed in the qualitative study

We performed interviewed with two banks, MNO's, PSP and TP's and with one PA (nine in total) and argue that this extent of empirical investigation gives a solid base for qualitative study.

3.4.2 Choice of Respondents

In all of the companies, we interviewed a respondent that had the overall responsibility for the companies' mobile payment solution, or the companies' activity in the mobile payment industry. Hence we argue that the interviewees had an adequate understanding of the research area of this study.

3.5 Reference System

There are several academic reference systems, and it is important that we designate the academic and empirical sources that they refer to in a consistent way. The Harvard reference system first was used in 1881 at Harvard University and is a simple and rational reference system. The system also gives the reader of a study quick access to the resources. In the Harvard reference system, there are two major parts; the text reference and the bibliographical description. The text reference consists of a reference in the document, and is a parenthesis with the surnames of the source together with the publishing year. The bibliographical description is placed last in the document placed under the section bibliography. In this section, all the sources are compiled (Bytoft-Nyaas, 2008).

With regards to its rationality and its quick access to the resources, we have chosen the Harvard reference system in our master thesis.

3.6 Theoretical Framework

In order to create a theoretical framework, we have processed academic literature, academic articles, research reports, journals, dissertations and encyclopedias. In order to find relevant academic literature, we have been using the University of Gothenburg's search engine GUNDA, as well as the universal search engine Google Books. In addition, we have been

using databases as Business Source Premier, Emerald and Academic Search Elite in order to find applicable and accurate journals and research reports. The search words that have been used include “Collaboration”, “Collaborative Strategy”, “Alliances”, “Strategic Alliances”, “Value Networks” and “Knowledge Based Economy”, “Mobile Payment Industry” “Mobile Payment Products” and “Collaborations in the Mobile Payment Industry” and combinations of these.

There is very little research on the subject “collaborations in the mobile payment industry”, and consequently limited prior research in this area. Further reasoning regarding this can be found in section [2.5 Prior Research](#).

In contrast, we found a great deal of research regarding the subject of collaborations in the industry. The research identified and used started in the middle of the 1980’s and was during the first 15 years focused on strategic alliances. However, at the beginning of the 21st Century, the research shifted from focusing on alliances to collaborations and cooperatives. This led us into some definition difficulties that we discuss in section [4.2 Collaboration](#). Moreover, we did not find a large amount of research regarding value networks, but the research that we found we consider to be of high quality. This is further explained in section [4.1 Value Networks](#).

3.7 Analysis

The conclusions of this study were generated by an analysis of the empirical study with help from the theoretical framework. Since the overall research question to this study is on a highly conceptual level, the sub-research questions were needed to facilitate the transformation from empirical findings into more holistic conclusions. In the analysis chapter, we analyze the empirical findings in relation to each of our three sub-research questions with support from the theoretical framework. The analysis from these three questions is used together with key parts from the theory to answer the overall research question. This furthermore leads to the conclusions that are geared towards the purpose of this study.

3.8 Credibility of the Study

Eriksson and Widdersheim-Paul (1991) defined the term operationalization as “how to transfer theoretical concepts in terms of notions and models into empirical observations”. Within this context, validity and reliability are essential terms (Eriksson and Widdersheim-Paul 1991). We intend to describe and analyze a situation from a theoretical framework. Therefore, it is important that we in the process of transferring the theoretical framework to empirical observations remark the validity and reliability. Therefore we will in the next sections of the methodology chapter further describe these terms and how we have paid respect to them.

3.8.1 Validity

It demands that that there is a high degree of certainty on the collected data in order to receive a good quality in the qualitative study. In this context, the term validity refers to that the researchers actually study the questions they intend to research. The term “validity of content” for example implies that the empirical investigation should reach a valid coverage of the

research area that the master thesis intends to study. Within the qualitative study it is also important to receive a good validity in the whole research process by applying and using good pre-understandings.

We argue that the validity of our study can be justified from a number of different perspectives. Firstly, we have used the method in-depth interviews, and have consequently received circumstantial answers from the respondents. In addition to this, we have also had the opportunity to ask clarifying questions. Secondly, we have interviewed persons with great insight in the mobile payment industry and in the companies' mobile payment products as product managers, business developers or CEO's. Thirdly, we have been very precise initially in the interview to give a thorough introduction to our study and our research questions. Fourthly, we have interviewed a fair number of companies and therefore made sure that we have covered a large part of the research area. It can however be seen as a risk that we have interviewed only one respondent in each company, since this can lead to subjective answers.

We have during the whole research process worked in order to receive a valid quality insurance of the interview guide that has been used during the interviews. We have also received a good feedback from the respondents regarding the content of the interview guide. In addition to this, we have had the opportunity to compliment an interview from the respondents if we felt that we had missed something essential.

There are also weaknesses in our study. Firstly, our study is limited to the mobile payment industry in Sweden. Therefore, no statements, findings or conclusions can be derived regarding the international mobile payment industry or the industry as a whole. Secondly, we have not interviewed all actors in the industry in Sweden but a sample of nine actors. Therefore, the conclusions that are derived about the mobile payment industry are not completely validated.

3.8.2 Reliability

In relation to validity, reliability refers that the investigation is conducted in a reliable way (Davidsson & Patel, 2003). The term reliability says that the surveying instrument, in our case semi-structured in-depth interviews, should generate reliable and stable answers. As an example should the same result come about from another approach, as interviewing another company in the industry, or another person at the same company (Eriksson and Widersheim-Paul, 1991).

We argue that we have achieved good reliability in our study for a number of reasons. Firstly, we have through our academic approach and working process strived to receive good knowledge about the theoretical framework in order to generate good quality in the interview guide. Secondly, we have not been too active in the interviews but rather let the respondents talk freely about their standpoint and experiences. Thirdly, we have used a voice recorder during the interviews in order to assure that we not miss anything from the interviews. Finally we argue that the respondents in our study possess great knowledge about the research and therefore find that the empirical investigation has been performed in a reliable way.

There are also weaknesses with our study in relation to reliability. Firstly, our research area can intrude on topics or matters that are of strategic importance for a company and therefore confidential to the public. This can lead to that some interviewees can have avoided providing us with certain information and data. Moreover, all the interviewees have not had the same position in the companies. Therefore there is a risk that they could have different perceptions on certain key issues and questions.

3.9 Criticism of Resources

Earlier in this chapter we have explained the process of how we worked in order to generate a theoretical framework to this study. First and foremost we have only been using recommended databases as GUNDA, Business Source Premier or Emerald. In the case of using sources directly from the Internet, our purpose has been to either access newly published information or to access information from encyclopedias. If we have used a reference, we have critically accessed its validity and if the author in any way can be seen as subjective. Also, we have been using a number of scientific reports and the methods of which we believe have been refereed and for this reason we argue that these enhance the appropriateness of our study.

4 Theory

In the theory chapter, we will clarify the theoretical framework that is used as the foundation to this study. Since the purpose of the study is to describe and analyze the collaborations in the Mobile Payment Industry, we will first give an account for the subject Value Networks and explain that collaborations are a building block of these. Thereafter we will explain Collaborations in detail by clarifying definitions, different arrangements, advantages and disadvantages. Also examples where collaborations have been a part of a success story are presented. Finally, we will present a summary of the theoretical framework.

4.1 Value Networks

In the industrial economy, the value chain introduced by Porter provided a good analysis of the exchange between firms by visualizing the flow of goods and services as a flow from raw materials to consumption on the market. The new complex and dynamic environment of the knowledge-based economy demands a new understanding of the inter-organizational exchanges at both the conceptual and practical level. An attempt to analyze the increasing complexity of inter-form relationships is the model “value network”. (Biem and Caswell, 2008)

4.1.1 Definition of Value Networks

During the last decades, several researchers have undertaken the task of describing and conceptualizing the term “value network”. Christensen (1997) was one of the pioneers in the area, and first described a value network as “the collection of upstream suppliers, downstream channels to market, and ancillary providers that support a common business model within an industry”. Parolini (1999) moreover argued that it is possible to stress the core entities as the activities in the definition of a value network. Therefore, a value network could also be described as “a set of activities linked together to deliver a value proposition to the end consumer”.

Alle (2002) says that any organization, group of organizations or actors, independent of if the exchanges between the parties were tangible or intangible could be viewed as a value network. The network consists of relationships that should generate value through complex and dynamic exchanges and could therefore be described as “a complex sets of social and technical resources that work together via relationships to create economic value in the form of knowledge, intelligence, a product (business), services or social good”.

Biem and Caswell (2008) propose yet another view of the value network by stating that the value network is “a set of economic entities (EE) connected through transfer of offerings that yields a structural network whose purpose is to deliver a common value proposition to a specified end consumer or market”.

Even though the different definitions value networks differ to some extent between the different scholars, the intent of their definitions is similar. This is since all of the definitions have in common that a value network is a number of organizations or firms that are interlinked through relationships and collaborations.

In this thesis we define the value network as *a set of organizations and firms that are interlinked through relationships and collaborations with the purpose to deliver a common value proposition to a specified end consumer or market*. Consequently, collaborations are of significance in the value network.

4.1.2 The Purpose of Value Networks

The views of the purpose of value networks also differ to some extent between the different scholars. However, again the intents behind the various definitions have a lot in common; the common perceptions among the scholars are somewhat well summarized by Biem and Caswell (2008). The authors believe the purpose of a value network to be to deliver a common value proposition enabled by a set of economic entities to a specified end-consumer. The structure of the network should therefore be able to create, recognize and capture the value that was to be used in the value proposition.

4.1.3 The Building Blocks of Value Networks

Value networks can be further divided into building blocks to help understand them in-depth. There is however some discrepancy between different researchers' views of the building blocks that value networks consist of. Biem and Caswell (2008) argued that a value network consisted of five types of building blocks; the economic entities, offerings, financials, end consumers and a value proposition. However, we argue that this description of the building blocks is not complete as it leaves out an essential building block; the relationships and the collaborations between the economic entities of a value network. Therefore, we argue that the definition of the building blocks of a value network stated by Pries-Heje, Venable and Bunker (2010) is more accurate. They defined a value network as consisting of six building blocks; actors, roles, flow-communication, channels, governance and relationships;

1. **Actors** – actors are the core economic entities that collaborate, communicate and cooperate with each other in order to launch a particular service. These are mainly business partners, but could also be end-consumers actors.
2. **Roles** – the roles of the actors in a value network are another important building block. In a value network, the roles of each actor must be defined. The roles could vary significantly as one actor could have a crucial role for the development of a product or service as being the founder or patent holder of an innovation, and another actor could simply be described as a service supplicant.
3. **Flow-communication** – this building block describes the material communicated between the actors in a value network. The flow-communication hence represents the value exchange streams that exist between the actors of a value network.

4. **Channels** – the channels can be described as the communication mediums or the ports that are used to communicate or deliver material between the actors of a value network. Channels could be either physical or digital and be governed automatically or manually.
5. **Governance** – power and control are important to govern as an actor in a value network as this leads to that an actor could lay claim to the value that is created in a value network. Governance of the whole value network is therefore the building block that describes the powers and control of each actor in a value network.
6. **Relationships** – the relationships represents the linkage between each actor in a value network. The importance of each actor's role has significant effect on the linkage between the actors, and therefore influences the design of the relationship. The relationships could therefore have many different forms and designs, but a few examples could be strategic alliances, affiliations, strategic partnerships, joint ventures, or simply a customer-supplier relationship. The relationship between the actors also influences the channels that will be used in the value network.

Johnson, Scholes and Whittington (2008) argued that it is important for a firm to assess and understand the whole value network in order to generate the most possible value. Johnson, Scholes and Whittington (2008) defined a value network as a set of inter-organizational links and relationships that are necessary to create a product or service. They therefore argued that in order to generate the most possible value, a firm must manage its relationships and collaborations in the value network.

Since the purpose of this study centers around the collaborations in the mobile payment industry, it is the building block *Relationships* (or *Collaborations*) that will be the main focus of this theory chapter. Consequently, after discussing value network strategies we will proceed to investigate the subject *Collaborations* by presenting their definitions, different arrangements, advantages and disadvantages.

4.1.4 The Strategy in a Value Network

Davenport, Leibold and Voelpel (2006) explain that a successful business is a firm that is able to gather resources, partners, suppliers and customers to create a cooperative value network and thereby foster innovation. Businesses co-evolve rapidly and effectively, and should therefore have a strategy to co-perform with others to build co-opted capabilities. Kleinaltenkamp and Ehret (2006) furthermore consider that strategic positioning is an important activity for a firm a value network: A firm should alter the architecture of the value network and by doing this navigate the company into a favorable position. Kleinaltenkamp and Ehret (2006) explicitly mention Intel as a good example from the industry, since they managed to reach and maintain a central value-adding role within the computer industry.

When it comes to the subject positioning in a value network we have identified two different approaches among scholars. On the one hand, Schilling (2010) explains that a company has

little power to self-determine its position in the value network. The position of a firm in a value network is instead determined by the firm's number of links to other companies or actors in the value network. This strong position can either be achieved by a large a powerful firm or a firm that is crucial to the network in the transmission of information or other resources through the network.

On the other hand, Ballon (2007) and Johnson, Scholes and Whittington (2008) argue that a company can actively endeavor to reach a favorable position in a value network. Ballon (2007) explains that positioning was traditionally about brand management and marketing management. The author further argues that in a technology-intensive and rapidly growing value network, positioning is a complex issue with many choices and trade-offs, and that today this includes choices regarding complementarity and substitutability. A basic example of this is when a firm in a value network positions itself as a complement to a particular set of existing services or products.

Johnson, Scholes and Whittington (2008) have developed a framework for how a firm should position itself in a value network. According to the authors a firm should deal with three key issues in a solid value network strategy.

1. The company should assess which activities that are important and which that are less central to the strategic capability of the firm.

A firm might be able to be more effective in letting other partners in the network perform their activities. It can though be important to perform key activities in-house, since it is important to control the activities that are key to the firm's competitive advantage.

2. The firm must decide on who might be the most favorable partners in the value network.

Also, it is important to decide on what type of arrangements of collaboration the firm should have with each partner. This is since, if this issue is managed carefully, the firm can yield benefits from areas outside its area of competence.

3. A firm must analyze where the profit pools are in the value network.

A profit pool is referred to as the different levels of profits that are available on different areas of the network. Some are more profitable than others, which are often related to the competitive intensity of the specific area. However, it is important for the firm to balance between the current profits and some profit pools future profit potential.

This framework has been important for us in the study and is therefore a part of the summary of the theory chapter. Moreover, after the introduction to the subject value network we see it

as obvious that collaborations are a central part and a determining success factor for a value network. Hence, the subject collaborations will be further explained in the following section.

4.2 Collaborations

In order to give a first clear view of collaboration, Nationalencyklopedin (2011) defines collaboration as *efforts that are performed by two or more actors with a common purpose*. Collaborations are not only important within an organization, but also among organizations; through collaborations companies gain access to partner's knowledge and skills and without it innovations among organizations would probably not be realized to the same extent (Suha, Jung and Hong, 2010). Blaxill and Eckardt (2009) further explained that many companies do collaborate with various partners on projects in order to achieve and accomplish strategic goals. Therefore, collaborations are no longer optional – they are essential.

In order to cover the subject of collaborations, we will first introduce different collaboration arrangements and how different researchers argue that these arrangements should be defined. Following, we will go through the purpose of collaborations and finally explain the associated advantages, limits and risks.

4.2.1 Introduction to Arrangements of Collaborations

Contractor and Lorange (1988) state that there are several different types of cooperative arrangements, ranging from informal contracts to complete mergers. One major hurdle for us in this study was to find a common term that clearly defined the different types of collaboration.

During the past 30 years, scholars have used different general terms in order to define different types of collaborations. Contractor and Lorange (1988) use the term *cooperative arrangements*, but Roos (1989) instead use cooperative ventures. Other terms that are used are organizational arrangements (Powell, 1990) and inter-firm alliances (Notebook, 1999). More recently, Knoke and Todeva (2005) use the term models of collaboration while Trott (2008) use strategic alliances and Schilling (2010) collaboration arrangements.

In this study, which is entitled *Collaborations in the Swedish Mobile Payment Industry*, we found it logical to use the term collaboration arrangements (Schilling, 2010). We find this more up-to-date and broader than for instance Trott's (2008) term strategic alliances. Within the term collaboration arrangements, Schilling (2010) states that strategic alliance is an arrangement rather than an umbrella term for different collaboration arrangements.

4.2.2 Arrangements of Collaboration

There are many types of collaboration arrangements (Contractor and Lorange, 1988 and Powell, 1990), and these were compiled into a list by studying the following scholars: Trott (2008); Yoshino and Rangan (1995); Lorange & Roos (1992); Knoke and Todeva (2005); Contractor and Lorange (1988); Notebook (1999); Corey (1997); Baxill and Eckardt (2009); Wong and Dutfield (2010); Besanko et.al. (2000); Huyzer, Luimes and Spitholt (1992);

Dratler (2006); and Schilling (2010). This resulted in twelve types of collaboration arrangements that we believe could be used in the mobile payment industry;

- Mergers & Acquisitions
- Equity Investments
- Joint Ventures
- Strategic Alliance
- R&D Consortium
- Outsourcing
- Sub Contractor Networks
- Franchising and Licensing
- Patent Pools
- Industry Standard Networks
- Strategic Cooperatives
- Cooperatives

However, in the analysis of the empirical study we discovered that it was hard to assess the collaborations based on the different kinds of arrangements that were mentioned above. To improve the assessment we felt that there was a need to group and categorize the arrangements. The grouping clarifies and improves the analysis process significantly. Before we further explain the details of the different kind of arrangements that exist, we will therefore present the framework that we use in order to categorize the collaboration arrangements. This framework was developed by Lorange & Roos (1992).

4.2.3 Categorizing Arrangements of Collaboration

Different scholars have tried to analyze and categorize arrangements of collaborations in various ways. Contractor and Lorange (1988) argues that collaborations could be analyzed by categorizing the collaborations' compensation methods and their degree of inter-organizational dependence. A different methodology is presented by Noteboom (1999), who states that there exist nine dimensions that could be used in order to categorize various arrangements of collaboration. But in order to simplify the process, these nine dimensions can be brought into two variables; (1) claims to profit and (2) claims to decision rights. Yet another way is proposed by Lorange and Roos (1992), who say that collaborations can be analyzed by categorizing the collaborations either by their vertical integration or by their hierarchical dependence. The authors argue that an arrangement of collaborations is not a unison model, but rather a concept with many different opportunities to collaborate. In order to visualize

this, they define the arrangements of collaboration according to two scales; (1) the degree of integration and (2) the degree of dependence.

4.2.4 Vertical Integration

Lorange and Roos (1992) first analysis of the collaborations is based on using the collaborations' vertical integration as a categorization variable. In Figure 2 below, it is possible to see that the left hand side of the scale represents fully integrated activities in the fully owned organization (this state is also called the hierarchy). If a company acquires another, the result is a fully vertical integration.

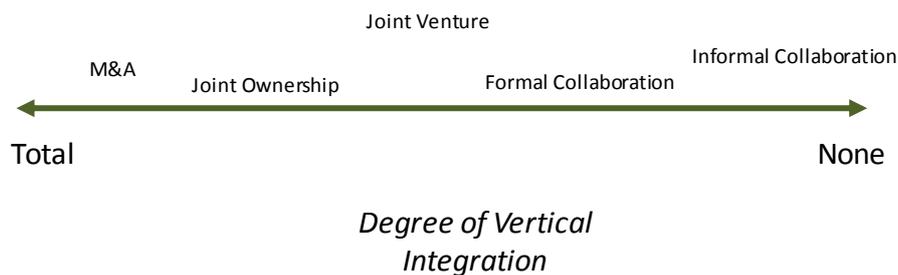


Figure 2 Degree of Vertical Integration (Lorange & Roos, 1992)

It is also possible to arrange differently regarding ownership, and if a company lowers its share of ownership it results in lower degree of integration. Lorange & Roos (1992) state these as formal and informal collaborations. On the end of the right hand side of the scale, we have the market; here a company can freely acquire and sell goods, services and no integration exists.

4.2.5 Degree of Dependence

Lorange and Roos (1992) also present an alternative way to define different kinds of collaborations, where they instead used the degree of dependence between the actors as a categorizing variable. In other words, you can say that they defined the arrangements of collaboration according to the relations between the parties. As seen in the Figure 3 below, under a stronger dependence (mutual dependence) it is also harder for the actors to leave the collaboration. On the other hand, at the top of the scale, the dependence is weaker and it is therefore easier for the actors to leave the collaboration.

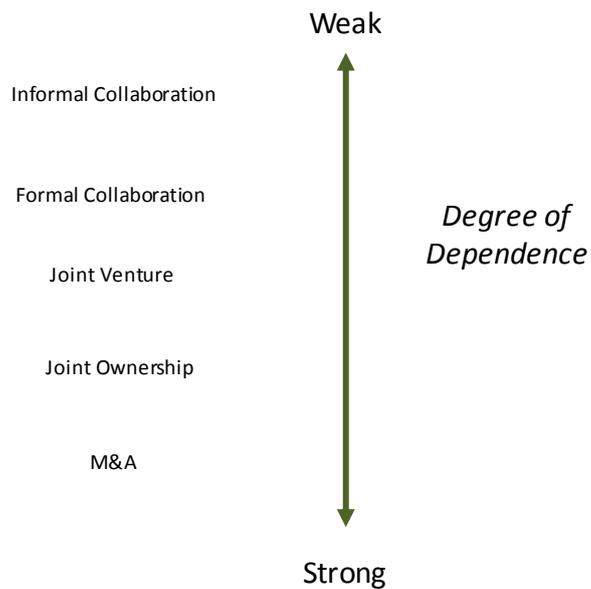


Figure 3 Degree of Dependence (Lorange & Roos, 1992)

It is important that an actor in a given industry should not only consider the choice of collaboration depending on what is the most relevant degree of dependence in the initial phase. The company should also consider the need to develop the confidence of the other party. A company could as an example start the relationship with a lower degree of dependence and then develop the relationship over time until both partners can rely on each other (Lorange and Roos, 1992).

As mentioned above, a categorization of the twelve arrangements of collaborations into five main groups improved the analysis process. The categorization can be seen in Table 2 below. In addition, it is possible to see that the main groups presented by Lorange and Roos (1992) also can be seen as collaboration arrangements. After the table, each main group and each collaboration arrangement will be presented in detail.

	Main Groups of Collaboration				
	Merger And Acquisition	Joint Ownership	Joint Venture	Formal Collaboration	Informal Collaboration
Type of Collaboration Agreement	Mergers & Acquisitions	Equity Investments	Joint Ventures	Strategic Alliance	Strategic Cooperatives
			Patent Pools	R&D Consortium	Cooperatives
				Outsourcing	
				Sub Contractor Networks	
				Franchising and Licensing	
				Industry Standard Networks	

Table 2 Own table based on Lorange & Roos (1992)

4.2.6 Merger and Acquisition

A merger or acquisition often occurs between two companies in a value network (Contractor and Lorange, 1988). In the M&A one of the firms either acquires the other company, or a merger between the companies is made and that firm will gain control of the other company's assets and coordinates the actions in the firm by its ownership (Knoke and Todeva, 2005).

An example from the industry is the merger between the legal entities Astra AB and Zeneca Group PLC in 1998 (AstraZeneca, 2011). Astra AB was a Swedish pharmaceutical company founded in 1913 with 22 000 employees and a turnover of 57 billion SEK in 1998. Zeneca Group PLC was a British bioscience industry founded in 1926. The firm had in 1998 34 000 employees and a turnover of GBP 5.5 billion. In the merger, the companies formed the new legal entity AstraZeneca.

4.2.7 Joint Ownership

Lorange and Roos (1992) do not specify a definition of joint ownership. In order to use this framework, we have however defined the main group joint ownership as when there is an investment of a firm in another firm, or from both sides, where there is no full acquisition or merger.

Equity Investment

Equity Investments is a collaboration arrangement where a firm holds a majority or a minority of the equity in another firm by direct stock purchases (Knoke and Todeva, 2005). The equity investment can also be called joint ownership, since firms can invest in each other and the collaboration arrangement can take various levels of vertical integration between the firms (Contractor and Lorange, 1988).

4.2.8 Joint Venture

Joint Venture is when two companies found a separate legal entity where they are equity shareholders. The costs and the benefits in the Joint Venture are therefore shared, for example when the Joint Venture is designed as a research collaboration (Trott, 2008). Contractor and Lorange (1988) argued that the compensation model that is often used between the parties of the joint venture is often fractions of shares or dividends. Also, they argued that the extent of inter-organizational dependence of a joint venture is high. Schilling (2010) explains that investments and other resources, together with the division of profits and dividends are often specified carefully in contractual agreements.

Moreover, Huyzer, Luimes and Spitholt (1992) demonstrates that the four most common goals of joint ventures were (1) penetration of novel markets and industries (2) knowledge pooling, (3) ensuring or creating distribution networks and (4) economy of scale by combining financial means.

A good example from the industry of a joint venture is Sony Ericsson Mobile Communications, which was established to set design manufacture and distribute cell phones (Sony, 2001). The joint venture was established by the telecommunication actor Ericsson and

the consumer electronics actor Sony Corporation and is owned equally between the parties and they announced its first joint products in March 2002 (SonyEricsson, 2011).

4.2.9 Formal Collaboration

Lorange and Roos (1992) do not define formal collaboration. We see the formal collaboration as when an arrangement of collaboration exists without any investments or equity transactions, but with formal contracts and agreements, and when the strategic objective is medium term.

Strategic Alliances

Strategic alliances can be explained as a contractual agreement between two or more organizations with the purpose of combining their efforts and resources to meet a common goal (Trott, 2008). It can also be defined through a checklist developed by Yoshino and Rangan (1995). They claim that a strategic alliance should; (1) consist of at least two partners, (2) remain, after the establishment of the alliance, as legally independent entities (3) distribute the advantages and the management between the parties involved, and (4) have the purpose of continuously improving at least one strategic area, such as technology or the products of the actors involved.

R&D Consortium

Trott (2008) claims that a consortium often occurs when a number of firms need to pool resources to undertake a large scale activity. The benefits of the consortium are the possibilities of sharing costs and risks, pooling scarce expertise and equipment and performing pre-competitive research. Knoke and Todeva (2005) explained the R&D consortia as agreements between firms for the purpose of research and development collaboration. The R&D consortia are often established in an industry with fast-changing technological fields. Moreover, most of the R&D consortiums are formed through initiatives from a governmental organization or an industry association. However, there are also R&D consortiums that are solely initiatives of private corporations (Schilling, 2010).

Corey (1997) further described an R&D consortium in another way, and argued that an R&D consortium can be equated with a church or a country club since they all are self-governing and nonprofit organizations with the purpose of serving their members. The specific purpose of R&D consortia are however to develop new technologies and to put these into practice. An R&D consortium is funded partly by the member companies and partly by government sources and can be categorized according to their membership policy, the nature of the R&D mission or their R&D sourcing model.

An example from industry is the R&D consortium SEMATECH, which was founded in 1986. SEMATECH stands for “Semiconductor Manufacturing Technology” and its purpose is to perform R&D to develop chip manufacturing. In 1986 SEMATECH started as a partnership between the US government (U.S. Department of Defense) and 14 US-based semiconductor manufacturers (Corey, 1997).

Outsourcing

Outsourcing often refers to when a company is subcontracting a non-core operation from the company to a third-party company. There are several reasons why companies outsource, for example lowering costs, redirecting energy towards core competences or make more efficient use of worldwide labor, capital technology or resources (Trott, 2008). The most common form of outsourcing is contract manufacturing; when a firm hires a specialized manufacturer in order to manufacture its products. The method allows the outsourcing firm to focus on their core processes that are central to their competitive advantage and can provide the firm with necessary support or resources that they do not possess (Schilling, 2010).

An example from industry is the sportswear and equipment supplier Nike. Nike is a good example of a company that has outsourced major parts of the manufacturing and distribution of its sportswear goods. This is since Nike only owns its brand, and manages strategy, marketing, sales and administration in-house. Instead, Nike relies on an established network of relationships to produce and distribute their products (Trott, 2008).

Sub-contractor Networks

Sub-contractor networks are inter-linked firms where a subcontractor negotiates its suppliers' agreements containing regulation regarding areas as pricing, production pace, delivery schedules (Knoke and Todeva, 2005).

Licensing and Franchising

The difference between franchising and licensing is generally that licensing occurs when a licensor grants a licensee the right to use a patented technology or production process (Schilling, 2010). Dratler (2006) further explained that the license agreement could either be:

- Exclusive – only the licensee will be able to use, operate, manufacture or market the product itself.
- Sole – the licensor agrees not to grant any other licensees but will remain to have the right to use, market, manufacture or operate the patented product or technology.
- Non-exclusive – the licensor can grant any number of licensees and use, operate, manufacture or market the product itself.

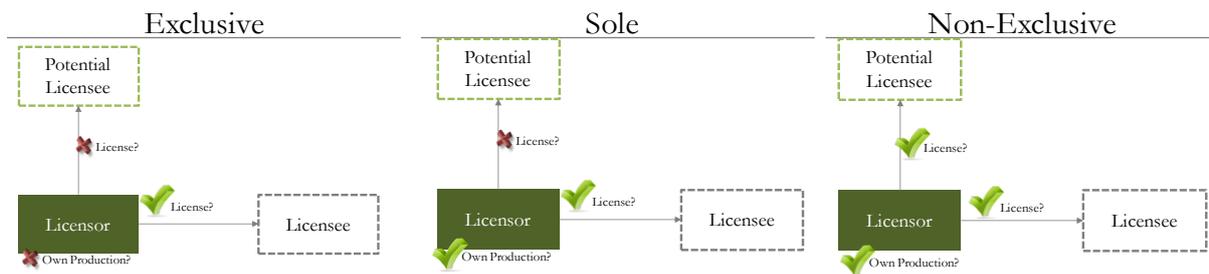


Figure 4 Patent licensing, based on Dratler (2006)

Franchising however is generally when a franchiser grants a franchisee the right to use a brand or trademark (can also be business concept) for a geographical area. It is also not unusual that the franchiser retains control over pricing, marketing and standardized service norms, (Knoke and Todeva, 2005).

Patent Pools

Patent pools are often considered when there is a need to solve a patent thicket. Patent thicket is the definition for a situation when a platform of a technology consists of many patents with different owners. In this situation it becomes costly and inefficient for an actor to negotiate deals with all patent holders in order to be able to operate on the platform. Also, a patent holder on the platform could also have problems in dealing with so many possible cross-license partners. On an industry level, a patent thicket can block the use of a new valuable technology (Blaxill and Eckardt, 2009).

A patent pool is an apparatus by which a number of patents held by several actors, such as research universities, research institutes and companies are made available for other actors to produce or further develop the technology. The patent pool is a consortium of at least two patent holders where they agree to license patents to actors relating to a particular technology. The patent holders receive royalties that are paid for by those who use the patents, and the pool manages all the activities as the licenses, the negotiations and the receipt and payments for royalties (Wong and Dutfield, 2010).

An example of a patent pool is the MPEG LA (Moving Picture Experts Group Licensing Authority) from the video technology industry. The MPEG LA consisted of 25 separate companies from seven different companies, holding over 600 patents (Blaxill and Eckardt, 2009).

Industry Standard Groups

Standardization is a systematic order- and rule creating operation with the purpose to achieve optimal technical or financial solutions on recurring problems and issues (Nationalencyklopedin, 2011). An industry standards group can also be named standard-developing organization (SDO), standard-setting organization (SSO) or standards body. The ISG is often a committee or organization that pursues the member organizations' agreements

on the adoption of technical standards for manufacturing and trade. The main activities are therefore also to coordinate, revise, amend, interpret or produce the technical standards in order to address the needs of the wide base of affected adopters (Knoke and Todeva, 2005).

An example of this kind of strategic alliance is the European Telecommunications Standards Institute which produces globally applicable standards for Information & Communication Technologies (ICT). The ETSI is a non-for-profit organization and was created by the European Conference of Postal and Telecommunications Administrations and is also officially recognized by the EFTA secretariat and the European Commission. The technical standards that the ETSI has created are as examples the Low Power Radio, Short Range Device, GSM cell phone system and the TETRA professional mobile radio system (ETSI, 2011).

4.2.10 Informal Collaboration

Lorange and Roos (1992) do not explicitly define informal collaboration, hence in order to use the framework in the analysis we have defined informal collaboration as when an arrangement of collaboration exists without any investments or equity transactions but with less formal contracts and agreements, and when the objective is short term.

Strategic Cooperative Agreements

Strategic Cooperative Agreements consist of several partners and is a contractual business network. The business network is based on a jointly multi-party strategic control, and the main purpose with the agreements are (1) to collaborate over key strategic decision and (2) sharing responsibilities for performance outcomes (Knoke and Todeva, 2005).

Cooperatives

Cooperatives are explained by Knoke and Todeva (2005) as a coalition of several small to medium sized firms. In the coalition, collective resources are combined, managed and coordinated.

4.3 The Purpose with Collaborations

Indisputably there exist vast advantages with collaborating (Schilling, 2010), and a table containing these different advantages is compiled in next section. In addition it is also interesting to look at the underlying purpose for collaborating. Trott (2008) suggests that collaboration has become a strategic weapon in the 21st Century economy and argues that the purpose for collaborating is “combining efforts to reach a common goal”.

Another purpose for collaborating is to achieve collaborative advantage (Kanter, 1994). Competitive advantage can be defined as “the ability of a firm to outperform its industry, that is, to earn a higher rate of profit than the industry norm” (Besanko et al., 2000). But collaborating with other actors and the relative success from these collaborations can translate into a competitive advantage. A well-developed ability to create and sustain a good and

successful collaboration gives any company a major competitive privilege. This is referred to as collaborative advantage, and is reason for collaborating.

4.4 The advantages of Collaboration

The advantages of collaborating are interesting to investigate in order to help answer one of the research questions focused on company approach towards collaborations. In the process of establishing the theoretical framework for this study, we found that the benefits of collaborations perceived by scholars have evolved during the past 30 years; Table 3 below summarizes the views of the scholars we see as the most significant regarding the advantages with collaborations. For some of the scholars we only state the advantages that they see with collaborating, but for others we have included examples or motivation behind their thinking.

Source	Different Advantages
Harrigan (1985)	<p>Harrigan (1985) stated that there exist many advantages of collaboration, but that these could be divided into three areas; internal uses, competitive uses and increase the company's strategic position.</p> <p>Examples of internal uses were; Costs and risk sharing, obtaining resources where there is no market, obtaining financing to supplement the company's debt capacity, shared outputs of large minimum efficient scalable plants, obtaining a window on new technologies and customers, improving managerial capacities, and possibilities to retaining entrepreneurial employees.</p> <p>Examples of competitive uses were; influencing an industry structure's evolution, preempting competitors, providing a defensive response to blurring industry boundaries and globalization and creating of more effective competitors.</p> <p>Examples of increasing the company's strategic position were; creating and exploiting synergies, transferring of technology, diversification</p>
Contractor and Lorange (1988)	<p>Contractor and Lorange (1988) gave seven major areas of advantages of collaboration and broke these down into examples.</p> <ol style="list-style-type: none"> 1. Risk reduction <p>Examples; product portfolio diversification, dispersion and or reduction of fixed costs, lower total capital investment and faster entry and payback on investment.</p> <ol style="list-style-type: none"> 2. Economics of scale and/or rationalization, <p>Examples; lower average cost due to larger volume and lower cost by</p>

using comparative advantage of each partners.

3. Complementary technologies and patents

Examples; technological synergy, exchange of patents and territories,

4. Co-opting or blocking competition

Examples; defensive joint venture to reduce competition or offensive joint ventures to increase costs and/or lower market share for a third party

5. Overcome governmental regulations

Examples; receiving permit to operate as local, satisfying local requirements

6. Facilitate international expansion

Examples; benefit from a local partner know-how

7. Linking Complementary contributions of a partners

Examples; Access to materials, technology, labor, capital, distribution channels, benefits from brand recognitions.

Powell (1990)

1. Gain fast access to new technologies or new markets
2. Benefit from economies of scale in joint research or in production
3. Tap into sources of know-how located outside the boundaries of the firm
4. Share the risks for activities that are beyond the scope or capability of a single organization

Noteboom (1999)

1. Economy of scale or scope
2. Share or diversify risk
3. To prevent transportation costs
4. Follow customers
5. Adapt a product to the local market
6. To circumvent entry barriers
7. Increase speed of market entry

8. Pre-empt competition to from entering first

9. The need jointly to set a market standard

Hitt, Freeman, Edward and Harrison (2001) Hitt, Freeman and Harrison (2001) gave seven examples of advantages of collaboration and motivated each advantage;

1. Faster strategy implementation

Motivation: A partner can give access faster to a technology, market or a complementary skill. Therefore, collaboration can be used in order to achieve a competitive position faster than internal development.

2. Gain economics of scale

Motivation: by pooling economic activities as raw materials supply, manufacturing, marketing and distribution.

3. Reduce risk and gain stability

Motivation: this is an attractive option for large and risky projects, since neither party must bear the full cost.

4. Capitalize on the partners reputation

Motivation: This often occurs when a small firm is seeking collaboration with a larger firm.

5. Gain access to another firm's knowledge

Motivation: Access to other firm's knowledge or ability to perform an activity often occurs when there is asymmetry in the competence between the firms.

6. To increase the potential to enter new markets

Motivation: Collaborations can facilitate both geographical expansions and expansion to new technical markets.

Hansen and Nohria (2004)

1. Cost savings through the transfer of best practices
2. Better decision making as a result of advice obtained from colleagues at partners in the arrangements of collaboration
3. Increased revenue through the sharing of expertise and products among subsidiaries
4. Innovation through the combination and cross-pollination of ideas

5. Enhanced capacity for collective action that involves dispersed units

Blaxill and Eckardt (2009) Blaxill and Eckardt (2009) argued that there are seven benefits with collaborations, and motivated some of these statements.

1. Collaboration can yield unexpected benefits

Motivation: Unexpected benefits can be reached from access to new opportunities and markets while also learning how to orient their strategies to achieve greater success. Moreover, a group of companies can solve a broader range of problems

2. Collaboration can tap new resources

Motivation: Collaborations can generate assets from outside your company.

3. Collaboration can generate large spillover effects

Motivation: Blaxill and Eckardt (2009) mentions as an example that the collaborative form of software development Linux also had a role in determining a commercially valuable technical standard.

4. Support the delivering of complex solutions to the market

Motivation: The most frequent type of commercial collaboration occurs when firms work jointly in order to create customer solutions that neither of the firms could make alone. Moreover, firms in the world are becoming increasingly specialized, which makes it more common for larger networks to emerge that connect a large number of firms.

5. Support getting on to the market with complementary patents

Motivation: It is common that firms need patents licenses in order to take a product to the market. If there are many patents, cross-license can be an option. However, if there are too many patents, a patent thicket is created. In this situation, collaboration can lead to a patent pool being created.

6. Energizing and tapping external innovation

Motivation; Wikipedia is a good example of how collaboration can serve as a means for creating, capturing and protecting user-generated innovation from large communities of participants.

Schilling 1. Firms can reach markets through collaboration more quickly since

- (2010) they can obtain necessary resources or skills faster.
2. Collaboration can increase a firm’s flexibility since obtaining missing assets from partners minimizes the asset commitment.
 3. Collaboration with partners is an important source of learning and knowledge transfer between the firms in an arrangement of collaboration can occur.
 4. Partners of an arrangement of collaboration can share costs and risks for a project.
 5. Collaborations can facilitate the creation of a shared standard.

Table 3 Advantages of collaborations

The matrix below is a summary of the Table 3 and is meant to further visualize the different advantages. In this matrix we have the different scholars on the left hand side, and the different advantages on the horizontal line.

Advantages of Collaboration	Economics of Scale	Risk & Cost Share	Facilitate International Expansion	Blocking Competition	Tap New Resources	Access to Technology, Knowledge and Know-How	Faster Access to Market/Faster Implementation of Strategy	Develop Market Standard	Better Decision Making	Increased Innovation Through Cross-pollination of Ideas	Generate Spill-over Effects	Support the Delivery of Complex Solutions to the Market	Getting to the Market With Complementary Patents	Increased Flexibility
Reserachers														
Harrigan (1985)	X			X		X			X					
Contractor and Lorange (1988)	X	X	X	X	X	X							X	
Powell (1990)	X	X				X	X							
Noteboom (1999)	X	X	X	X			X	X						
Edward, Freeman, Hitt and Harrison (2001)	X	X	X		X	X	X							
Hansen and Nohria (2004)					X				X	X				
Blaxill and Eckardt (2009)										X	X	X	X	
Schilling (2010)		X				X	X	X						X
	5	5	3	3	3	5	4	2	2	2	1	1	2	1

Figure 5 Summary of advantages of collaboration

From Figure 5 we can conclude that the most mentioned advantages with collaborations are:

1. Economics of Scale

2. Risk and Cost Share

3. Access to Technology, Knowledge and Know-How

4. Faster Access to Market/Strategy Implementation

However, in the last decade, new types of advantages of collaborations have been mentioned by the scholars as *(1) Increased Innovation through Cross-pollination of Ideas, (2) Support the Delivery of Complex Solutions to the Market and (3) Increased Flexibility.*

In the last section of the theory chapter, we will further explain how we will utilize the findings above to improve our analysis.

4.5 Disadvantages and Risks with Collaboration

Numerous industrial collaborations fail, maybe because they include the process of dealing with different peoples' preconceptions, personalities and approaches to working together (Leslie, 2006). Consequently, there are disadvantages, risks with as well as limits to collaborating. In this study, we have found scholars arguing for three major disadvantages that are also described below.

1. Bureaucracy

2. Administration and Sharing

3. The weak functionality in immature industries

The first disadvantage is bureaucracy (Blaxill and Eckardt, 2009). Value in a value network can be destroyed if critical business decisions have to go through a bureaucratic process, not to mention that costs can increase. Administration is the second disadvantage (Contractor and Lorange, 1988), mainly since it is costly to administrate the transfer of revenues, income, knowledge, know-how as well as technology between the partners. Moreover, it is also risky to share these with other parties. Blaxill and Eckardt, (2009) mention that a third disadvantage with collaborations is that they often work best, and generate most value, in a mature industry. In these industries, collaborations and commercial connections occur between well-established actors in an established economic system. Therefore, the value and rewards of collaboration can flow towards the larger and well-established actors and leavess new and unconnected players without any significant value.

Moreover, we have also identified three significant risks, presented below

1. Incomparability of the partners of a collaboration

2. Absence of compatible strengths

3. Antitrust systems

Hitt, Freeman and Harrison (2001) mention that a major risk with collaborating is the partners' comparability. This is especially important in international collaborations where cultural factors influence the performance. Lorange and Roos (1992) say that it is important for collaborations that there is no conflict of interest between the parties and that there is trust and mutual understanding. Another risk that Lorange and Roos (1992) mention is the lack of compatible strengths between the collaborating parties, which can lead to unbalanced bargain power between the parties. This can in turn be a result from the relative urgency of cooperation, the parties' available resources and the strengths and weaknesses of each partner (Hitt, Freeman and Harrison, 2001). A result can be instability in the collaboration and thus harm the performance.

The third major risk with collaborating is the legal and antitrust systems (Blaxill and Eckardt, 2009). The Swedish antitrust law, Konkurrenslag SFS (2008:579) 2 kap. § 1, for instance, states that; "Agreements between companies that have the purpose of preventing, restricting or distorting competition in a significant way on the market are prohibited ... This applies in particular to contracts that imply that ... production, markets, technical development or investments are limited or controlled...". The antitrust law could therefore be an obstacle to collaborations (Blaxill and Eckardt, 2009).

4.6 Examples of Successful Collaboration

In this section we will describe two success stories where collaborations have been the key success factor. First we will give an example for when collaborations have been a determining success factor for a specific company and then we will give an example from a specific industry.

4.6.1 The Story of Toyota

The story of Toyota and its collaborative strategy is interesting. This is because Toyota is the most valuable automotive company, one of the most successful manufacturing companies, one of the most benchmarked companies from a managerial perspective and also a company that to a large extent has been praised for its successful collaboration strategy (Blaxill and Eckardt, 2009).

The structure of the automotive industry is rather universal. The industry consists of a few number of assemblers, like Toyota, Ford and GM, and a large number of parts and component suppliers. In this industry, assemblers often have the most power since they control the decisions about sourcing and purchasing. However, the assemblers must have a good supplier network to be competitive. This is since a large part of the value of the car itself comes from purchased parts and components (Blaxill and Eckardt, 2009).

Some assemblers have therefore utilized their control position in the industry in order to squeeze the suppliers for price reductions of the purchased parts and components. Still, these assemblers tend to forget that technology and innovation is of vast importance for successful automotive assemblers. The model of Toyota has therefore been rather different from their competitors in the automotive industry. Their model is called *Keiretsu* and means that they

lock ownership interests among actors in a value network of suppliers of components and parts to the automotive industry (Blaxill and Eckardt, 2009).

Blaxill and Eckardt (2009) explain that Toyota in this model invests in equity in the suppliers of the value network at the same time as they also offer key suppliers of the value network to invest in Toyota. This collaboration structure gives three direct positive effects. First, it gives Toyota revenues, since 10 % of the corporate groups net income derives from dividends from equity investments. Second, it aligns and optimizes the financial interests of the actors in the value network. Third, it enables the value network to have an open approach to innovation and technology collaborations.

Blaxill and Eckardt (2009) also clarifies that Toyota, in addition, offers the actors in the value network a structure for formalization of regional organizations with the purpose of bringing the actors together. The regional organizations stimulate information exchange and facilitate training programs and social events.

The collaboration strategy of Toyota visualizes that by taking a collaborative approach to innovation, actors can draw advantages of being in a winning value network. The collaborations lead to a strong commercial trust that enables the whole value network to share the benefits generated by the high performance. All of this is thus built on a strategic commitment to collaborations at Toyota (Blaxill and Eckardt, 2009).

4.6.2 The Story of MPEG LA

MPEG LA is probably one of the biggest collaborative firms in the world, but yet also one of the most anonymous. The MPEG LA is a patent pool in the video technology industry, and works as a solution to the patent thickets that the video technology industry consists of (Blaxill and Eckardt, 2009). (Patent pools and patent thickets are further described in the section [4.2.2. Arrangements of Collaboration](#) above.

The MPEG LA was founded in 1995 by few members from the video technology industry. They worked hard to recruit other members that also were core patent holders in the video technology industry. In close collaboration with the U.S. Department of Justice, the MPEG LA, created its first patent pool; the MPEG 2. This patent pool consisted of 25 companies, from seven different countries that together held over 600 patents (Blaxill and Eckardt, 2009).

The MPEG 2 was such a huge success that the MPEG LA further developed another seven patent pools. Today, the MPEG LA is also working on creating patent pools for technologies such as digital TV and digital rights management. This work has developed the MPEG LA into a multibillion-dollar company that generates a large turnover for its members (Blaxill and Eckardt, 2009).

However, the MPEG LA also generates win-win situations for other companies outside the firm since the patent pool has several benefits. Out of these, the most significant are; (1) It opens up the video technology market for innovation (2) It reduces the cost of accessing intellectual properties and (3) it speeds up the access to clusters of technology.

4.7 Key Theory and Frameworks for the Analysis

In order to perform a good and valid analysis that will lead to the conclusions of this study, we will use some key parts of the theoretical framework as tools and guidelines in the analysis chapter. Further, we will use findings from the academy to evaluate the discoveries from the empirical study. In this section, our intention is to simplify the reading process for any reader by high-lighting the key theories and key frameworks that we will focus on in the analysis of this study.

We have structured the analysis of this study so that it focuses separately on each sub-research question, and the last analysis section is dedicated to the overall research question of this study. Therefore, this section will explain what key theories and frameworks we will use to analyze each sub-research question as well as to analyze the overall research question.

4.7.1 The Extent of Collaboration in the Swedish Mobile Payment Industry

The first of our sub-research questions is *to what extent do collaborations exist between different types of actors in the Swedish mobile payment industry, and what is the structure of these collaborations?*

We will use the following main facts and frameworks from the theory chapter to answer this question:

Firstly, in order to analyze the collaborations, we will use this definition of collaborations; *Collaborations are efforts that are performed by two or more actors with a common purpose.*

Secondly, we know that there exist a large number of possible collaboration arrangements that can be used in the mobile payment industry. In order to make a more distinct analysis of the different arrangements of collaboration in the mobile payment industry, we will use a framework developed by Lorange and Roos (1992) to categorize the arrangements into the five main groups of collaborations. These are *Merger and Acquisition, Co-Ownership, Joint Venture, Formal Collaboration and Informal Collaboration*. We explain in section [4.2.3 Categorizing Arrangements of Collaboration](#) why we have chosen this categorization.

	Main Groups of Collaboration				
	Merger And Acquisition	Joint Ownership	Joint Venture	Formal Collaboration	Informal Collaboration
Type of Collaboration Agreement	Mergers & Acquisitions	Equity Investments	Joint Ventures	Strategic Alliance	Strategic Cooperatives
			Patent Pools	R&D Consortium	Cooperatives
				Outsourcing	
				Sub Contractor Networks	
				Franchising and Licensing	
				Industry Standard Networks	

Table 4 Own table based on Lorange and Roos (1992)

This categorization can facilitate the analysis of the structure of the collaborations since a collaboration arrangement that is categorized on the left side of the table above has a high degree of inter-organizational dependence. The collaboration arrangements that are categorized to the right of the table have a lower degree of formalization. By analyzing what kind of collaboration arrangement that is used, we can draw conclusions about its characteristics by using the table above.

The framework above will thus support our analysis of the extent of collaboration. This is since it will help us see how much collaboration that exists, how this is structured and if the empirical investigation can support our thesis that the mobile payment industry is structured as a value network.

4.7.2 The Approach to Collaboration

We will partly focus on assessing what advantages the different firms see with the collaborations when answering the research question: *What are the approaches towards collaborations among the different types of actors in the Swedish mobile payment industry?* We will try to utilize what the academy believes are the advantages with collaborations and we will then assess how the perception about advantages with collaborations in theory corresponds with the empirical evidence from the mobile payment industry.

From the theoretical frameworks we know that the most common mentioned advantages with collaborations among scholars are:

1. *Economics of Scale*
2. *Risk and Cost Share*
3. *Access to Technology, Knowledge and Know-How*
4. *Faster Access to Market/Strategy Implementation*

However, in the last decade, three new types of advantages of collaborations have mainly been mentioned by scholars; (1) *Increased Innovation through Cross-pollination of Ideas*, (2) *Support the Delivery of Complex Solutions to the Market* and (3) *Increased Flexibility*.

Dependent on which advantages the studied companies see with collaborations, we will then be able to further analyze the companies approach to collaborations. This will then be used to further answer the overall research question of this study.

4.7.3 The Value Network Strategy

We will assess the value network strategy of each of the firms that are studied in the empirical study in order to answer the research question: *What are the different actors' collaboration strategies in relation to the commercialization of mobile payment products?* ***In the theory chapter we have found out that a firm can either have a passive or an active value network strategy.***

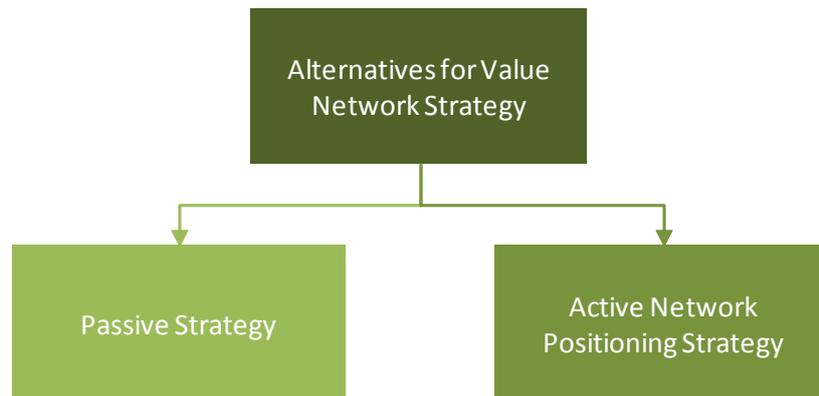


Figure 6 Own Picture – Alternatives for Value Network Strategy

A firm can adopt a passive value network strategy since a firm has little power in determining its position in the value network. Positioning in a value network is decided by the firm's resources or power or its ability to transmit valuable information in the value network (Schilling, 2010).

However, Johnson, Scholes and Whittington (2008) argue that a company can be active in endeavor to reach a favorable position in a value network. They call it a company's value network strategy and they argue that three issues should be decided in order to determine a value network strategy;

- 1. The company should assess which activities that are important and which that are less central to the strategic capability of the firm.*
- 2. Second, the firm must decide on who might be the most favorable partners in the value network.*
- 3. A firm must analyze where the profit pools are in the value network.*

In the analysis we will try to evaluate each firm by assessing if they have a passive or active value network strategy. Also, if they have an active strategy we will use the framework developed by Johnson, Scholes and Whittington (2008) in order to evaluate their strategy.

4.7.4 Commercialization Alternatives given the Collaboration Situation

The overall research question in this study is: *What are the possible value creation alternatives for mobile payment actors given the collaboration situation in the Swedish mobile payments industry?* In the analysis of this question we will utilize the findings that we will generate from the analysis using the key theories and frameworks that are mentioned above.

Also, we will assess if there exists any risks and disadvantages in the collaboration situation for the actors in the mobile payment industry. In the establishing the theoretical framework for this study we have established that there exist three major disadvantages with

collaboration; (1) *Bureaucracy*, (2) *Administration and Sharing* and (3) *The weak functionality in immature industries*, as well as three major risk with collaboration; (1) *Incomparability of the partners of a collaboration*, (2) *Absence of compatible strengths* and (3) *Antitrust systems*. These theories will then be assessed if they correspond to the empirical evidence from the mobile payment industry.

5 Empirical Investigation

This chapter contains the empirical data that has been collected in this study. The first part of the chapter is a description of the empirical investigation. This is followed by the summaries of all the interviews made in this study.

5.1 Introduction to the Empirical Investigation

As mentioned in the methodology chapter, the empirical investigation consists of nine interviews (see overview below) with actors from the mobile payment industry. In the interviews, the companies are first asked to define mobile payments. This is since the industry is rather complex and therefore it is important that we establish a mutual understanding of the definitions to avoid misunderstandings. Following are questions relating to the companies' current and future mobile payment products/solutions, the current and future collaborations around these products, and finally the companies' general strategy regarding collaborations (see Appendix for questionnaire).

Each interview summary is made to as much as possible follow the structure below:

1. ***Definition of Mobile Payments*** – the interviewee's definition of mobile payments.
2. ***Current Product/Solution and Collaboration*** – an introduction to the companies' current product/solution and the collaborations that influence this product.
3. ***Future Product/Solution and Collaboration*** – an introduction to the companies' future product/solution and the collaborations that are or will influence this product.
4. ***Strategy Regarding Collaborations*** – a presentation of the companies' strategy when it comes to collaborations.

This chapter does not contain transcripts of each interview; instead we have tried to summarize each interview based on the four research questions and structure above.

5.1.1 Overview of Investigated Companies

Company Index	Company Type	Turnover	Employees	Geographical Market	Interviewee
A	Technology Provider	>1 billion SEK (Large)	> 1000	Global	Senior Engineer
B	Technology Provider	<50 million SEK (Small)	<100	Global	CEO
C	Mobile Network Operator	>1 billion SEK (Large)	> 1000	Global	Product Manager
D	Mobile Network Operator	>1 billion SEK (Large)	> 1000	Global	Business Developer
E	Payment Aggregator	>1 billion SEK (Large)	100 - 1000	Global	Global Customer Solutions Manager
F	Bank	>1 billion SEK (Large)	> 1000	Europe	Business Developer
G	Bank	>1 billion SEK (Large)	>1000	Europe	Product Manager
H	Payment Provider	50 - 1000 million SEK (Medium)	100 - 1000	Europe	Business Developer
I	Payment Provider	50 - 1000 million SEK (Medium)	100 - 1000	Nordic	Business Developer

Table 5 Compilation of investigated companies

5.2 Company A

Company Type	Technology Provider
Turnover	>1 billion SEK
Employees	> 1000
Geographical Market	Global
Interviewee	Senior Engineer

Company A is an international technology provider, developing and manufacturing mobile handsets. The interviewee is a senior engineer (in this thesis mentioned as the Senior Engineer) that currently works with technology road mapping regarding local connectivity, among other things deciding how NFC should be integrated in future handsets.

5.2.1 Definition of mobile payments

The Senior Engineer¹¹ defines mobile payments as “... all technical transactions where a mobile phone is involved in any step of the payment process.

5.2.2 Current Mobile Payment Product and Position in the Value Chain

According to the Senior Engineer¹² Company A currently has no commercially active role within mobile payments, but manufactures mobile handsets and sells them mainly through MNOs or merchants. Since the mobile handsets are involved in a mobile payment process, you could argue that Company A at the moment has a passive role in the mobile payment. However, in the future Company A will be more involved actively in mobile NFC payment solutions, which is further explain below in this study.

5.2.3 Collaborations Regarding the Current Mobile Payment Solution

The Senior Engineer¹³ explains that Company A as a technology provider is too small actor to manage to get a grip of payment solution by themselves. Therefore they have been working close to mobile network operators in order to be flexible and to meet their requirements. However, as some technology is becoming more of a commodity, it is in services the big money will be. Thus, the technology provider has to balance their own service ambitions against the MNOs, who often want to provide the services themselves. It is important to have a good relation to MNOs as they are the major customer to Company A.

The Senior Engineer mentions that mobile payment solutions are not easy to launch and traditionally Company A does not have a role in the industry. The industry is complex with different regulations in different parts of the world, and the need for having different cooperation partners is huge. Furthermore, the company would therefore need to decide what kind of actor to collaborate with.

5.2.4 Future Product or Solution

As a technology provider, Company A will be more directly involved in the mobile payment industry in the short term future as a provider of NFC enabled mobile phones (Senior Engineer, 2011). NFC (Near Field Communication) is a technology that enables the exchange of data between different devices that contains this technology. The technology is a short-range high frequency wireless communication (Mobile Nfc, 2011)

5.2.5 Collaborations Regarding the Future Mobile Payment Solution

The Senior Engineer¹⁴ explains that the NFC based mobile payment industry is today in a power struggle over which actor that will control the secure element in NFC chips. The big question is if the element should be placed on the SIM-card or be embedded in the phone. On

¹¹ Senior Engineer, Company A (2011). Interview 2011-03-22

¹² Senior Engineer, Company A (2011). Interview 2011-03-22

¹³ Senior Engineer, Company A (2011). Interview 2011-03-22

¹⁴ Senior Engineer, Company A (2011). Interview 2011-03-22

the SIM-card the mobile network operators will have the controlling power. However, embedded in the phone will give more power to mobile software providers.

For Company A, this is thus a delicate situation to be in the middle of a power struggle between several of the company's most important collaboration partners. But in order to put this new product on the market in the future, the technology provider has two general collaborations; one with mobile software providers and one with the mobile network operators.

The relationship with a mobile software provider is interesting. The collaboration is based on general contractual terms, not specific to the technology provider, and what drives the collaboration is the end consumers' wants, rather than a contract. This collaboration is therefore rather thought of as a strategic alliance that is held together by end-user needs rather than contracts.

The collaborations with MNO's, however, are very close, but not really contractual. There are teams that keep dialogues with the different MNOs to find out their wishes and requirements for future products, but no agreements to buy the products. Generally the technical requirements from MNOs are very similar as they are discussed though GSMA.

The Senior Engineer¹⁵ explains that Company A must as a technology provider also consider the needs of the end-consumer, and ensure the best solution for them. But if Company A would take a more active role in mobile payments in the future, they would probably work with a TSM that would handle contractual issues with many third parties. Company A would probably not want to negotiate all agreements themselves.

5.2.6 Strategy regarding collaborations

The technology provider knows they cannot do everything, and has therefore a very open approach towards collaborations to be able to offer the best products and services available. Overall, Company A talks about two guidelines: to be the best friend of the MNOs and at the same time to sell technology that fits well with mobile software providers. Transferring this to the mobile payments market, the technology provider seems to stick to these guidelines, and thus does not seem to actively have a different strategy towards mobile payments than other technology related areas. Therefore, the strategy regarding mobile payments seems to be to follow the overall strategy of the company and then take advantage of opportunities that might present themselves. For example, if security elements are embedded in the phone, the technology provider could potentially use the ownership over these elements to take fees for utilizing them.

The Senior Engineer¹⁶ also indicates that exclusive collaborations are rare, as this might lock up the end user and make the product less attractive. Looking at the mobile payment market in general, he furthermore believes that the future will hold many different parallel solutions.

¹⁵ Senior Engineer, Company A (2011). Interview 2011-03-22

¹⁶ Senior Engineer, Company A (2011). Interview 2011-03-22

The financial institutions are inclined towards secure and heavy services, and there will probably be space for more flexible services, especially for smaller transaction amounts and in countries where a big proportion of the population do not have bank accounts.

5.3 Company B

Company Type	Technology Provider
Turnover	<50 million SEK
Employees	<100
Geographical Market	Global
Interviewee	CEO

Company B is a technology provider for secure transactions using connected mobile devices not confined to mobile phones and provides technology solutions for;

- Mobile banking
- Mobile payments
- Mobile security

We interviewed the CEO of the company (in this thesis mentioned as the CEO).

5.3.1 Definition of mobile payments

The CEO¹⁷ defines mobile payments as “...money transactions where the mobile phone is the main vehicle for authentication and verification”

5.3.2 Current mobile payment product or solution

The CEO¹⁸ explains that Company B provides an extensive technology platform for different kinds of mobile payment products. The company works B2B and can adapt their services to fit the client’s requirements. The solution is based on secure transactions using a mobile, connected device for secure authentication. To do this Company B offers a back end product for the secure transfer of funds.

The actual product is built around a white label mobile application and connected service platform that is given out by different service providers, such as merchants or banks. The application allows several different payment alternatives, suitable for all distribution channels:

- Online (e-commerce)
- Mobile (m-commerce)
- Point of Sale, including vending machines
- P2P

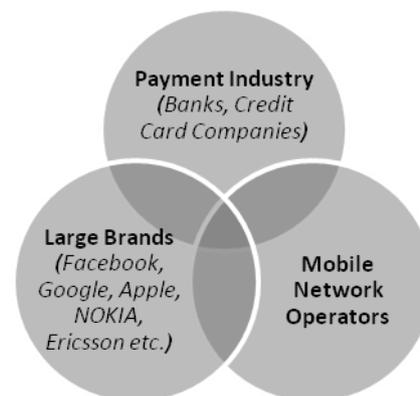
¹⁷ CEO, Company B (2011). Interview 2011-04-06

¹⁸ CEO, Company B (2011). Interview 2011-04-06

The application can be integrated with a NFC chip for POS purchases. The exact composition of the end product towards the consumer is decided by Company B's customer. The value for the end consumer is a secure and trustworthy mobile payment solution that is also simple.

5.3.3 Position in the value chain

The CEO¹⁹ declares that Company B is a B2B company, targeting firms that want to offer mobile payment services to their consumers. Company B supplies infrastructure for these mobile payment solutions, and does not have any direct contact with the end consumers. Company B directly targets the segments that they believe will be part of the mobile payment industry, namely banks, MNOs and big brands. The customer buys Company B's technology and incorporates this with existing systems.



5.3.4 Collaborations regarding the current mobile payment solutions

According to the CEO²⁰, any company that tries to build a payment solution totally on their own will eventually fail. Therefore collaborations are needed for the product of Company B to succeed. In Figure 7 the total collaboration structure of Company B is visualized, by in summary you can say that this attitude has resulted in these different collaboration partners for Company B:

- **Payment service providers:** Offering a product that the PSP can build on and offer to merchants. Company B is 10% owned by Company I (also in this study), and together they offer a ready mobile payment solution.
- **Account holding institutions (banks, etc.):** To be able to offer services which include the possibility of having accounts with money on them
- **Acquires:** To be able to offer full services towards merchants, Company A is integrated with acquirers
- **Technology providers:** Company B uses technology providers to complement their system with servers and security solutions.
- **Infrastructure providers:** For NFC services Company B's software needs to be incorporated into payment terminals. Again Company I is a good example of this kind of collaboration.

The structures of these collaborations are generally designed as formal or informal collaborations with contractual agreements between the actors. However, an exception of this is that Company B has received investments from a payment provider; Company I in this

¹⁹ CEO, Company B (2011). Interview 2011-04-06

²⁰ CEO, Company B (2011). Interview 2011-04-06

study. Company I thus owns 10 % of Company B and also has a board member position (CEO, 2011).

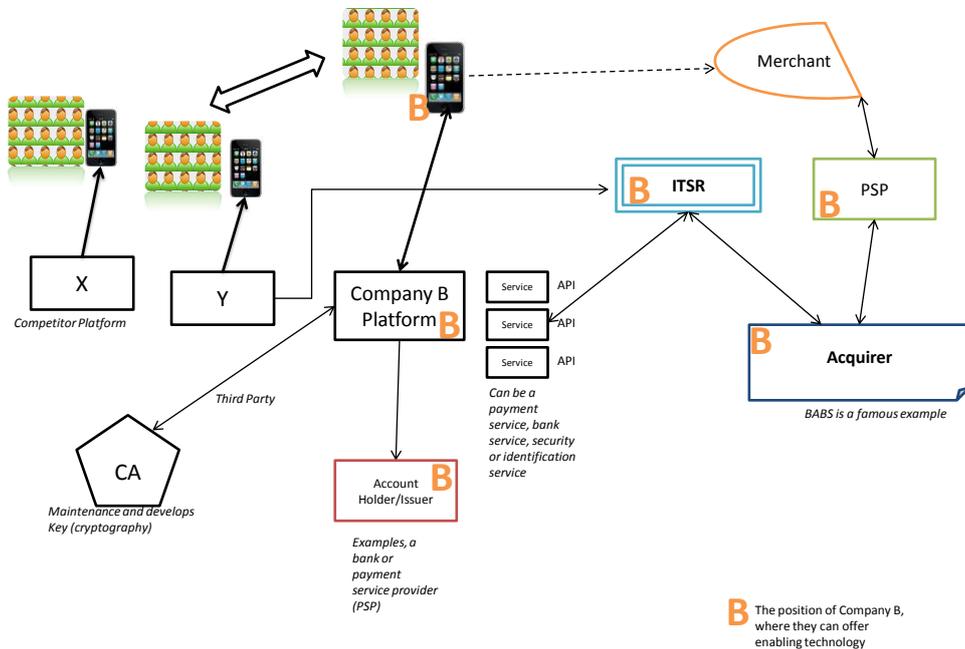


Figure 7 The collaboration structure of Company B

In order to further explain the arrangements of collaborations above, the CEO clarifies that the ITSR (Inter-transaction Service Router) is the technology of Company B. This is a switch between the actors in the mobile payment value network that routes data. Other actors' preferred payment systems (services) can be connected to this router. Moreover, the CA is a certification issuer (Certification Authorities) that publishes and maintains the keys. Banks and Mobile Network Operators are examples of these actors, where banks have an advantage since they generally have higher credibility.

5.3.5 Strategy regarding collaborations

According to the CEO²¹ it would be possible for Company B to build a full solution on its own, but such a solution would not be self-selling. Therefore Company B has decided to have open APIs around the product to enable many different actors to use and build on the platform, and incorporate it into their own products. A modular structure also means that Company B is very flexible in what customers needs to put into the collaboration, and can through other collaborations offer more or less full mobile payment products.

The CEO thinks that payment systems are trust systems. To become a global actor like Visa or MasterCard there is a need to be trusted. Moreover, there are two options to expand the reach of services: (1) the multi-tier version where Company B adapts to the current

²¹ CEO, Company B (2011). Interview 2011-04-06

infrastructure to easily fit into global standards, or (2) the single tier version where Company B will have to ensure that any specific solution fits all actors. Company B's strategy seems to be the multi-tier one, and to gain trust by collaborating with and adjusting to the systems and companies that are trusted and already in place.

Here the CEO states that Company B actively strives to offer the technology that is needed to position the company in the middle of the value network, but at the same time be open towards other solutions. This strategy is focused on claiming the company's part of the big picture, and as the business grows, more money will be earned. By focusing on selling the services rather than taking a part of transactions, Company B can more easily collaborate with many of the big actors.

Finally, the CEO²² mentions that collaborations also have been used to reach customers. The offerings towards MNOs have been made together with Company I, and internationally Company B also works with partner strategies.

5.4 Company C

Company Type	Mobile Network Operator
Turnover	>1 billion SEK
Employees	> 1000
Geographical Market	Global
Interviewee	Product Manager

We interviewed a product manager (in this thesis mentioned as the Product Manager), responsible for current and future mobile payment products in all markets.

5.4.1 Definition of mobile payments

The Product Manager²³ means that mobile payments can be understood as payments where the mobile is involved or where the payer is mobile, but in more concrete terms defines a mobile payment solution as "... when you use a mobile telephone in some way during payment."

5.4.2 Current mobile payment product or solution

According to the Product Manager²⁴, Company C currently offers two mobile payment products: (1) Premium SMS (CPA) (2) Premium WAP (/IP/mobile broadband) – Click-to-buy. The base for these products is the same: a MNO can identify the user through their mobile number or mobile connection and adds the purchase amount to the next bill or deducts it from a prepaid pot.

Company C does not actively market the products, but tries to make it as easy as possible to use and implement, especially as there is no standard API for this kind of product. Generally there are two big target segments for the two products: (1) mobile consumed (ring tones, etc.)

²² CEO, Company B (2011). Interview 2011-04-06

²³ Product Manager, Company C (2011). Interview 2011-03-25

²⁴ Product Manager, Company C (2011). Interview 2011-03-25

and (2) non-mobile consumed (tickets, vending machines, etc.). The main value for the end consumer is the simplicity of the product.

5.4.3 Position in the value chain

As a MNO, Company C already provides mobile payment solutions, and is actively trying to expand to provide further payment services. Company C handles a big part of the payment value chain themselves as they handle the billing, collection and collaboration with merchant (or aggregator). The premium WAP product is mostly used on Company C's own portal, which means that they also handle the sold goods (Product Manager, 2011).

5.4.4 Collaborations regarding the current mobile payment solutions

The Product Manager²⁵ explains that between the MNOs there is an organization called GSMA, which enables collaborations between the actors. The MNOs do not feel like competitors regarding the premium SMS products as the consumer does not chose operator depending on what kind of premium SMS service they have. Therefore the most important relationship here is the one with the content provider as this is what the consumer wants. Sometimes Company C sells services though collaborations, as collaborations with payment aggregators, even though this is not considered to be part of the core business. However, there are other MNOs that do have their own platforms for content.

Regulatory authorities should also be mentioned here, as payments have to follow the law. At the moment, Company C is having a dialogue with Finansinspektionen regarding new regulations that will affect Company C's products. Regarding the technical side of the products, Company C often decides to utilize outside competencies and therefore has collaborations with external technology developers.

5.4.5 Future mobile payment product or solution

Regarding future mobile payment products the Product Manager²⁶ mentions NFC solutions. The infrastructure for this kind of solutions is beginning to fall into place. However, the payment ecosystem is still not set, and there is a feeling that all actors are waiting for each other. For example the banks could have launched contactless cards, but this has not yet happened in Sweden.

There are many possible business models for the future. The Product Manager²⁷ believes that everything needs to be integrated for the customer: no need for extra stickers, memory cards or registration. The success with premium SMS is probably because of the simplicity. There must be trust, security and simplicity.

5.4.6 Collaborations regarding the future mobile payment solutions

There are many potential players in a NFC-based mobile payment product. Company C does not believe in other players than the ones that already are working to get a position. As NFC is

²⁵ Product Manager, Company C (2011). Interview 2011-03-25

²⁶ Product Manager, Company C (2011). Interview 2011-03-25

²⁷ Product Manager, Company C (2011). Interview 2011-03-25

an infrastructural game it will be hard for smaller actors to get a good position, they will need to cooperate with bigger actors to succeed. Company C believes in collaborations with financial institutions like a smaller bank. But a NFC solution will also require an industry wide standard to give a clear customer benefit, especially in small markets as the Nordic one (Product Manager, 2011).

In conclusion, the Product Manager²⁸ explains that GSMA is trying to create a standard for MNOs where the MNOs could act as TSMs. Exactly how the collaborations will look is still unclear. Company C also has good collaboration with mobile handset manufacturers. It is based on a mutual need, and most of the big ones have worked with Company B for several years. Company C can put pressure on manufacturers, but in the end all parties need to agree.

5.4.7 Strategy regarding collaborations

The Product Manager²⁹ argues that the telecom industry is driven by big investments and long cycles. Therefore the MNOs are used to collaborations to get things done. However, according the product manager many MNOs are used to good earnings and there is therefore a risk that they might not be willing to share this income in the long run.

Company C looks at collaborations from case to case. According to the product manager, the company does not think about value network positioning as they are such a big company, thus being in a relatively static position confined by many owners, regulations, etc. However, Company C owns a MNO active in another European country that is built as a network company. They have outsourced almost everything resulting in about 100 employees for about 2 million customers. For example the premium SMS technology has been mostly outsourced to another actor in the industry, Company E a payment aggregator, which is also interviewed in this study.

5.5 Company D

Company Type	Mobile Network Operator
Turnover	>1 billion SEK
Employees	> 1000
Geographical Market	Global
Interviewee	Business Developer

We interviewed a business developer (in this thesis mentioned as the Business Developer) at the Swedish office with responsibilities for innovation and business development as well as for the company's mobile payment product.

5.5.1 Definition of mobile payments

The Business Developer's³⁰ definition of mobile payments: "A mobile payment is initiated and ended with a cell-phone" The Business Developer also mentioned that mobile payments could be seen in a more general sense, not only looking at a mobile phone. The payment

²⁸ Product Manager, Company C (2011). Interview 2011-03-25

²⁹ Product Manager, Company C (2011). Interview 2011-03-25

³⁰ Business Developer, Company D (2011). Interview 2011-03-16

device has to be something that is mobile and that you bring with you, but not including payment cards.

5.5.2 Current mobile payment product or solution

Currently the only mobile payment product offered by Company D is premium SMS, also known as Content Provider Access (CPA). This is a good service for Company D today, but since it has drawbacks, the MNO is also looking into future payment options.

The CPA product is used for digital content, tickets, voting, vending machines, etc. It is very popular because it is very simple and available to everyone with a mobile phone. However, there are two drawbacks that greatly limit the possibilities with the products: Security and costs.

- Security: There is no valid agreement that proves that it is the owner of the mobile phone that is the purchaser. Therefore a purchase could easily be challenged. Therefore the purchase amount needs to be small.
- Cost: Because of the high costs the MNOs take, CPA payment is not good for goods with low margins, i.e. most physical goods.

5.5.3 Position in the value chain

The CPA service Company D offers is most often marketed by payment aggregators. These in turn sell the services to payment service providers or directly to merchants. Company D could offer their services directly to merchants, but generally there is at least one actor in between.

5.5.4 Collaborations regarding the current mobile payment solutions

Regarding the CPA product, the Business Developer³¹ presents that Company D only really collaborates with payment aggregators, such as Company E. The collaborators get access to Company D's API through contractual agreements. Some big merchants or service providers have direct relationships with Company D, but this is more of a customer – supplier relationship than collaboration.

Company D also has relationships with ethical agencies in order to offer good services to end consumers. There is no real collaboration between the MNOs regarding this product. All actors know that they need to have it, but there is no common standard. The business developer explained this by stating that collaborations should be a result from the demands of the market. In the case of CPA, there is no need.

5.5.5 Future mobile payment product or solution

The Business Developer³² did not go into any specifics about what kind of product Company D will develop in the future, but there is work going on. Getting into physical payments with some kind of NFC solution is hard as the value chain is very set: The four box model including card issuers, acquirers, payment service providers and merchants is very fixed.

³¹ Business Developer, Company D (2011). Interview 2011-03-16

³² Business Developer, Company D (2011). Interview 2011-03-16

Looking at the evolution of payment cards in this industry it takes time, and the business developer believes that not even the whole industry of operators can affect this.

Regarding remote payments however, a lot more things are going on. 4-5 years ago almost only cards were used for payments online. Today there are many more options and the future is unclear. The big question for Company D is how to position itself when CPA payments are not enough, and when going outside tickets and cell phone content.

5.5.6 Collaborations regarding the future mobile payment solutions

In general the Business Developer³³ thinks that collaborations will be needed for future products as this will reduce the development needed for each partner, as well as add more strength to the product. Industry standards are necessary, but because of competition law the collaborations cannot go further than technical standards. In addition, the business developer believes that it could be hard for many parties to all agree on a standard technology/market road map.

Collaborations will be essential for future solutions, a lone actor cannot grasp for too much. But for this to occur, many actors must change their behavior to fit into collaborations structures. Therefore there is not yet any solution ready in Sweden.

The Business Developer³⁴ gave several examples of projects outside of Sweden, involving Company D, where collaborations are used to create mobile payment solutions. Among other things, the division in Hungary created a joint venture together with other operators and financial institutions to enable mobile payments and related services. The joint venture setup was necessary to agree on prices and govern a service involving so many actors. In Pakistan, Company D bought a bank to enable the development of payments.

5.5.7 Strategy regarding collaborations

Generally Company D is very positive towards collaborations, but particularly so when it comes to payments. For Company D there are two main underlying reasons for collaborating: (1) differentiate services, and (2) create standards. Regarding payments, collaborations will be about creating standards and at the same time minimizing the pressure on internal development. Also, a solution must attract a critical mass of customers, and usually a company is not attractive alone.

The Business Developer³⁵ further notes that it is important for collaboration that no actor should become too fat (or thin). Collaborations always involve more than two parties, and within mobile payments no player has such a strong position that they can ignore the other players. Company D clearly thinks they should have a role in future NFC mobile payment structures.

³³ Business Developer, Company D (2011). Interview 2011-03-16

³⁴ Business Developer, Company D (2011). Interview 2011-03-16

³⁵ Business Developer, Company D (2011). Interview 2011-03-16

5.6 Company E

Company Type	Payment Aggregator
Turnover	>1 billion SEK
Employees	100 – 1000
Geographical Market	Global
Interviewee	Global Customer Solutions Manager

The company is a subsidiary in a corporate group that is a provider of telecommunication and data communications systems and related services. We interviewed a global customer solutions manager (in this thesis mentioned as the Global Customer Solutions Manager) that works with sales, architecture, product development and business development of their mobile payment product.

5.6.1 Definition of Mobile Payments

The Global Customer Solutions Manager³⁶ had, compared to many other interviewees, a rather different way of defining the mobile payment product “... a payment when a person uses the mobile phone but where the payment transaction is cleared from the prepaid account or the mobile network bill”

5.6.2 Current Product or Solution

Company E is a payment aggregator with relationships to both the merchants/content providers and the mobile network operators.

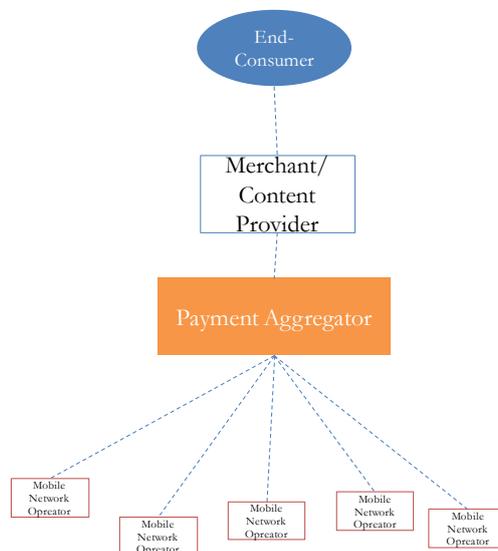


Figure 8 Collaborations regarding current product, Company E

This means that Company E can handle all the complexity that working with several mobile network operators implies. Company E is the platform that contains a system for messaging and payments, and provides an API which all content providers and merchants can connect to.

³⁶ Global Customer Solutions Manager, Company E (2011). Interviewed 2011-03-31

5.6.3 Collaborations in the current product or solution

The Global Customer Solutions Manager³⁷ explains that Company E collaborates with a number of actors in order to bring the product to the market. It collaborates both with the operators and the content providers/merchants. Also, they collaborate with different authorities. This is because the collaboration is necessary to minimize the regulatory barriers that exist in some countries when it comes to mobile payments. Moreover, the Company also collaborates with competitors. This is since the industry is so complex so that structure can function best if the different aggregators that exist become each other's aggregators.

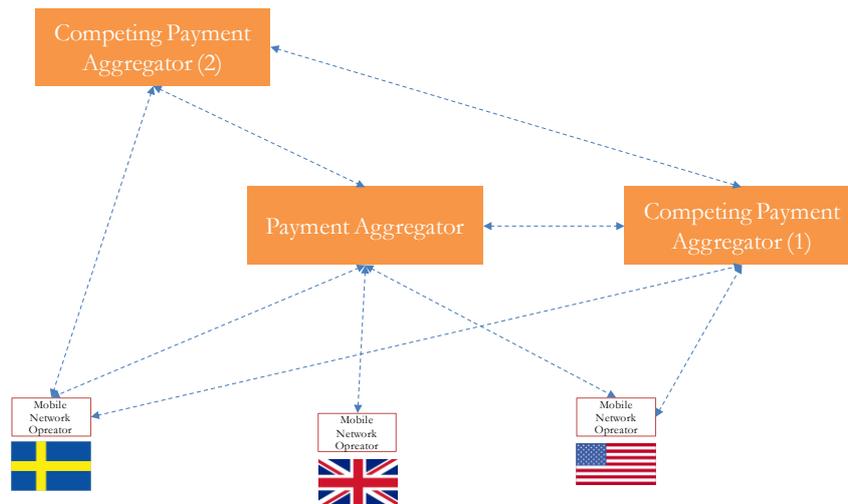


Figure 9 Collaborations with competitors, Company E

5.6.4 Future Product or Solution

The Global Customer Solutions Manager³⁸ mentions a NFC enabled product as an example of a future product. In this solution, Company E provides a platform that handles the complex situation between several mobile operators and a service provider, in this case often hotels.

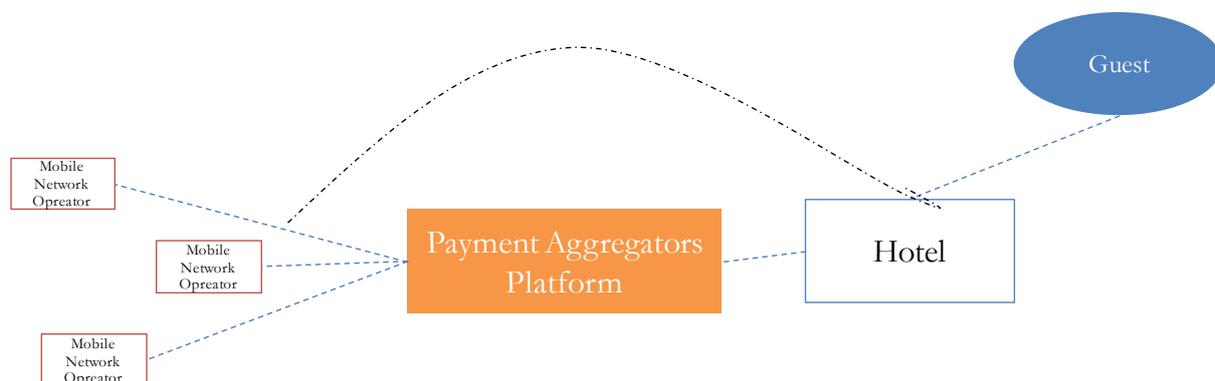


Figure 10 Collaborations regarding future product, Company E

³⁷ Global Customer Solutions Manager, Company E (2011). Interviewed 2011-03-31

³⁸ Global Customer Solutions Manager, Company E (2011). Interviewed 2011-03-31

This structure enables the hotel to provide their guests to use their cell phone as a key, instead of having a key card.

5.6.5 Collaborations in the future product or solution

This solution demands that Company E must have agreements with the mobile network operators since the operators must enable Company E's platform to access the NFC code. Also, the solution must be able to be blocked if the mobile phone is lost or stolen (Global Customer Solutions Manager, 2011).

5.6.6 Strategy and Collaborations

According to the Global Customer Solutions Manager³⁹, Company E is also positive towards collaborations, and utilizes these it in several ways. Collaboration has been used in order to differentiate a solution towards competitors by collaborating with other aggregators towards customers. Also, collaborations with actors that offer complimentary products such as mobile advertising have been lucrative to collaborative with in order to generate more value for the content provider/merchant. The level in the company where collaborations are agreed upon is different and is influenced by the strategic importance of the question.

5.7 Company F

Company Type	Bank
Turnover	>1 billion SEK
Employees	> 1000
Geographical Market	Europe
Interviewee	Business Developer

We interviewed a business developer (in this thesis mentioned as the Business Developer) within retail related services, among other things responsible for developing new concepts, including mobile payments.

5.7.1 Definition of mobile payments

The Business Developer⁴⁰ thinks the concept of mobile payments is wide, but defines it as "... a payment that is initiated by a mobile phone" Mobile payments can be both used in remote commerce (P2P, m-commerce or e-commerce) or in point-of-sale commerce.

5.7.2 Current Product or Solution

Currently Company F does not have any mobile payment solutions, but the company is looking into many different possibilities. The main challenge is to choose an underlying system that is both easy and secure. Here the secure element is a central detail; somehow the customer needs to be identified and sign a transaction (Business Developer, 2011).

³⁹ Global Customer Solutions Manager, Company E (2011). Interviewed 2011-03-31

⁴⁰ Business Developer, Company F (2011). Interviewed 2011-04-08

5.7.3 Future Product or Solution

The Business Developer⁴¹ explains that there exists a great demand for to be able to handle small debts, such as those that occur with online trading platforms. It is important not wait too long to get a product to market, when a payment solution has been adopted by a critical mass of consumers it becomes very hard to get into the market. Company F also talked about developing card and direct bank transfer options.

The Business Developer⁴² also noted that NFC as an underlying system is interesting, connected to payment cards, but that there is no functioning ecosystem currently in place. The business developer said that it would probably take time before a working solution will get to the mainstream market because of the infrastructure demands. However, with big companies like Apple and Google getting involved it will probably go very fast when the right prerequisites are in place. Company F is actively monitoring developments, and will focus on the opportunities that present themselves. Moreover, several big banks are working on a common solution for mobile P2P money transfer that is fast, easy and secure (Bankföreningen, 2011). An SMS-based system is probable as this would be usable for all mobile owners. Such a system already exists in Norway. Regarding B2B solutions, Company F is looking into different possibilities, especially focused on payment cards. However, many new solutions require changes in behavior, which makes success less easy.

5.7.4 Collaborations regarding the current mobile payment solutions

Regarding the development of a P2P payment solution, Company F is part of a sort of consortia that is facilitated by Bankföreningen – the branch association for banks. It is however hard to get this kind of collaboration to work. The technical and customer side of the solution will be developed by a technology provider, Company I, so that the banks do not have to expand too much outside of their core business (Business Developer, 2011).

The Business Developer⁴³ also explained that when developing payment cards to fit mobile payments, for example though NFC solutions, Company F believes in building on existing business models and finding new distributions of tasks and security. The European Payment Council is working on developing collaboration models based on input from all actors and best practice cases. A solution needs to work on a global scale, like card payments do today. Therefore the collaborations need to be global. It is also a question about paying for the infrastructure investments; if the consumer should pay the utility must be higher than the costs, otherwise the costs need to be spread over the actors involved. A challenge with NFC solutions will be that payment cards function very well today. The main utility for a consumer could be the ability to combine many different cards in the mobile phone. Such a scheme would need the collaboration of even more actors.

A complication here is the MNOs that so far have been very expensive regarding the payments they have been involved in. They need to decide what role they are going to take in

⁴¹ Business Developer, Company F (2011). Interviewed 2011-04-08

⁴² Business Developer, Company F (2011). Interviewed 2011-04-08

⁴³ Business Developer, Company F (2011). Interviewed 2011-04-08

a new value chain. If the MNOs will become TSMs, they need to realize that other actors could take that role too. If the MNOs could lower their prices they could be attractive to collaborate with

5.7.5 Strategy regarding collaborations

The Business Developer⁴⁴ thinks that it is very important with collaboration, especially to make the customer experience better and gain important network effects. However, the business developer also indicates that Company F needs to become better at collaborating. The banks are built on several automatic systems, which can make it hard for a bank to easily integrate with outside systems. Despite this, Company F is currently in the process of starting several new collaborations that have sprung up very fast. Collaborations are becoming more important as the world is becoming more complex and product life-cycles are getting shorter. Working together is a way of adapting quickly and building utility for the end consumer.

Company F's strategy towards collaboration usually depends on the business model. However, a general principle is that collaborations need to be win-win. When dividing the revenue, this needs to be done in a fair and transparent way that creates incentives for all actors to work towards a common goal. Here it is important to create customer utility, and focus on what the consumer really wants.

5.8 Company G

Company Type	Bank
Turnover	>1 billion SEK
Employees	>1000
Geographical Market	Europe
Interviewee	Product Manager

We interviewed the product manager for mobile payments (in this thesis mentioned as the Product Manager).

5.8.1 Definition of Mobile Payments

The Product Manager⁴⁵ explains that it is really hard to define a mobile payment solution. A clear definition is hard to state, but it spreads from purchasing items with a credit card in a cell phone to performing a distance payment through a mobile phone.

5.8.2 Current Product or Solution

According to the Product Manager⁴⁶, Company G provides today an application for smart phones and an adjusted web site for mobile phones. Regarding service, the end user can manage their bank account, make transactions and pay their bills.

⁴⁴ Business Developer, Company F (2011). Interviewed 2011-04-08

⁴⁵ Product Manager, Company G (2011). Interview 2011-03-24

⁴⁶ Product Manager, Company G (2011). Interview 2011-03-24

5.8.3 Collaborations in the current product or solution

Company G has no real collaboration in order to take this solution to the market. However, the company as such has other current collaborations in the mobile payment industry, where they are suppliers of transaction services to payment providers. This collaboration is however less formal.

5.8.4 Future Product or Solution

Company G can in the near future provide the market with another two mobile payment products⁴⁷.

Mobile P2P transfer – In the near future, it is possible that Company G together with other competing banks will provide a mobile P2P solution for its customers. This will enable the customers to make real time fund transactions even though the account holders have different banks.

Point of Sale Solution - In the future, it is possible that Company G will be able to offer its customers to purchase items in shops and make payments with a NFC-enabled mobile phone.

5.8.5 Collaborations in the future product or solution

The different future products require different collaborations with different actors⁴⁸.

Mobile P2P transfer – The Mobile P2P transfer product requires a strong collaboration with all the banks on the Swedish market. This collaboration will be facilitated through the national bank association (see Company F above for further explanation).

Point of Sale Solution – The Point of Sale solution also require a number of collaborations. Company G can today issue credit cards to end consumers, sign up retailers to accept credit cards and manage payments. It is yet to be decided what the value chain of the NFC-based solution will look like, but collaborations with mobile network operators are probably necessary.

5.8.6 Strategy and Collaborations

The Product Manager⁴⁹ states that he thinks that the bank is not less open for collaborations than any other actor in the industry. Generally, collaborations develop when there is a commercial aspect with the collaboration. Collaborations must therefore increase for the business to exist. Also, collaboration for Company G must be long term and be a part of the company's strategic plan.

5.9 Company H

Company Type	Payment Provider
Turnover	50 – 1000 million SEK
Employees	100 – 1000

⁴⁷ Product Manager, Company G (2011). Interview 2011-03-24

⁴⁸ Product Manager, Company G (2011). Interview 2011-03-24

⁴⁹ Product Manager, Company G (2011). Interview 2011-03-24

Geographical Market	Europe
Interviewee	Business Developer

Company H is a Swedish company that offers payment solutions to the eCommerce and mCommerce industry. We interviewed an employee at the business development department (in this thesis mentioned as the Business Developer). His duties were both to be a bridge between IT and the rest of the organization as well as general business development tasks such as mapping the competitive landscape, following trends etc.

5.9.1 Definition of Mobile Payments

The Business Developer⁵⁰ explains that the mobile payments definition covers a broad spectrum and reaches from mobile banking to mobile authentication. Mobile payments will provide the opportunity to bring offline and online purchases together and the industry is leveraging a lot on the development of smart phones. Moreover, a more concrete definition of a mobile payment would be “The ability to make payments/send receive money/conduct transactions in low frictions ways and not dependent of geographical location”.

5.9.2 Current Product or Solution

The Business Developer⁵¹ argues that the current product of Company H is a payment method that is offered by merchants on their eCommerce or mCommerce focused towards the end consumers. The end consumers can the pay for their product by authenticating themselves through a premium SMS, a voice service or by using a pin code. The consumer pays through an invoice that is sent to the consumer after the purchase. The value for the end consumers is that the service involves little friction, and that the service is not limited to subscription phones but also pre-paid and corporate cell phones⁵².

5.9.3 Collaborations

The Business Developer⁵³ explains that Company H is a small actor and therefore performs a large proportion of the activities in-house, compared to large actors that use many specialized collaboration partners. However, Company H collaborates with the following actors;

Information providers - Credit bureaus, telephone look up companies, address look up companies that can provide the Company with information about the cell phone holders that would like to purchase by using their product.

SMS Gateways – technology providers that enable communication between the end-consumers cell phones and Company H’s internal system.

External Development Expertise – Companies that are specialized in some areas of technology development that Company H can utilize for instance when developing smart phone applications or likewise.

⁵⁰ Business Developer, Company H (2011). Interview 2011-03-08

⁵¹ Business Developer, Company H (2011). Interview 2011-03-08

⁵² Business Developer, Company H (2011). Interview 2011-03-08

⁵³ Business Developer, Company H (2011). Interview 2011-03-08

All these collaborations have a low degree of formalization. This is since the collaborations are built as service provider relationships, as one partner provides a service that the other partner pays for. Moreover, the collaborations are not largely connected to the product, but rather to the company level. This is because collaborations are not generated around the mobile payment products, but on other payment products in the company (Business Developer, 2011).

5.9.4 Strategy and Collaborations

The Business Developer⁵⁴ argues that main driver to Company H's perception of collaborations is the business need. If there is a commercial winning with collaboration, then the company is positive towards it. The decision process is based on a business cost/profit analysis, and if the result is satisfying the company is very keen on getting into collaborations. The level in the firm that decisions about collaborations are taken is dependent on the strategic impact of the collaboration. Collaborations have also been used as a strategic tool in the company and have been used to gain better positions towards interesting potential customers to the firm.

5.10 Company I

Company Type	Payment Provider
Turnover	50 – 999 million SEK
Employees	100 – 1000
Geographical Market	Nordic
Interviewee	Business Developer

Company I provides

- Payment Solutions for Internet, Mobile and Physical Commerce
- Credit
- Accounts
- Receivables
- Billing
- Collection
- Billing
- Customer Relationship Management Systems

We interviewed the Product and Development Manager of the company (in this thesis mentioned as the Product Manager). His duties are product and business development and he is responsible for the mobile payment product of the company.

⁵⁴ Business Developer, Company H (2011). Interview 2011-03-08

5.10.1 Definition of Mobile Payments

The Product Manager⁵⁵ defines mobile payments as "...When you use your mobile phone in the transaction process, either for the transaction of funds or for purchasing items through your mobile phone..."

However, the customers are all of those that use the mobile phone somewhere in this process. And the mobile phone is also a device that is used to ensure the security in the transaction process. But the industry is hard to define. It is for example hard to know if the transaction, when a person is purchasing an item on a smart phone application by using a credit card, is to be categorized as a mobile payment transaction.

5.10.2 Current Product or Solution

Company I's current product is a mobile payment product that is built so that it can be used in the following distribution channels;

- Point of sale
- eCommerce
- mCommerce
- Vending Machines
- P2P transfers

The concrete value offer for the consumers is three-fold; (1) the consumer doesn't need a credit card or debit card (2) it enables real time access to an account (3) it functions in all distribution channels (Product Manager, 2011).

Point of Sale – In the point of sale channel, the product functions as having a credit card or debit card in your cell phone, since it enables real time access to your account. The consumer must first download an application and register an account at the Company I. After that the consumer can purchase from a merchant either through swiping the cell phone above a hardware or by using a one-time password.

Remote (eCommerce and mCommerce) – In the remote distribution channel, the consumer uses a one-time password in order to perform a transaction.

Vending Machine – in the vending machine process, the consumer contacts a router that is installed in the vending machine. The consumer then sends money to the vending machine through the downloaded application.

P2P – The consumer can transact funds to other account holders at Company I by using the application in the cell phone.

⁵⁵ Product Manager, Company I (2011). Interview 2011-03-24

5.10.3 The role in the value chain

The service of having an account at Company I and the mobile payment product is marketed directly towards the end consumers and also towards the merchants. However, for Company I it is mostly important to be the actor that sets up the infrastructure and thus functions as a technology provider (Product Manager, 2011).

5.10.4 Collaborations in the current product or solution

Company I has invested in a technology provider and owns 10% of that company (the technology provider is also interviewed in this study; Company B). Company I does only own the infrastructure and the account system in the value chain. They could therefore function as a white label towards consumers. This means that the consumers could use the Company I's service but see the brand of a bank or a mobile network operator in the process. Company I is in this sense a payment aggregator. This means that Company I has collaboration with these payment providers; mobile network operators, credit card/debit card agencies and banks. Of these, the relationship to CC/DC and Banks are more informal collaborations but the relationships with the mobile network operators are seen as more formal (Product Manager, 2011).

So, the merchant could, instead of having a different interface towards each payment provider, only have an interface towards Company I. This is first and foremost a technical collaboration between the payment providers and the merchants. Company I strives to have an open API so that they could be infrastructure providers in all parts of the value chain, but it is possible for the merchants to use other payment suppliers solutions together with the solutions from Company I.

5.10.5 Strategy and Collaborations

The Product Manager⁵⁶ explains that company I has a positive and open attitude towards collaboration. The general perception is that they enter into collaborations if the company can gain commercial advantage from the collaboration. He also stresses that collaborations are often needed in order to execute the strategic objectives of the firm. Collaboration is decided at different levels in the firm and could both be decided at board level or product manager level. This depends on what strategic impact on the firm the collaboration has.

The strategy of Company I is to be as attractive partner as possible in the mobile payment industry. Therefore, they strive to offer all parts that are necessary for a merchant or end-consumer in the transaction process. But this solution must also be open so that solutions from other payment providers can be used. Through this merchants can have one good solution instead of two separate systems.

⁵⁶ Product Manager, Company I (2011). Interview 2011-03-24

6 Analysis

This chapter is focused on the analysis of the study. First we give you an introduction to the analysis and how it is structured. Following this, we will focus separately on each of the three sub-research questions, before finally analyzing the overall research question of this study.

6.1 Introduction to Analysis

As described in the introduction chapter to this master's thesis, the purpose of this study is to; create an understanding for the use of, and the approach towards, collaborations, including collaboration strategies, among the different types of actors in the Swedish mobile payment industry. Further, the purpose is also to describe the resulting value creation alternatives for mobile payment actors that the collaboration situation gives rise to. This chapter aims at using the theoretical and empirical investigation to fulfill this purpose. The methodology used in this study, which also is explained in the methodology chapter, is to construct a theoretical framework around collaborations and consequently perform an empirical study consisting of semi-structured interviews with actors from the Swedish mobile payment industry. The analysis chapter therefore has the intention of being a logical bridge between the theory and the empirical study, while also leading up to the conclusion of the thesis.

This chapter will therefore be based on an analysis of the theoretical and empirical findings, utilizing the key theories and frameworks that are presented in section [4.7 Key Theory and Frameworks for the Analysis](#). The theory will be used both as tools and guidelines, but we will also evaluate these findings in the light of the findings from our empirical study. The analysis will be used as a foundation for our conclusions that will fulfill the purpose of our study. The conclusions will furthermore be presented in the next chapter of this study.

This chapter is divided into four sections: three sections are intended to correspond to each of our three sub-research questions, and the fourth is dedicated to answering the overall research question. Therefore the analysis chapter is made up of the following parts;

- **Extent of Collaboration** – which will cover “To what extent do collaborations exist between different types of actors in the Swedish mobile payment industry, and what are the structures of these collaborations?”
- **The Approach to Collaboration** – which will cover “What are the approaches towards collaboration among the different types of actors in the Swedish mobile payment industry?”
- **Value Network Strategy** – which will cover “What are the different actors' collaboration strategies in relation to the commercialization of mobile payment products?”

- **Alternatives for Value Creation** – In the last section of the analysis chapter we will make an attempt to analyze and answer the overall research question with this study: *What are the possible value creation alternatives for mobile payment actors given the collaboration situation in the Swedish mobile payments industry?* In this section we will utilize the analysis from the three previous sections, and also the implications that we can see from a collective analysis of these three sections. The last section will therefore aim at analyzing the collaboration situation that exists and find the possible alternatives for value creation for the actors in the Swedish mobile payment industry.

6.2 Extent of Collaboration

One of the sub-research questions of this study is *to what extent do collaborations exist between different types of actors in the Swedish mobile payment industry.* In order to answer this question, we chose to utilize the Vertical Integration Framework that was brought together by Lorange and Roos (1992). The authors suggested (as can be seen in [section 4.7 Key Theory and Frameworks for the Analysis](#)) that there are five types of collaborations; Merger & Acquisition, Joint Ownership, Joint Venture, Formal Collaboration and Informal Collaboration. We preferred to use this framework in the analysis since it simplifies the analysis by using fewer variables than using all twelve types of collaborations that were first introduced in the theory chapter.

Firstly in order to analyze the extent of collaborations in the mobile payment industry, based on the interviews we compiled a table consisting of three variables; (1) which partners each company collaborates with, (2) if that particular collaboration actor is part of the mobile payment value network, and (3) what type of arrangement the collaboration is.

In the analysis, it is important to emphasize that we have ***focused on the number of different types of collaboration arrangements.*** By this, we do not count five similar collaborations with the same types of actors as five collaborations, but rather as one type of collaboration. As an example, a payment aggregator could have hundreds of formal collaborations with mobile network operators. In this study, we have defined this as ***one*** type of agreement.

We will use Table 6 below ***as the base of our analysis of the extent of collaborations in the mobile payment industry, and also to differentiate between which actors the collaborations occur.***

Company	Collaboration Partner	The Collaboration Partner is in the Mobile Payment Value Network	Collaboration Arrangement
A: Technology provider	Mobile Service Operator	X	Formal Collaboration
	Mobile Network Operators	X	Informal Collaboration

B: Technology provider	Payment Service Provider	X	Joint Ownership
	Account Holders	X	Informal Collaboration
	Acquirers		Informal Collaboration
	Technology Providers	X	Informal Collaboration
	Infrastructure Provider		Formal Collaboration
C: MNO	Mobile Network Operators	X	Formal Collaboration
	Regulatory Authorities		Informal Collaboration
	Technology Providers	X	Informal Collaboration
	Payment Aggregators	X	Formal Collaboration
D: MNO	Payment Aggregators	X	Formal Collaboration
	Ethical Agencies		Formal Collaboration
	Technology Providers	X	Informal Collaboration
E: Payment aggregator	Mobile Network Operators	X	Formal Collaboration
	Other Payment Aggregators	X	Formal Collaboration
	End-users	X	Informal Collaboration
	Government Authorities		Informal Collaboration
F: Bank	Payment Providers	X	Informal Collaboration
	Industry Organization		Formal Collaboration
	Banks/Competitors	X	Formal Collaboration
G: Bank	Payment Providers	X	Informal Collaboration
	Industry Organization		Formal Collaboration
	Banks/Competitors	X	Formal Collaboration
H: Payment provider	Information Provider		Informal Collaboration
	SMS Gateway		Formal Collaboration
	Technology Providers	X	Informal Collaboration
I: Payment provider	Mobile Network Operators	X	Formal Collaboration
	CC/DC Companies		Informal Collaboration
	Banks		Informal Collaboration
	Technology Provider	X	Joint Ownership

Table 6: The extent of collaborations in the Swedish mobile payment industry

Collaborations are commonly occurring in the mobile payment industry – As can be seen above, there are many kinds of collaborations in this industry. More specifically, all of the

actors above have some kind of collaboration both with actors in the mobile payment industry and with actors from outside the mobile payment industry.

In total, we have identified 31 types of arrangement of collaboration among the actors investigated. If we apply this study to the industry, we could argue that there are approximately 3.5 arrangements of collaborations per actor in the mobile payment industry in Sweden. The number of collaborations per actor in this study varies from two to five. Company A, a technology provider has the least number of collaboration types; two. Company B, also a technology provider, has the most numbers of collaboration arrangement types; five.

The collaborations often occur within the industry – As can be seen above, many of the collaboration arrangements are realized with another actor from the mobile payment industry. 20 arrangements or approximately 66 % of the collaborations were identified as occurring between actors in the mobile payment industry.

In the mobile payment industry, some type of actors have similar collaboration arrangements while others do not – In the analysis we can also see that some type of actors are very similar when it comes to the type of collaboration arrangements. Two good examples of this are the banks and the mobile network operators. The banks (Company E and F) both have informal collaborations with the payment providers and more formal collaboration with each other. The mobile network operators (Company C and D) both have informal collaborations with technology providers and formal collaborations with payment aggregators.

However, the two payment providers (Company H and I) that exist have different type of collaboration arrangements. The only type of collaboration partner that they have in common is the one with technology providers. However, the arrangements of these collaborations also differ, since Company H has informal collaborations with technology providers, and the Company I has gone so far as to invest in a technology provider and therefore has a close collaboration with this partner. Moreover, the two technology providers (Company A and B) in the study also have different arrangements of collaboration. Also, Company A has the least number of collaboration arrangements and Company B has the most collaboration arrangements.

6.2.1 Structures of the Collaborations

Moreover, in this study, we also tried to look at *the structures of these collaborations*. In order to do this a matrix was compiled using information from Table 6, which can be seen in Figure 11 below. Using this matrix we will try to *further analyze what this implies, and discuss the different structures of the collaboration arrangements*.

	Collaboration Arrangement	Merger & Acquisition	Joint Ownership	Joint Venture	Formal Collaboration	Informal Collaboration
Company:						
A: Technology provider					X	X
B: Technology provider			X		X	X
C: MNO					X	X
D: MNO					X	X
E: Payment aggregator					X	X
F: Bank					X	X
G: Bank					X	X
H: Payment provider					X	X
I: Payment provider			X		X	X

Figure 11 The structures of collaboration in the Swedish mobile payment industry

Low degree of formalization and inter-organizational dependence – In Figure 11 it is possible to see that almost all of the firms only have formal or informal collaborations in relation to mobile payments. This means that the vertical integration between the parties in the collaboration arrangements is often low. In our study we have only found one example of a collaboration with a higher degree of formalization and higher degree of mutual dependence; Company I's investment in Company B.

According to the theory, this structure is not surprising. As can be seen in the theory chapter, Blaxill and Eckardt, (2009) argue that *a major disadvantage to arrangements of collaborations is that they often work best, and generate most value in a mature industry*. In the empirical study, respondents have also stated that they are waiting for a stable dominant structure before they will move into any closer collaboration arrangements and that the ecosystem is not set yet and therefore they are reluctant to have any tighter relationships. Moreover, according to the empirical investigation, some of the investigated firms have closer relationships abroad regarding the mobile payment industry. An example of this was Company D that is part of a joint venture including a bank in Eastern Europe and has acquired banks in south Asia in order to improve its mobile payment products in these regions. Also, Company C owns a MNO in another European country that has outsourced many activities, and has therefore become very reliant on the other actors in the value network. We therefore argue that it is possible that if we revise Figure 11 above in five to ten years time, it will contain more examples of collaboration arrangements with a higher degree of inter-organizational dependence, such as joint ventures, co-ownership and merger and acquisitions. This can be backed up by Lorange and Roos (1992) that state that a company can decide to start a relationship with a lower degree of dependence in an initial phase and at a later stage, when the actors feel more confident in the collaboration, decide on what kind of degree of dependence that is relevant.

6.3 Approach to Collaboration

The purpose with this section is to answer the research question; *What are the approaches towards collaborations among the different types of actors in the Swedish mobile payment industry?* In this part of the analysis we will operationalize the research question by breaking it down further into three sub-questions. The research question will be answered by analyzing and evaluating the interviewed companies' responses in relation to these three sub-questions. The first two are geared towards the companies' products and how these are designed towards collaborating. The third question is a measure of the interviewees' views on the advantages of collaborations for the different companies:

1. *To what extent are (will) the companies' mobile payment products (be) open to collaborations?*

The design of the companies' products should reflect their approach: A product that is built to be easily integrated with outside parties indicates a positive approach, while a product that is designed to largely stand by itself and requires special effort for external integration indicates a negative approach. Each company will be graded as High, Medium or Low on this question.

2. *To what extent are (will) the companies' mobile payment solution (be) dependent on relationships with other companies?*

This question is a measure of how the companies' current or future business model is designed to be dependent on other companies or not: A solution that requires unique relationships with other actors indicates a positive approach towards collaborations, while a solution that only requires the relationship to exchangeable suppliers indicates a negative approach. Each company will be graded as High, Medium or Low on this question.

3. *What are the companies' reasons for collaborating (what advantages do the companies see)?*

According to summary of the theory chapter in section [4.7](#) there are many different advantages⁵⁷ in collaborating. This question is designed to qualitatively evaluate what advantages the interviewed companies expressed, and thereby further understand their approach towards collaborations. The advantages that the investigated companies see will also be assessed in relation to the documented advantages with collaborations.

To further strengthen the analysis in this section, the turnover size and core activity of the companies was also taken into account. The turnover size is interesting as an indication of the relative strength and stability of the company, which might affect the approach of the companies. In addition, we also reasoned that if a company is centered on mobile payments, then the approach could be different compared to a company that only has mobile payments as a peripheral activity.

⁵⁷ Common themes in the interviews were that collaborations should help to fulfill strategic objectives and in general be economically positive for the business. These are not considered below as we see these as the effect of advantages, rather than *the* advantages.

This section is structured so that we first present a table containing some key take-outs from the interviews regarding the three questions above to give an initial overview of the companies' approach to mobile payments. After that an analysis of the three separate questions is presented. Following, a table and a matrix visualizing the key discoveries from the analysis is presented. The last part is dedicated to evaluating the approaches to collaborations and the findings from this section are later used in section [6.5, Value creation alternatives](#), to help answer the main research question of this study.

Company	Approach towards Collaboration	Mobile payments a core activity?	Turnover size
A: Technology provider	<ul style="list-style-type: none"> - Very open approach towards collaborations to be able to offer the best products and services available - Do not consider themselves big enough to manage to get a grip of a payment solution by themselves. - Considers the mobile payment industry to be complex and thus the need for having different cooperation partners as huge. 	No: No current products	Large
B: Technology provider	<ul style="list-style-type: none"> - Believes that any company that tries to build a payment solution totally on their own will eventually fail. Therefore collaborations are needed to succeed. - The company works B2B and can adapt their services to fit the requirements of many different kinds of actors. - Company B has decided to have open APIs around the product to enable many different actors to use and build on the platform, and incorporate it into their own products. - By collaborations offers more or less full mobile payment products. 	Yes: The company provides an extensive technology platform for different kinds of mobile payment products.	Small
C: MNO	<ul style="list-style-type: none"> - Tries to make their products as easy as possible to use and implement for collaborators as there is no standard API. - Handles a big part of the payment value chain by themselves and sometimes collaborates with payment aggregators. - As NFC is an infrastructural game it will be hard for smaller actors to get a good position, they will need to cooperate with bigger actors to succeed. A NFC solution will require an industry wide standard to give a clear customer benefit. 	No: Company B currently offers two mobile payment products: 1. Premium SMS (CPA) 2. Premium WAP/IP/mobile broadband	Large
D: MNO	<ul style="list-style-type: none"> - Positive towards collaborations, but particularly so when it comes to payments. - Collaborates with a few different actors to get their solution to the market. - In general collaborations will be needed for future products as this will reduce the development needed for each partner, as well as add more strength to the product. 	No: Premium SMS	Large
E: Payment aggregator	<ul style="list-style-type: none"> - Is positive towards collaborations. - Provides an API to their platform to all content providers and merchants to connect to. - Future product demands agreements with MNOs. - Collaborates with a number of actors to get the solution to the market. - Collaborations have been used to differentiate a product and to offer complementary products 	Yes: Aggregates premium SMS products	Large
F: Bank	<ul style="list-style-type: none"> - Built on several internal systems that make it hard to integrate. - Focused on consumer utility, and believes that collaborations are very important to improve consumer experience and gain network effects. - In an NFC solution the collaborations needs to be global, and cost could be spread over the involved actors. 	No: No current products	Large
G: Bank	<ul style="list-style-type: none"> - Working on a future mobile P2P transfer product that requires a strong collaboration with all the banks on the Swedish market. - It is yet to be decided how the value chain of the NFC-based solution will look like, but collaborations with mobile network operators are probably necessary. 	No: (Mobile banking)	Large

	- Collaborations must increase the business to exist.		
H: Payment provider	- A small actor and performs a large pile of the activities in-house. - Collaborations are not generated around the mobile payment products, but on other payment products in the company.	Yes: Mobile payment solutions based on invoice payment	Medium
I: Payment provider	- Has a positive and open attitude towards collaborations. - Strives to have an open API so that they could be infrastructure providers in all parts of the value chain but that it is possible for the merchants to use other payment suppliers' solutions together with the solutions from Company I. - Enters into collaborations to gain commercial advantage.	Yes: Payment aggregator and Mobile application payment product	Medium

Table 7 Summary of answers regarding approaches to collaboration

6.3.1 Analysis of the Approach to Collaboration

Looking through the responses of the companies it is clear that there is a general positive attitude towards collaboration. However, to get a deeper understanding of the different companies' approach towards collaborations we have answered the three questions stated above.

1. Openness towards collaborations

Company A, as a technology provider, is open towards modifying its products to fit their collaboration partners' needs, yet the end consumer demand is still the most important to follow. A similar approach is taken by Company B and I, which have even built their products in modules so that it should be possible to fulfill a wide range of requirements and collaborate with many different companies.

The MNOs, Company C and D, have worked for easy integration with their products to ensure collaborations with payment aggregators, such as company E. Company E's product is based around collaborating, and is therefore built to be open both towards payment providers and merchants. However, Company E has gone further, and has opened up its product for integration towards competitors (other aggregators).

The banks, Company F and G, do not have any current products, and company F expressed that their internal system is not built for easy external integration.

Company H is not built to require collaborations, and the relationships that exist have been specifically integrated as needed.

2. Dependence on collaborations

Companies B, E and I have built their mobile payment products to necessitate specific collaborations in order to function and are therefore very dependent on these collaborations.

A's collaborations are not crucial regarding mobile payments, but the company will probably follow the lead of their partners.

Both F and G have indicated that future involvement in mobile payment products will be based on specific collaborations at an international level. In contrast, company H has the approach of trying to do as much as possible in-house (excluding general suppliers).

C and D have enabled collaborations with payment aggregators and PSPs for convenience, but also deliver services directly to merchants. They have also indicated the need for close collaborations with actors such as financial institutions for some future mobile payment solutions. In addition, Company C's relationship with handset manufacturers is based on mutual need.

3. *Reasons for collaborating*

Company A's collaboration with MNOs and a mobile software provider is mainly motivated by end consumer needs and thus *increased sales*. However, collaborations are also motivated by the complexity of the mobile payment industry; the technology provider cannot do everything themselves, thus the need for collaborations to *deliver working solutions* to the market.

Company B believes that a payment system needs to be built by several actors to succeed. This is motivated by several aspects, such as *increasing consumer trust in the company* and *reaching more customers*, thus earning more money. Collaborations also enable Company B to *offer more elaborate solutions* to their customers. By partnering with established actors, Company B more easily *adapts to the current infrastructure*.

Both Company C and D see meeting the end consumers' needs as the biggest reason to collaborate and thus be able to *create complex standard solutions*. Company C sees NFC-based solutions as an infrastructural game, which will require the participation of many big actors to *deliver a product*. Similarly, Company D collaborates with a few actors to *take a solution to the market*. D also talked about a *lower amount of work* for each actor if working together, and collaborations can be used to *differentiate a product from competitors*.

The design of the business model is the main factor behind collaboration for Company E: collaborations are needed to *bring the product to the market*. The value the company adds is the *reduced complexity* it offers by easily connection MNOs with merchants all over the world. Company E further uses collaborations to *differentiate solutions towards competitors* or to add value to their services by offering *complementary goods*.

Company F motivates its plans to collaborate regarding mobile payments by the *reduced need for investment* and *increased utility for the end consumer*: F believes that future payment solutions *need to be global*, and this can only be achieved through collaborations. Company G focuses on the commercial gains from collaborating; through collaborations the company can *access the new market* of payments but still keep to its core activities. A similar approach is taken by Company H, where the main driver for collaborations is the business need for *external input regarding products*. Naturally collaboration should lead to some commercial winning for the company, maybe by getting a better position towards potential customers.

Finally, Company I uses collaborations to be able to *offer a full product* to merchants, that even works together with competing solutions to increase the simplicity for the merchants. It is important that collaborations lead to commercial advantage for the company.

In order to better visualize and analyze the approach to collaborations among the investigated companies, the answers from the questions above have been compiled into this table.

Company	Openness of product	Dependence on collaborations	Reasons for collaborating	Mobile payments a core activity?	Size of Company
A: Technology provider	High	Medium	- Increase sales - Deliver working solutions	No	Large
B: Technology provider	High	High	- Increase consumers' trust in the company - Reach more customers - Offer more elaborate solutions - Adapt to the current infrastructure	Yes	Small
C: MNO	Medium	Medium	- To create complex standard solutions - To deliver a product	No	Large
D: MNO	Medium	Medium	- To take a solution to the market - To lower the amount of internal work - To differentiate a product from competitors'	No	Large
E: Payment aggregator	High	High	- To bring the product to the market - To reduce complexity - To differentiate solutions towards competitors - To offer complementary goods	Yes	Large
F: Bank	Low	High	- To reduce need for investment - Increase utility for the end consumer - To have global solutions	No	Large
G: Bank	Low	High	- To access new market	No	Large
H: Payment provider	Low	Low	- To get external input to products	Yes	Medium
I: Payment provider	High	High	- To offer a full product	Yes	Medium

Table 8 Summary of findings regarding approaches to collaboration

To get a better overview of *the reasons for collaborating*, the answers were compiled into the matrix below, trying to group them together and translating to the relevant advantages discussed obtained from the theory chapter.

Advantage:	Deliver working solutions/ access the market	Increase consumers' trust in the company	Reach more customers/ increase sales	Deliver complex solutions ⁵⁸	Increased flexibility ⁵⁹	Cost and risk sharing ⁶⁰	Differentiate a product from competitors'	To offer complementary goods
Company:								
A: Technology provider	X		X					
B: Technology provider		X	X	X	X			
C: MNO	X			X				
D: MNO	X					X	X	
E: Payment aggregator	X			X			X	X
F: Bank				X		X		
G: Bank	X							
H: Payment provider						X		
I: Payment provider				X				

Table 9 Matrix visualizing reasons for collaborating

6.3.2 Evaluation of the approach towards collaborations

The results from Table 8 and Table 9 above lead to the findings regarding the companies' approach towards collaborations:

Most of the time there is a connection between the kind of company and the approach to collaborations. Regarding both the MNOs and the banks, the interviews demonstrated a similar approach towards collaborations. This is hardly surprising given that actors of the same type and size are facing the same market dynamics. Moreover, this similarity could be further strengthened by industry and standard associations and common initiatives. The two payment providers however show opposite approaches towards collaborations regarding mobile payments. This can be explained by a difference in choice of business model in an industry where a dominant business model has yet to emerge.

Almost all companies in the investigation have an underlying need for collaborations in their business model for mobile payments. This confirms the hypothesis about the industry as value network based, however, it is also interesting to note that Company H has chosen a less dependent business model. This company is also the only company that did not somehow mention help delivering solutions as an advantage to collaborations, instead focusing on the pure economic benefits.

⁵⁸ Includes: Offer more elaborate/global solutions, reduce complexity for consumers, create standards, etc.

⁵⁹ Adaption to the current infrastructure

⁶⁰ Includes: To lower the amount of internal work

In the mobile payment industry, there is a need to collaborate with other actors in the industry. In our study we have, as can be seen above, discovered that many actors have a need for collaborating. This can be seen in relation to Table 6 in section [6.2](#) that indicated that there is a greater need for the collaborations to occur with other actors in the industry. We think that this could imply that many actors in the industry are dependent on each other. A validation of this thesis is that many of the collaborations that exist between actors in the mobile payment industry relate to a core process or core activity for the mobile payment product or solution. A good example of this is the collaborations between payment aggregators and mobile network operators. This is because; the premium SMS product, as an example, cannot be provided by the mobile network operators by themselves to all content and service providers. They are thus dependent on the payment aggregator, and that they take the role as a middle-man towards a large number of content and service providers, in order for the premium SMS product to function.

The primarily perceived advantage of collaborations is the help to get (complex) solutions to the market. This indicates a general belief that it is not possible to create a viable mobile payment solution as a lone actor, which was even expressed during interview with Company B. This is in line with Blaxill and Eckardt (2009) (section [4.7](#)) who states that increasing collaboration is partly a result of companies becoming more and more specialized. Nevertheless there are companies like Company H that tries to create solutions that are not dependent on other specific actors.

The advantages that the companies communicate do only to a little extent correspond to the advantages presented by prior research. Among the most common advantages argued by the prior research (presented in [4.7](#)) only one, risk and cost sharing, correlates with our empirical study. The others; Economics of Scale, Access to Technology, Knowledge and Know-How and Faster Access to Market/Strategy Implementation were not directly communicated in the empirical study. However, the advantages presented by recent research, such as “Support the Delivery of Complex Solutions to the Market” and “Increased Flexibility”, corresponds with the findings from the empirical study. Moreover, some advantages presented by the investigated companies are not or to a little extent mentioned in the prior research. Consequently, we think that there is room for further research in this area.

With one exception, companies where mobile payment is a core activity have a very positive approach towards collaborations. Three out of the four companies where mobile payments are the core have chosen business models focused on collaborations involving big specialized actors. However, the big actors with whom they need to collaborate generally seem to be less easy to collaborate with (more negative approach).

6.4 Value Network Strategy

Similarly to the prior sections, with a starting point in the interviews, and with the aid of the theory chapter, this section in the analysis is focused on trying to answer the research question: *What are the different actors' collaboration strategies in relation to the value*

creation of mobile payment products? To evaluate the strategic direction of the different companies we will be looking at three sub-questions relating to how they act in the mobile payment value network; the first two more focused on the interviewed companies' strategic behavior in the mobile payment industry, while the third is an evaluation of strategic thinking regarding network positioning:

1. *To what extent is the company active in taking their current or future mobile payment product to the market?*

Part of the company's strategy towards mobile payment relates to how active the company is involved in marketing and the development of the products. An active focus on mobile payments suggests an interest in getting a central role in the value network. A more passive development suggests a weaker interest in becoming a strong strategic player by forming the market.

2. *To what extent does the company actively try to control a central position in the mobile payment value network?*

According to Kleinaltenkamp and Ehret (2006), in section [4.1.4](#), obtaining a central position in a value network is an important strategy to become a strong actor in the industry. This question is meant to evaluate how active the company is in following this kind of strategy.

3. *How is their positioning strategy built?*

According to Johnson, Scholes and Whittington (2009), in section [4.1.4](#), a company's positioning strategy in a value network should consist of three key issues: (1) Find and focus on the activities that are core to the company, (2) decide suitable partners and collaboration arrangement with these, and (3) find the current and future profit pools in the value network. We will call this kind of strategy **active network positioning**.

A contrasting view is stated by Schilling (2010) (section [4.1.4](#)), who argues that a company does not have the power to decide their position themselves, but that the position is a result of size and competence of the company. Thus, powerful companies sitting on crucial information can rely on finding their place in the value network without an active positioning strategy. We will call this kind of strategy **passive network positioning**.

This question is meant to evaluate if the company uses one of these strategies (or similar), or if any other approach seems prominent (we will summarize these as **other network positioning** strategies).

This section is structured like [6.3](#): we first present a table containing some key take-outs from the interviews regarding the three questions above to give an initial overview of the companies' value network strategies. After that an analysis of the three separate questions is presented. Following that is a table visualizing the key discoveries from the analysis is presented. The last part is dedicated to evaluating the approaches to collaborations and the findings from this section are later used in section [6.5, Value creation alternatives](#), to help answer the main research question of this study.

Company	Strategy today	Mobile payments a core activity?	Turnover size
A: Technology provider	Overall, Company A talks about two guidelines: to be the best friend of the MNOs and at the same time to sell technology that fits well with mobile software providers. The strategy regarding mobile payments seems to be to follow the overall strategy of the company and secondly take advantage of opportunities that might present themselves.	No	Large
B: Technology provider	Company B actively strives to offer the technology that is needed to position the company in the middle of the value network, but at the same time be open towards other solutions. This strategy is focused on claiming the company's part of the big picture, and as the business grows, more money will be earned. By focusing on selling the services rather than taking a part of transactions, Company B can more easily collaborate with many of the big actors.	Yes	Small
C: MNO	Company B looks at collaborations from case to case. According to the product manager the company does not think about value network positioning as they are such a big company, thus being in a relatively static position confined by many owners, regulations, etc. However, Company B owns a MNO active in another European country that is built as a network company. They have outsourced almost everything resulting in about 100 employees for about 2 million customers. The telecom industry is driven by big investments and long cycles. Therefore the MNOs are used to collaborations to get things done. However, according to the product manager many MNOs are used to good earnings and there is therefore a risk that they might not be willing to share this income in the long run.	No	Large
D: MNO	Two main underlying reasons for collaborating: (1) differentiate services, and (2) create standards. It is important in a collaboration that no actor should become too fat (or thin). Collaborations always involve more than two parties, and within mobile payments no player has such a strong position that they can ignore the other players. Collaborations will be about creating standards and at the same time minimizing the pressure on internal development. Also, a solution must attract a critical mass of customers, and usually a company is not attractive alone.	No	Large
E: Payment aggregator	Collaboration has been used in order to differentiate a solution towards competitors by collaborating with other aggregators towards customers. Also, collaborations with actors that offer complimentary products as mobile advertising has been lucrative to collaborative with in order to generate more value for the content provider/merchant.	Yes	Large
F: Bank	Collaborations are becoming more important as the world is becoming more complex and product life-cycles are getting shorter. Working together is a way of adapting quickly and building utility for the end consumer. Company F's strategy towards collaborations usually depends on the business model. However, a general principle is that collaborations need to be win-win. When dividing the revenue, this needs to be done in a fair and transparent way that creates incentives for all actors to work towards a common goal. Here it is important to create customer utility, and focus on what the consumer really wants.	No	Large
G: Bank	Generally, collaborations develop when there is a commercial point with the collaboration. Collaborations must therefore increase the business to exist. A collaboration with Company G must be long term and be a part of the company's strategic plan	No	Large
H: Payment provider	The main driver to Company H's perception of collaborations is the business need. If there is a commercial winning on collaboration, then the company are positive towards collaborations. Collaborations have also been used as a strategic tool in the company and have been used to gain better positions towards interesting potential customers to the firm	Yes	Medium
I: Payment provider	The strategy of Company I is to be as attractive partner as possible in the mobile payment industry. Therefore, they strive to offer all parts that are necessary for a merchant or end-consumer in the transaction process. But this solution must also be open so that solutions from other payment providers can be used. By this, merchants can have one good solution instead of two separate systems. The general perception is that they enter into collaborations if the company can gain commercial advantage from the collaboration. Collaborations are often needed in order to executive the strategic objectives of the firm.	Yes	Medium

Table 10 Key answers regarding value network strategy

6.4.1 Analysis of the Value Network Strategy

The initial screening of table 10 gives a mixed picture of approaches towards strategy in value networks. Therefore, to get a clearer picture of the companies' strategies to obtain strong positions in the value network, we have answered the three questions stated above.

1. Active mobile payment development

Company A's driving force behind integrating NFC technology is the company's collaborators. The technology provider will probably not be a driving force behind a future payment solution but rather exploit potential opportunities that come their way.

In contrast, Company B is very active in their work offering technology for mobile payment solutions. Similarly, Company E also markets and develops their product actively.

Company C does not work actively with their current premium SMS product, but states that they are actively trying to expand the company's presence in the market with new solutions. The other MNO, Company D, also seems to be semi-active regarding their payment product.

Even though the banks, Company F and G, do not actively participate in current payment products, they indicate that they are participating in the development of future solutions.

Finally, both the payment providers, Company H and I, work actively developing their mobile payment services, and market these towards their customers.

2. Active value network positioning

Company A's general strategy is to keep its current position in the value chain, and focus on making collaboration partners and consumers happy. However, if an opportunity presents itself the company seems interested in taking advantage of it.

Company B has a very active value network strategy by making sure to supply and keep control over the technology that puts the company in a central position in the value network. Thus, as the business grows, Company B hopes to become an increasingly important actor in the industry.

The MNO, Company C, said that they do not have an active network strategy as they see themselves in a relatively static and defined position. Company D's strategy is less clear from the interview and is therefore deemed to be neutral.

Regarding future solutions, the payment aggregator (Company E) has thought about how to use their current relationships to build a controlling position in the next generation mobile services.

The banks, F and G, both talked about being part of future mobile payment solutions, but both seem to want to be part of products that build on current structures and thus contribute with current competencies.

Company H is unique in this study as they try to control most of the value chain by having the competencies in-house. This means that for their mobile payment product the company is avoiding a value network built on collaborations, thus the company cannot be said it want to control a central position, rather build their own network.

Lastly, Company I is widely present in the value chain and has a strategy of being an attractive partner, but did not seem to clearly know exactly what part of the value network to control.

3. Positioning strategy

Company A does not seem to have a specific positioning strategy for mobile payments. Rather, the company works together with their old collaboration partners, trying to meet requirements, and has no strategy to take a central role unless an opportunity presents itself.

Company B has decided to offer the technology that puts them in the middle of the value network. This has been done by building a flexible product with open interfaces in all directions, making it possible to collaborate with many different actors. In particular there is a co-ownership relation with Company I, who has the products to complement B to offer a more complete solution. Company B has decided to sell their services at a price related to the number of users rather than taking part of transactions, hereby make them more attractive as a collaboration partner, while still earning more as the business grows.

In contrast, Company C does not think about positioning in the value network, rather the company considers their position to be relatively static and mobile payment products are built on the current position as a MNO.

The other MNO, Company D, did not talk explicitly about network positioning as the business developer did not desire to talk about future products. However, the business developer did express concern about how to position the company outside of premium SMS product. One can assume that Company D will use their core capabilities of being able to identify their consumers even in the future,

Company E, the payment aggregator, is a network company as its business is to work as a bridge between other companies and make their business easier. When discussing future solutions the company indicated that it will build on the capabilities that it has developed for the current products, and seems to have decided to focus on similar collaboration partners. Regarding profit, the company also expressed that further collaborations to provide complementary goods has been lucrative.

The bank, Company F, indicated that they are part of a solution that will not require a great expansion outside of their core business. The company believes in building mobile payment solutions on existing structures by adding new distributions of tasks and security. Regarding collaboration partners other than banks, Company F has thought about MNOs as an attractive partner, if they could lower their price. As of now, the company is monitoring developments and will focus on opportunities that present themselves.

The other bank, Company G, also strongly emphasized that companies in the industry should keep to their own core business regarding mobile payments. The value chain for point of sale based mobile payment solutions has yet to be decided, but Company G thinks collaborations will be needed.

Company H is so far controlling a large part of their business in-house, and thus does not have a network based strategy.

Lastly, Company I has focused on owning infrastructure and an account system in the value chain, and has decided to complement with collaborations to be able to offer full mobile payment products. The co-ownership with Company B is an example of this. The strategy is to be very flexible and open to collaborate with more or less anyone in the value network, even competitors, thereby being an attractive partner to everyone. Then, by always owning the underlying system infrastructure Company I makes sure they are always a central player, and thereby build transaction volumes and increased revenues.

Company	Active development	Active control position	Positioning Strategy	Mobile payments a core activity?	Size of Company
A: Technology provider	Low	Medium	Passive	No	Large
B: Technology provider	High	High	Active	Yes	Small
C: MNO	Medium	Low	Passive	No	Large
D: MNO	Medium	Medium	Passive	No	Large
E: Payment aggregator	High	High	Active	Yes	Large
F: Bank	Medium	Low	Passive	No	Large
G: Bank	Medium	Low	Passive	No	Large
H: Payment provider	High	Low	Other	Yes	Medium
I: Payment provider	High	Medium	Active	Yes	Medium

Table 11 Analysis of value network strategy

6.4.2 Evaluation of the results

The results from Table 11 indicate some interesting points for answering the research question *what are the different actors' collaboration strategies in relation to the value creation of mobile payment products?*

Only one of the interview companies is passive in developing mobile payment solutions. The high level of activity for Company B, E, H and I can simply be explained by the fact that they

have mobile payments as a core activity, and would therefore be expected to develop their products actively. Regarding the other companies, Company C stated that there seems to be a waiting among the large actors⁶¹, as indicated by the lower activity. Still, this indicates that the general interest in the market seems to be high.

Only two of the interview companies indicated that they actively work towards creating a central control position in the value network. This indicates unwillingness among several of the companies to develop their business outside of their current position. The waiting noted above could be explained by several of the larger actors not seeing the business potential in developing a central control position within mobile payments, and instead decide to wait until they are somehow conveniently integrated into a solution where they can have a relatively static position.

Only companies with mobile payments as a core activity seem to be using an active positioning strategy in the value network. Companies B, E and I's active positioning strategies further emphasize the difference between these companies and the larger companies that do not have mobile payments as a core activity. By choosing not to build more independent solutions like Company H, they have to rely on developing value networks involving the older companies that seem to have chosen a more passive or semi-active positioning strategy, relying on their current power and core competencies to get a fair piece of the revenue in the mobile payment industry.

6.5 Value Creation Alternatives

Based on the analysis from the prior three sections and some additional input from the theory chapter, this section is aimed at finally answering the main research question of this thesis, namely: *what are the possible value creation alternatives for Swedish mobile payment actors given the current collaboration situation in the Swedish mobile payments industry?*

Through the analysis in section [6.2](#), [6.3](#) and [6.4](#) we have identified three possible main paths for value creation. These three value creation alternatives are presented below.

6.5.1 Value creation through targeting, and striving to control a central position in the value network

Section [6.2](#) showed that collaboration arrangements between actors in the mobile payment industry are common. However, the differences in these arrangements between the types of actors indicate that there is currently no dominant business model in the Swedish mobile payment industry. Moreover, it was found that the degree of formalization of these collaborations is mostly informal or formal in nature. This in turn indicates that structures could be considered to be less fixed and that there is a degree of flexibility in the industry; hence new collaborations could readily be formed when creating new business models.

Further, section [6.3](#) shows that most of the types of actors in the mobile payment industry are motivated to collaborate in order to get (complex) products onto the market. However, not all

⁶¹ Product Manager, Company C (2011). Interview 2011-03-25

actors have a very open approach towards collaborations (for example the banks whose products were created for other purposes), even though collaborations would be necessary to offer a product. In addition, as seen in section 6.4, several of the actors have a passive positioning strategy in the value network. Thus there is an underlying need in the industry for facilitating collaborations in order to create these complex solutions.

Combining the arguments above, there seems to be an opportunity for companies that have an active positioning strategy; facilitating the creation of new collaborations in order to establish mobile payment solutions on the market. From section 6.4, Company B, E and I best fit the description of this type of network oriented companies that can *utilize the situation to create value by building a strong central position in the value network*.

An example of a type of actor that follows this value creation alternative is the payment aggregator: Company E. This kind of company becomes good at facilitating the connection between merchants/payment service providers and other actors, in this case MNOs, and extracts value from being the connecting hub. Another example is Company B who has built a flexible product with open interfaces in all directions, making it easy to collaborate with many different types of actors to create payment solutions, while making sure that all transactions pass through their central platform, thus gaining a central control position.

6.5.2 Value creation through control over core competencies or resources

Many of the types of actors in the mobile payment industry do not have mobile payments as their core activity (see section 6.3.1), but it is important to mention that some have the control over an exclusive/important competency or resource that can be used in mobile payment solutions. An example is the banks that control bank accounts that could potentially be integrated directly into payment solutions. However, as seen in section 6.4, companies that do not have mobile payments as a core activity are less active in developing products and also have a tendency for somewhat less open approach towards collaborations compared with focused mobile payment companies (section 6.3). An explanation for this could be the lesser financial need in these companies as there are additional sources of revenue, in addition to the fact that their core business was built for other purposes – probably for a market requiring less/different collaborations – and their products and processes are therefore not designed for easy integration with partners.

A result of the described situation is a passiveness in the industry among many actors, as also noted in section 6.4. This corresponds to Schilling's (2010) view that companies can rely on their control over valuable competencies or assets to position them in a value network; hence *a value creation alternative based on the control over core competencies/resources*. However, in an immature industry, like the Swedish mobile payment industry, with a lacking dominant structure, this passive strategy can lead to a very slow progress in the industry overall. That is unless a company working according to 6.5.1 Value creation through targeting, and striving to control a central *position in the value network* joins the actors together. This could help to explain why any major mobile payment schemes (except Premium SMS) have yet to become widely adopted in Sweden.

An example of this kind of value creation is the Premium SMS business model. This is built around the MNOs possibility to connect a phone number with a person's network bill. By owning the customer relationship the MNOs get a huge part of the transaction amounts, even if it is a payment aggregator or payment service provider that actively markets the solution.

6.5.3 Value creation through new innovative structures, creating a new value network, and controlling all the desired parts

Section [6.2](#) describes that there are many collaborations are between actors within the mobile payment industry. This could imply that the many different types of actors in the industry are dependent on each other. This could be explained since many of the collaborations that exist between actors in the mobile payment industry relate to a core process or core activity for the product or solution. A good example of this is the collaborations between payment aggregators and mobile network operators. This is since, the premium SMS product could as an example not be provided by the mobile network operators to all content and service providers, but they are dependent on the payment aggregator, and that they take the role as a middle-man towards a large number of content and service providers. This reasoning is further backed by section [6.3](#) where it is concluded that there is a high degree of dependence on collaborations regarding the mobile payment products the actors are/will be part of.

Section [6.3](#) further discusses the advantages with having collaborations, and finds that the most commonly stated advantage is that collaborations help to deliver products to the market. This helps to explain the perceived dependence on collaborations, at least when they are needed to actually create a product. However, there are also several disadvantages and risks with collaborations as summarized in section [4.7 Key Theory and Frameworks for the Analysis](#). Accordingly, an actor might find a solution not dependent on collaborations more attractive in order to avoid these risks and disadvantages.

In section [4.7](#) the main disadvantages are described as (1) Bureaucracy, (2) Administration and Sharing and (3) the weak functionality of collaborations in immature industries. Combining these reasons with the problem of unbalanced bargaining power that would exist between a small and a large company (section [4.5](#): Lorange and Roos, 1992), there is a clear case for choosing a less dependent business model that does not require collaborations with a specific large actor. In this study, Company H stands out as the company that has chosen this option to *create value by building new structures that are relatively independent of other actors* (section 6.3 and 6.4). Especially under slow development conditions as described in 6.5.2, an independent company like Company H could have time to build a strong position with an alternative solution that leaves the slower actors out altogether.

Moreover, section [4.7](#) also describes the three major risk with collaborations; (1) Incomparability of the partners of a collaboration, (2) Absence of compatible strengths and (3) Antitrust systems. Contractor and Lorange (1988) also mention that a major risk with collaborations is that the partners share revenues, knowledge and technology. Company C for instance mentions that a reason that could cause reluctance towards collaborations is that they have made such good and satisfying profit from their earlier mobile payment products and

solutions so that they are not keen on sharing this with any other actor in the industry. This gives additional reasons for a company to find a value creation solution that is independent on collaborations.

In conclusion, the third value creation option is to *avoid cumbersome collaborations by building a new type of structure/network, and controlling the desired parts of this*. Company H built a solution that did not require the participation of any of the standard actors in the mobile payment value network. Another well-known example of a solution built on a similar principle is PayPal.

7 Conclusion

In this the concluding part of our thesis, we will describe and explain the conclusions we have discovered from our theoretical framework, empirical study and its subsequent analysis.

7.1 The overall Conclusion

As previously explained in this report the purpose with master thesis is to

Create an understanding for the use of, and the approach towards, collaborations, including collaboration strategies, among the different types of actors in the Swedish mobile payment industry. Further, the purpose is also to describe the resulting value creation alternatives for mobile payment actors that the collaboration situation gives rise to.

To make our study more concrete, the purpose was translated into 4 research questions, the main concluding question being:

What are the possible value creation alternatives for mobile payment actors given the collaboration situation in the Swedish mobile payments industry?

Our objective in the process of writing this master's thesis has therefore been to strive to answer this question in order to fulfill the purpose of this study.

Consequently, our conclusion is that given the present collaboration situation in the Swedish mobile payment industry there are three value creation alternatives for a mobile payment actor:

(1) Create value through targeting and striving to control a central position in the value network.

(2) Create value through leaning upon your key resources and by that utilize your power in the value network.

(3) Create value through creating new structures by innovations that lead to the generation of a new value network where you are relatively independent of collaborations.

These conclusions are visualized in Figure 12 and are argued for below. The figures are only illustrations of the concepts, and are not meant to be studied in detail.

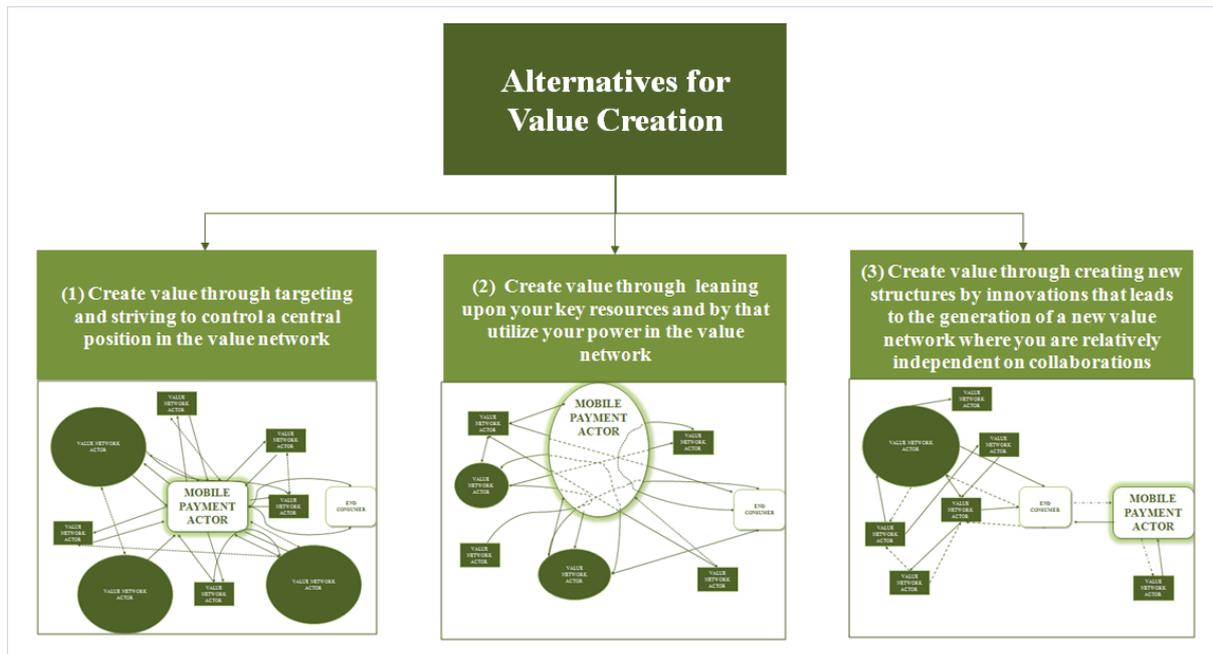


Figure 12 Alternatives for Value Creation

(1) Create value through targeting and striving to control a central position in the value network⁶²

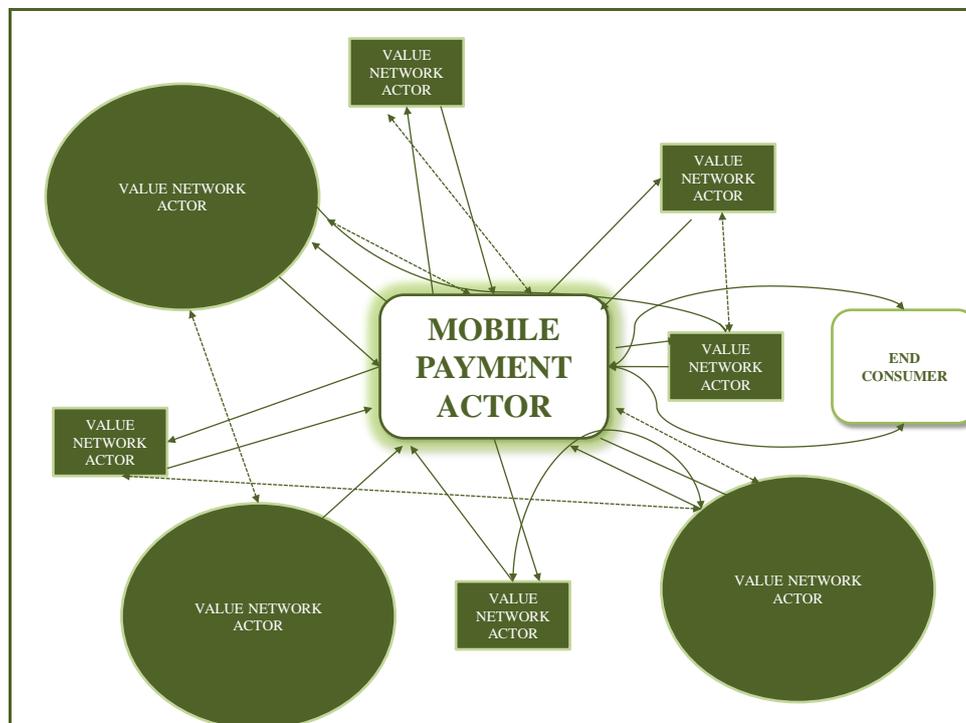


Figure 13 Alternative 1

- In this alternative, the actor should be open and flexible towards collaborations.

⁶² The intention of this figure is to be a visualization of the conclusion rather than a clear description.

- The actor's value network strategy should aim at creating a position where the firm's own capabilities are placed at the center of the value networks in order to make these capabilities valuable for the other actors. Controlling this position the actor can increasingly facilitate and control the creation of new collaborations.
- Succeeding, the actor will be in a favorable control position in the value network and can thus claim shares of the revenue streams that the value network generates.

(2) Create value through leaning upon your key resources and by that utilize your power in the value network⁶³

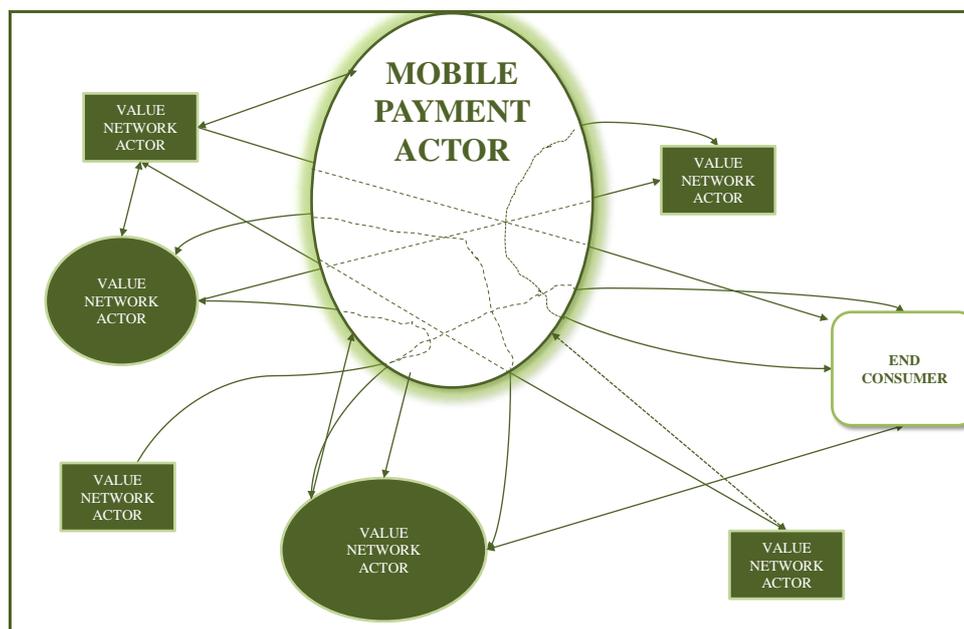


Figure 14 Alternative 2

- In this alternative, the actor can be passive and wait for a collaboration structure to be formed, incorporating the actor into the value network.
- The actor can rely on receiving an important role in the network since its key resources are valuable, and therefore other actors will make sure that the actor becomes a part of the value network.
- The actor can utilize its power over the more dependent actors and can by doing so claim shares of the revenue that the value network generates.

(3) Create value through creating new structures by innovations that leads to the generation of a new value network where you are relatively independent on collaborations⁶⁴

⁶³ The intention of this figure is to be a visualization of the conclusion rather than a clear description.

⁶⁴ The intention of this figure is to be a visualization of the conclusion rather than a clear description.

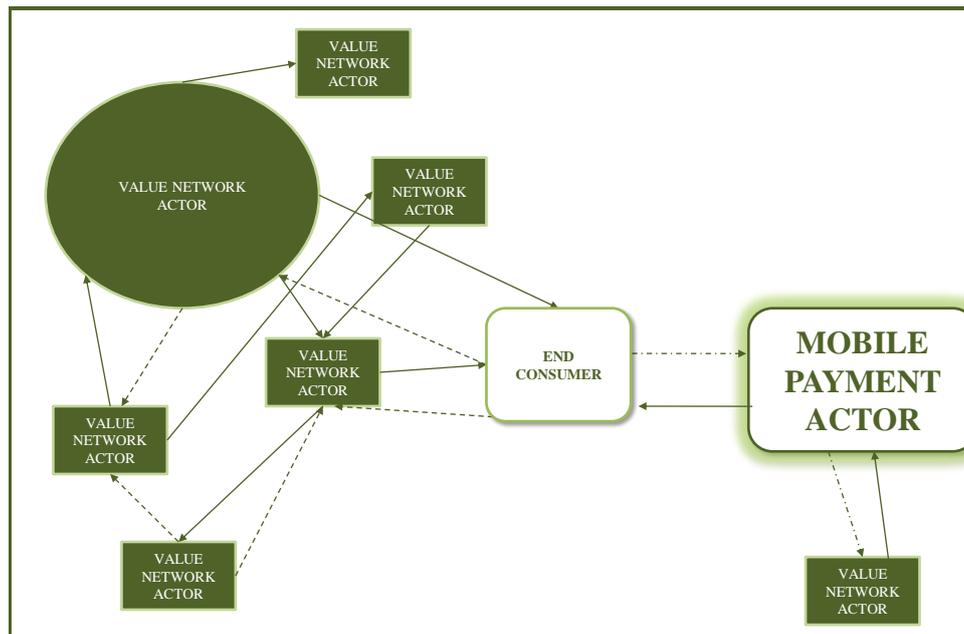


Figure 15 Alternative 3

- In this alternative, the actor could avoid the risks with collaborations and utilize that other actors are exposed to the disadvantages of collaborations, by building new structures that are relatively independent.
- When building new structures that are not so reliant on collaboration arrangements the actor can take control over the crucial parts of the new value network that is created.
- By owning a large part of a value network, the actor can thus control the revenue that is generated.
- Also, if the new structure receives a critical mass of end consumers, it will become interesting for other actors to join. This would put the actor in a dominant control position with great bargaining power over the interested actors.

7.2 Findings Leadings to the Conclusion

The conclusion above was based on an analysis of the present collaboration situation in the Swedish mobile payment industry. Therefore, the previous analysis chapter was to large extent devoted to answering the three sub-research questions:

(1) To what extent do collaborations exist between different types of actors in the Swedish mobile payment industry, and what is the structure of these collaborations?

(2) What are the approaches towards collaborations among the different types of actors in the Swedish mobile payment industry?

(3) What are the different actors' collaboration strategies in relation to the commercialization of mobile payment products?

In this part of the conclusion we will therefore present the key findings from trying to answer these questions.

First and foremost we have seen that collaborations are commonly occurring in the Swedish mobile payment industry and that a majority of these occur with other actors within the industry. Also, in the industry, some types of actors have similar collaboration arrangements while others do not. The collaborations are generally structured so that there is a low degree of formalization and a low degree of inter-organizational dependence in the relationships between the actors.

Additional key findings from the study are that there often is an underlying need among the actors to collaborate, and also a need for the collaborations to occur with other actors in the Swedish mobile payment industry. We saw that the companies with the most positive approach towards collaborations have mobile payments as a core activity. In addition, the most common reason for collaboration is to facilitate the process of taking (complex) solutions to the market.

Finally, we have seen that very few actors have an active value network strategy where they actively strived to reach a favorable position in the value network. And those actors that did have an active value network strategy were actors that had mobile payments as a core activity.

7.3 Concluding remarks

The analysis above regarding the current collaboration situation in the Swedish mobile payment industry resulted in the overall conclusion to our study. Overall, we saw that there are some general tendencies in the Swedish mobile payment industry, even though the industry is complex and in an immature state without any clear dominant business models, or structures in the value network. This situation is also the prerequisite that results in the current value creation alternatives in the Swedish mobile payment industry.

Moreover, we can see that the three alternatives that we conclude exist for a mobile payment actor are interrelated and should be considered in relation to each other. They should also be considered in the light of an actor's current situation and core capabilities and resources. For example, an actor that is following alternative 1, use an active value network strategy, will be able to use the actors that would be characterized as part of alternative 2. This is because passive actors can be the ones being utilized as building blocks in the value network that the alternative 1 actor is trying to connect. Further, less active players can lead to opportunities to build innovative solutions that will reach the market faster or meet consumer demand in a different way. This is because; the passivity can lead to slowness in the value network that can put an actor that is trying to generate a new structure in a favorable position.

In the empirical investigation of this study, the actors in the value network have commented on the current industry situation in many different ways that can be put in relation to the concluding alternatives. Indicating a strong degree of network thinking, the CEO for Company B for instance mentions that he believes that “a company that is trying to build a

payment solution on their own will eventually fail”.⁶⁵ The Product Manager at Company G seems to be focused more on their key resources and capabilities, and argues that “a cobbler should stick to his last”.⁶⁶ Indicating that a less collaborative approach is also an option, the Business Developer at Company E worries that “any actor that on their own manages to receive a critical mass of consumers will be extremely hard to intercept”.⁶⁷ This last statement is however telling for all options: a critical success factor in all alternatives is to obtain a critical mass of users. The kind of solution that will succeed will be revealed in time.

⁶⁵ CEO, Company B (2011). Interview 2011-04-06

⁶⁶ Product Manager, Company G (2011). Interview 2011-03-24

⁶⁷ Business Developer, Company F (2011). Interviewed 2011-04-08

8 Suggestions for Further Research

During this master's thesis study, we have found some interesting areas where we think that further research could be targeted. Hopefully future researchers will find these areas interesting and decide to develop the academic side of these topics further. We found three areas of research that we think are the most interesting to investigate further:

Firstly, the study has indicated that the perceived advantages with collaborating have a different focus compared to prior research. Therefore, we think that this area could be investigated further to update and possibly improve the general advantages with collaborating in the knowledge-based economy. In addition, industry specific differences regarding advantages with collaborating would be interesting to investigate to add even more understanding to collaborations in the Twenty-First Century.

Secondly, an idea could be to do a similar study to this one in another industry, and consequently compare the conclusions from this study to the results from this one. This focus could help to develop the connection between collaborations and industry characteristics. Hence we encourage researchers to take on the task of bringing our purpose and research questions into other industries.

Thirdly, we think that it would be interesting to investigate the same problems that we have focused on but in other markets and/or during a wider time period. Such an investigation could test if our findings regarding value creation alternatives hold in markets with different characteristics and external environments.

9 Bibliography

9.1 Literature

Allee, Verna (2002). *The Future of Knowledge: Increasing Prosperity through Value Networks*. Boston: Butterworth-Heinemann

Besanko, David. Dranove, David and Shanley, Mark. (2000). *Economics of Strategy*. 2nd ed. New York: Wiley

Blaxill, Mark and Eckardt, Ralph (2009). *The Invisible Edge: Taking Your Strategy to the Next Level Using Intellectual Property*. London: Penguin Books

Bryman, Alan and Bell, Emma. (2007). *Business Research Methods*. Oxford: Oxford University Press

Chesbrough, Henry William (2006). *Open innovation: the new imperative for creating and profiting from technology*. Boston; Harvard Business Press

Christensen, Clayton (1997). *The Innovator's Dilemma: When New Technologies Cause Great Firms to Fail*. Boston: Harvard Business Press

Contractor, Farok and Lorange, Peter (1988). *Cooperative Strategies in International Business - Joint Ventures and Technology Partnerships between firms*. Lanham: Lexington Books

Corey Raymond (1997). *Technology fountainheads: the management challenge of R&D consortia*. Boston: Harvard Business Press

Davenport, Tomas, Leibold, Maruis and Voelpel, Sven (2006). *Strategic Mindset for the Innovation Economy*. Hoboken: John Wiley & Sons

Davidsson, Bo and Patel, Runa (2003). *Forskningsmetodikens grunder*. Lund: Studentlitteratur

Denscombe, Martyn (2000). *Forskningshandboken : för småskaliga forskningsprojekt inom samhällsvetenskaperna*. (Övrs: Per Larson). Lund: Studentlitteratur

Dratler, Jay (2006.) *Licensing of Intellectual Property*. New York: Law Journal Press

Eriksson, Torsten & Wiedersheim-Paul, Finn (1991). *Att utreda, forska och rapportera* Malmö. Liber-Hermods

Harrigan, Kathryn Rudie (1985). *Strategies for Joint Ventures*. Lexington: Lexington Books

Hitt, Michael, Freeman, Edward & Harrison, Jeffrey (2001). *The Blackwell Handbook of Strategic Management*. Oxford: Blackwell Publishers

Huyzer, S.E., Luimes, W and Spitholt, M.G.M (1992). *Strategic Cooperation: Orientation and Implementation*. Alphen a/d Rijn: Coopers and Lybrand Dijker van Dien/Samson

Johnson, Gerry, Scholes, Kevan and Whittington, Richard (2009). *Exploring Corporate Strategy*. Harlow: Pearson Education

Kleinaltenkamp, Michael and Ehret, Michael (2006). *Business & Industrial Marketing - Relationship Theory and Business Markets*. Bingley: Emerald Publishing Group

Lorange, Peter and Roos, Johan (1992). *Strategic Alliances; Formation, Implementation and Evolution*. Cambridge: Blackwell Publishers

Noteboom, Bart (1999). *Inter-Firm Alliances; Analysis and Design*. London: Routledge

Parolini, Cinzia (1999). *The Value Net: A Tool for Competitive Strategy* Hoboken: John Wiley & Sons

Petrusson, Ulf (2004), *Intellectual Property & Entrepreneurship, Creating Wealth in an Intellectual Value Chain*, Gothenburg; Center for Intellectual Property Studies

Pries-Heje, Jan, Venable, John J and Bunker, Deborah (2010). *Human Benefit Through the Diffusion of Information Systems Design*. Perth: 6 International Working Conference

Schilling, Melissa (2010). *Strategic Management of Technological Innovation*. Columbus: McGraw-Hill

Trost, Jan (2005). *Kvalitativa Intervjuer*. Lund: Studentlitteratur

Trott, Paul (2005). *Innovation Management and New Product Development*. Harlow: Pearson Education.

Wallén, Göran (1993). *Vetenskapsteori och forskningsmetodik*. Lund: Studentlitteratur

Wong, Tzen and Dutfield, Graham (2010). *Intellectual Property and Human Development: Current Trends and Future Scenarios*. Cambridge: Cambridge University Press

Yoshino and Rangan (1995). *Strategic alliances: An entrepreneurial approach to globalization*. Boston: Harvard Business School Press

9.2 Articles

Ballon, Pieter (2007). *Business modelling revisited: the configuration of control and value*. Emerald Publishing Group. Volume: 2007 : 9.5.

Biem, Alain and Caswell, Nathan (2008) *A value network model for strategic analysis* Proceedings of the 41st Hawaii International Conference on System Sciences. 2008

Boersma, Jakob, de Bel, Jeroen and Screpnic, Adriana (2011). *Innopay: Online payments 2011 - a market in motion* Innopay. 2011:1

Bouwman et.al (2008). *How new billing processes reshape the mobile industry*. Research paper Emerald Group Publishing Limited. 11-1 pp: 78-93

Camponovo G., Ondrus J and Pigneur Y., (2005). *A Proposal for a Multi-Perspective Analysis of the Mobile Payments Environment*. The 4th International Conference on Mobile Business (ICMB'05). IEEE Computer Society, Sydney, Australia, 2005

Gerpott, T., & Kornmeier, K. (2009). *Determinants of customer acceptance of mobile payment systems*. International Journal of Electronic Finance, 3(1), 1–30.

Hansen, Morten, Nohria, Nitin (2004). *How to build Collaborative Advantage* MIT Sloan Management Review. Fall2004, Vol. 46 Issue 1, p22-30

Kanter, Rosabeth Moss (1996). *Collaborative Advantage: The Art of Alliances*. Harvard Business Review. Jul/Aug94, Vol. 72 Issue 4, p96

Karnouskos, Stamatis (2004). *Mobile payment: a journey through exiting procedures and standardization initiatives*. IEEE Communications Surveys and Tutorials 6 (4) (2004) 44–66.

Leslie, Annette. (2006). *Why do so many industrial collaborations Fail?* Engineering Management. Apr2006, Vol. 16 Issue 2, p40-42, 3

Michaël Van Bossuyt, Leo Van Hove, (2007). *Mobile payment models and their implications for NextGen MSPs*, Emerald Group Publishing Limited info, Vol. 9 Iss:5, pp.31 - 43

OECD (1996). *Organisation for economic co-operation and development; paris, general distribution* OECD/gd(96)102

Powell, Oliver (1990). *Neither Market nor Hierarchy: Network Forms of Organization*; Research in Organizational Behaviour; 1990:12, 295-336

9.3 Internet Resources

Bankföreningen (2011). *Bankföreningen utvecklar mobila betalningar*. (Electronical). Available:

<[http://www.swedishbankers.se/web/bf.nsf/\(\\$All\)/EF34FE054AADB641C12576F0003037E2?OpenDocument](http://www.swedishbankers.se/web/bf.nsf/($All)/EF34FE054AADB641C12576F0003037E2?OpenDocument)> (2011-05-10)

Bytoft-Nyaas, Eli (2008). *Att ange källa, skriva citat och noter : en introduktion till Harvard-systemet*. (Electronical) Borås: Högskolan, biblioteket. Available: <<http://www.hb.se/blr/harvard/har.asp>> (2011-04-27).

ETSI (2011). *About ETSI*. (Electronical). Available: <<http://www.etsi.org/WebSite/AboutETSI/AboutEtsi.aspx>> (2011-05-10)

Mobile Nfc (2011). *NFC*. (Electronical). Available: <<http://www.mobilenfc.eu/>> (2011-05-10)

Nationalencyklopedin (2011). *Bank*. (Electronical). Malmö: Nationalencyklopedin Available: <<http://www.ne.se/lang/bank/123564>> (2011-05-10)

Nationalencyklopedin (2011). *Samarbeten*. (Electronical). Malmö: Nationalencyklopedin Available: <<http://www.ne.se/sve/samarbete>> (2011-05-10)

Nationalencyklopedin (2011). *Stanardisering*. (Electronical). Malmö: Nationalencyklopedin Available: <<http://www.ne.se/lang/standardisering/314053>> (2011-05-10)

Oxford Reference (2011). *Network Operator*. (Electronical). Oxford: Oxford Reference Available: <www.oxfordreference.com.ezproxy.ub.gu.se/views/ENTRY.html?entry=t11.e4223&srn=1&ssid=1180506087#FIRSTHIT> (2011-05-10)

Sony (2001). *Press Archive*. (Electronical). Available: <http://www.sony.net/SonyInfo/News/Press_Archive/200108/01-0828/> (2011-05-10)

Sony Ericsson (2011). *About Us*. (Electronical). Available: <<http://www.sonyericsson.com/cws/corporate/company/aboutus/profile>> (2011-05-10)

9.4 Dissertation

Roos, Johan (1989). *Cooperative Venture Formation Process: Characteristics and Impact on Performance*. Diss. Stockholm School of Economics, Sweden 1989. Stockholm.

10 Appendix

10.1 Interview Guide that was used in the Empirical Investigation

(1) Introduction to the Master's Thesis

- Presentation of the authors and the thesis
- Purpose of the study
- How the information will be used
- Permission to record interview

(2) Background about the interviewee/respondents

- Background about the interviewee
 - Academic background
 - Industry background
- Information about his/her current position
- Information about his/her current work tasks

(3) Definition of mobile payments

Since mobile payments are so broadly defined (there are as many mobile payment solutions/products as there are definitions), we believe that this introduction will secure that we are in the same ballpark.

- Describe what you think about if we mention Mobile Payments/Mobile Payment Solutions and Products?
- How would you define mobile payments?

(4) Mobile Payments and Collaborations

This section will be divided into three parts; (1) current solutions offered through this actor, (2) future solutions offered by this actor (3) current solutions, where the actor is a passive part of the mobile solution.

Current Product/Solution

- If applicable, describe any mobile payment products/solutions Company X offers to end consumers/end users today.

- How does the product function?
- Describe the value for the end user/end consumer the product generates?
- About the collaboration around the product;
- Describe how active your company is in order to bring this product to the market?
- Are you owners of getting the product to the market?
- Explain how you make sure that the product becomes successful? What strategy?
- From a holistic perspective, what major components would you say are needed for the product to function?
- Who owns these components?
- Describe how you developed your building blocks/components?
- Describe the kind of companies you collaborate with to provide this product to the market?
- How does the collaboration look like?
- How does the collaboration structure look like? Formal contracts, ownerships, division of revenues etc.
- What other alternative structures did you consider in this collaboration?
- Why did you choose this kind of collaboration model?
- Why did you choose to collaborate with these actors?

Future Product/Solution

If applicable, explain how your company plans or evaluates any future mobile payment products/solutions to end consumers/end users?

- Please, describe the product and solution.
- How does the product function?
- Describe the value for the end user/end consumer the future product will generate?
- About the collaboration around the product; Describe how active your company is in order to bring this product to the market?

- Are you owners of getting the product to the market? Explain how you make sure that the product becomes successful? What strategy? From a holistic perspective, what major components would you say are needed for the product to function?
- Who owns these components?
- Describe how you developed your building blocks/components?
- Describe the kind of companies you collaborate with to provide this product to the market?
- How does the collaboration look like?
- How does the collaboration structure look like? Formal contracts, ownerships, division of revenues etc.
- What other alternative structures did you consider in this collaboration?
- Why did you choose this kind of collaboration model?
- Why did you choose to collaborate with these actors?

Current partner in Product/Solution

- If applicable, describe how your company works other companies that provide mobile payment solutions to the end consumers/market?
- Please, describe the product and solution.
- How does the product function?
- Describe the value for the end user/end consumer the product generates?
- About the collaboration around the product; Explain how you make sure that the product becomes successful? What strategy? From a holistic perspective, what major components would you say are needed for the product to function?
- Who owns these components?
- Describe how you developed your building blocks/components?
- Describe the kind of companies you collaborate with to provide this product to the market?
- What does the collaboration look like?
- What does the collaboration structure look like? Formal contracts, ownerships, division of revenues etc.

- What other alternative structures did you consider in this collaboration?
- Why did you choose this kind of collaboration model?
- Why did you choose to collaborate with these actors?

About the usage of collaboration models in the company

This section is intended to provide us with the general perception of collaborations in the mobile payment industry.

- Describe your company's current perception towards collaborations?
- Motivate/Describe how important collaborations are for your company? At what level of your company are decisions about collaborations made? Explain how your company generally uses collaborations as a strategic tool?
- Explain how it is used when taking products onto the market?
- Why do the collaborations exist with your collaboration partners?
- Could you describe an example of a successful collaboration your company has/have had?
- Could you describe an example of a less successful collaboration you company has/have had?