

Barriers to Business Model Innovation - A comparative case study of the Finnish paper and telecom industries

Marketing
Master's thesis
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2010

AALTO UNIVERSITY SCHOOL OF ECONOMICS
DEPARTMENT OF MARKETING AND MANAGEMENT

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OBJECTIVE OF THE STUDY

The aim of this study is to describe the business model innovation (BMI) process, and the barriers and enablers related to that process in two for the Finnish economy significant industries: the paper industry and the telecom industry. The process of creating business model innovations has not been discussed to any broad extent in the literature, and the barriers to business model innovation described in the literature are of a very generic and abstract nature. The aim of this study is to identify the concrete barriers and challenges to business model innovation. By comparing two industries with very different characteristics, but the same problem (lack of business model innovation), the study aims at identifying both industry-specific as well as universal barriers to BMI, in order to bring some valuable insight to academics and practitioners alike.

RESEARCH METHOD

This is a qualitative study. A comparative multiple case study has been conducted of the Finnish paper and telecom industries. After reviewing the literature on business model innovations and barriers and enablers of BMI, 17 interviews with practitioners and experts from both industries were conducted. Analysis of the data resulted in insight into both the BMI process and the barriers and enablers of BMI. The results were then compared to those suggested in the literature.

FINDINGS

The study contributes with both development of the theory, as well as managerial implications. The theoretical contributions include introducing a new process model for BMI, and identifying universal, as well as industry-specific barriers to BMI. The universal barriers and enablers are compared to those suggested in the literature, and some additions are suggested. For practitioners, the study brings insight into the concrete barriers that are hindering organizations from creating new business models, and suggests some organizational changes which may enable the BMI process.

KEYWORDS

Business model, business model innovation, barriers, enablers, telecom industry, paper industry

Contents

Figures and tables.....	5
PART I: Introduction.....	6
1.1 Research problem and scope	7
1.1.1 <i>Innovative business model vs. business model innovation.....</i>	<i>7</i>
1.1.2 <i>Business Model vs. Strategy</i>	<i>8</i>
1.2 Structure of study.....	9
PART II: Theory Review	10
2 Business Model – a debated concept.....	10
2.1 Business model definitions.....	10
2.1.1 <i>Classifications of business models</i>	<i>12</i>
2.2 Business model elements – What is a business model made of?	12
2.3 Evaluating business models.....	16
3 Business Model Innovation	16
3.1 Why and when is BMI needed?.....	18
3.2 What is (a) business model innovation?.....	19
3.3 The process of BMI	20
3.4 Experimentation: a key to BMI	22
3.5 Managing parallel business models.....	24
4 Generic enablers of and barriers to BMI	26
4.1 How is BMI different than any other organizational change?	26
4.2 Enablers of BMI	27
4.2.1 <i>Organization and culture.....</i>	<i>27</i>
4.2.2 <i>Management involvement and support</i>	<i>27</i>
4.2.3 <i>Information technology.....</i>	<i>28</i>
4.3 Barriers to BMI.....	29
4.3.1 <i>Organizational structure.....</i>	<i>31</i>
4.3.2 <i>Organizational culture.....</i>	<i>31</i>
4.3.3 <i>Financial metrics and incentives.....</i>	<i>32</i>
4.3.4 <i>Barriers in the BMI process.....</i>	<i>33</i>
4.3.5 <i>Overcoming the barriers – suggestions by the literature</i>	<i>34</i>
4.4 Summary and research agenda	34
PART III: The chosen methodology: A comparative multiple-case study	35
5 Qualitative case study research.....	35
6 Research design.....	36

7	Method : Abductive reasoning	37
7.1	Case sampling	38
7.1.1	<i>Choice of case industries</i>	38
8	Research process	39
8.1	Empirical data gathering and analysis	39
9	Research Quality: Validity and reliability	42
9.1.1	<i>Yin’s validity tests</i>	42
9.1.2	<i>Research reliability</i>	42
PART IV: The case study		44
10	The case industries	44
10.1	The Finnish telecom industry	44
10.2	Finnish forestry industry.....	45
11	Case 1: BMI in the telecom industry	47
11.1.1	<i>Significant business model innovations in the industry</i>	47
11.1.2	<i>Use of R&D resources for BMI</i>	48
11.2	Barriers to business model innovation.....	48
11.2.1	<i>The role of corporate culture and the top management</i>	50
11.2.2	<i>The role of IT</i>	51
11.3	Barriers in the BMI process	52
11.3.1	<i>Level 1</i> :.....	52
11.3.2	<i>Level 2</i> :.....	52
11.3.3	<i>Level 3</i> :.....	53
12	Case 2: BMI in the paper industry	53
12.1.1	<i>Significant business model innovations in the industry</i>	53
12.1.2	<i>Use of R&D resources for BMI</i>	54
12.2	Barriers to business model innovation.....	54
12.2.1	<i>Corporate culture and the role of the top management</i>	56
12.2.2	<i>The role of IT</i>	56
12.3	Barriers in the BMI process	57
12.3.1	<i>Level 1</i>	57
12.3.2	<i>Level 2</i>	57
12.3.3	<i>Level 3</i>	58
13	Research results	59
13.1	Result 1: General barriers to BMI	60
13.1.1	<i>Universal barriers</i>	61

13.1.2	<i>Industry specific barriers</i>	63
13.1.3	<i>Telecom industry</i>	63
13.1.4	<i>Paper industry</i>	65
13.1.5	<i>Summary of results</i>	65
13.2	Result 2: Barriers in the process of BMI	66
13.3	Result 3: Overcoming the barriers.....	69
13.3.1	<i>Enablers of BMI</i>	69
13.3.2	<i>Concrete measures in the telecom industry</i>	69
13.3.3	<i>Concrete measures in the paper industry</i>	72
13.3.4	<i>Summary of results</i>	73
PART V:	75
14	Discussion and conclusions	75
14.1	Theoretical contributions	75
14.2	Managerial contributions	76
14.3	Research restrictions and suggestions for future research.....	76
15	References	78
16	Appendices	83
16.1	Interview questions	83

Figures and tables

Figure 1: Santos et al (2008, p 12): The dual linkage nature of business models	11
Figure 2: Linder & Cantrell 2000: Change model of business models (p13.)	17
Figure 3: Cooper's (1996) third generation stage-gate model with overlapping stages and gates	21
Figure 4: BMI process that includes the stage-gate model (Cooper, 1996)	22
Figure 5: Black-hole investment strategies versus options oriented investment strategies.	23
Figure 6: Different strategies for managing dual business models (Markides & Charitou, 2008, p3)	25
Figure 7: The business model innovation process and the barriers at each stage.	33
Figure 8: Systematic combining (Dubois & Gadde, 2002)	37
Figure 9: Employees in the Finnish telcom industry during the years 1995-2007 (Statistics Finland).....	45
Figure 10: Employees in the Finnish paper industry during the years 1995-2007 (Statistics Finland).	46
Table 1: Elements of business models according to the literature review	15
Table 2: Chosen definitions	19
Table 3: Santos et al. (2009): Reconfigurations of business models	20
Table 4: Barriers to business model innovation	30
Table 5: Industry characteristics.....	39
Table 6: Informants of the research	41
Table 7: Net sales and net income/loss in 2008. (PriceWaterhouseCoopers, 2009)	46
Table 8: Summary of research results	59
Table 9: Barriers to business model innovations mentioned by informants	60
Table 10: Barriers to business model innovation in the context of the business model innovation process.....	67
Table 11: General enablers of business model innovation as suggested by informants	69
Table 13: Suggested concrete measures for increasing business model innovations	70

PART I: Introduction

Academics and practitioners alike are agreeing that the subject of business model innovation is highly topical at the moment. It is discussed in various different domains, such as management, strategy, e-business and information systems (Pateli & Giaglis, 2003). The reasons for business models receiving so much attention lies within the rapidly changing business environment, driven by globalization and technological innovations that change the business landscape (MacGrath, 2007; Osterwalder, 2004 etc.). The earning logics of several industries have been turned on their heads, and change happens so fast in many industries because of rapid technological development, resulting in hypercompetition and uncertainty as development directions are increasingly challenging to estimate. The impact of transaction costs and coordination issues has declined due to the impact of information technology and thus enables more configurations of the business, however the companies' businesses have also become more complex and involve more stakeholders. Therefore traditional management tools and concepts may not be valid anymore (Osterwalder, 2004).

Several management surveys have shown that business model innovation is a highly prioritized area on the management agenda (Pohle & Chapman, 2006). Furthermore, academics agree that the business model can be a source for sustainable competitive advantage (MacGrath, 2007; Johnson et al, 2008; Teece, 2009; Chesbrough, 2007; Afuah & Tucci, 2001; and several more), however the constituents of a business model can still be quite transparent and easy to imitate, resulting in situations where successful business models often to some extent are shared among competitors (Teece, 2009). In any case, it seems to be clear that business models are worth pondering. But what makes business models interesting and/or valuable?

McKinsey's Innovation Survey (Berwig, Marston et al, 2009) showed that business model innovation tend to generate bigger gains than product or process innovations. The reason for this is thought to be that business model innovations are harder to copy for competitors, and therefore the advantage of a change in business model was longer lasting, than that of product or process innovations. Chesbrough (2007) also comply with the view that business models are harder to copy than technology or products. He also states that a better business model is more valuable than having a better product or technology. Furthermore, Chesbrough argues that it is cheaper to conduct business model innovation than product innovation. This argument is also supported by Zott & Amit (2010), who argue that business model innovation is a way of extracting more value from the firm's existing resources, markets and knowledge. The systemic view on the business models supported by Nenonen & Storbacka (2010) and Tikkanen et al. (2005) however contradicts this claim, as they see the business model from a systemic view, implying that a configural fit between the parts of the business model needs to be ensured, and that when changing some parts of the business model, the whole entity needs to be rethought.

Every firm has a business model, whether it is acknowledged or not by the management (Chesbrough, 2007). Osterwalder (2005) states that the business model's place in the firm is as the blueprint of how the company does its business. It serves as a building plan that enables the organization to design and realize the "business structure and systems that constitute the company's operational and physical form". We will dwell deeper into the constituents of a business model in the next chapter, but apart from the obvious business related tasks of a business model, many researchers also entitle the concept with other attributes and responsibilities. Magretta (2002), for instance emphasizes the motivational factor the business model has for the employees, as it tells the story of how the company functions, and thus communicates the mutual goals of all employees.

Osterwalder (2004) agrees that having a clear business model improves the understanding and sharing of the business logic within the organization. Chesbrough & Rosenbloom (2002) add to the praise of the business model by stating that constructing a business model brings some clarity and rationality to a complex environment. According to Teece (2009), the business model plays an important part in capturing the value of

inventions, and thus the ability to create viable business models is important on a societal level as well. In the case of the Finnish economy that traditionally has been strong in developing technologies but lacking commercialization skills, business model research is relevant to ensure the future competitive position in the global economy. Also, it seems that radically new and different business models are mainly generated by start-ups and that incumbents are having troubles keeping up, which can result in entire businesses being liquidated if the incumbents aren't ready to jump on new opportunities and revamp their business. The business model concept offers a beneficial new view of the operations of a company, as it takes an outside-in rather than an inside-out focus. The internal focus promoted by for instance core-competence thinking hinders companies from reacting on the changing business environment, and being an agile player in the market (McGrath, 2010).

1.1 Research problem and scope

The research questions that are investigated in this thesis are related to the business model innovation processes in firms.

The main research question of the study is the following:

Which are the barriers to business model innovation?

More specifically, the research tries to answer the following questions:

- Where in the business model innovation process are the barriers located?
- Are there similar or different barriers to business model innovation in the two studied industries?
- Are the barriers related to industry structure, processes, cognition, thinking patterns, organizational culture or something else?
- Which potential solutions can be found to overcome the barriers?

As very little can be found on business model innovation processes and barriers to business model innovation in the literature, this study contributes to the existing literature by adding new knowledge to these areas. A framework is created based on the existing business model literature, and is tested through interviewing representatives in two different industries. The research results are then used to further develop the model and suggest future research in the field.

The research domain of business models and business model innovation is rather large and flaky, and to create a more focused research agenda one needs to shut out some of the interesting, but for this purpose irrelevant research discussions. These are briefly discussed next:

1.1.1 Innovative business model vs. business model innovation

The business model literature is effectuated with describing innovative business models, such as that of Apple's iPod, Amazon.com and for instance freemium or long-tail business models. Teece (2010) finds it ironic that even though the incumbents are the ones with great advantages in brands, sharp people and significant resources, it seems that start-ups are more prominent in creating new innovative business models and profiting from growing markets. There is a gap between innovative business models, which often focus on start-ups, and business model innovation, which comprises a whole set of challenges related to organizational restructuring and transformational change.

The business model of a start-up may be creative, but it most likely not created solely with the purpose of being a good business model, but to profit from an innovation (Teece, 2010). The literature that mentions innovative business models introduced by start-ups should take into account that however successful a business model may be, it will not survive forever (Chesbrough, 2007). To determine whether a company has successfully managed its business model, one should take a longer perspective. Even though incumbents

experience greater challenges and inertia when it comes to renewing their business models, they are seemingly more willing to change their business models. However there are barriers of business model innovation that keep them down (Comes & Berniker, 2008). In this study the area of interest lies within the domain of business model innovation, and not innovative business model design per se.

There is a difference between business model design for innovations and business model innovations. Designing business models is necessary for being able to capitalize on innovations, however, business model innovation creates a new business model design for an existing business. One can also distinguish between incremental business model renewal done as a continuous process (e.g. improving processes and technologies, adding new channels or such) or making game-changing business model innovations, where you radically deviate from the industry standard. The challenges and issues related to business model innovation are closely related to those of organizational change, which can be seen as a term comprising many different change initiatives, BMI being one of them. The focus of this study will be managing business model innovation specifically, but many of the issues and topics that arise in the literature can be said to be true also for managing organizational change.

1.1.2 Business Model vs. Strategy

As the definition of business models has not reached consensus, it still remains unclear what the difference and relationship between business models and strategy. Both terms are among the most “sloppily used terms in business”, and the concepts have often been used interchangeably (Magretta, 2002). In this study the focus will be on business models, not strategy. The differences, and similarities, are discussed next.

As Porter’s definition of strategy (2001) can be said to be widely accepted (Seddon et al., 2004), the definitions of business models are usually compared to this, which is also sometimes referred to as the Harvard-school conceptualization of strategy. In Seddon et al (2004, p 433) Porter’s latest conceptualizations of strategy (1996, 2001) are comprised to “*involve defining a company’s long-term position in the marketplace, making the hard trade-offs about what the company will and will not do to provide value to customers, and forging hard-to-replicate fit among parts of the “activity system” the firm constructs to deliver value to customers, all with a view to making a superior return on investment.*”

The dominant view on the differences between strategy and business models (Teece, 2009, Magretta, 2002, Osterwalder, 2005) is that while the business model is concerned with how to create and capture value, the business strategy is concerned with dealing with the competition. Keen & Quereshi (2006) state that there is no real evidence of established companies ever announcing new business models, but merely *strategic shifts*. A proposed way of bridging the gap between business models and strategy is to recognize that an effective business model must be supported by effective strategy, and become embedded in the strategy over time. Magretta (2002) states that strategy and business models are not the same, but that both are needed.

According to Chesbrough & Rosenbloom (2002) the emphasis of business models lay in value creation for the customer, whereas capturing that value lies within the domains of strategy. Moreover, another difference argued for by Chesbrough and Rosenbloom is that financing of value creation activities is implicitly assumed in business models, whereas it is explicitly assumed in strategy, because of connection to creating shareholder value. Finally, the third difference is derived from the assumptions about the state of knowledge held by the firm and its stakeholders. (Chesbrough & Rosenbloom, 2002). Keen & Quereshi conclude their argumentation by drawing on experiences from the e-market stating that it seems to be that a company aiming at entering a market or industry, bridging industries or creating a new market space needs a business model first, and that any firm within an industry needs a strategy. Also a company going through a transformation needs to

communicate the changes in their goals and operations, and for that purpose a business model is a good tool. Osterwalder (2005) points out that one element of difference that hasn't been that much discussed is that strategy includes implementation, while implementation and execution is widely neglected in the business model conceptualizations. Teece (2009) adds a layer of strategic analysis as the last step of business model design and states that *"A competitively sustainable business model requires a strategic analysis filter"*

Seddon et al. (2004) discuss the relationship between business models and strategy and state that it is irrelevant to ask whether business models are part of strategy or the other way around, and what their exact relationship is, because when experts in either concepts define their concepts it becomes clear that the two are essentially the same. The term business model seems to be more prominently used among those with a technology background, whereas those with a business background use strategy. However, according to Seddon et al., there are uses of the term business model that do not interfere with that of strategy, and thus can be seen to add value. They propose that it can be helpful to consider the differences and similarities of the concepts as different levels of abstraction. Under this view, business models are considered to be abstractions of strategy, which illustrate elements of the strategy that can be used across firms.

In conclusion, when referring to business models in this study, a construct separate from that of strategy is intended.

1.2 Structure of study

To summarize, the business model innovation discourse is highly topical, and subject of the interest of both scholars and practitioners. In this study the interest lies within the domain of business model innovation, which here is separated from innovative business models and the strategy concept. The aim is to be able to describe the business model innovation process, and find out which the enablers and barriers are in that process.

This study is divided into five parts. First, a theory review will introduce the research and literature concerned with business models and business model innovation. A definition for business models and business model innovation will be chosen, and the business model elements, as well as the business model innovation process will be described. Based on the theory review, an initial framework will be developed and a research agenda created.

Next, the research methodology will be described in detail. This is an qualitative study which follows an abductive research approach. The research design and process are described in detail, and the research validity and reliability are assessed.

The third chapter will describe the two case industries and the empirical research. 17 interviews have been conducted with practitioners and experts from the two case industries, and the content and findings of the interviews is analyzed. The developed framework is revised according to the empirical evidence.

Finally, in the fourth chapter the conclusions that can be derived from the research will be discussed. I will also suggest future research areas and discuss the theoretical and managerial contributions, as well as identify some of the limitations of this study.

PART II: Literature Review

When speaking about business models, many things can be meant by these two words. Linder and Cantrell (2000) state that three things can be meant when talking about business models; elements of business models (e.g. the earning logic or the value proposition), the operating model (which is what is really to be meant by the concept of business model: the core value creating logic of a firm), or change models (which describe how the firm's business model is to change over time to adapt to changing business environment). Chesbrough (2007) and Santos et al. (2009) state that in order to innovate a business model, understanding of what a business model is must first be established. To clarify the concepts and the different research discussions within the area of business models, I will in the next chapter give a brief review of some of the research discussions related to business models in the academic literature. I will begin by discussing why business models are considered to be interesting, as well as what the business models actually do in an organization. Next I will go through numerous definitions of business models, as no consensus on what a business model in its essence really is, has been reached. After this, the elements and classifications of business models will be reviewed. Before concentrating more on the actual topic of this thesis, Business Model Innovation, I will shortly describe various methods of evaluating business models, i.e. discuss what a "good business model" is.

A literature review according to Cooper (1998), uses primarily written documents of original scholarships, but does not report new original findings. The main reason for doing literature reviews is to summarize, clarify, evaluate and/or integrate the content found in existing primary documents. (Cooper 1998). The primary sources have been gathered through using search databases and through the reference lists of articles that have been found to be useful. The field of business models and business model innovations is a research field that has close ties with managerial issues and the results of the research often has very clearly articulated managerial implication. This makes it an intriguing (and lucrative, perhaps) field for consultants and other experts to research, and many of the often cited references in the literature have a more managerial profile. As the topic matures, the academic depth of the business model literature will hopefully increase. For this thesis I have used both articles that fulfill the requirements of academic publishing, as well as writings of a more managerial nature, however with an emphasis on the academia.

2 Business Model – a debated concept

To this date, a mutual understanding of what the business model concept comprises has not been established. As Osterwalder (2005) has showed, the occurrence of the term business model has increased substantially from the beginning of the 90's, when it was rarely mentioned if at all, to being mentioned in more than 15 article titles in the year 2000. The surge of business model – related articles coincided with the rise of the NASDAQ stock and the subsequent IT-bubble. In the last 10 years, the business model research has become an acknowledged research stream within industrial marketing research. Even though it has been a popular research theme, there is still no unison definition of a business model. Several definitions and propositions have been made, but as Mäkinen and Seppänen (2007) find in their study, the current business model concepts do not comply with taxonomical criteria, and might even be misleading.

I will next give a brief introduction of the discussion on business models in literature, and defend the definition chosen for this thesis.

2.1 Business model definitions

The overall objective of business models is to create value for all parties involved (Zott & Amit, 2010), which happens through the value proposition (Magretta, 2002). The main role of the business model construct is to find and design promising business concepts, as well as a being a tool that enables sharing, developing and

managing of the business (Osterwalder, 2005). A business model is in essence a good story, which answers the basic questions about the business, such as which are the customers? What do they value? How do we make money in this business? (Magretta, 2002). Teece (2010, p2) state that *"in essence, a business model embodies nothing less than the organizational and financial 'architecture' of a business"*.

The business model construct can be seen as describing transactions within an organization (Zott & Amit, 2007, 2008), which complies with Osterwalder's (2004) statement of the business model being the blueprint of how a company does business: business models help to *"capture, visualize, understand, communicate and share the business logic"* (Osterwalder, 2004 p 23). However, recently an activity focus on business models have been argued to be useful (Zott & Amit, 2010). When a transaction-based view describes *"a system that is made up of components, linkages between the components and dynamics"* (Afuah & Tucci, 2002), an activity based view of business models is described as *"the set of which activities a firm performs, how it performs them, and when it performs them"*. In their previous papers (2007, 2008), Zott & Amit define the business model as *"the structure, content, and governance of transactions between the focal firm and its exchange partners"* however, lately the authors have converged to the activity approach, and define business models as: *"a template of how a firm conducts business, how it delivers value to stakeholders (e.g., the focal firms, customers, partners, etc.), and how it links factor and product markets"*. Santos et al. (2009) define a business model as *"a configuration of activities and of the organizational units that perform those activities both within and outside of the firm designed to create value in the production (and delivery) of a specific product/market set"*, and thus bring a relationship aspect to the discussion that previously has been mainly concerned with transactions and activities. Santos et al's dual linkage model is depicted in Figure 1.

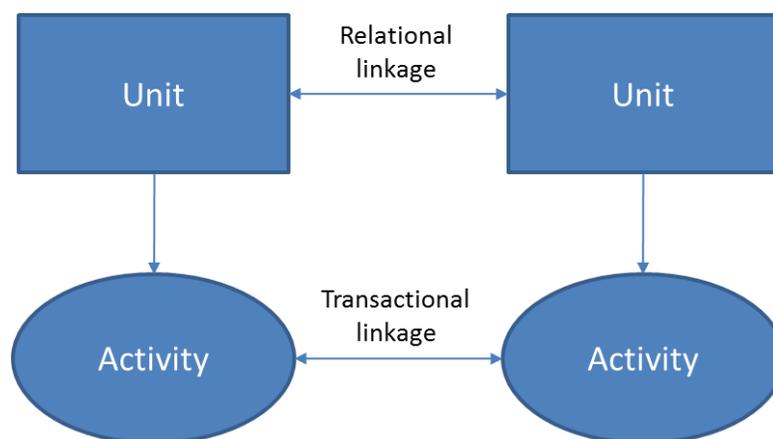


Figure 1: Santos et al (2009, p 12): The dual linkage nature of business models

Chesbrough & Rosenbloom (2002) see the business model as a mediating construct between technology and economic value, enabling companies to capitalize on the technological input. In other words business models are needed to capitalize on innovation. Teece (2010) agrees and adds that the business model articulates the logic and provides the data and other evidence that demonstrates that value is created and delivered to the customers. The revenue, cost and profits architecture associated with delivering value to the customer is also outlined by the business model, however, Teece emphasizes that the business model is a conceptual, rather than financial model of a business. Santos et al (2009) describe the business model as a *"configuration of activities and of the organizational units that perform those activities both within and outside the firm designed*

to create value in the production (and delivery) of a specific product/market set". This is the definition of business models that have been chosen for this study, as it comprises both the theme of configuration (and therefore the importance of "fit" between the elements), and the internal and external relational linkages which are elemental for the success of the business model.

The differences in perceptions of the concept of business models have been categorized by Osterwalder et al, (2005) into three categories: 1) overarching business model concepts that abstractly describes what a business does, and which elements are to be found in a business model, 2) taxonomies and more specific models and 3) specific business model cases and examples.

2.1.1 Classifications of business models

Malone et al (2007) have tried to create a typology of business models and have tried to assess which business models perform better than others. Their typology is two-dimensional, focusing on what is being sold and which types of assets are being sold. Malone et al were not able to give a final answer to which is the best business model, but their research showed that some do perform better than others, but on different measures of performance. Chesbrough (2007) presents a business model framework that shows the development stage of the business model. When the business model has not been considered at all, the company is forced to compete on price and availability. The more complex the business model becomes, the greater the competitive advantage. The two highest levels are reached when the company integrates its innovation activities into the business model, and finally, when the business model is an adaptive platform and experimenting with and developing new business models is constant.

Amit & Zott (2007) divide business model designs into efficiency-centered and novelty centered designs. Novelty-centered business model designs focus on adopting new ways of creating and capturing value, by for instance creating partnerships, combining resources, or designing new transaction mechanisms. Efficiency-centered business models build on minimizing transaction costs and producing the product/service as cost-efficiently as possible. Amit's and Zott's research show that novelty-centered business model designs have a positive impact on the performance of entrepreneurial firms. They also find that attempts to incorporate both novelty- and efficiency centered design elements into the business model can be counterproductive.

2.2 Business model elements – What is a business model made of?

According to Osterwalder (2005 p5), a "business model is a conceptual tool that contains a set of elements and their relationships and allows expressing the business logic of a specific firm". However, there are many views on which these elements are. In most definitions of the business model, the same elements are present. At its most stripped-down version, the elements are value creation and value capture, and various sub-categories of these. Some of the models and frameworks have a very pragmatic approach and suggest best practices for managers (Chesbrough & Rosenbloom, 2002; Johnson et al., 2008; Osterwalder et al., 2009, Nenonen & Storbacka, 2010;) whereas some are more theoretically oriented and express merely general aspects of the business model construct (Voelpel, 2005; Hamel, 2000; Stähler, 2001). The reason for splitting up business models into maps and elements like this is to make it easier to understand and utilize the business model construct as a tool (Chesbrough, 2010).

Chesbrough and Rosenbloom (2002) define the functions of a business model as articulating the value proposition, identifying a market segment, defining the structure of the value chain and estimating the cost structure and profit potential, describing the position of the firm in the value network, and finally, formulating the competitive strategy. In Voelpel's (2005) definition of business models, the main elements are new customer value proposition, the value network configuration, and a sustainable revenue model.

Osterwalder (2004) introduced a framework for elements of business models, which is based on the previous literature in the field. He recognized nine elements that were reoccurring in the definitions of business models, and created a framework of nine building blocks of business models. The nine building blocks are divided into Product, Customer interface, Infrastructure Management and Financial Aspects. The product is represented by the value proposition, the customer interface by the target customers, distribution channels and relationships. The infrastructure management comprises the value configuration, capabilities and partnerships needed. And finally, the financial aspects show the cost structure and revenue model.

Four components of business models are also identified by Stähler (2001), which correspond to some extent with those of Osterwalder. The four components proposed by Stähler are Value Proposition, Product/Services, Architecture and Revenue Model. The main difference between Stähler's (2001) and Osterwalder's (2004) four components is that the customer interface of Osterwalder's framework is missing in Stähler's, which takes a network-centric view on business models, and leaves out the marketing model i.e. the customer is missing from his model. In Hamel's (2000) model, the business model is also divided into four components (Customer interface, core strategy, strategic resources and value network), which are related to each other through three "bridges"; customer benefits, configuration and company boundaries. Chesbrough and Rosenbloom (2002) include also *Competitive strategy* into the six functions they define to be part of the business model. Of the remaining five, all elements are also present in the previously discussed conceptualizations.

As one can see from Table 2, where the high-level division of the business model concept into sub-categories (or functions, or principles, or activities) the differences in between the proposed frameworks for business models seem to be mainly related to what you call different parts of the operations, as the same elements are present in nearly all of the definitions. In this table, the references that have divided the business model concept into elements have been accounted for.

Chesbrough and Rosenbloom choose to include strategy, and add the network function. The role of the company within the business network is also taken into account by Hamel (and the essential meaning of Chesbrough's and Rosenbloom's (2002) network is also accounted for in Osterwalder's (2004) infrastructure management, Johnson et al's (2008) key resources and Nenonen & Storbacka's (2010) operations). Hamel (2000) and Nenonen & Storbacka (2010) have not included the financial aspects as one subgroup, but in Nenonen & Storbacka's model costs and revenues have been taken into account in the other subgroups. While Johnson et al (2008) show a focus on operative issues (key resources and key processes), Teece (2010) does not take resources or processes into account at all, but includes market segments and customer benefits as separate elements of the business model design concept.

Zott & Amit (2007; 2008; 2009) take a rather different view as they present their business model framework. They take an activity-system view, under which the business model consists of activities related to design elements (content, structure and governance) and design themes (Novelty, Lock-In, Complementarities and Efficiency). Zott & Amit (2002, 2007) have argued for a design logic of business models, and according to their framework, business models consist of design elements and design themes. Design elements of business models include content, structure and governance, and the design theme chosen states the main idea of the business model (the design themes are novelty, lock-in, complementarities, efficiency) (Zott & Amit, 2010). Good business model designs are highly situational and the process of designing business models is iterative (Teece, 2009).

An activity-based view can mean many things: Zott & Amit (2007) argue that designing business models in itself is a key managerial activity, whereas others (Johnson et al., 2008; Afuah & Tucci, 2002; Mitchell & Coles 2004, Eisenmann, 2002) see that the business model defines which activities the managers should be performing. Johnson et al. (2008) for instance list the key activities contained within the parts of the business model, such

as training, development, manufacturing, budgeting etc. These paradoxical arguments are illustrative of the prevailing academic discussion that still has not reached a consensus when it comes to the business model construct.

Osterwalder (2004)	Stähler (2001)	Hamel (2000)	Nenonen & Storbacka (2010)	Chesbrough & Rosenbloom (2002)	Johnson et al. (2008)	Teece (2010) (<i>emphasis added</i>)	Voelpel (2005)
Product What business the company is in, products and value proposition	Value Proposition What value does the company create for customers and partners?	Customer Interface Channels, customer intelligence, relationships and pricing	Customer Brand & demand, segment mgmt, customer mgmt	Value Proposition Value created for customer from offering	Customer value proposition Target customer, job to be done, offering	Select technologies and features to be embedded in the product / service	New customer value proposition
Customer Target customers, channels, relationship building	Product/Services What does the firm sell?	Core Strategy Overall business strategy, product, segmentation, differentiation	Offering R&D, earnings logic, offering design	Market segment The users for whom the offering is useful, and revenue generation	Key Processes Processes, rules and metrics, norms	Determine benefit to customer from consuming/using the product/service	Value network configuration
Infrastructure Management how infrastructural and logistical issues are handled, capabilities, partners	Architecture How and through what configuration is value created?	Strategic Resources Core competencies and strategic assets, core processes	Operations Supply, production, delivery, partners	Value chain Structure on value chain and assets needed to support the firm's position in the chain	Key Resources People, technology, products, information, channels, partnerships, brand	Identify markets segments to be targeted	Sustainable revenue model
Revenue Model revenue model, cost structure, the business model's sustainability	Revenue Model How does the company earn money?	Value Network Suppliers, partners, coalitions	Management Mgmt system, infrastructure, human resources	Cost Structure & Profit potential given the chosen value prop & value chain structure	Profit Formula revenue model, cost structure, margin model, resource velocity	Confirm available revenue streams	
				Value Network Links, partnerships		Design mechanisms to capture value	
				Competitive Strategy The means to gain and hold advantage over competitors			

Table 1: Elements of business models according to the literature review

2.3 Evaluating business models

In management and academic literature one can often read about examples of successful business models, but what makes a good business model? On which determinants should one measure and evaluate a business model? According to Osterwalder (2005), research on what exactly constitutes a “good” or a “bad” business model is still in its infancy.

Magretta (2002) defined a good business model as having a good story and a viable profit and loss statement. Performing a test of these two critical aspects will show why a business model doesn't work; there is a problem in either one of the aspects. Hamel (2000) evaluates business models on four factors: 1) Efficiency: the cost of producing the benefit the customer received must be lower than the value customer place on the service/product. 2) Uniqueness: The greater the differentiation from average industry business models the higher the returns 3)Fit: All elements of the business models are reinforcing each other and 4) Exploiting profit boosters: A business model that incorporates any profit boosters (lock-in, increasing returns, competitor lock-out etc.) will have superior returns. Amit & Zott (2007) showed that focusing on only one business model theme (novelty or efficiency) would pay off better than focusing on both, which can be counterproductive. Afuah & Tucci (2003) have three levels of business model appraisal: 1) profitability measures (earnings and cash flows), 2) profitability predictor measures (profit margin, revenue market share and revenue growth) and 3), business model component attribute measures (indicating the soundness of each of the elements of their internet business model framework). Adding to what has been previously stated by others, Keen and Quereshi (2006) recommends the use of the patent office criteria to test the worth of a business model: usefulness, novelty and nonobviousness. They also argue that the most effective business models are industry independent.

According to Osterwalder (2004), business models cannot be successful per se, but the success of a business model can be evaluated only after it has been implemented. What can be evaluated is the coherence and the soundness of the business model. A strong business model poorly managed is no better than masterly execution of a weak business model (Osterwalder, 2005). Overall, there is a lack of concrete metrics for business model success, which makes it hard to compare and decide on which business model to pursue.

3 Business Model Innovation

Now that we have concentrated on the research discussions concerned with the business model construct it is time to look at the actual topic of this thesis; business model innovation. According to Comes & Berniker (2008), product and process innovation are understood by companies and managers, but business model innovation is still a new area that hasn't been introduced in as great extent. Because of the rapid technological development, innovation activities must include business model innovation, not only traditional technology and R&D –related innovation (Chesbrough, 2007). Innovating in the terms of business models is the best way to achieve sustainable competitive advantage according to Zott & Amit (2010). Much of the business model literature is concerned with business model design and focuses primarily on the business models of startups (e.g. Zott & Amit, 2008;2009, Chesbrough & Rosenbloom 2002), but when it comes to business model innovation, we are mainly concerned with renewal of business models among incumbent firms.

BMI is not a new phenomenon, but a new term (Santos et al., 2009). Business model innovation can create new markets and disrupt old ones (Comes & Berniker, 2008). In a survey in 2005 (American Management Association, 2006), 54% of executives said that business model innovation would be more

important than product or service innovation between the years 2005 and 2010. The same results were reached in the IBM CEO study of 2006: nearly 30% of the respondents stated that business model innovation was a key focus area. Even though it evidently is an important area, it has been relatively ignored in practice, and it seems to be a difficult task to take on for most companies (Comes & Berniker, 2008).

In Linder and Cantrell's (2000) change framework the assumption is that business models are constantly changing, thus describing a business model is merely a description of that business model at a point in time. Most businesses' business models are under constant pressure to change and evolve because of the dynamic features of their business environment (technological advancements and fierce competition). The change model introduced by Linder and Cantrell (Figure 2) describes the development of the business model over time.

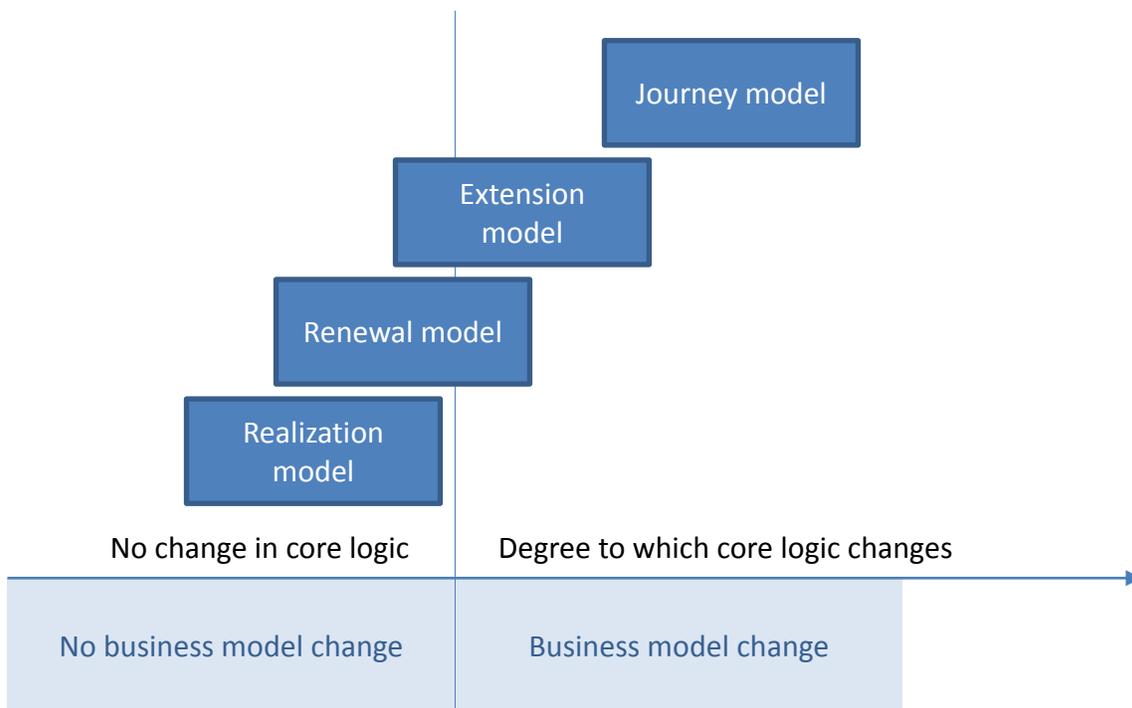


Figure 2: Linder & Cantrell 2000: Change model of business models (p13.)

The realization model incorporates the least amount of change, and in fact the company is merely maximizing the returns from their existing operating logic. If a company is expecting expansion geographically and customer base growth, but not foreseeing any bigger changes to the business models, this model is where the firm is active. The renewal model is common among firms trying to stay on top of the price/value curve, constantly seeking new ways of renewing pricing, branding, service platforms, brands etc., to stay competitive. The extension model describes firms that constantly are innovating to stretch their current core competencies to enter new markets, value chain functions and products/services.

3.1 Why and when is BMI needed?

Researchers seem to agree that solid business models can create sustainable competitive advantage. Chesbrough (2007) points out that however successful your initial business model, the world and business environments change, and therefore the business model needs to change as well to remain competitive, no business model lasts forever. According to Comes and Berniker (2008), there are six reasons for firms to seek business model innovation. These reasons include situations where the markets are mature and the products are commoditizing, the products or services are democratized or decentralized or the company is looking to leverage underutilized resources or capabilities. If the market dynamics are changing due to legislator or regulatory changes, firms with different business models are merged or acquired or a company is looking to harness new technologies might also be situations where considering BMI is useful. BMI can help a company identify valuable opportunities and enable capitalization on these opportunities faster than the competitors; therefore BMI is valuable for all companies. For a company facing stalling growth or rapidly evolving markets, BMI could be a matter of life or death (Comes & Berniker, 2008)

McGrath (2010) proposes that critical discussions should be held within and outside of the company to identify the risks and threats to the current business model. Discussing with these stakeholders is more effective than waiting for them to share their knowledge, since they often lack the incentives to bring up news that are bad for business. McGrath recommends discussing with leading technologists in the firm, people that know of indirect competitor (that for instance compete for the customers' time), and people that might point out non-customers of today that could be new customers in the future.

Santos et al. (2009) list several implications of BMI for managers. According to them BMI offers an opportunity for lean value creation, as there is no need to await or create breakthrough technology or invest heavily in process or product enhancements, as the cost of BMI is the cost of organizational change. However, whether organizational change can be seen to be cheap can be debated, as several researchers (Nenonen & Storbacka, 2010; Santos et al., 2009; Teece, 2009, Tikkanen et al., 2005) see the business model as systemic, requiring vast organizational restructuring when changed.

Many successful business model changes that have been referred to in the business model literature have occurred in the context of severe financial stress. Such is for instance the success story of IBM, who changed the course of the entire firm by embracing a new, service based business model in the early 1990's (Santos et al., 2009). However, the ideal situation is of course that the business model innovation does not need to be born out of financial distress, and that a firm can identify their burning platforms (Venkatraman & Henderson, 2008) and proactively engage in business model innovation (Chesbrough, 2007).

Recognizing the burning platforms referred to by Venkatraman and Henderson (2008) is a way of motivating the need for business model innovation internally for the company, thus showing that remaining at status quo is not an option to consider. Venkatraman and Henderson agree with Chesbrough (2007) that business model innovation is easier if the organization is in crisis, but point out that it is the task of the managers to inflict a sense of urgency and energize the organization to innovate also under normal conditions. Venkatraman and Henderson suggest that the business eco system and networks should be mapped, and that the organization must be energized to continuously innovate and prepared for the fact that innovation activities create a "bumpy ride".

3.2 What is (a) business model innovation?

We have defined the business model as a “*configuration of activities and of the organizational units that perform those activities both within and outside the firm designed to create value in the production (and delivery) of a specific product/market set*” (Santos et al., 2009). To define a business model innovation, we use Schumpeter’s (1934) definition of innovation, according to which an innovation is the introduction of a new good or a new quality of the good, an introduction of a new method of production, the opening of a new market, the conquest of a new source of supply or the carrying out of the new organization of an industry. Santos et al’s (2009) quite successfully then comprises the essence of both by stating that a “*business model innovation (BMI) is a reconfiguration of activities in the existing business model of a firm that is new to the product/service market in which the firm competes.*” In other words, to fit the description of a business model innovation, a new business model must stem from a set of current activities, remodeled in a way that is new to the market. What goes for a business model innovation differs between different definitions, and drawing the line for when a new business model taken into use actually is a business model innovation and not simply a new business model is challenging. The activity of business model innovation is not equal to business venturing, nor technological development, however both can lead to BMI (or not) (Santos et al., 2009).

BUSINESS MODEL	INNOVATION	BUSINESS MODEL INNOVATION
a configuration of activities and of the organizational units that perform those activities both within and outside the firm designed to create value in the production (and delivery) of a specific product/market set Santos et al. (2009)	1) The introduction of a new good or a new quality of the good 2) The introduction of a new method of production 3) The opening of a new market 4) The conquest of a new source of supply 5) The carrying out of the new organization of an industry (Schumpeter, 1934)	Business model innovation (BMI) is a reconfiguration of activities in the existing business model of a firm that is new to the product/service market in which the firm competes. Santos et al. (2009)

Table 2: Chosen definitions

Santos et al.’s definition, as well as Schumpeter’s definition of innovation, emphasizes the fact that the newness need not necessarily involve new knowledge, but implies that also modifying or advancing existing knowledge is considered as innovation. In the case of BMI, this means that a new business model is a business model innovation if it is new to the product/service market in which the firm competes, since often a business model innovation actually involves simply copying a standard business model from another product/service market into another. An example of this is could be going into a service business (e.g. leasing jet engines by the hour). The definition by Santos et al (2009) has been chosen for this study as it encompasses all of the usually mentioned elements of a business model, but adds a relational aspect in that the elements of a business model are both elements and business units. The relationship view is important, as most problems with reaching BMI (and all other organizational change) seem to be an issue related to the people involved in the process.

Santos et al.’s BMI definition states that BMI always involves some kind of reconfiguration of activities, and these reconfigurations can be one or several of four different ones: relinking, repartitioning, relocating and reactivating. The reconfiguration alternatives are presented in table 4.

Relinking	An alteration in the connections between organizational units currently performing activities.
Repartitioning	An alteration in the physical, cultural, and institutional boundaries of the organizational units currently performing activities
Relocating	An alteration in the (physical, cultural, and institutional) distance between organizational units currently performing activities
Reactivating	Altering the set of activities that constitute the current business model of the firm.

Table 3: Santos et al. (2009): Reconfigurations of business models

As a final remark, it can be pointed out that the word *innovation* can refer to both the activity of innovating, and a phenomenon: *an innovation*. Both meanings of *business model innovation* are used in this thesis, but as the meaning is conveyed through the context, no differentiation between the two has been established. The desired outcome of business model innovation is a business model innovation.

3.3 The process of BMI

Cooper's study (1996) found that the strongest common denominator of successful innovators was a high-quality innovation process. Merely having a process was not enough; rather it was the quality and nature of the process that generated superior returns. The same can be assumed to be true for a business model innovation process, and therefore Cooper's model will be used as a foundation for the theoretical model proposed next. Cooper's stage-gate model is chosen because it is a familiar managerial tool, and many companies have implemented some version of it in their innovation strategy. Although many have discussed the different parts of the BMI process, no descriptive process model has been introduced in the business model literature. I will use the classical stage-gate model as a foundation for a proposed process of BMI, adding levels of complexity that mirror the nature of the business model construct.

Cooper identified that flexibility within the process was needed to remain nimble, and this is what sets the third generation stage-gate process apart from its predecessors: the gates are flexible and the stages happen simultaneously at times. Cooper (1996) thus introduced a revised version of his previously developed stage-gate process models (Cooper 1994). The model describes the process of new product development as a funnel that begins with an idea and ends with successful commercialization of the product. In the earlier generations of stage-gate models the phases have been designed to gather information needed for the next decision point, or the "gates". As delays in any activity or phase delays the entire process, this third generation phase-gate model has "fuzzy gates" (Cooper, 1994). The gates serve as quality check points, as well as go/kill decision points and at every gate the entire team is gathered.

The first stage includes preliminary homework, such as defining the scope of the project, preliminary market assessment, preliminary technical assessment and preliminary business assessment. In the second stage a more detailed investigation takes place, basically deepening the knowledge acquired in the first stage. At this step a detailed plan for the next steps is also made. In the third stage the actual product is developed and researched, and plans for launching the product are made. At this point all parts of the organization – from finance to marketing, design and technology - are involved. At the fourth stage the product is tested and marketing and production plans are validated. In-house testing of

the product and trials in the market take place in this stage. At the beginning of stage five, the product is ready for commercialization and the launch plan is initiated. The product is monitored and adjusted according to the reactions of the market. Throughout the whole process, the same team, which is complemented with additional resources during the different phases, remains owners of the project. The third generation stage-gate process is pictured in figure 3.

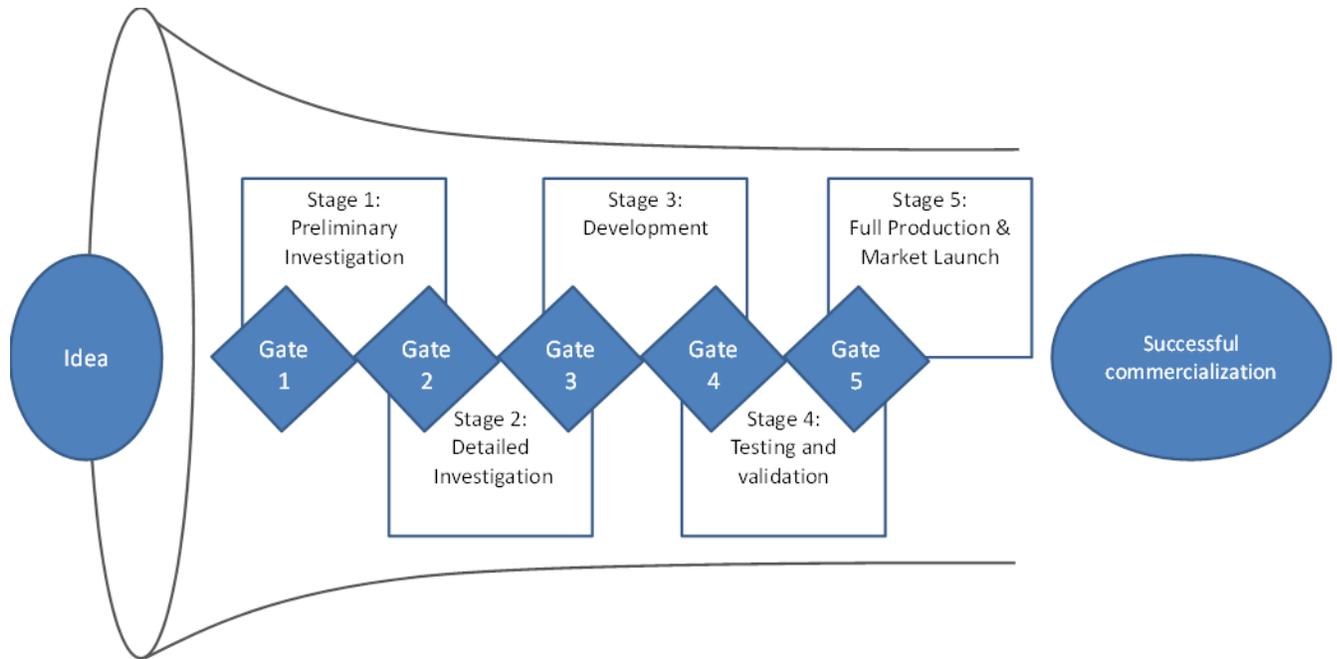


Figure 3: Cooper's (1996) third generation stage-gate model with overlapping stages and gates

A full business model innovation implemented in a firm differs from a normal innovation in that it is nothing short of a complete transformation of the firm (Comes and Berniker), due to the systemic nature of the business model (Nenonen & Storbacka, 2010; Teece, 2009). Before beginning the process of BMI the managers of a company must be familiar with the business model construct and the business model of the firm (Santos et al., 2009). Comes and Berniker (2008) assume that a business model innovation process starts by assessing the value proposition and the revenue logic of a new offering, thus first identifying a market opportunity. Santos et al. (2009) state that it often is implied by the literature that technological advancements would be needed in order to create business model innovations, but that this is untrue. Also, they argue that the knowledge needed to create BMI often is purchased from external experts, although all the intelligence needed to develop new value propositions and reconfiguring the activities within the firm already resides within the company. Experimentation plays a big role during the process of business model development (McGrath, 2010, Teece, 2010), where the outcome of each initiative is uncertain, and the projects are carried on until killed when seen unprofitable. After a new business model has been chosen, the new business model will usually be carried out in parallel with the current model, until integrated, or separated into its own entity (Markides & Charitou, 2004).

Based on the stage-gate process, and the literature on business models, an overarching process model is proposed. The process of BMI starts with the realization that change is needed, and understanding the business model construct, and analyzing the current business model. A stage-gate process is what happens during the experimentation process described by McGrath (2010). Each idea goes through a

stage-gate process where the team working on the idea continuously review the idea at the “gates”. Some of the initiatives are continued, and some are killed if the further investigation and development shows that its potential is too low. When reaching the phase of commercialization, the new business model is either kept as a parallel business model, or an integration process is started to transform the entire organization.

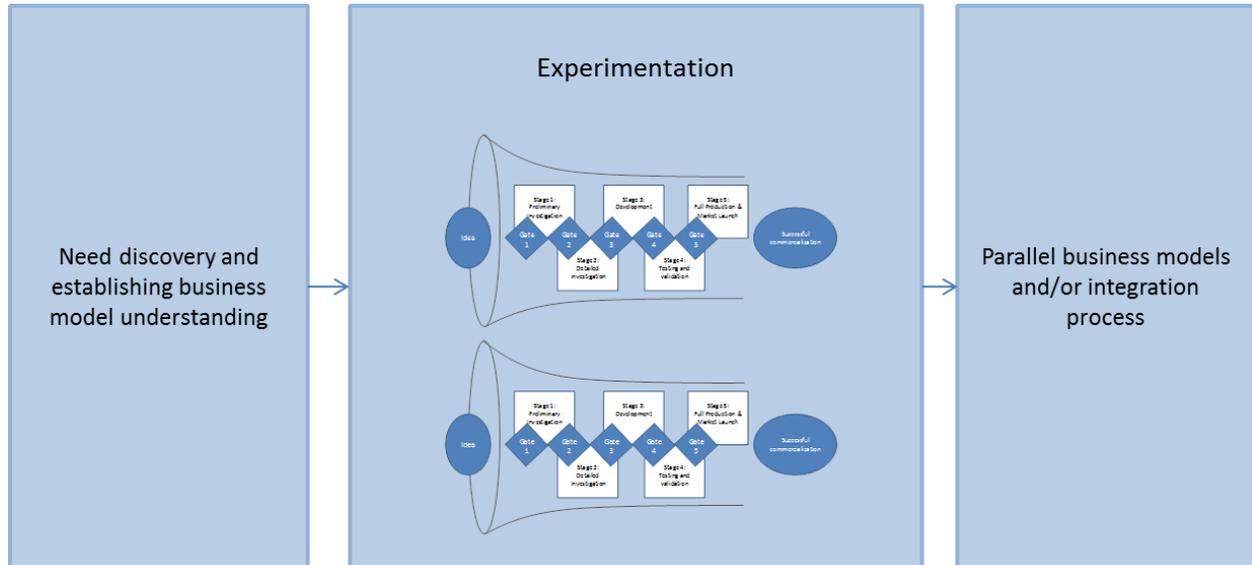


Figure 4: BMI process that includes the stage-gate model (Cooper, 1996)

3.4 Experimentation: a key to BMI

Several researchers recently advocate the importance of exploration in business model design and business model innovation. Chesbrough (2010) points out that rules of experimentation that are true for general innovation are useful also for experimentation with business models. The highest fidelity is accomplished by testing the business model experiment with real customers in a real setting. Chesbrough cites Thomke (2002) and states that it is important to distinguish between failures and mistakes when it comes to evaluating the outcome of experimentation. Failures are a natural outcome of experimentation, when mistakes are failures because of poor experimentation design or implementation. (Tomke, 2002). Thus, one can learn from failures, but not from mistakes.

Chesbrough also emphasizes the importance of effectuation, in which the actors do not analyze the environment, but goes on straight to implementation. In the case of business models, this would imply trying a business model early on, and then analyzing the data that results from experimentation.

McGrath (2010) emphasizes that business model experimentation takes place across as well as within firms, and that it is nearly impossible to know in advance which design will win. As a matter of fact, business models usually must be learned over time, which is why experimentation is essential. Also, business models and strategy evolve over time, implying that a discovery-driven approach should be used at all times, as the business model never stays unchanged for a longer time (Teece, 2010; McGrath, 2010). As everything in the business environment changes all the time, it is nearly impossible to know which constraints or assumptions that will shape the business of tomorrow. If business model innovations demand experimentation, firms need to be comfortable with assessing investment choices on much different grounds than the current projected economic value added. McGrath suggests real

options reasoning, where the costs are kept low, until the project is shown to be profitable and the project is scaled up rapidly. (McGrath, 2010)

MacGrath (2010) speaks for a discovery-driven approach to business model innovations. According to her, new business models should be explored extensively, with small amounts of resources. The traditional way of measuring the success of a plan has been to assess how close your projections came to what actually happened, but as the business environment is so complex and evolves at fast speed, there is no advantage to be gained by predicting the future. If one firm would be able to do so, so would all others and there would be no competitive advantage in such an effort. Therefore McGrath proposes that one should explore as much as possible about the different outcomes of the future, with as little investments as possible. Instead of investing a big sum of money into a new business model venture with hopes of returns in the future (black hole strategy), companies should engage in the discovery driven approach. The main idea that she proposes is to have a multitude of projects, which are carefully followed and killed when the outcome shows signs of being inappropriate for the company. This “options oriented investment strategy” lowers the barrier of involving in, and cancelling projects when seen fit.

The two models are illustrated in figure 5 below.

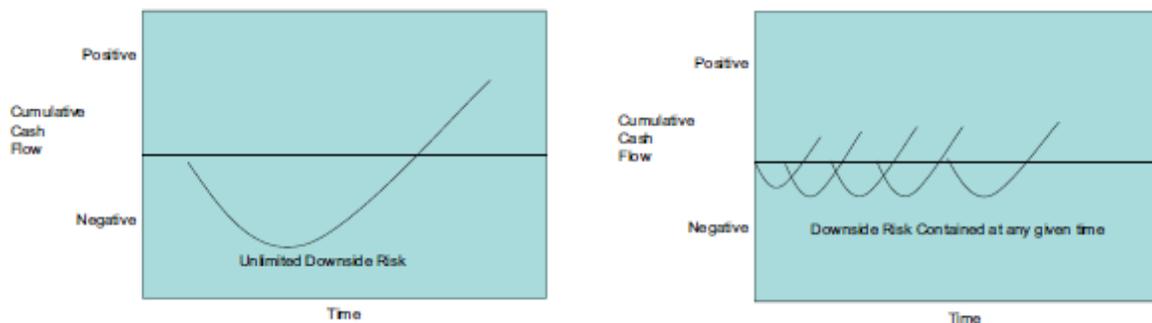


Figure 5: Black-hole investment strategies versus options oriented investment strategies.

Santos et al (2009) state that BMI is not the same as business venturing, however venturing can lead to business model innovations, as is the implied case in McGrath’s framework. What McGrath reinforces is the unknown outcome of the future dominant business model designs (similarly to the development of dominant designs in the technology field, following from an “era of ferment”). The importance of experimentation stems from the fact that no-one knows beforehand what the future looks like, but by engaging in many options, it will be easier and faster for the company to adapt to industry change. Similarly to what Osterwalder (2004) states: *“Based on Allen’s law of excess of diversity in evolutionary theory [Allen 2001] one may argue that a company should maintain a portfolio of business models in order to be ready for the future”*. It seems to be that it might be wise to have a portfolio of alternative business models to be able to adapt quickly. This view is also advocated by Doz & Kosonen (2010), who state that having several business models and additionally, using them for different products as seen fit, can result in additional flexibility and renewal. Chesbrough (2010) also underlines the same proposition: *“business model innovation is not a matter of superior foresight ex ante rather, it requires significant trial and error, and quite a bit of adaptation ex post.”*

The experimentation discussion correlates closely with the concept of organizational ambidexterity, where an organization focusing on a dual strategy of both exploration, and exploitation (e.g. O’Reilly &

Tushman 2007, 2004) or adaptability, and alignment (Gibson & Birkinshaw, 2004). Exploitation is synonymous with efficiency and core competence utilization. Exploration covers actions geared towards innovation and new product development (O'Reilly & Tushman, 2007). As mentioned by Doz & Kosonen (2010), business model innovation can be seen to be included in this exploratory activity.

3.5 Managing parallel business models

When engaging in business model innovation, one will necessarily at some stage have two or more parallel business models, as one is developed at the side of the core business. This creates some challenges for BMI, which include financial assessment, protectionism of core business, resource disputes and ambiguity in the strategic direction of the company.

According to Comes and Berniker (2008), financial considerations often hinder the development of successful business model innovations, as new BMI-initiatives are measured on the same quarterly or monthly indicators as the main business. They recommend that a different set of matrix should be applied to the new business model than to the core business and that managers should be "*patient for growth, but impatient for profits*" (p16). Chesbrough (2007) suggests that the resources used for the BMI should be kept separately, to hinder the BMI projects from being perceived as taking away resources from the core business. Protecting the BMI initiative internally is important, but at the stage when the new business model has been shown to be profitable it needs to be openly brought out in the organization, to compete with the original business model. Sometimes the two business models can co-exist within the organization, but in this case (some of) the customers are typically divided. This situation creates tension, as the employees (and management) are used to the previous business model. BMI has elements of competency destruction (sometimes literally destroying jobs or tasks previously performed by employees), and might also have socio-emotional costs, as well as loss of relative power for some in the organizations. All of these challenges must be tended to to avoid change resistance. (Santos et al., 2009). The process is tedious and expensive, but a better alternative than to wait for the competitors to go through the BMI process and come out as a winner (Chesbrough, 2007).

When it comes to the integration of new business models into that of the main business, Markides and Charitou (2008) proposes a framework of different strategies for managing dual business models. The framework is presented in figure 6.

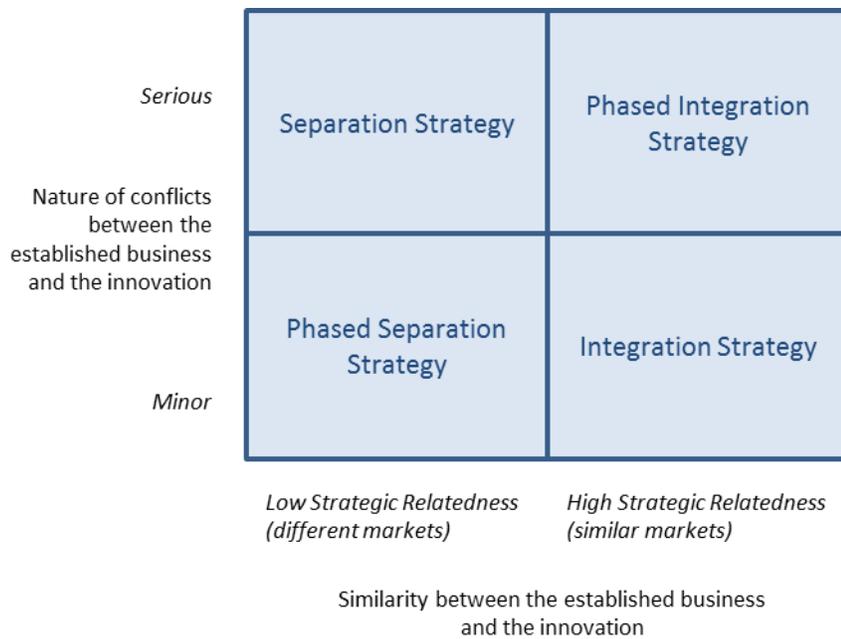


Figure 6: Different strategies for managing dual business models (Markides & Charitou, 2008, p3)

The strategies are mapped out on two dimensions; the nature of the conflicts, and the similarities between the business models, as these two define whether a separation strategy would be beneficial and how important it is to exploit the synergies between the business models. A separation strategy is preferred when there are serious conflicts and low strategic relatedness between the business models. The opposite: an integration strategy is recommended when the strategic relatedness is high and only minor conflicts occur between business models. Creating a phased integration plan is recommended when either having minor conflicts and low strategic relatedness, as well as high conflicts and high strategic relatedness. In their research Markides and Charitou found that the fewer the conflicts and the more similarities between business models, the better the firms competing with dual business models performed.

4 Generic enablers of and barriers to BMI

Change management literature highlights several generic enablers for organizational transformation and driving change. Much of these are the same for business models, and several enablers become disablers when not present in the organization or change process. Next we will first take a brief look at what differentiates change by business model innovation from that of other organizational change projects. After that, the enablers and disablers of business model innovation identified from the business model literature will be introduced, after which a framework for classifying the enablers and disablers of business model innovation will be presented, along with an interview agenda for the empirical part of the research.

4.1 How is BMI different than any other organizational change?

Based on, relatively scarce literature on barriers to business model innovation, one can draw the careful conclusion that the barriers to business model innovation seem to be rooted in the attitudes of the people working in the organizations. The question arises: is business model innovation any different than other organizational change? Three differentiating factors can be found:

4.1.1.1 *Business models are systemic by nature*

One of the main elements of the business model construct presented by e.g. Teece (2009), Tikkanen et al. (2005) and Nenonen & Storbacka (2010) is the systemic nature of the business model, which implies that in order to change one part of the business model, one must assure that the configuration or “fit” of the altered part still fits with the rest of the model. Explicitly, this means that to change one part of a business model one must alter the entire model. For instance, if the sales channel is changed but inventory management does not support this change, the result will be dissatisfactory.

4.1.1.2 *BMI is hard to imitate*

Teece (2010) discusses the business model and argues that although the general theme or superficial attributes of a business model (e.g. a “service” model vs. a “product” model) can be easily understood and copied, it is challenging to successfully replicate a business model. This is because implementing a new business model requires systems and processes that may be hard to replicate, and some level of opacity may remain within the successful business model that isn’t visible for potential copycats. Also, the internal reluctance to change business model among incumbents make it hard for them to change business models in an instance (however this does not mean that other unconstrained market participants couldn’t copy the business model). Teece’s (2010) statement that business models are hard to imitate thus enables us to draw the conclusion that in order to achieve sustainable competitive advantage from BMI activities, the innovation must be specifically considered in the context of the focal firm. A general theme such as previous organizational changes (such as implementing TQM or focus on core competences) might in this case be very different than BMI, and this is one of the particular challenges BMI brings that are different than other organizational changes.

4.1.1.3 *Uncertainty of the outcome*

One of the main differences of embracing the process of business model innovation compared to that of other big organizational changes is that the outcome of the BMI process is uncertain. When one starts innovating the business model, no-one knows for sure which business model design is eventually going to win. (McGrath, 2010). Therefore, experimenting and adapting a discovery-driven approach is argued to be essential, as well as developing not only one new business model, but a portfolio of different business models which can be used when needed (Doz & Kosonen, 2010; Osterwalder, 2004). Consequently, the uncertainty of the outcome of the BMI process differentiates the BMI from other

organizational change processes, where the outcome usually is rather clearly defined when the change is initiated.

4.2 Enablers of BMI

Based on the BMI literature, the following enablers of business model innovation can be identified; the organizational culture, the support and involvement of the top management and Information Technology.

4.2.1 Organization and culture

Santos et al (2009) introduce a model for a multiunit business organization that embraces business model innovations, *the BMI-Conducive Corporation*. The BMI-Conducive Corporation maximizes the opportunity and likelihood that BMI will emerge from its business units. Santos et al define the organizational structure and culture of such an organization, and state that in order to create opportunities for managers to learn and share, “creating a creative space” within the company, the firm should apply a loose horizontal coupling strategy (as opposed to a tight coupling strategy or portfolio strategy) where managers are energized and communicate with each other. The main benefit is the unstructured, but present connections between business units and to the corporate center. Santos et al. explain that there might be a severe gap between the implicit knowledge of BMI opportunities of the corporate managers compared to the explicit knowledge of the business unit managers. If this information is shared more actively, opportunities for BMI are born.

Comes and Berniker (2008) advocate the importance of autonomy. According to them, new business model initiatives must remain autonomous to enable them not to be pre-conceived by the boundaries of the parent firm. This might be challenging, as the people involved in the innovative project characterized by uncertainty and ambiguity still belong to the parent firm through structures such as payments, health plans, etc. Evaluation of progress is easily slipped into the same structure as the rest of the firm, even though the operations are very different from that of the parent firm. Comes & Berniker thus recommend that organizational separateness should be encouraged when doing business model innovation, in order not to be bound to the structures of the parent firm. A human resources-related challenge arises when separating the operations: who are the ones that should be working with the business model innovation? Depending on the culture of a firm, it could be seen as a punishment or a reward to be separated into a BMI-unit. Working in an unstructured and ambiguous environment might not fit all employees. Setting the boundaries and metrics for evaluation for this separated groups should be done as soon as possible, and it should have the senior management teams’ blessing. (Comes & Berniker, 2008).

Doz & Kosonen (2010) apply their strategic agility framework to the field of business models and state that the organizations should be decoupled, modularized to increase flexibility and get rid of overly rigid organizational elements which hinder change. Furthermore, Doz and Kosonen advocate separating resources from ownership, thus creating an organization where collaboration and mutual responsibility over business decisions made enables new ideas to prosper and decreasing the change resistance, i.e. creating a corporate culture which supports the creation of new ideas.

4.2.2 Management involvement and support

As whenever an organizational change is to take place, management support is crucial. According to Chesbrough (2007), an organization must give the resources and authority to conduct business model

innovation experiments to a dedicated senior manager. This manager then collaborates with several other parts of the organization, and when the results of the BMI experiments are received, the manager can then decide which projects to discontinue and which have future profit potential. This view coincides with that of McGrath, who speaks for having several smaller experimental projects, which are carefully monitored and killed when their profit potential no longer is adequate. According to Chesbrough (2007), it is crucial that one manager has this responsibility.

Santos et al. (2009) emphasize the need for managers and executives to change their behavior as well as changing the structure of their organizations. In order for managers of business units to create BMI, and for executives to then push the ideas forward, the organizational culture must encourage initiative and risk-taking. Managers and executives should therefore involve in discussion on BMI, embed knowledge from their current tasks and share learnings among business unit managers and executives to create learning opportunities. They propose that organizational justice (both procedural justice and distributive justice) and a deep sense of mutual involvement is important in creating this culture. According to Santos et al. (2009), as the business model construct involves also relationships between units, a manager must understand also the relationship dynamics of a business model to fully be able to create the organizational change accompanied by BMI.

Not only is the senior managements role important in creating a cultural direction that enables sharing of ideas and acceptance of risk, but the senior management also needs to stand fully behind the new ventures and actively participate in the strategic decisions of the BMI-group. As the senior management holds the greatest experience and knowledge, it is important that they are involved in shaping the future directions of the firm, and therefore each venture should be spearheaded by at least one member of senior management. The senior management then contributes with enthusiasm and leadership, and calls for debate and opinions. (Comes & Berniker, 2008).

4.2.3 Information technology

The rise of business models to the agendas of managers has been triggered by the e-economy and the rise of internet, as well as rapid technological advancements, which have enabled new means of payment, leaner cost structures, and decreased transaction costs etcetera. Information Technology (IT) has been one of the main enablers of business model innovation, and it still is. There are a multitude of business model frameworks that are entirely concentrated on or have IT as an integral part of the model, especially within the field of e-business (Osterwalder, 2002; Hughes, 2008; Lumpkin, 2004; Cagnina, 2007 etc.). However, I have not looked into this research area in this thesis but only recognize the role of information technology as an enabler of business model innovation.

IT can be leveraged for a multitude of purposes, that all enable configurations of the business model. The sales channel, back office processes, and customer research and product innovation processes can be altered not to talk about co-creation of value with customers. IT creates opportunities for achieving competitive advantage and staying ahead of the industry curve. (Comes & Berniker, 2008). But as previously stated, business model innovations are not dependent on technological advancements or IT, it is merely an enabler thereof (Santos et al., 2009).

The role of IT in business model innovation is placed in the middle of the business model innovation and implementation process by Venkatraman & Henderson (2008). They also state that BMI is to be framed in a more network-centric view with greater recognition of co-creation of value. The authors recognize that the role of IT in impacting operating efficiency has been acknowledged, but they state that the role of IT in creating business model innovation should be further developed.

4.3 Barriers to BMI

Two things become evident when reading about business model innovations: they are needed and wanted, but seemingly hard to achieve. Research has shown that experimenting with new business models pays off, but why aren't more companies experimenting with new business models (Chesbrough, 2010)? New business models seem to be considered neither interesting, nor threatening, even though they are both (McGrath, 2010). In this next chapter I will line out the barriers to business model innovation lined out by previous literature on the topic. Based on this literature review, a framework will be created, which then will be validated in interviews with practitioners.

Businesses face significant barriers to achieving business model innovation, which has been proven in the literature (Chesbrough, 2010). Amit & Zott (2001) showed that new configurations of business models often conflict with those of the current business, and that managers and executives thus are likely to resist experimentation with the business model. Typically, the new product or service serves non-core customers at price points that the current customers would not be willing to pay, which may seem uninteresting to the managers that are used to being measured through success with the current business model (McGrath, 2010). The new business model is not providing as much value for the company in its infancy, and often margins, or growth may be lower in the beginning than would normally be accepted within the company (Comes & Berniker, 2008; McGrath, 2010). Amit & Zott's and Comes & Berniker's barriers rely on the notion that there already is a known need for business model innovation in the organization, but Chesbrough (2010) shows that there is a barrier that hinders even the recognition of the need for change, and the choice of alternative business models is very complex and difficult as well.

Chesbrough (2010) further states that there is a cognitive barrier that hinders new business models from reaching the unbiased attention of the executives in the company. This cognitive bias stems from the success of the previous business, giving direction for the decision making for future business decision. Only issues relevant to the current business are being thoroughly thought of, and issues considered as non-core get filtered out of the decision making process. All of this happens because of the complex business environment, and the abundance of information. Creating these cognitive channels helps managers focus on what (seems to be) relevant. And even though this aids the company in reaching decisions faster, it might result in turning away potential new directions, and might cause the senior management to see only what is exactly straight ahead in the current business. If there are no immediate obstacles in the way, the need for change may become evident way too late.

In the Table 4 I have gathered the explicit barriers to business model innovation identified in the business model literature. Only a few scholars have pondered upon the barriers for business model innovation. These barriers are listed in the table divided according to theme.

Theme	Barrier	As suggested by
ORGANIZATIONAL STRUCTURE		
	Organizational separateness creates challenges	Comes & Berniker, 2008
	internal systems have no incentive to embrace a discovery driven approach	McGrath, 2010
	2-3 year job rotation for managers	Chesbrough, 2007
	Corporation center serves as barrier of BMI by altering the scope of the corporation, impacting the strategic operations of other units and changing the risk exposure of the organization	Santos et al., 2009
ORGANIZATIONAL CULTURE		
	New business groups are considered risky vs. new business groups are considered as superior	Comes & Berniker, 2008
	The current managers and executives have reached their positions using the current model – familiar and reassuring: no evident need to change	Chesbrough, 2007
	Current business and new business groups are valued unequally	Comes & Berniker, 2008
FINANCIAL METRICS AND INCENTIVES		
	New BM is measured on the same metrics as the old model	Comes & Berniker, 2008
	Sales channel opposition; since the best customers aren't served by the new business model they can't see the benefit of the new model	Comes & Berniker, 2008
	There are no incentives for embracing a discovery driven approach	McGrath, 2010

Table 4: Barriers to business model innovation

4.3.1 Organizational structure

Chesbrough (2007) identifies a “business model innovation leadership gap”, where the structure of the organization is such, that there is simply no-one to take leadership of the business model innovation process, as the managers are circulated within the company in 2-3 year periods. This time, according to Chesbrough, is too short to create new business models, which forces the managers to simply concentrate on managing to grow the current business as well as they can within the given time frame, instead of experimenting and choosing new directions based on the results from the experimentation.

Many of the issues related to business model innovation seem to be connected to the organizational structure. When a new business model is introduced, it usually resides within a separate unit of some kind. At this point, the new business unit should be kept separate, but this again creates some additional challenges as it cannot be completely detached. The financing and budgeting processes of the parent organization are often still present and force the new business unit to comply with some of the assumptions of the current business (Comes & Berniker, 2008).

According to Comes & Berniker (2008), the sales channel is where most of the objections are going to be raised, as the people involved in the sales channel i.e. the sales force, feel that any alterations in the revenue logic of the firm is a direct threat to their success. Typically the objections are regarding allocation of resources or cannibalization of sales. As the sales force are in touch directly with the customers, they also tend to object because a new potential offering might not serve the “best customers” (Comes & Berniker, 2008; Chesbrough, 2010). Also, the fact that BMI is competency destructing as it may even destroy concrete jobs, brings some additional issues to the table (Santos et al., 2009).

Santos et al (2009) take the discussion a bit further as they are concerned with the effect of belonging to a bigger, multi-unit corporation on business model innovation activities. They state that while the parent corporation might bring opportunities for BMI (for instance by creating a creative space where dialogue between managers can occur) , it also constrains the activity of the business unit’s business model innovation, because of the changes the business model change in the business units inflict on the entire corporation. Firstly, the BMI can potentially alter the scope of the corporation in a way that does not comply with the corporations long-term strategy. Secondly, the BMI of one unit may conflict with the strategic operations of another unit, for instance by shifting the market dynamics (e.g. becoming a competitor). Lastly, the risk portfolio of the parent corporation might be affected by BMI activities in one of the business units. Even though some alterations in business models are unlikely to attract the attention of the corporate center, other demand the involvement and approval as they affect the operations of the other members of the corporation. Santos et al suggest a loosely coupled organization as the best way of ensuring knowledge sharing without too much rigidity added by the organizational structure.

4.3.2 Organizational culture

When it comes to change, the major challenge is always that of changing attitudes of human beings. The mutual attitudes towards renewal and change exist within the organization’s culture, and can be deeply rooted. The organizational culture can express how individuals are geared towards working in the strategic direction of the organization (Tikkanen et al, 2005). The artifacts of an organizational culture are symbols, language, ideology, belief, ritual and myth (Pettigrew, 1979). The role of the corporate culture for the BMI initiatives are how the artifacts of the corporate culture can enable or disable striving for a business model innovation. For instance, a sign of the corporate culture can be found in the

attitudes towards belonging to a business development group: in some organizations it might be a privilege, when in others it is avoided by everyone.

Santos et al (2009) talk about the importance of creating a “creative space”, where sharing of knowledge between managers within the corporation can take place. The opportunity to create such spaces is underutilized, and by bringing together managers from different units and getting them to share knowledge new change initiatives can be started. However for this to take place, the corporate culture must support knowledge sharing. Tikkanen et al (2005) see a strong interrelationship between the organizational culture and the cognitive belief system of the organization. They suggest that the more concrete and measurable aspects of corporate culture (such as intrapreneurship and strategic intent of the top management team) should be analyzed in order to identify the key success drivers of business models in certain industries.

4.3.3 Financial metrics and incentives

Comes & Berniker (2008) express a concern that publicly traded incumbents are less successful at innovating business models than privately held incumbents, and state that although the concern might not be true, the financial market impacts the decisions of the publicly traded companies with great force, and add further rigidity to the decision making processes of traded firms. Any short-term shifts in the financial statements are met with alarm, and therefore significant efforts are required to explain and convince the financial analysts that exploring and experimenting will pay off in the long term.

The power of the financial markets create a vicious circle where the top management is rewarded based on quarterly performance, and they again incentivize the managers to show their ability to grow the business only within the constraints of the current model. This development is made even stronger since the current top management usually have reached their positions by succeeding within the current business model. This results in a situation where the current business model is so familiar that convincing data needs to show the benefit of the new model, which results in the established business model becoming unchallengeable (Chesbrough, 2007). McGrath (2010) points out that the reason for incumbents acting as described above and missing opportunities that new models could bring, is that there are no incentives for embracing a discovery driven approach in an organization like this.

4.3.4 Barriers in the BMI process

From the literature one can withdraw the conclusion that there are three different phases of the BMI process. A natural conclusion is that there ought to be barriers related to each stage. To clarify and enable comparison between the different models, these phases should be accounted for in the literature when discussing barriers. I will next propose a framework, which illustrates the different phases of the BMI process, together with the barriers associated with each step, based on the literature investigated. In the empirical part of this study I intend to find out which the most important barriers are at each level, and to see if there are any barriers that are apparent at all levels.

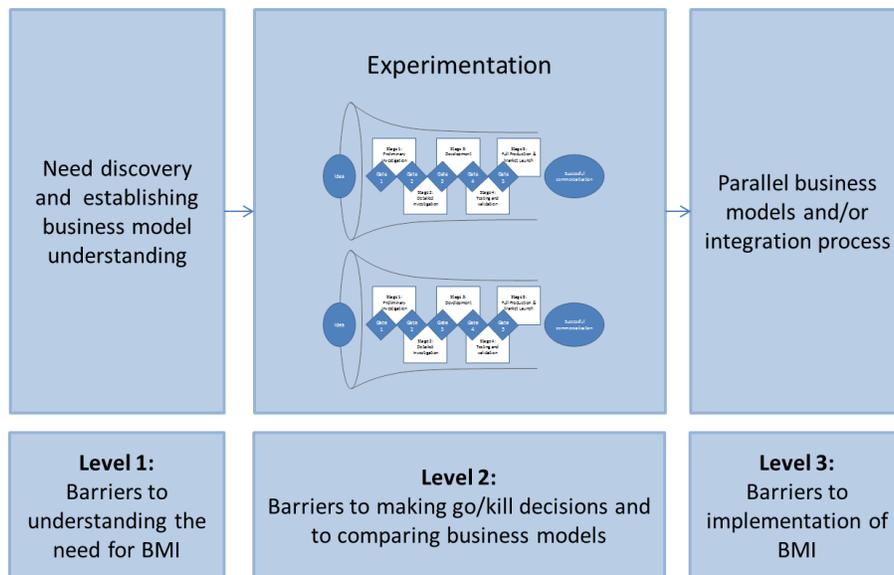


Figure 7: The business model innovation process and the barriers at each stage. In this research one of the research questions is which barriers are present at each stage.

4.3.4.1 Understanding the need for change

Before involving in business model innovation, there must be an identified need for change. If this need isn't acknowledged in the organization, business model innovation is very unlikely to happen. The first step of the business model innovation process proposed thus is to understand the need for change. Chesbrough (2007, 2010) focuses his attention on the fact that many managers simply aren't aware of the need to change, and that when the need becomes obvious it is often too late. Doz & Kosonen's (2010) extended strategic agility framework also highlights the importance for creating an organization that both sees the coming challenges in time, and is able to react on them in time. When this need is understood by the top management, the time between realization and choosing of the future path is used for experimentation and investigation of new business models.

4.3.4.2 Choosing the (right) business model

When the need for reinventing the business model of the firm has become obvious and some alternative models have been developed, the hard part is choosing the right model. Exploration, as discussed previously, is one method proposed by McGrath (2010) and Chesbrough (2010), however the process of exploration is continuous and does not stop when the best business model has been reached, as the business model evolves over time. One barrier to choosing a business model in a situation when there are several alternatives is that there are yet no concrete ways of measuring the success of a business model. Chesbrough & Rosenbloom (2002) points out that one should be careful not to engage in circular reasoning by inferring that a successful enterprise has a good business model, or that a good business

model should guarantee success for the business. Rather, they emphasize the importance of the learning process in the business model innovation process. After choosing a business model, the time between the second and the third phase is used for careful planning of the implementation stage. As proposed by the advocates of the importance of configural fit (Nenonen & Storbacka, 2010, Osterwalder, 2005, and others) the case may be that the decision of which business model to implement isn't as important as analyzing the elements of the business model and ensure a good fit between all parts.

4.3.4.3 BMI implementation

The last phase of the BMI process is the actual implementation of the revised or new business model. The barriers to this phase are often the same as in other change initiatives, primarily change resistance and the lack of incentives for the change. The barriers at this point are numerous and seemingly hard to surpass. Some of these barriers might be related to the structure of the organization and to the incentives for involving in business model innovation activities and embracing change (Comes & Berniker, 2008).

4.3.5 Overcoming the barriers – suggestions by the literature

Comes and Berniker (2008) states that as incumbents approach new market opportunities and intend to create new business models, they need to strive for the flexibility corresponding to that of a start-up, while still maintaining the advantages that a larger firm inherently possesses, as they will surely meet these start-ups in competition for new markets. The barriers to business model innovation however, are hindering this from happening. Although barriers are identified, the means of overcoming them are not very extensively discussed in the literature, and the suggestions made are often quite self-evident, or focus on mainly identifying the barriers, not creating concrete action plans. Chesbrough (2010) suggests that mapping practices, such as done by e.g. Osterwalder (2004) is helpful, as they visualize the business model construct and create tools for reconstruction. This enables experimentation as the elements of the business model construct become visible and more tangible. The works of Nenonen & Storbacka (2010) also contribute to the collection of pragmatically oriented tools of creating business model innovation. However, maps and tools are not enough to create actionable measures for business model innovation. The managers in charge of business units need organizational processes and the mandate to innovate to undertake experiments with business models.

4.4 Summary and research agenda

The barriers to business model innovation and especially the means to overcome them are quite sparsely discussed in the business model literature, and thus I hope to bring some new knowledge to this field through this study. Many scholars list the barriers but have no suggestions for overcoming them, or then the solutions are very vague and indirect. In this chapter, the enablers and barriers to business model innovation found in the literature review have been presented, and a framework for the location of the barriers in the business model innovation process has been proposed. The ways of overcoming the barriers discussed in literature mainly focus on a need for mapping and identifying the barriers.

In order to bring some clarity to the barriers involved in creating business model innovations, the barriers evident in the BMI process and the enablers and ways of overcoming these barriers, the empirical study of this thesis will focus on interviewing managers and experts from the Finnish paper and telecom industries. The intention of the study is to find out which barriers there are to business model innovation: either in the general context of the industry or company, or, more specifically in the context of the business model innovation development process. In the next chapter the chosen methodology will be discussed, and after that the case study and the research results are introduced.

PART III: The chosen methodology: A comparative multiple-case study

In this chapter I will introduce the research method and research design of this study. I will first discuss the use of qualitative research in general and case studies in particular as research methods for research in industrial marketing. After that, a closer description of the chosen method and the research design. Finally, the research quality will be evaluated by assessing the validity and reliability of the study.

5 Qualitative case study research

The main strength of qualitative data is that it focuses on naturally occurring, ordinary events in natural settings, and thus describes real life and not only theoretical possibilities. (Miles & Huberman, 1994). To enforce this strength, the qualitative data needs to be locally grounded, i.e. gathered close to the occurring phenomena and not over mail or the phone. According to Miles & Huberman, the researched entity is a specific case, which is embedded in its context. Understanding this context is part of the research process, as it often can offer an explanation for an occurring phenomenon. Thus the researched case is not stripped from its contextual setting, but the context is a valuable part of the research in qualitative research.

Another attribute of qualitative data is that it is rich and holistic, and thus very complex, which makes analyzing qualitative research data challenging. Other reasons for using qualitative research methods are that causalities can be assessed and that the research method is quite flexible: the research methods can be altered to fit the context, even in the middle of the process. Miles and Huberman furthermore speak for the qualitative methods as one of the best methods for developing hypotheses, having a strong potential for testing hypothesis, and additionally quite successfully being able to illustrate or test quantitative data results.

According to Yin (1994), case studies are excellent when researching “*situations where the number of variables of interest far outstrips the number of datapoints*” (Yin, 1994). Later on, Yin (2009) has defined a case study as “*an empirical enquiry that investigates a contemporary phenomenon in depth and within its real-life context, especially when the boundaries between phenomenon and context are not clearly evident*”. In case studies, data is collected by multiple means, and the methods used can include interview, archive data, secondary data, surveys etc. (Yin, 2009). Contradictory to many case study critics’ beliefs, case studies need not contain a lengthy narrative, but can shortly and in a concise manner report the findings.

Choosing a case study for this research can be motivated in many ways. By looking at the literature on case studies we can see that Yin (2009) suggests that a case should be used when answering a “how” or “why” question, and when the study doesn’t require control over behavioral events, and focuses on contemporary events. One could argue that a history of business model innovations in the two industries would satisfy the same objective, but as identifying the current barriers of contemporary business model innovation processes is the objective of the research, looking at the “dead past” of an organization (Miles & Huberman) would not satisfy that objective.

Some reasons for choosing a case study that are context specific for this research can also be identified. Firstly, the events and processes studied are concerned with the current situation and processes, not the ones in the past. The temporality of case research (Yin, 2009) fits this need. Secondly, in my research I am interested in knowing what the individual manager’s perceive as the biggest barriers and challenges of business model innovation. As the business model construct in itself is complex and dynamic, conducting a case study provides a method of taking all this complexity into account, as the meanings

and underlying logic of the answers in semi-structured interviews allows the interviewees to give a broader picture of their statements. Finally, case studies are a good platform for theory building (Eisenhardt, 1989) or theory development (Dubois & Gadde, 2002). As the researched phenomena is shown to be relevant for practitioners, being able to generalize and develop theories with managerial implications from the research results is one additional reason for choosing to use a case study as the research method.

In a case study, the researcher is not trying to strip away the context from the research findings, but the context is a vital part of the research findings. (Amabile et al., 2001). Case studies can be generalized to theoretical propositions, not to entire populations (Yin, 2009). With a multiple case study, like in this case, the found differences and similarities between the industries business model innovation activities will point out some directions for future research, and some theory of which the limiting factors of business model innovation can be found that potentially are the same across industries. In industrial marketing case research is beneficial because the research often involves input directly from practitioners, which again makes the findings interesting for the practitioner community (Amabile et al, 2001).

6 Research design

The design of the research can be considered as an anticipatory data reduction (Miles & Huberman, 1994) because of the restrictions they propose for the research. A semi-loose research design has been chosen, as Miles and Huberman (1994) suggest a more tightly pre structured research design for beginning researchers, because of the direction and clarity it provides, and reduces the risk of diffuseness and overload. The amount of predetermined structure depends on *the time available, how much is already known about the phenomena under study, the instruments already available and the analysis that will be made.* (Miles and Huberman, 1994 p. 17). In this case, when there are two separate cases that need to be compared, it is important that there is a pre structure that enables comparison between the two.

The study will be a comparative multiple-case study based on abductive reasoning. A comparative case study differs from a single case study or multiple case study, as the same research question is posed to different cases, which are then researched and then the research findings are finally compared. (Miles & Huberman, 1994). The unit of analysis in this study is an industry. As it is a multiple-case study, there are two units of analysis: the Finnish paper industry and the Finnish telecom industry. The units of analysis are represented by managers of prominent companies within the industries. The study is explanatory as it tries to explain the underlying reasons for the lack of business model innovation in the industries. The study focuses on the current development in the industries, and the contemporary challenges and barriers of business model innovation.

The research design was decided before the study begun, but has been subject to change when new findings have been discovered during the research process. Flexibility is an important aspect of case studies (Yin, 2009), and to the study's abductive logic is included a transparency and flexibility clause, thus all changes in the research methodology are accounted for in this chapter.

7 Method : Abductive reasoning

The objective of this study is to connect theory and empirical evidence into a theoretical framework developed in dialogue between the existing literature and theories and the empirical data gathered from industry interviews. Thus, the study follows abductive reasoning, where in the research process, the researcher goes back and forth between theory, empirical data and analysis. Data is therefore not forced to fit to the theoretical framework, nor is the theoretical framework created only based on the empirical evidence. (Dubois & Gadde, 2002). Abductive research can be thought of as being in between inductive and deductive reasoning. Eisenhardt (1989) has pointed out that conceptual frameworks are typically based on combining previous literature, common sense, and experience. Abductive research strives to match theory and reality by a nonlinear, path-dependent process of systematically combining empirical observations and insights from a continuous exposure to literature. According to Dubois and Gadde (2002, p 555) matching is “about going back and forth between framework, data sources, and analysis”.

Dubois & Gadde (2002) state that the matching, *systematic combining*, of evidence, theory and analysis may take you in any direction, and there is no single best way, although some outcomes can be said to be better than others. The results of the matching activities can, and will give the research new directions, which form the path of the research. To make the research process transparent to readers it is important to describe the twists and turns of the case study and thoroughly account for the changes of research focus, unit of analysis, research questions etc.

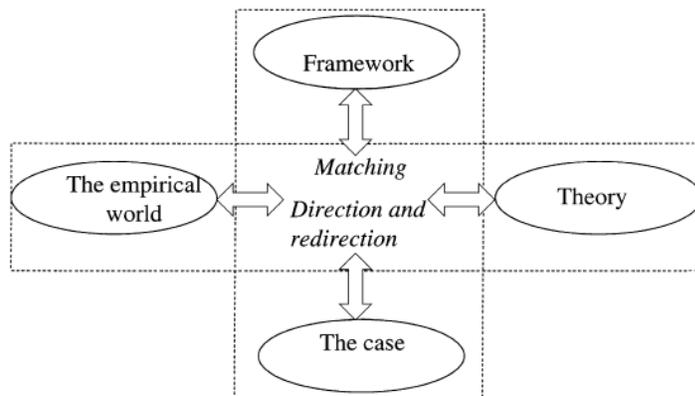


Figure 8: Systematic combining (Dubois & Gadde, 2002)

Based on the literature, three different uses of theory development can be derived. As already stated, theory is often the outcome of a study. However, it can also be an important tool for planning and executing research, and for generalization. A theory creates a hypothetical story about why acts, events, structure and thoughts occur (Sutton & Straw, 1995; in Yin, 2009). In other words, by creating propositions and theory before doing the case research will provide guidance in what data to collect and in identifying rival explanations and choosing data analysis strategies. Theory development is also used when generalizing the research results. As the research results are complex and context-specific, theory development from the results is what Yin (2009) refers to as *analytical generalization* (as opposed to

statistical generalization). Analytical generalization refers to using a previously developed theory as a template to which the empirical results are compared. The study's abductive nature states that the theory may also be revised during the research process. If both of the cases show the same results, one may claim that the study can be replicated in order to achieve the same results, and having more than one case thus improves the study's reliability.

Abduction has received some criticism and although abduction increasingly is the reported method of discovery, there is a general concern is that there is still very little known on the forms abductive reasoning can take and which methods support a research result of high quality (Van Maanen, 2007). Järvensivu et al (2010) point out that even though a study may be abductive as a whole, its sub-phases and processes may be deductively or inductively oriented. Also, they show some concern that the middle-ground status of the abductive reasoning, while giving it some of the main strengths also makes it "it is vulnerable to unintended "blindness" by the researcher "towards unexpected empirical evidence and unorthodox theoretical insights"- Järvensivu et al. therefore suggest that researches using abductive reasoning must excel in openness and transparency in the research design and research ethics.

7.1 Case sampling

This is a holistic multiple-case study (Yin, 2009). Even though the informants represent different organizations, they are representatives of the same industry, and it is industry-wide problems that are identified in this study. A multiple-case is considered to be one variant of a classic case study and have no major difference to a single-case study, although others have argued that multiple-case studies are significantly different and should be considered as a research method on its own. (Yin, 2009). When doing a multiple-case study, the logic of conducting the study is to replicate the study for both cases, and in the case of a discovery in one or the other of the cases, the main interest would be to see whether the result can be replicated in the other case, either expecting the same outcome or the contrasting results based on anticipated differences in the industries. (Yin, 2009).

The rationale for having two cases is that they represent a "two-tail" design, in that they are different, but show the same kind of behavior. In studying the two cases, the objective of the study is to identify and point out the differentiating factors. The holistic multiple-case study contains embedded case studies as the interviewees represent primarily their own entities, the corporations they work for. Choosing contrasting cases will, if the hypothesis proves to be right, give further reliability of the case results and suggest generalizability over more industries. (Yin, 2009).

7.1.1 Choice of case industries

The case sampling process began only after conducting a thorough review of the literature on business models and business model innovation. The Finnish forestry industry was identified as an industry clearly lacking evident business model innovations, partly because it did not occur in the literature even once. It is an interesting industry to study, because of the fact that one can say that it is general knowledge that the industry needs to renew itself to remain competitive, and still there have been no radical innovative changes in their business models during the last 10 years. In order to narrow down the scope, the paper industry was chosen as the unit of analysis within the forestry industry. To find the industry to compare the paper industry with, an industry that would represent the opposite of the paper industry was the main concern, and based on the characteristics listed in Table 6, the Finnish telecom industry was chosen. Again, the scope was narrowed down and the chosen focus became telecom network operators.

	Paper industry	Telecom industry
Customers	B2B	B2C, B2B

Technology	Low-tech	High-tech
Industry clock speed	Slow	Rapid
Offering (main)	Product	Service
Operations & Market	Global	Mainly local

Table 5: Industry characteristics

Using the same frameworks or methods as other case studies in the field of business model innovation studies is important to increase comparability (Stake, 2005). I thus consider myself to have an instrumental interest in cases (Stake, 2005). As suggested by Stake multiple cases in the study will create more generally applicable research results. Eisenhardt (1989) states that the population to which the research might have an impact should be defined, and the case then sampled from that population. For example limiting constraints such as organizational size, geographical location etcetera will aid the search for a case that answers the needs of the research. Random selection of case(s) is therefore not preferable, as we are trying to choose a case that is probable to replicate the emergent theory.

8 Research process

According to the literature on abductive reasoning, conducting research should not be viewed as a predetermined process (Dubois & Gadde, 2002). However, having some structure to begin with can be considered helpful for beginning researchers (Miles & Huberman, 1994). Therefore, there has been a predetermined, but loosely defined research process, which begun by conducting a thorough literature review on business models and business model innovations. During this period, journal articles, blogs, management literature and cases were studied to get an overview on the discussions on the topic in both the academic and managerial fields. Next, after conducting the literature review, a conceptual framework was created, upon which the empirical research was built. A conceptual framework explains the main things to be studied, - the key factors, constructs or variables that will be studied (Miles & Huberman), and it served as the platform for conducting the interviews in the stage of gathering empirical data. Before conducting the interviews, some research on the individuals and the companies they represent, as well as research on the industry characteristics and history was conducted.

Around 20 interviews was planned to be conducted with managers and experts from the two industries, 10 from each. Interviews seek to describe the meanings of central themes, and in a qualitative research they seek to cover both factual and meaning levels (Kvale, 1996). Interviews are useful especially for getting the individual experiences of the interviewees and more information about an interesting topic can easily be sought out by asking more questions. (McNamara, 1999). An abductive approach has been proposed by Dubois and Gadde (2002) and has been chosen for this study as it allows for flexible theory development as a dialogue between the existing literature, the created theoretical framework and the empirical data. An abductive approach differs from that of the inductive or deductive in that the role of the framework is different: the original framework is modified according to the findings (even if they are unanticipated) and the theoretical insights gained during the process of gathering the empirical data. (Dubois & Gadde, 2002).

8.1 Empirical data gathering and analysis

A set of 10 interviews from each industry will be conducted. The interviewees have been chosen based on position and insight in the area of business model innovations and the strategies of the corporations in the industry. Some limits to who were interviewed was posed by access problems. The interviews were semi-structured with thematic questions regarding business model innovations, and the barriers related to them. The interview duration was around 60 minutes.

Each interview was conducted in person by the researcher and recorded on tape. One exception was an interview that was done over Skype. In each interview, the interviewee was asked to recommend a few people to interview next. Also, researchers that were familiar with the industries were asked for some contacts in companies. This “snowballing” method was used to ensure that the informants were as familiar with the topic as possible, and to access informants through personal recommendations. The amount of interviewees was then finalized at 9 representatives of the paper industry, and 8 of the telecom industry. At the point when the last interviews were done, the data gathered had already saturated and very little if any new data was collected at each new interview. The interviews were semi-structured (see list of interview questions in the appendices), and the topics discussed were at times also topics that weren’t planned to be included in the discussion, but as they brought forth new interesting ideas and topics they were used in the dialogue with the coming interviewees. The interviewees mainly on a senior management level in the researched industry, or had extensive experience. Also people who aren’t working directly within the industry were interviewed, two in the paper industry and one in the telecom industry. Two of these people had work experience from the researched industries, and they all represented experts who were able to comment on the development of the industry from the outside.

The recordings were listened to multiple times and the essence of the content was transcribed. Because of the risk of losing richness of the data the content of the interviews was not analyzed with any quantitative text analysis program. (Miles & Huberman, 1994). The interview data was the primary data of the study, but also secondary data (such as industry statistics) was gathered, and used to verify the statements of the interviewees. The findings were organized into a spreadsheet according to interviewee and question, after which the data for each question was exported to a document. The data was analyzed by finding themes and coding. After finding the often occurring themes, the next step was to identify the connections between these themes and apply that to the framework used as a basis for the research, creating a theoretical model (Miles & Huberman, 1994; Dubois & Gadde, 2002). The negative exceptions either disconfirm parts of the model or suggest changes that need to be made for the model (Ryan & Bernard, 2002). The concepts and models developed based on the data gathered is be presented by presenting quotes from the interviewees, as well as tables and graphical models depicting the result of the analysis. There was an overemphasis on men in the research data, as only one of the informants was female. An anonymous list of the interviewees and their current positions can be seen in table 7.

According to Eisenhardt (1989), creating constructs is the first step of creating a hypothesis. When a construct has been created, a constant comparison between data and constructs should take place so that the new evidence is used to sharpen the construct in an iterative process. Eisenhardt also suggests that the time to stop iterating and consider the research done is when the incremental improvement is minimal. After that point, trying to find more points of parity between the data and the case proposition / theory is no longer efficient, and it is time to stop, even though the results are disappointing.

When analysing the data, according to the literature on abductive reasoning, verification is of less importance and the gathered data should be used for directing and redirecting the focus of the study. When conducting interviews, the interview questions are built upon the previous results of the interviews from the same case industry, enabling a theoretical framework to evolve and develop during the interviews, and getting direct feedback on the proposed theory directly during the interviews.

Name	Position	Company	Background
Axel	Managing Director, Myllykoski	Paper company C	Forest industry
Burt	Executive Vice President (Technology)	Paper company B	Forest industry
Charles	Managing Director, Packaging	Paper company A	Forest industry
David	Production Manager	Paper company D	Background in product development and research in forest industry
Erik	Senior VP, Corporate R&D	Paper company A	Background in Paper Company A mainly within R&D
Frank	Senior VP, Technology	Paper Company B	Background in industrial corporations
George	Professor h.c.	Paper Company D	Forest industry
Helena	Member of managing board	Forest Research Company	Background in industrial corporations
Isac	Research director	Forest Research Company	Background in R&D at Paper company D
Joe	Executive Vice President, Consumer Business unit	Telecom operator B	Telecom sector and various
Kurt	Communications counselor	Ministry of communications	Telecom sector
Logan	Head of Solution Concepts in TS Business Services	Telecom operator A	Telecom sector
Mark	Development Manager	Telecom operator C	Telecom sector, banking
Noah	Vice President	Telecom operator B	Telecom sector and various
Oscar	Retired from being VP	Telecom operator A	Telecom sector
Paul	Director of strategic R&D relationships	Telecom operator A	Telecom sector
Roland	Researcher, project manager	University A	Telecom sector

Table 6: Informants of the research

9 Research Quality: Validity and reliability

Dubois & Gibbert (2010) suggest two general characteristics of research quality: the strengths of the links between the empirical evidence and the theory and the extent to which the description of how these links were established convinces the reader. One sign of research quality is having systematic research processes that are described in the methods chapter, as well as providing a clear description of the used research method (Easterby-Smith et al., 2008). Yin (2009) proposes four tests of research quality, which are construct validity, external validity, internal validity and reliability. I will here use these tests to analyze the research quality of this study.

9.1.1 Yin's validity tests

Construct validity refers to “identifying the correct operational measures for the concepts being studied”, and entails choosing the right informants, being objective in observing events and analyzing the results. In this study, I have used both archive data and literature to identify attempts at creating business model innovation, and used this data as secondary information of which innovations actually have been tried. Establishing chains of evidence have been made by letting the reader be able to follow all derivations of conclusions from the case data material. Key informants have been asked to review the case study results and give additional comments. During the interviews, a common understanding of the constructs business model and business model innovation has been assured, to avoid misinterpretations of the interview questions.

Internal validity is especially important for an explanatory study like this one, and refers to the ability of the author to show the logical reasoning behind linking events and creating causalities. Taking all causes into consideration and doing careful analysis of the inferences; i.e. making sure that there is a causal relationship between two events. Therefore, before conducting the analysis, potential outcomes have been considered, as well as preparing for pattern matching already before conducting the interviews has given the research internal validity.

When it comes to external validity, which addresses the research's ability to generalize findings outside of the studied case, the results of this study can at least be generalized to be true for the companies in the industries studied. In the cases where there are similar results in both industries, one can argue that they may be true also for other industries, as the two studied case industries are so different on all aspects. (See table 6). However, being able to replicate the findings in other industries is not the main goal of the study, but understanding why the two industries studied are both failing at business model innovation.

9.1.2 Research reliability

When it comes to reliability the key words are transparency and replicability. Yin's (2009) reliability test measures whether someone else would be able to reach the same results if the same study were to be done. Errors and bias have been minimized in this study by following an abductive approach and adhering to principles of transparency and flexibility. The entire research process is described in this methodology chapter, and the data gathered has been gathered into one case study protocol file. Improving reliability is why using conflicting literature is important. If conflicting literature is not taken into account, the credibility of the research suffers. Literature discussing similar findings is important as well, however. It ties together and adds to the generalizability and results in stronger internal validity and a higher conceptual level (Eisenhardt, 1989). Triangulation of research results enables a researcher to verify findings (Yin, 2009). Transparency is maintained as the research process is described in detail in the methodology chapter, and because of the fact that the case data material is available for further studying and analysis.

A qualitative research can never be entirely objective, but one must acknowledge and recognize ones bias as a researcher. Van Manen (1998) states that to achieve research quality involves making of highly contextualized individual judgments. Dubois & Gibberg (2010) neatly draw together the discussion on reliability of abductive studies and states that the main objective is to reach transparency by reducing the level of complexity, helping the reader to understand the complex topics studied, instead of increasing the complexity of the phenomenon by trying to describe the complex reality. They finally state that “a good case study provides a model of reality, not reality itself”.

PART IV: The case study

This chapter presents the empirical part of this research study. The subjects of the research are two Finnish industries: the paper industry and the telecom industry. First, these industries will be introduced, followed by an introductory comparison of the current situation and BMI background of the industries. Next, the research findings for each industry are introduced. This is followed by presenting the research results, which can be divided into three sub results. In the results, the findings in the case research are compared with the suggestions of the literature on barriers and enablers of business model innovation.

10 The case industries

10.1 The Finnish telecom industry

Finland has become one of the leading ICT countries in the world in at the end of the 1990's. In the year 2000, Finland was the country that scored the highest in ICT employment, ICT R&D expenditure and value added by the ICT sector (OECD, 2002). One of the reasons for the rapid development of the ICT sector has been seen to be the broad co-operation between Finnish firms and research organizations across sectors.

In this thesis I will focus on the telecom sector in its most conservative definition: the telecom operators. The operator market in Finland is dominated by three major players. TeliaSonera, which was formed as a merger between the Finnish previous public posts and telecom office Sonera, and the Swedish Telia. Elisa, which is a private telephone company and the newest competitor on the market: DNA Finland, a low-cost operator.

Liberalization of the telecom competition took place between the year 1988 and 1994, and was among the first in the world. Pressure from the private telecom sector forced the end of the state monopoly. Regional licenses permitted the construction of local mobile networks, but did not allow NMT (Nordisk Mobil Telefoni, the main protocol at the time) –licenses to private companies. Radiolinja, a private telephone company had at the time built a national network through local mobile networks in expectation of liberalization of competition. In 1991, both Telecom Finland (which would later become Sonera) and Radiolinja opened up their GSM networks. At this time, the Finnish economy was still in a very depressed state, and the success of Nokia was not yet anticipated. Due to fortunate developments in the international business environment, GSM networks started to make their way into many other countries where telecom monopolies crumbled. As a result of the greater availability of the GSM networks, the demand for mobile phones rose and Nokia was able to jump on the chance, eventually becoming the world's biggest mobile phone producer. (Schienstock, 2004)

The development during the years 2000-2010 have been characterized by rapid technological advancements and the saturation of the mobile market. Licenses to use third generation (3G) mobile telephony standards were auctioned at overvalued prices in the early 2000's, only to become a financial burden due to slower deployment and diffusion than expected. (Schienstock, 2004) The industry has been characterized by a focus cost efficient operations since the turn of the century, which is visible in the amount of employees (Figure 9).

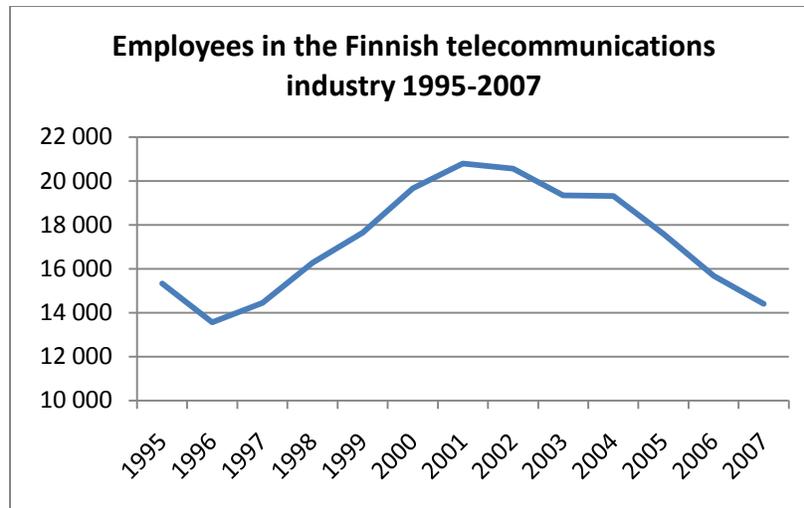


Figure 9: Employees in the Finnish telcom industry during the years 1995-2007 (Statistics Finland).

Innovation in the global telecommunications industry during a long period of time focused mainly on technical innovation, involving network capacity expansion, maintenance and service. Lately, the managerial focus has shifted towards human-made innovations and talent management. As different media are converging into single hand-held devices, the importance of software related to information communication increases for the operators (Laaksonen, 2006).

10.2 Finnish forestry industry

The forest industry has been the backbone of the Finnish economy since the 16th century. Globalization and the development of the global markets for the products of the forest industry has forced the Finnish forest industry to streamline production, form bigger units through mergers and acquisitions and international expansion. Today, more than 60% of the production capacity of the forest sector is located outside of Finland, and the Finnish forestry corporations are among the biggest in the world. In this thesis the focus will be on the paper industry, which

The demand growth for paper products has declined or even turned negative in some markets, which has resulted in profitability problems for the Finnish forest industry. Layoffs have been a constantly reoccurring topic of the news during the latest economic downturn starting in 2008. The pressure for remaining competitive in the global market has forced the entire forest cluster to seek innovation and new offerings. The net sales and net income/loss of the biggest paper producers in the world show that the Finnish paper industry is in trouble, but that the troubles are shared by other paper producers as well.

Rank	Company	Country	2008 Net Sales (US\$M)	2008 Net Income (Loss) (US\$M)
1	International Paper	United States	24,829	(1,282)
2	Kimberly-Clark	United States	19,415	1,690
3	SCA	Sweden	16,965	857
4	Stora Enso	Finland	16,227	(991)
5	UPM	Finland	13,920	(263)

6	Oji Paper	Japan	12,788	114
7	Nippon Unipac	Japan	11,753	55
8	Smurfit Kappa	Ireland	10,390	(73)
9	Metsäliitto	Finland	9,335	(313)
10	Mondi Group	UK/ South Africa	9,466	(310)

Table 7: Net sales and net income/loss in 2008. (PriceWaterhouseCoopers, 2009)

In recent years, the Finnish forest industry has undergone major changes. The relative share of Finland's export value has been on the decline for a longer time, however it still accounts for some 17 per cent of the total value. Forestry's share of GDP is 5,9 %, and the entire forest industry employs around 58.000 employees. The employment of the paper industry during the years 1995-2007 can be seen in the figure 10. As can be seen, the amount of employees has declined steadily since the mid-90's and as the last recession isn't accounted for in this figure, the current employment numbers are still lower.



Figure 10: Employees in the Finnish paper industry during the years 1995-2007 (Statistics Finland).

In the light of a competitiveness report by the Finnish Ministry of employment and the economy in 2009, the operating environment for the forest industry was considered to be difficult. The supply of raw material and energy is sufficient, but the prices of raw material and labor input are higher in Finland than in most rivaling countries. The report states that investments have been focused on the first part of the value chain (wood production and supply of raw material), but that investments should be transferred downward in the value chain. Concrete measures besides structural changes included an increased emphasis on service solutions and greater investments in the development of new forest sector services. (Ministry of Employment and the Economy, 2009).

11 Case 1: BMI in the telecom industry

Illustrative of the current situation in the telecom industry is that there is virtually no market growth in the traditional line of business, but the telecom operators are boasting profit margins of around 30% due to the focus on efficient operations that has been prevailing in the industry during the last decade.

In the telecom industry all informants were of the same opinion – innovation is nothing new in this industry. All stated that there is a need to change and that business model innovation is where that change should come from. Milking the same cow has been generating satisfying results for a longer period of time, but the traditional telecom business is shrinking and new business areas need to be sought out. The telecom business has traditionally been a very innovative business which is used to change and new services and products entering the markets at a steady pace. In the late 80's and during the 90's the operators were where the innovations were made, but today as the technological product innovations are done by the device manufacturers, the service innovations have changed location to the same place. Saturation of the mobile subscription market and the market entrance of new low-cost competitors have changed the market dynamics and focus of the operators, as efficiency is emphasized over innovation. This is visible also in the R&D personnel in the telecom companies, which according to informants from all companies has shrunk to a fraction of what it used to be. However, not only the R&D people have decreased, the drastic decrease in amount of employees is descriptive of the development in the industry in general.

The telecom industry seems to have less of a short-term problem, since the business still is financially sound. Business model innovations are discussed to some extent, but there seems to be barriers to business model innovation hindering actions on this area. Which these barriers are and how they can be overcome is the topic of this research.

11.1.1 Significant business model innovations in the industry

All of the informants agreed that there have been very few, if any, business model innovation in their industry lately. The innovations that radically have changed the way their business is done have been technological innovations with business model implications. One such innovation mentioned by many of the informants were the 0700-service numbers introduced in the late 1980's. A minimal change in the operations enabled the operators to charge higher prices according to predetermined tariffs for voice content with higher added value for the customer. This enabled new ways of doing business for the B2B customer segment, as it enabled practitioners of various trades to make money on telephone services.

Mainly the innovations lately have been related to billing and packaging of services, which has been enabled by technological advancements. One such development is the increasing focus on package deals and all-you-can-eat subscriptions. *“When data became package deals, the interest to develop services and applications for the users stopped, the customer would pay the same anyway”*. However, easier pricing also resulted in having easier billing processes. As a matter of fact, the invoicing of millions of customer's phone calls and various other services is one of the biggest bottlenecks in the development and commercialization of new services or products, and packaged deals made this part easier to handle, since the need to follow the usage of the network exactly decreased.

Although many smaller innovations have been made in the industry, especially related to billing and packaging of the services, they have quickly been copied to the 800 other telecom operators globally. “In the B2B business selling as service has changed the way you purchase phone centers. Before, you bought telephones, a switch and cables. Now we sell this as a service to the B2B customers, who only care about

that it works. It has made our business sounder as well when we can bill them every month instead of selling huge projects every three years. As the location of innovations has shifted backwards in the value chain towards the device manufacturers, the operators have become used to receiving “ready-made” business models that they only implement. The problem is, that if these business models and underlying technology isn’t what the market wants and is ready to pay for, then the problem lies in the hands of the operators.

11.1.2 Use of R&D resources for BMI

According to the informants, quite a lot is done to find new areas of business. Previously, improving the network coverage and quality has been a competitive advantage and focus area, but this is not the case anymore, since the quality of the reception is basically the same for all of the competitors.

There are only a handful of R&D people left at the operators, which previously employed hundreds. According to one informant, the R&D work is more about handling the life cycles of the existing products than researching new opportunities. According to another, the R&D resources are mainly used to adjust the current processes, and that if new things are developed it is because there is a technology push from the device manufacturers, which forces the telecom companies to create services accordingly.

Some horizontal development projects have been done together with all players in the field, to try and expand the mobile market and create opportunities for new services. Some of these initiatives have been mobile TV, mobile wallet/paying and mobile certification, although none of these have become commercial success stories. *“Radical product innovations aren’t born at the operators; they have flagged that one out. Mobile certification/identification is an exception, but that is the only thing that has been done in the last 10 years, which is pretty weak.”* (Oscar)

Many of the informants point out the importance of being able to focus on both exploration into new business opportunities and areas, and incrementally improving the existing processes and products. Another informant states that it is the operator that has the leanest operations that win in the traditional business, since the prices are constantly getting lower and the market is shrinking. However, the outlines of the telecom industry are getting blurrier, and many other industries are feeling threatened as the telecom companies are venturing into new competitive arenas, such as television, entertainment, video calls and home security.

11.2 Barriers to business model innovation

When asked about the biggest barriers to business model innovation in the telecom industry, a long list of barriers were presented by the informants. The informants were first asked to in free form describe the barriers they find as hinders of business model innovation. After that they were asked to place these barriers in the context of the proposed BMI process model. After this, their comments on the roles of corporate culture, top management support and IT were asked, as these were the factors suggested by the literature.

The two biggest barriers that the informants communicated in the interviews were the lack of financing and the attitudinal barriers present in the industry. Lack of financing creates a situation where there is no incentives to develop ideas, since there is no money that can be used for further development. Risk averse behavior in the companies since the IT-bubble burst in the beginning of year 2000 has hindered the development of new business models. Many of the informants also blame the short-term thinking of the management when it comes to pleasing the needs and wants of the shareholders or owners.

“The CEO’s in this industry are so short-lived, that their perspective easily is only 3 years. They might look better if they only cut costs and cut all research activities for that time. But if we take a 10-year perspective it becomes clear that we have to come up with something new. The profitability of the industry and the current customer base gives the telecom companies all opportunities to innovate and commercialize, but it is a question of how much you want to invest into innovative activities, and how much you want to focus on this year’s result. How long can we keep squeezing the last juices of the current business?” (Logan).

The attitudinal barriers are related to realizing the need for change. In many cases the financially solid ground that the industry is standing on at the moment is creating a false sensation of safety. However, there is no top-line growth in the industry, which means that all results are derived from measures to make the operations more efficient, and this creates an unstable situation in the long-term. If the board and the top management see the future as being stable, there will be no motivation to look for anything new, and you clean out all the people and capabilities needed for innovation. *“The wish to grow is what keeps you from thinking like this. With a growth-mindset and a wish to take over the world you will succeed” (Logan).* The financial disincentive is even so big that it becomes very hard for the companies in the telecom sector to find any new ventures worth investing in, because they will drag down their margins, which the shareholders won’t react positively to. In Elisa’s case this happened when they announced that they are expanding their business, analysts proclaimed that their shares should be sold since they are going into business areas with lower profitability. TeliaSonera experienced the same with its ownership in the hardware retailer Expert. In the case of TeliaSonera, which previously was a state-owned institution with no such result demands, the change has been drastic.

It is not only lack of internal financing, but also lack of external financing which is a barrier. There is no venture capital network in which start-ups and new initiatives could grow and develop into flourishing new businesses. The entire telecom industry has been living in a cost cutting mode lately, which has made it difficult to innovate as everyone is working under constant cost pressure. There have been very strong cost cutters leading the companies, but if there are no individuals in the top management team that communicate the importance of innovation and development, it can be fatal. *“If you don’t put resource into development you will find yourself in double trouble the next year: you are lagging behind the competitor and losing customers, and you have to invest in the development with the same cost structure and less customers” (Oscar).*

There is also an internal pride of the technological competence within the telecom industry, and people tend to defend the existing business and existing products. *“The culture and routines support the current ways, naturally. There is a learning curve, and at the moment people are at the very height of it. We need to ask ourselves how we can get people to move to a new learning curve. We need to convince them that the new curve will take you further in the future. It is very risky and there is nothing known about this new learning curve and if you compare it to the existing one it does not look like a very good alternative” (Noah).*

Another barrier communicated by the informants is the lack of people with the right kind of vision, who can think in the ways needed to be able to create business model innovations. *“We are not used to thinking about these things. The house is full of engineers. We have begun to think in the lines of service innovations because we realized that what we have is not enough” (Paul).* Digitation and all the new businesses utilizing the web and offering free services to consumers have forced the telecom business to rethink the outlook of the business and adjust to the changing needs of the consumers. Even though the industry might not have a burning platform financially, the changing demands of the customers forces change upon the telecom companies. People who are ready to question the current establishment are

highly valued, but it is a question of culture if these kinds of people get accepted. When the company is very focused on cost cutting, these “difficult” people are usually the first ones to go. A concrete people-related problem is that when most of the technical expertise is relocated to other parts of the value chain, there is no one to ask within the organization if you come up with a good idea, and this in turn creates one more barrier for taking ideas further into development.

Regulation has become more of a barrier since joining the EU. One of the informants even describes it as a paragraph jungle. Often, regulation is lagging a few years behind and might even be irrelevant when it is introduced. Knowing that there will be regulatory measures in the future, but not knowing what they will be affects the propensity to develop new services. This is the case for instance with mobile TV. Everyone realizes that there will be property rights issues, but no-one knows what they will be, so it becomes difficult to compare the benefits with issuing the service with the possible restrictions which might be enforced many years ahead. One informant representing the telecom industry expressed his frustration with the regulatory power of the government as they are forcing the telecom companies to serve unprofitable businesses. As the telecom companies represents one of few industries that won't be leaving Finland, these kinds of restrictions and demands can be forced upon it.

The telecom industry has traditionally been a very dynamic and innovative industry. *“We live of innovation, it is in the walls of this place”*, as one of the informants put it. However lately it seems that the locus of innovation has changed and left the telecom companies to market the business models and technological innovation created elsewhere. An unpleasant situation in the long-term, and may lead to unprofitable business in the short-term as well, if the device producers are lacking market orientation. *“We get stuck with new technological innovations that we are forced to sell, and then we give up after some time when we realize that there are simply no users for the service”*. Market orientation and finding latent demands is mentioned by some informants as being important in overcoming these barriers. There is some ambiguity on whether there is a demand for innovative business models or not, where some informants argue that the market isn't interested in having anything different than what is offered today.

As can be seen from the amount of barriers given by the informants, it is not a question of only one or a few barriers (or enablers for that matter), it is the context and the whole organization and organizational culture, and the strategic direction chosen by the management.

11.2.1 The role of corporate culture and the top management

All informants agree that the role of the top management is significant in creating business model innovations. *“The top management needs to be 110% committed. “A significant share of their time should be devoted to managing the experimentation with new business models”* (Joe). According to the informants, nothing happens unless the top management and the board are sponsoring the innovation activities, and the demand for business model innovations should be found there. If the top management is concerned only with cost cutting, all the innovation activities are easily cleaned out of the company, and when the next surge for growth comes, there may be a budget for innovations, but no ideas and no people who are able to come up with them. However, a few of the respondents point out that the management is only acting out the wishes of the owners, and that if the focus lies only on cost cutting, the blaming finger should be pointed at the short-term interests of the shareholders.

The top management also has a great influence on the corporate culture, which in its part affects the business model innovation process. *“Everything starts with the vision of the top management: where is the future? Where are we going”*(Oscar). An innovation-friendly culture in the company shows in small things and signals that influence the people working in the organization. *“There are small things that*

make a big difference in the corporate culture: for instance, do you get a promotion or do you get fired from making mistakes? A few of the wrong signals and all innovation stops and focus remains on the operations” (Logan). The importance of creating a mission that the employees can understand and commit to is emphasized by Roland: “The corporate culture is important. If you can create a strong mission that the employees will understand and want, then it will show. And you can’t communicate this in a speech; the management really has to walk the talk for it to spread”.

All informants do not see the top management as being crucial in creating business model innovation, but see that the corporate culture can be such that it generates business model innovation. *“The top management affects the innovation activities, but it is not crucial. If the corporate culture is that you want to be the best, then it will feed BMI. If it is that you want to be efficient, then it will hinder BMI” (Noah). One of the informants, Paul, states that it is rooted deep in the national culture, and that especially in the Finnish culture you have an idea you develop it first, and ask permission later, when again in other countries you may need a strongly articulated need for ideas before they are created in the organization.*

11.2.2 The role of IT

The role of information technology is widely discussed in the literature (Osterwalder 2002, among others), and seems to be an integral part of most business model innovations made in the 21st century. However, very few of the informants mentioned IT without asking specifically for it. When asked about the role of IT, the representatives of the telecom industry agreed that digitization has been a big force in the industry during the latest 20 years, and that IT plays a very big part in their daily operations today. *“IT is crucial, a prerequisite for doing anything at all. It is not a supporting function, but core competence and core doing for us” (Joe). All of the services in the telecom business are based on IT, and IT is used especially in the pursuit of lowering the cost to serve, which is one of the main targets in the shrinking mobile markets.*

The informants agree that managing the IT is a business critical competence; however, it becomes clear that IT is not seen only as an enabler as such in the telecom industry. Five out of the respondents mention IT as being not only an enabler, but a barrier to creating business model innovations, mainly because of the stiffness of the invoicing systems. *“At the moment it seems to be easier to develop new services than it is to make it billable. So the IT systems can also be barriers” (Logan).*

“IT is both an enabler and a barrier. If you have bad and stiff systems it is a very big barrier. Not being able to bill a new service for instance. IT is not a support function, it is the backbone of the firm, and many firms should consider building the entire business up from scratch to change the IT systems. There should be understanding of this topic at a high level in the company. IT creates competitive advantage and competitive strength” (Noah).

New developments in how IT is managed brings new hope to those critical of the current systems, which by one informant are described as “purkkaviritelmä” (literal translation: fixed with chewing gum), and therefore can’t be touched because of the risk of collapsing. *“IT is slowing us down at this moment, but this is also radically changing because of this SaaS [Software as a service], and what is considered to be core competence. Now that we are doing new projects we are also purchasing business critical systems as SaaS, using external providers. This will bring some more flexibility in the future” (Paul).*

11.3 Barriers in the BMI process

In the interviews the informants were asked to comment on the business model innovation process presented to them as a picture. The aim was to get feedback on the picture and be able to make changes according to the input from the business world. Overall it can be stated that all informants agreed that having a clear process when it comes to developing business model innovations is important, because it articulates the need for change and renewal, and gives the tools for everyone to participate. None of the companies had a process specifically for finding business model innovations. The two first levels and the barriers associated to those were seen to be the most significant.

11.3.1 Level 1:

There was some ambiguity to whether there are any barriers to the first level, understanding of the need of changing. There has happened a shift since the 90's when there were customers in line to buy your services. Since then, the market has saturated and the low-cost operators have entered the market forcing the two incumbents to change their behavior. But the cognitive barriers remain: on one side there is, according to some of the informants, no incentives to change because of the financial situation and the high margins of the current business. *"Why kill something that works?" (Mark)*. On the other hand, there is an understanding that the industry needs to change, since the world is changing and the current business won't be enough in the future. Even if there is an understanding of the need to change, the continuous layoffs have made the work environment for creating innovations challenging.

11.3.2 Level 2:

About half of the informants found this level to be the biggest bottleneck to the business model innovation process. It is mainly a question of risk taking and knowing what to invest in. There are many people involved in the process, each person with his/her own view on what is important and the future development of the market. There are in all of the companies some initiatives already in this phase of development which all could be developed further, but the difficulty comes in knowing which projects to bet your money on. *"Usually the problem is that you put too much too early, or too little too late. Luckily the competitors are experiencing the same situation" (Logan)*. Another issue is that of size and comparing the initial projects with the current business. A new venture should have extremely good outlooks for the company to be willing to invest in it in many cases. *"Very few new ideas look good compared to our current business. The requirements are impossible when comparing to the existing business. Of course we can bring some of our own capabilities, but the risk is very big. Our current profit is 30 % with no risk here, why venture into something new with lower return and far greater risk? (Mark)*. At this point of the process the risk averse behavior comes into play. Thinking is cheap compared to actually investing in developing a new business model, and speculative work is done. Size is mentioned also when considering the opportunities the Finnish telecom business has to impact the global telecom scene.

Many of the informants point out that having a separate unit that does all the development work is dangerous and potentially risky, since it becomes a place, separated from the rest of the organization, where you are developing all the crazy ideas that weren't good enough for the real business. If any of the projects are taken as far as commercialization, it will be difficult for the rest of the organization to accept the new ideas, and internal selling of the idea will take up a lot of time and effort for the development team. Even if the separate group has the blessing of the CEO, it will not be enough. The CEO's blessing in general is not either enough, since the CEO's change with continuous intervals. Innovation activities need a very broad support among the senior management to ensure the continuance of the process, even when the organization changes.

Wrong kind of people making the go/kill decisions can become a big barrier. Also when it comes to gathering the ideas in the initial stage, an idea can get stuck simply because your closest boss doesn't understand the value of the idea.

11.3.3 Level 3:

On the third level of business model innovation the barriers thought to be related to challenges in commercialization, managing change and implementation of new systems due to the business model change. According to the informants, the biggest barriers are in the earlier stages, and if the work in those stages are handled well the third stage will be no problem. Some barriers which are mentioned are lacking management/leadership skills for the third level. The team who invented the business model are not necessarily the ones who are best at implementing or scaling the operations quickly. Also, sticking too tightly with the competence from inside the company can become a barrier to effective implementation. A lack of social networks both internally and externally can hinder successfully completing the third level. Internal networks helps in selling the idea and eases the change resistance. There might be specific people or units that resist the new business model more than others, usually those people whose business the new model is killing, or those whose resources are being taken away. External networks improve the partnering opportunities, and can aid the process also in the earlier stages.

Another barrier which becomes evident in the commercialization phase is whether the business model is based on an observed market need or not. Unresponsiveness from the market is a result of the companies' ability to create markets; there simply hasn't been thinking in those directions. Some informants also mentioned that the sales teams can be the worst ones to sell the idea to, and that they can severely hinder the successful commercialization. The sales team is an important networking partner since they are the ones that meet the customers.

The third level is where most of the practical issues arise, as this is when the idea is fully tested and commercialized. There are practical issues during the entire process, but this is where they become the most evident. The informants also mentioned the invoicing system as one of the barriers at this stage, when the actual new business model needs to be integrated in the existing invoicing system.

12 Case 2: BMI in the paper industry

The paper industry has been going through some rough times with constant lay-offs and restructurings during the last decade. The economic downturn starting in 2008 has been the latest heavy cloud over the industry, forcing the companies to focus on cost cutting and saving what can be saved. In the case of the paper industry the need for business model innovation was clear for all the interviewees. As two of the informants stated, by the time the next economic downturn is knocking at the industry's door, they need to have some new businesses running or else there will be no paper industry left after cutting away more of the operations. Currently the paper industry is suffering from overcapacity, competition from low-cost countries and a buying model which forces all paper suppliers to standardize the products according to the customers' specifications, which leaves the paper companies with no bargaining power. A sense of urgency and of moderate despair because of the barriers hindering the industry from renewing itself could be noticed in most of the interviews with representatives of the paper industry. Through this study I hope to articulate some of these barriers and potential ways of overcoming the barriers.

12.1.1 Significant business model innovations in the industry

The immediate reaction to the question of which significant business model innovations have been made in the paper industry in Finland is hesitant, and a majority of the informants respond that there haven't

really been any. Some few examples are mentioned, such as UPM Raflatac, which are tags using RFID-technology which can be printed very inexpensively due to a new technology. Other new, innovative products are also mentioned, but hardly any have changed the rules of competition in the industry.

The unified sales channel for all of the Finnish paper companies in the form of Finnmap and the likes (Finnboard, Finnchem) are seen by some of the informants as being a business model innovation. *“After the wars the Finns had to cooperate, and all the sales and marketing was handled centrally through Finnmap. It was a business model innovation at the time”* (Erik). Later on, when this model was abandoned, it showed in the focus of the paper companies – no thought was used on the customer and the demand, the only concern is the volume produced.

Other business model innovations that were mentioned in the interviews, which had smaller impacts but are good examples, are M-Reals integrated brand packaging business, where the company moves further on in the value chain and offers added value to the traditional product. M-real also managed to create a lighter paper, this saved transportation costs. The costs saved were divided equally with the customers. UPM-Kymmene’s and Stora Enso’s ventures into biofuel are expected to bring new volume business, and there is talk about replacing plastic products with fiber-based products in the long term, which may bring new volume business. Continuous technological improvements have brought new innovations in terms of value chain control and integration.

12.1.2 Use of R&D resources for BMI

Traditionally, the Finnish paper industry has been very focused on operational efficiency, and the bigger part of R&D resources have been spent on improving the processes. Lately, the focus has shifted towards product innovations, and only a fraction is used to finding new business models. *“There has traditionally been very engineer-like development efforts in this industry - technology improvements, product and process improvements. We haven’t looked at our business from the customers and the end-users’ perspective. Now we have realized that there is a need to change because of the shrinking markets, and we have started looking, but there is still a lot of effort going into basic process improvements”* (Axel). There seems to be a lack of systematic processes in finding new business models, and most of the R&D efforts go into the development. *“The biggest part [of R&D efforts] is spent on product innovations. This is partly good, but more service innovations should be researched also. We are doing too much with the existing business units, too little with strategy or research people”* (Erik). One of the reasons for this seems to be the lack of people who are able to think more in terms of customer and end-user needs and conceptualize new ideas. *“Finnish engineers are not even trained to think about these things. We are used to only developing the process. Now we are starting to find power to develop the models as well”* (Frank). Within smaller, marginal products some new development has been happening, as with the integrated brand packaging initiative in M-real. But the volume of these initiatives is so small that they are barely noticed at all.

12.2 Barriers to business model innovation

Many barriers were discussed when the informants were asked to list the barriers they feel affect the lack of business model innovation in their industry. The biggest two barriers are related to attitudes in the industry, and the industry structure. The mental barriers and attitudes seem to be related to tradition, as the paper industry is an old and powerful player in the Finnish economy and society. *“It is a problem related to the identity of the firm – we are a paper company and it is hard to change that”* (Charles). According to Frank, *“People’s attitudes are the greatest problem. But you can’t change the mindsets of all people; there are people that are meant to be thinking about these things”*. In other words, it can also be seen as a problem related to the lack of the right kind of people within the companies.

Currently, a large part of the employees within the paper industry have the same educational background, with a majority being engineers.

“New ideas are killed in an early stage because of mental and status barriers. In the boardroom or top management this is evident immediately. You are afraid you will get fired if you take on a project like this. People outside of the industry have recognized the lack of renaissance individuals. In the 50’s and 60’s there were some, but not anymore”. (George).

One issue which is partly related to the mental barriers and attitudes, but also rooted in the structure of the industry, is the issue of size. In an industry where the size of the business is measured in tons instead of euros, it seems to be challenging to evaluate ideas based on their long-term potential, instead of comparing them to the current business.

“This is the basic barrier in all of the forest industry. Unless the proposed business can bring in 100 million in sales, nobody is interested. But the main point shouldn’t be the size of the business, but the result it brings. This industry does not necessarily understand that new things are small, and that you need to have patience to grow them.” (Erik)

The size issue is based on the structure of the industry: the paper companies have a very capital intensive balance sheet, and investments are made for tens of years ahead. Investing in a pulp or paper mill costs billions of euros, and once you have built it, it is practically impossible (or at least extremely costly) to move the mill or changing what it does. This lack of flexibility has led to widespread restructurings during the last years of recession, with thousands of employees losing their jobs in the Finnish paper industry. The situation of financial distress that the paper industry currently is in is also severely hindering business model innovations from taking place, although it provides an efficient burning platform. *“All resources are currently being used for saving the sinking ship – you can’t develop new things if you aren’t profitable” (Charles).* The lack of financing is touched upon by a few other informants as well: *“Very few companies have increased their development and research funds, although now there is a strong demand [for new things, mainly bio fuel]” (Frank).* Avoiding risks has due to the stressed financials has become a barrier to developing new ideas further.

An issue that was raised in the discussions was also the power the customer have over the paper companies. *“Customer specifications are used as determinants of what the companies are able to do” (Isac).* *“The companies are hiding behind their customers claiming that they can’t produce anything else but what the customers demand in their specifications, and that they can’t compete with their customers. But this should not be a barrier, if you have a good idea it should be used” (Helena).* The customers demand standardized products according to their specification in order to be able to effectively force prices down when having 3-4 suppliers. In Ainomaija Haarla’s doctoral dissertation (2003), the purchasing model used for paper products was found to be one of the main reasons for why differentiation in the paper industry is so difficult. *“At one point when we accidentally came up with a better [lighter] product, the sales people said STOP, this is not what the customers have specified. So we did not sell a product that was better for the customer, because it didn’t fit the specifications” (David).* The last example illustrates that having a standardized product which enables a price competition is more important to the customers than having a supreme product.

Finally, an informant states *“The barrier to change shrinks when the current market vanishes. It’s not gone yet, but its shrinking”*, which illustrates the general attitude among the informants. This perhaps representing the more change-seeking kind of people in the organizations, who are looking at the

change resistance of their peers disappearing and being replaced with a sense of urgency to save what can be saved.

12.2.1 Corporate culture and the role of the top management

The corporate culture was seen as being essential by all of the informants. *“If someone in an organization comes up with a great idea, it is the culture that determines whether it is taken forward or not”* (Burt). The culture in the paper industry is conservative, since the industry is old, and the culture has been cultivated from one generation to the next. Change has not been embraced before there is a need to change. Many see the culture as one of the most important barriers, and the reason for the mental barriers discussed in the previous chapter. As the culture is so strong, it is difficult to change it. *“There is a very small supply of people thinking differently, and those people have a hard time bringing their opinions public. This culture is deeply rooted, and changing this is very difficult”*. (Helena). The role of corporate culture goes hand in hand with the role of the top management, as many mention the top managements support as being essential for a culture change. But it is not only the top management who decides what the culture will be like, as the behavior of the management reflects the wishes of the owners. *“What is important and what is not is a question of culture. Empty words in the vision and mission statements are worth nothing. In some companies you can really smell the change. All of this that is missing is the fault of the top management.”* (Charles).

The top managements support in developing business model innovation initiatives. The top management signals what is important in their statements and strategies, and all change should start at the top management, without their articulated support nothing will happen. Currently the top management consists of mostly senior managers from the paper industry with the industry recipe in the backbones. *“There are very few inventors in the top management; they are all old farts from the financial or production side. This is the tradition, we are stuck. It is easier in young businesses; here the old people automatically have the last word”*. There have been CEO's coming from other businesses, but there might be trust and support issues in the top management teams.

Some of the top management teams suffer from shortsightedness, and many of the respondents reveal that there is no tolerance for mistakes, which leads to risk avoidant behavior. *“In a dead-end situation you get more respect as a manager if you continue to drive the ship onto shore, instead of trying to save the ship and failing. If you fail you get removed.”* (Frank).

12.2.2 The role of IT

None of the informants mentioned IT as being either an enabler or barrier when asked about barriers and enablers. However, most agreed when specifically asked, that IT is a tool and an enabler of more effective operations, and a way of reaching the end users and customers. In most of the answer the response was that IT has not been utilized enough yet, and mainly in trying to create more effective operations and logistics systems. *“IT has not been used in creating new business models yet, only for improving efficiency. For instance selling through the web, this no one dares to do. You have all the information on the web, but you can't buy the product there. Even though it would probably be cheaper when it comes to serving small digital print houses for instance”*. (George). The opportunities in utilizing IT are big according to all of the informants, but there is very little knowledge about IT in the paper companies since everything is outsourced, and the IT service providers are still in their infancies: *“The service providers don't know what they are selling, and the companies don't know what we are buying, how can we trust what they are saying? How can we learn how to buy IT, when it's not properly sold? The business models in that industry are underdeveloped, which makes it difficult to partner with them”*.

12.3 Barriers in the BMI process

All of the informants agree that the greatest barriers for the paper industry lie within the two first barriers. The dynamics and history of the industry does not emphasize development and launching new products on a regular basis. *“The situation and mindset of the Finnish forestry companies has had to change. For a long time, they were supported and protected by the Finnish government. This is the first time that they have had the incentive to differentiate”* (Helena).

12.3.1 Level 1

Although most of the interviewees agree that the biggest barriers are mental and located in the beginning of the process, very few other barriers were identified at the first step of the process, perhaps because very few business model innovation projects seem to have found their way towards development in the paper companies. In this step the attitudes within the company and management support and culture seem to be the major barriers. *“The highest barrier is located at the first step, if that one can be forced it will become easier in the following steps”* (Helena).

12.3.2 Level 2

At the second level of the business model innovation process the most important barriers according to the interviewees are that the process has involved enough, and differently skilled people who can evaluate the ideas from many different aspects. *“...having a diverse group of judges is crucial. This has been the place where the ideas get stuck for ages, the typical engineer won't see business models in that light, and so this is where all the more radical ideas get stuck. Their value isn't appreciated because they are not evaluated on the right scale. You need a specialized team for this”* (Burt). According to some informants this stage is the bottleneck of the process, either because there is a lack of input of ideas, or because all the ideas are “killed” in the process when they get evaluated on too demanding requirements.

The size issue and capital intensity is evident at this stage. Ideas with small sales potential in the short run are facing metrics which compare them to the current business, which makes it difficult to get an idea to the next level, it gets killed in the process. *“Developing small-scale is OK, but when you need more money, you have to compete against other ideas and it is easier to give money to familiar ideas, where you understand the outcome and the business potential”* (Isac). The criteria on which the ideas are evaluated make a big difference for how the ideas are further developed in the process. *“The second stage is easiest for this kind of industrial corporation. But, it is also very easy to put it so that you will be able to say no/kill. It is easy to kill, kill, kill, but if someone gets past those things, and need to commercialize. That's is where our knowledge ends. We need new kind of expertise for this.* (Charles). Axel articulates the issue when evaluating ideas in clear text: *“...and the capital intensity plays a big part - we need to find the ideas that are good investments with the current measurements”*.

The behavior easily becomes too risk averse due to the corporate culture, as illustrated in the comment by Isac: *“At the second stage it is all about risk and money. And the ones that want to make CEO can't afford to fail, so they choose the low-risk alternatives”*. As it is difficult to calculate any precise NPV's or cash flow predictions for business model innovation ideas, there is always an element of risk included, compared to investing in a process improvement that with low risk will improve the efficiency of the operations and save a known amount of money. The effect of the corporate culture also becomes evident in the comment by Charles: *“The biggest weakness is that we don't have enough input of ideas, nobody wants to get labeled as the one who comes up with new stuff”*. Three of the informants also point a finger at the research done in Finland. In their opinion much of the research is done without any

thought of whether there is a substantial business application to the research results or not. One of the reasons for this is the targets and metrics on which the universities and researchers are measured, which focus on volume and not quality. Although a lot of research in this field is done, the joint research initiatives are not focused on any business-critical topics, and there seems to be a general culture of hiding research results. One of the informants points out that more openness is needed, and that the companies could look for innovations also outside of the company borders. *“We can’t afford doing unnecessary research, what would happen if we said that the research budget is zero euros, where would they find the innovations then?”* (Charles).

Frank emphasizes that there is an urgent need to create something, anything through this kind of system to instill believe in the employees of the corporation that a new business can be found through a process like this. *“We are at the experimentation level (2), but stuck in here. Now we need to invest big sums of money, and produce something. It is difficult for the paper men to grasp the meaning of these new businesses. It would be good to get the biofuel train moving, to change the mindsets. There are loads of opportunities right now, we just need to dare.”*

12.3.3 Level 3

Most of the respondents see that the biggest challenges are within the two first levels, some motivate it with that the company they work for is such a strong project organization that implementing change and learning new things isn’t problematic. Barriers mentioned at the third level are related to change resistance and instances that may be especially difficult to sell the idea to. One of these is the sales unit, which according to David: *“The currently used pricing and the sales arguments hinder introducing new products. For instance we have been selling quality paper for 20 years, and it would be impossible for us at this stage to say that hey, here we have this paper which isn’t as good, and this would actually be better for your product.”* (David). Another issue which was mentioned by many of the informants was that the customers are often interested in and happily accept new introductions on the market, but that they are unwilling to pay for them.

Line managers are another instance that often do not look favorably on innovation initiatives if they mean that their resources are taken away. As line managers are focused only on optimizing and maximizing production, they are not capable of thinking in new directions. *“Everything is fine as long as their [the line managers] money isn’t being taken away”.* (Charles).

13 Research results

The two industries were chosen because of their evident differences in structure and business logic, but similarity in their inability to produce business model innovations. It was expected that there would be some common barriers, although the nature of the industries are quite different. Some of the interviewees used the other industry as a reference, but often to point out the differences between the industries: *“We have a quite interesting industry here, if we were a paper company we would both be building our own machines and producing the paper”* (Paul).

The research results achieved in this study are related to three different topics and research areas, which are summarized in the table below.

SUMMARY OF RESEARCH RESULTS

1. *General barriers to business model innovation*

Six universal barriers and 8 (telecom)/ 4(paper) industry-specific barriers were identified in the interviews. Of the universal barriers, many are the same as have been proposed in literature, but some new, such as the risk aversive behavior and overemphasis on customer orientation are acknowledged.

2. *Barriers to BMI in the context of the business model innovation process model*

The interviewees were asked to identify the location of barriers and think of barriers which could arise in particular parts of the BMI process. The results show that there are some differences between the studied industries, but that the biggest multitude of potential barriers occurs in the second, experimentation phase, of the BMI, although the barriers in the beginning of the process may be harder to overcome.

3. *Identifying enablers of and ways of overcoming the barriers to business model innovation*

The informants were asked to share their opinions on what would be needed for more business model innovations to take place in their respective industries. The outcome of this question was a list of enablers, which correspond with that of the enablers discussed in the literature, and a quite extensive list of concrete measures that would aid the situation in the industries.

Table 8: Summary of research results

13.1 Result 1: General barriers to BMI

Although the current situation is similar in both industries, the underlying reasons and barriers have some differences. The biggest difference lies in the financial situation of the industries. In the telecom industry, the profitability is being reaped out of efficiency improvements, and the companies are doing quite well in terms of operating profit. Although it is clear that in the long term they won't be able to continue like this, there is a lack of incentives at the moment to invest in risky new business models. In the paper industry the phase where there are no incentives to invest is long gone, and now they are facing a situation where sales and profitability is suffering heavy losses due to the last economic downturn, and there simply is no money to invest in business model innovation before they have a healthier core business.

Very few radical business model innovations have been done in the industries researched. Even though some small initiatives have been done in both, the first reaction to the question by both were that no significant business model innovations have been done, which shows that both industries are aware that they haven't been progressive in creating new business models. In the telecom industry any new innovative services or products have quickly been copied globally. In the paper industry the initiatives have been reasonably small, or very product focused with a small impact on the overall business. The power of the customers who seem to demand standardized products to enable price competition have put the end to many of the efforts made especially towards creating new quality features in the paper products.

Out of all of the barriers mentioned, most of them were mentioned in both of the industries. A summary in the form of a table is presented here.

BARRIER MENTIONED	TELECOM: N=8	PAPER N=9
Universal barriers		
Attitudinal barriers		
Lack of right kind of people & networks & knowledge		
Risk averse behavior		
Lack of management support		
Corporate culture		
Overemphasis on customer orientation		
Telecom		
Cost cutting focus		
No BMI process		
Strategic shortsightedness		
Lack of financing		
Too good financials- no incentive to innovate		
Knowing on what to focus		
Regulation		
Finland is too small		
Paper		
Size issue		
Capital intensity		
Customer power – specifications		
Financial distress – can't focus on BMI		

Table 9: Barriers to business model innovations mentioned by informants

In the table, brief overviews of which barriers have been mentioned by the interviewees when asked about the barriers can be seen. The barriers only covers the issues mentioned more than once in either of the industries to get a more focused result. Note that this table reflects what the interviewees answered without any specification; the question asked was “which are the barriers of business model innovation in your opinion in the industry?”

The barriers and enablers suggested in the literature were all present among the research findings, except that the role of IT wasn't mentioned even once when asked about the barriers and enablers. When asked, all of the informants in the paper industry agreed that IT plays a significant role as an enabler of operational efficiency and new ways of reaching the customers. In the telecom industry the response was more diverse: according to some, IT was a barrier, and to some, an enabler. All however, agreed that the role of IT is significant in business model innovation. Other concrete barriers which did not surface in the interview data but were mentioned in the literature review were wrongly designed monetary incentives, a too strong central management in the organization. The reason for these not being mentioned can be the nature of the studied industries, but in that case these barriers should also be defined as being context-specific and not universal.

Based on the results presented above, the barriers have been divided into universal barriers which seem to be the same in both industries, and industry-specific barriers where there is a clear emphasis only in one of the two industries. The barriers and the reasons for them are discussed next, and parallels are drawn to the barriers mentioned in the literature review.

13.1.1 Universal barriers

Six universal barriers to business model innovation were identified in the research. The two first barriers were mentioned in total by 10 of the 17 informants, with slightly more in the paper industry. The two next ones were mentioned by a total of 7 and 6 informants respectively, and the two last ones by six in total, but four of which in the paper industry. The reason for drawing the line for the universal barriers is of a practical nature, the following barriers have only one mentioning in either of the industries. It is possible, that these could be labeled universal barriers as well, but in this study the results are not indicative of that.

The barriers discussed in the business model literature were divided into three categories in the theory review. These three categories were: 1) *Organizational structure & division of tasks*, 2) *Change resistance & Organizational culture* and 3) *Financial metrics and incentives*. These barriers are naturally of a universal nature, as they aren't proposed for any specific industry. We can see that some new aspects to barriers to BMI are brought forth by this research, although the categorization done previously is quite general and can be interpreted to include all of the universal barriers found in this study. However, I would argue that the overemphasis on customer orientation, the attitudinal barriers and the lack of required competence in the organizations are barriers that weren't accounted for to a big enough extent in the literature. Next, the universal and industry-specific barriers will be introduced.

13.1.1.1 Attitudinal barriers

The attitudinal barriers are directly linked to the corporate culture and directly affect the behavior which is described in many of the barriers. But more importantly than that, it is the attitudes of the individuals in the highest management layers which is causing problems. Some concrete indications of attitudes which are hindering business model innovation from happening that the informants mentioned were defending the existing business, a lack of humility and being too proud of the competence that the firm at some point has had (both industries have a history of being global leaders in their fields), seeing the future as stable, getting rid of all the “difficult” people and focusing only on the personal career.

Chesbrough (2007) also identifies this as one of the major barriers and states that since most of the business managers have reached their current position through following the industry recipe, this is what they are good at. The attitudes of the top management is visible throughout the organization and effects all operations. It is seen as one of the most important barriers to business model innovation.

13.1.1.2 Lack of competence

The second barrier with the most references in the interview data is a lack of the right kind of people and the lack of competences and skills needed for business model innovation. Although the respondents in both the telecom business and the paper industry didn't seem to feel that they have a lack of generally innovative people, – both businesses have done product and process innovations frequently – they are lacking people with the ability to think conceptually about business models, and the management who can commercialize the innovations and take them to scale quickly. "It is all about the noble art of questioning and asking questions, of being curious. In the future we will compete for these people that question the given structures" (Joe). In the telecom industry the greatest reason for lacking these people seemed to be the continuous restructuring during the last years, when all the "difficult" people have been laid off. "You need a few difficult people who won't agree to do as wanted, who promises whatever to the customers. This is the kind of behavior that leads to innovations" (Logan). In both industries the lack of skills and competence in business model innovation is often connected to the fact that majority of the employees are engineers with a very narrow area of expertise. This barrier is not discussed in any greater extent in the business model literature, although this research shows proof of it being a significant barrier.

13.1.1.3 Risk aversive behavior

The risk taking ability in both industries is low, and the safe options are preferred to the ones with an unsecure future. The capital intensive nature of the traditional businesses in both industries have created a risk aversive culture: "*Network investments are big and expensive, and they can't be undone, they need give the desired return on investment*" (Mark). One big problem is that in the phase where an idea is developed and decisions on further financing needs to be done, the business model innovation ideas are being compared to ideas that are safe and familiar to the decision makers. "*At the time when your project requires bigger investment, then you have to compete with the other ideas, which are usually some modification of the normal business. Since the person deciding isn't familiar with the new initiative, they choose the safe alternative*" (Isac). A reason for not accepting any risk is the culture of the company, where in both industries it has been pointed out, that failures aren't tolerated. "*...the ones that want to make CEO can't afford to fail, so they choose the low-risk alternatives*" (Helena). Comes and Berniker (2008) mention that seeing new business groups as risky in an organization has a negative impact on the willingness of employees to engage in the locations of innovative activities. Thus, how risky new business development is seen will also affect the motivation of the employees in working with innovating new business models.

13.1.1.4 Overemphasis on customer orientation

In both industries many of the respondents have stated that the reason for not creating any business model innovations or other innovations is that there is no demand from the customer's side for innovative offerings. In the paper industry the customers are demanding standardized products that enable them to create a price war between the suppliers, and therefore it is impossible to create any radically innovative offerings, because they do not fit into the purchasing plan of the customers. In the telecom industry there is no market for new innovations and the majority of customers are content with the service offering of today. "*For this to work you need an enlightened buyer, who knows and wants something new. We can't simply push new things, there has to be a demand.*"(Noah). This barrier has not

been discussed in the business model literature used in the theory review of this study. Therefore this research result can be seen as a contribution to the knowledge of barriers to business model innovation.

13.1.1.5 Lack of management support

The focus on business model innovation has to start at the top management, and be implemented throughout the entire organization. The lack of management support and involvement in business model initiatives and creating a business model innovation process in the companies is a big barrier which is evident in both industries. In the business model literature there is no doubt about the importance of management support, and many scholars state the same mantra : without the support of the management you cannot create business model innovations in an organization (Comes & Berniker, 2008; Santos et al., 2009; Chesbrough, 2007; etc.)

13.1.1.6 Corporate culture

The corporate culture was one of the most significant barriers, and when asked about the role of the corporate culture in a follow-up question, all of the respondents agreed that it is very important for business model innovations to be created that there is an innovative culture, and that experimentation and failure both are natural parts of the process. The majority was also of the opinion that the top management's role in creating a culture beneficial for innovation is big. If there is an innovative culture in a company it creates a positive spin which involves also recruiting and networking. *"Everyone wants to work for a truly innovative company. This is important if we want to attract talents in the future"*(Joe).

13.1.2 Industry specific barriers

The industry specific barriers are barriers which clearly have been mentioned more often in one of the industries. In the paper industry the industry specific barriers are related to the issue of size, the capital intensity of the business, the perceived customer power and the current situation of financial distress. In the telecom business the barriers are concerned with the management's cost cutting focus, not having a clear process for business model innovation, shortsightedness due to the owners' prioritizations, lack of funds for innovation activities and not having a clear direction for the future. Also, regulation and the small domestic market were mentioned twice in the telecom industry.

13.1.3 Telecom industry

13.1.3.1 Cost cutting focus

The profitability in the telecom industry is at the moment coming from improved efficiency, as there is virtually no top-line growth in the industry. This has led to a focus on cost cutting, and strong efficiency leaders have been appointed as CEO's of the telecom operators. The saturation of the mobile market and the introduction of low-cost operators was what forced the companies to start the year-long efficiency projects. Living under constant cost-pressure and worrying about the future of you job hinders the innovativeness significantly. This is likely a barrier also in the paper industry, but it has been communicated differently, because the situation in the paper industry is grave enough for some of the companies to struggle for survival, which means that saving and lay-offs aren't a managerial focus by choice, but by force of the circumstances.

13.1.3.2 No BMI process

Having an articulated business model innovation process in an organization creates a demand for BMI and gives the people involved in business model innovation activities the right to exist.). Chesbrough (2007) and Santos et al. (2009) state that in order to innovate a business model, understanding of what a business model is must first be established. Considering that this isn't necessarily the case in the telecom industry, nor having a process for renewing the business models, this becomes a significant barrier.

13.1.3.3 Strategic shortsightedness

The short-term focus is one of the reasons for the lack of focus on creating new business model innovations in the telecom industry. The priority of the owners seem to be to get the dividends as planned, and there is a lack of understanding of the fact that the current business will not continue to generate profits like this forever.

13.1.3.4 Lack of financing

Lack of both internal and external financing is a barrier for business model innovations in the telecom business. The lack of internal financing is a result of the efficiency thinking and cost cutting which has been prominent during the last decade. The lack of external financing is because there is no venture capital center where ideas, experience, power and money would meet in the telecom industry.

13.1.3.5 Financial disincentive

A barrier which is very typical only for the telecom industry at this given moment is the financial disincentive to innovate and expand the markets, as the profit margin at the moment is so good that it is difficult to find areas of expansion that wouldn't reduce profitability for the company. This raises the question of if there is any need to innovate in a situation like this. *"In the long-term the answer is yes. The famous words of a dying company are: 'this is how we have always gone about'. Ability to renew the business is essential in the long run, but it can also go overboard if you put a lot of resources on innovation but nothing happens"* (Oscar). Although barriers related to wrongly designed incentives are commonly discussed in the literature, what is meant by that is usually that there is no financial incentive in engaging in innovation activities for the individual employee. This barrier in the case of the telecom industry is very specific for this industry and not likely to be a very broad problem in many other industries. The question of size, which is evident in the paper industry is a modification of the same problem, but it is different in that is merely a cognitive barrier, while this barrier has actual financial consequences. In both cases the new business models are measured on the same metrics as the old model, which Comes and Berniker (2008) has identified as a barrier.

13.1.3.6 Uncertainty of market direction

Not knowing in which projects to invest is a barrier which seems to be present only in the telecom industry, which might be because of the rapid technology development that is signifying for this industry. New technologies are developed constantly, and only a few of them are successfully commercialized. When the companies have tens of development projects, not knowing in which to invest creates a situation where the risk avoiding behavior in the industry favors safe projects or not investing heavily into any.

13.1.3.7 Regulation

The regulatory efforts of the EU and the Finnish regulatory instances are creating barriers for business model innovation in the telecom industry as the regulation always comes with a few years lag, and you can't know how new businesses are going to be regulated. Also, in the telecom industry the government is harvesting some of the resources that otherwise could be used for innovation activities through regulatory efforts (e.g. forcing the companies so serve unprofitable customers).

13.1.3.8 Domestic market size

In contrary to the paper industry the current telecom business is very local and bound to the nearest markets. This, which could be argued to be an issue of management mindset, is one thing that is hindering business model innovations. *"We are small in Finland. It is very unlikely that we can innovate for the global market. Not even the biggest players have innovated; they are merely partners for the*

iPhones etcetera" (Mark). The small potential domestic market demands humility and a stripped development model, according to another of the informants.

13.1.4 Paper industry

13.1.4.1 Size issue

Paper business is a volume business, and the size of the business is traditionally measured in tons instead of euros, which is an indicator of the production-focus of the industry that stems back to when the marketing and sales was handled centrally by Finnmap. This focus on volume and size makes it very difficult for the paper industry to consider new business opportunities which are drastically smaller than the current business. For a new business idea to be interesting, it has to generate hundreds of millions in sales in the first years, which for a new business is practically impossible. There is a lack of understanding of that you have to start small to be able to develop the ideas further, and that also small start-ups and new business ideas might have a big business potential in the long-term. Measuring the potential of new business models with the same metrics as used for the old model creates a situation where no new business models ever look good enough to invest in, a barrier also identified by Comes and Berniker (2008).

13.1.4.2 Capital intensity

The paper industry (like the telecom industry) is very investment-heavy, and the investments that are made are worth billions and can't be made undone if not successful. Building paper machines and mills ties the investment to a geographical location, and changing the function of a factory is possible but extremely expensive. This makes the industry slow moving and the mindset is focused on big investments with big returns. Paradoxically, this issue which has to do with the very concrete reality of the industry structure is actually a cognitive barrier which hinders the people in the industry to look outside of the box. Renewing the business does not necessarily mean investing in expensive capital intensive business, but as this is what development has meant in the history of the industry, this is what the people in this industry see in their minds when they hear business model innovation.

13.1.4.3 Customer power

In many of the interviews the purchasing power of the customers became evident. By demanding standardized products from all suppliers, it is easy for the customers to drive down the prices and keep one or many of the suppliers humble. There is also a big taboo in the industry of competing with your customers, which has been tried unsuccessfully by some of the market players. There is a general fear that in the tough competitive environment the customers will be quick to abandon the supplier if it starts competing directly, or indirectly, with the customer.

13.1.4.4 Financial distress

In order to be able to innovate, the financials of the core business needs to be in shape. At the moment the paper industry has suffered heavily from the last recession and restructurings and layoffs, and lately also rumors of acquisitions has been bothering the turbulent business environment. When trying to survive and cutting costs in every place possible, there is not much time or resources left for innovation, although innovation and finding new revenue sources might be the only thing that can save the Finnish paper industry from going under in the next cyclical recession in some years.

13.1.5 Summary of results

The research results show that the literature on barriers to business model innovation has been on the right tracks, but that there are differences related to industries and situations. The barriers identified by the literature are of a quite general nature and could be true for most organizational changes. In this study some new universal barriers have been identified, which seem to be significant at least in the two

studied industries. Further research is needed to see if these barriers are present also in other industries. Based on this study, adding lack of competence in the organization and an overly emphasis on the demands of customers to the list of universal barriers is proposed.

Universal barriers suggested by BM literature

- Organizational structure
- Organization culture
- Financial metrics & incentives

Suggested additions

- Lack of competence
- Overemphasis on customer orientation

Universal barriers found in study

- Attitudinal barriers
- Lack of competence
- Risk aversive behavior
- Overemphasis on customer orientation
- Lack of management support
- Corporate culture

13.2 Result 2: Barriers in the process of BMI

As can be seen from table 11, the informants were able to share some insight on where in the process the different barriers to business model innovation arise. The second stage is where most of the barriers are found, but they are not necessarily the most difficult ones to overcome. As the process can be seen as a development process as well, the respondents see that their industries are located in the first and second levels at the moment.

Through looking at the barriers in the process model it becomes clear that the situations the industries are in are quite different. In the telecom industry the main barrier of the first level is simply understanding the need for innovation, when the paper industry is facing problems in the corporate culture and the management attitudes that are working against business model innovation, although the need for change has been understood in the industry.

In the second stage, where most of the companies have some projects at the moment, the barriers of the telecom industry and the paper industry are quite alike. In both industries, barriers related to risk aversive behavior and having the right kind of people and competences involved in the process, as well as using unachievable metrics to evaluate the new business model with. Moreover, the informants in the telecom industry pointed out that there often is a lack of a broad management support, that it is difficult to know how to distribute your resources when the development of the market is uncertain, and that separating the innovation efforts from the rest of the organization can create alienation and results in change resistance later on in the process. The paper industry additionally mentioned a lacking input of ideas as a barrier at the second level.

	LEVEL 1	LEVEL 2	LEVEL 3
TELECOM	Financial disincentive to innovate	Risk aversive behaviour Uncertainty in market development Comparing with current business' profitability Innovation unit separated from core business- change resistance Lack of broad management support Wrong kinds of people in the process	Lacking management skills Lack of social network Unresponsiveness from the market Invoicing system stiffness
PAPER	Attitudinal barriers Management support Corporate culture	People unable of conceptual thinking evaluating BMI's Comparing size and sales outlooks to current business Risk aversiveness due to corporate culture Lack of input of ideas	Change resistance (line managers, sales unit) Customers unwilling to pay for innovativeness

Table 10: Barriers to business model innovation in the context of the business model innovation process

At the third level, a similar concern with unresponsive markets who aren't willing to pay for innovative offerings is present in both markets. This is an interesting observation, which isn't mentioned in the literature, but seems to be of some significance to the lack of business model innovations in both industries. The informants from the telecom industry are more concerned with having an overly stiff invoicing IT system, which makes introducing new products and services slower, and that the companies are lacking the needed management skills and networks within and outside of the network to enable effective commercialization and scaling. In the paper industry the change resistance from within the company, especially among the line managers and the sales force that is hindering business model innovation at the third level. The sales people being an internal barrier has been mentioned also by Comes & Berniker (2008).

Situating the barriers in the context of the business model innovation process phases enables us to analyze the process and see at which stage of the process the barriers occur. The differences between the industries can be derived from the current financial situation (differences on level 1) and industry dynamics (level 2 and 3). The barriers mentioned in connection with the BMI process are quite generic to

their nature, and the only clearly industry specific barriers are the stiffness of the invoicing systems and the uncertainty of the future development of the market, due to rapid technological advancements in the telecom industry. Some new barriers were mentioned at this stage of the interviews, and barriers of a more practical nature were brought forward when asked which the barriers are within the BMI process.

13.3 Result 3: Overcoming the barriers

All informants were asked to give their view on what is needed to create more business model innovations and which the biggest enablers for business model innovation are. Many normative suggestions were also mentioned especially when commenting on the barriers during the business model innovation process. The suggestions can be divided into enablers and concrete measures. Next, the enablers and concrete measures are presented and the similarities and potential usage across industries are discussed, and they are compared to the enabler suggested by the business model literature.

13.3.1 Enablers of BMI

From table 12 one can see that the enablers the informants from the two different industries have suggested have both common enablers and some that are quite different. The results tell of the biggest differences between the industries. In the telecom industry one would need a financial crisis or a burning platform for more BMI to take place, where again the paper industry is experiencing exactly that but finds itself in such big financial distress that it is impossible to invest in business model innovation at the moment. The reason why a tougher competitive environment would aid the telecom industry in creating more BMI ought to be the same as for calling financial distress an enabler. As Venkatraman and Henderson (2008) argue, it is essential to recognize a burning platform, and Chesbrough (2007) also states that business model innovation is easier if the organization is in crisis, but point out that it is the responsibility of the management to inflict a sense of urgency in the employees to motivate renewal also in normal conditions. Both industries are realizing the importance of having the top management's blessing and demand for BMI, and understand that broader networks internally and externally are needed to aid both the idea generation phase as well as the commercialization.

An important thing to acknowledge is that the enablers and barriers are simply the flip side of the same coin: when lacking the enablers become disablers, or barriers. That is why the same topics are brought up here, but from another perspective. By asking for enablers, however solutions for solving the current issues arise and the concrete measures needed for becoming more innovative are closer by. The main enablers of business model innovation suggested by the literature are found among those suggested by the informants. These were Information Technology (IT), Organization and culture and management involvement and support. Of these, only Information technology has been left completely without notice in the answers by the informants. When asked about the role of IT, all agreed that it is significant in a way or the other, but it was not mentioned separately.

GENERAL ENABLERS OF BUSINESS MODEL INNOVATION AS SUGGESTED BY INFORMANTS	
TELECOM INDUSTRY	PAPER INDUSTRY
Financial distress / burning platform	Financially stable core business
Tough competition	Improved understanding of business models
Top management's blessing	Top management's blessing
Broad internal and external networks	Broad internal and external networks
	People with commercialization skills

Table 11: General enablers of business model innovation as suggested by informants

13.3.2 Concrete measures in the telecom industry

There were concrete measures suggested both during questions about the general nature of the business model innovation process and the barriers related thereto, as well as specifically asked for in the interviews. Some of the measures touch upon the same issues in both industries, but they reflect the

situation in each industry and are thus not of a universal kind. However, many of the suggested measures are discussed in the literature and mirror the barriers mentioned earlier.

The biggest differences are that in the telecom industry there is a shared understanding that the innovation shouldn't take place in a separate unit, because of the alienating effect, but the organization should be built to support innovation activities and everyone should be able to participate in the innovation activity. In the paper industry the opposite is seen as a better solution: having a separate unit with separate financing and people that are doing business model innovations. Having a concrete BMI process installed in the company is also mentioned in the paper industry, when the BMI-conducive organization proposed in the telecom industry would include the innovation activity in all of the operations of the firm. Next follows a listing of the measures proposed per industry, and summary of the suggested measures can be seen in table 13 below.

Concrete measures in the telecom industry	Concrete measures in the paper industry
Mutual understanding	Erasing organizational barriers
Market making	Get involved in networks and partnerships
Horizontal partnerships	Culture change
Networking and innovation incubator	Increased external financing
Operating model in favor of innovation	Change of management profile
Leadership change	Develop new offerings
	Create a BMI-process

Table 12: Suggested concrete measures for increasing business model innovations

13.3.2.1 Create mutual understanding

To be able to develop business model innovations there must be a mutual understanding and language in which to discuss the issues related to business model innovation on the management level. This will also make the business model innovation process more concrete and understandable for the managers who are supposed to create them. These thoughts are in line with Osterwalder (2004) and Chesbrough & Rosenbloom (2002) who state that having an understanding of what the current business model is improves the understanding of the business logic, and that talking about business models in the organization can bring some clarity and rationality to a complex environment. It is also clear, that to be able to seek new business models, an understanding of the current business model needs to be established. Osterwalder (2008) offers practical tools for this with his business model canvas.

13.3.2.2 Engage in market making

To find new directions for business model development the companies should try to find new markets to explore. They can expand the current markets and move the industry boundaries which are blurry already. It is possible to create new markets and new consumer behavior by thinking in terms of the everyday life of the customer or by trying to solve the problems that the customer is facing. Finding latent customer needs is not easy and requires experimentation, but can open entire new possibilities. The company needs a clear direction and the management needs to follow global trends to be able to quickly adjust to new offerings in competing markets.

13.3.2.3 Involve in horizontal partnerships

In order for the telecom business to find new market areas, more partnering and co-developing should be done in horizontal partnerships, as has been done with the mobile certification protocol. Since everyone in the market owns a cellphone, it is a great platform for new services, but they cannot be developed by only one of the telecom operators, as they need to work universally. Developing joint

research projects and new service offerings, expands everyone's market, and focus on differentiating development can be done in parallel.

13.3.2.4 Develop networking and innovation incubator

There is a need for a meeting point where a multitude of competence would meet and innovations could be created, developed and commercialized on a fast schedule. In this place the innovator would have access to experience, power and money, and for instance all paperwork could be taken care of by this instance to allow the innovators to focus only on fast commercialization. An increased amount of intellectual contacts in a limited space also creates more ideas, as it has been proved in research it is simply a matter of mathematical odds. To create a place with elements similar to those present in Silicon Valley is an idea introduced by many of the interviewees.

13.3.2.5 Create operating model in favor of innovation

To ensure that business models are created within a company, the entire company should live and breathe innovation and be organized in such a way that it supports BMI. Having a separate group who does all of the innovation is not a good idea, since they will become a wasteland of half-bad ideas and separated from the rest of the organization. When an idea comes from a separate unit, the resistance will be much higher than if people from around the organization have been involved and the general attitude is that "we have developed this" instead of "they have developed it". In other words, everyone in the organization should be able to get involved in business model innovation, and there should be an articulated demand for business model innovations, and a culture that promotes risk taking. Innovations and ideas should not only be sought out from within the organization, but also external ideas and innovations should be considered. There needs to be a system where anyone can submit an idea and get help and support to develop it further, and where the organizational structure does not create more barriers in terms of middle management as gatekeepers whom must be passed to introduce the idea on the next level. An organization that lives and breathes business model innovation both in terms of organizational structure and corporate culture is what the BMI-conducive organization introduced by Santos (2009) is all about.

13.3.2.6 Leadership change

In order to ensure that all parts of the BMI process are handled as efficiently as possible, the company needs to ensure that the manager in charge of the business model innovation is suited for that task. The kind of people who are good idea developers are usually found outside of the incumbent firms, and should be recruited from smaller start-ups. A good developer is not necessarily a good scale-manager, and should therefore be replaced at the right moment, to someone who can drive up the scale effectively. This is contradicting with the idea of Cooper (199X) who sees it as an important enabler of having a good innovation process that it is the same team that is involved at all stages of the process. If the right kinds of people aren't found from within the company, they should be handpicked from elsewhere. Doz and Kosonen (2010) suggest that an increased openness in the top management team should be encouraged, to create an atmosphere of respect and mutual understanding, which can result in revealing the underlying motives of the members of the management team, such as short-termism and striving for a certain position. A clear collective commitment is needed to transform a business model, and creating a strong team in the top management team aids this process.

13.3.3 Concrete measures in the paper industry

13.3.3.1 Erase organizational barriers

The organization should be such that innovation activities can easily be done without harming the everyday business of the firm. A separate unit that gets separate financing should be established, which has the strong support of the top management. Partnering with start-ups should be easy and the organization needs to be approachable with quick decision making. Comes and Berniker (2008) discuss the pros and cons of having a separate unit taking care of the business model innovation, and state that although there are several pros in terms of separating budgets and financing as well as assumptions about business logic from that of the parent company can be good for the BMI process, having a separate unit will inevitably create a situation where the ideas that are developed separately from the rest of the organization will face change resistance and the innovation unit might become a wasteland of ideas.

13.3.3.2 Get involved in networks and partnerships

To find new ideas and to take the idea development to the next levels the companies must strive to become increasingly involved in networks and new kinds of partnerships. A place where people representing technological competence, business development and regulation could meet and develop ideas together is needed. Networking can happen through horizontal cooperation, and taking part in events and venture capital projects. Partnerships can take many forms, but trying new forms can bring added value to the current network, for instance by partnering over a new product with the market leader in a joint venture, where the profits are split even between the companies. In this way also the Finnish companies could reach the global market quickly.

13.3.3.3 Culture change

Changing the corporate culture is a long process that starts at the management level. There need to be positive stories about business model innovation to show that it is favored and possible. Success stories motivate the same kind of behavior also in the future. According to Comes & Berniker (2008) a sign of the corporate culture can be found in the attitudes among the employees towards belonging to a business development group or project. The culture and behavior derived through the culture within top management team is discussed extensively in Doz & Kosonen (2010), and they suggest that the top management team should focus on creating leadership unity through dialogue, revealing personal agendas, building interdependencies, aligning interests and showing empathy. A well working top management team will according to them show the direction to the rest of the company, and as this study has shown, a culture change must come from the top management to have an effect.

13.3.3.4 Increase external financing

To speed up the commercialization stage external financing should be sought to a greater extent. There are funds that can be applied for from the EU, and increasing the external financing would affect the risk behavior of the decision makers.

13.3.3.5 Change management profile

Since the industry recipe is so strongly rooted in the education and the people in the boards and managements of the paper companies, a needed change is to increase the amount of people from outside of the forest industry in the company boards. A shift in the demographics of the management teams would also aid the situation, which will happen automatically eventually. *“The people that have experience from the industry pre-EU have the wrong mindset and should be replaced”* (George)

13.3.3.6 Develop new offerings

The importance of experimentation should not be understated. By combining new materials, product categories, markets and technologies finding new directions is possible. It may be easier to either enter a new market with an existing product, or then introduce a new product on the current market. In that way you have only one unknown factor to take into account. However, the companies should not be afraid of starting something completely different and far from the current operations: *“It is far easier to start something from scratch than to change the existing operations”* (Helena). A lack of customer demand for innovative business models is mentioned as a barrier by the industry representatives and McGrath (2010) states that creating business models that don't create value for customers don't create value for the firms that seek to serve those customers either. But are the customers going to have the same demands forever? Many of the big customers of the paper industry are facing big changes and challenges themselves, and their needs might change quite rapidly as their business is shrinking as well. Engaging in a dialogue with the customers in order to solve the future problems together might bring new business opportunities for both parties to the surface. By focusing on business model shifts, the company has to engage and adapt to changing customer values and demands (McGrath, 2010).

13.3.3.7 Create a BMI-process

As there is no articulated BMI-process in the paper companies at the moment, a process should be created. *“Engineer-dense companies like this are used to processes, if a business model process is created it will be followed through”*. (Isac). The ambitions should be high and failure needs to be accepted in the processes. This is consistent with the studies of innovation done by Cooper (1996), who found that the strongest common denominator of successful innovators was a high-quality innovation process, and in this study this is assumed to be true also for business model innovation.

13.3.4 Summary of results

As there are very few suggested methods of overcoming the barriers to business model innovation in the literature, these research results add a much needed viewpoint to the literature. The vague suggestions by Chesbrough (2002), Osterwalder (2004) stating that mapping practices that visualize the current business model and the constituents thereof shows that the research in this field is still young; the focus has been on more pragmatic tools of a more normative, consultative nature. Bringing this question to the people working with these issues every day has proved lucrative; the suggestions brought forth in this research are concrete and have a direct effect if implemented. Mapping of the current business model may improve the understanding, but it does not guarantee that things start to happen in an industry where structural and cognitive barriers towards changing the current model prevail.

The enablers suggested by the literature were all except IT found very important in the industries researched. Why IT doesn't evoke any bigger feelings among the interviewees is an interesting question, as it in the BM literature is in a very big role. Perhaps it is simply thought to be important because much of the business model literature has its grounds in information systems research (Osterwalder, 2004; Hedman and Kalling, 2003). Based on this research, a renewed list of enablers of business model innovation is proposed:

Universal enablers suggested by BM literature

- Information technology
- Organization culture
- Management support

Suggested new list

- Organization culture
- Management support
- Fitting financial situation
- Broad networks
- (Information technology)

Being in a financial situation which supports and motivates making business model changes and having broad internal and external networks are added to the list, as they were seen to be very important in both researched industries. The information technology as an enabler is left on the list in parenthesis, but the relevance of IT as an enabler of business model innovation should be further researched. In this research no evidence of it being a clear-cut enabler were given, on the contrary in the telecom industry many thought of the information technology as being a barrier creating stiff systems which aren't flexible enough to cope with new business models.

The suggested enablers and concrete actions address most of the barriers either directly or indirectly, but some barriers are left without solutions. These are the barriers which are directly linked to the industry dynamics which are hard to change (regulation, financial disincentive), or with mental barriers (risk behavior, cost cutting focus, strategic shortsightedness). Many of the measures aid in overcoming several of the barriers, such as networking and culture change, which indirectly affects most of the barriers. Out of the proposed actions, many could be used as universal directives for overcoming business model innovation barriers and creating new business opportunities, such as creating new markets, creating a mutual understanding of business model innovations and organizing the structure of the company to support innovative activities.

PART V:

14 Discussion and conclusions

The research on business model innovations is young and still developing. Business model innovation seems to be an issue that the researched industries are aware of, but do not know how to create themselves. The barriers to business model innovation in the researched industries are undisputedly present, however a great part of them are attitudinal. It is in both industries' interest to make business model innovations happen, to ensure the future of the industry. It is also in the interest of the Finnish economy that these industries can overcome the barriers presented in this study, as they are two big industries both tied geographically to Finland, at least for the moment.

This study contributes to the research on business model innovations in that it brings insight in several areas for the business model literature. A BMI process description was proposed, when there was none introduced in the previous literature. The research results concerning barriers of business model innovation added two barriers more to the generic three found in previous literature, and in the case of enablers of business model innovation, two new enablers that were significant in both of the studied industries are suggested to be considered to a greater extent in the literature in the future. The comparative research of the two industries gave a deeper insight into the barriers and enablers of both industries, as well as made it possible to suggest two new universal barriers. Moreover, the practical suggestions of measures to overcome the barriers to business model innovation were shared by the interviewed practitioners and experts, and provided valuable insight for anyone facing similar problems, whether in the same industries or in other.

It seems paradoxical that BMI as a continuous process (Chesbrough, 2010) is needed at all time, and that the ones cited as having the most innovative business models almost without exception are start-ups. The success of the start-ups is determined by their ability to realize that their business model is under pressure to change immediately when it has been launched. Having an innovative business model at a point in time isn't enough for succeeding; you must be able to change it as the market changes. The paradoxical situation becomes evident: start-ups are creating all the innovative business models, while incumbents are the ones truly engaged in business model innovation, but burdened by the old ways of doing things in the company. A general unwillingness to change seems to be bothering all industries. As one of the informants stated *"It is interesting that firms are seeing the iceberg approaching, but not doing anything. The surprisingly short expected lifetime of 25 years of any given company is a result of this. You would think that radical changes would be natural, but even if the life expectancy is so short, companies stick to the conservative behavior. The old and successful firms are doing completely different things than what they started out with"*. The much-cited statement by Darwin still holds true:

"It is not the strongest of the species that survives, nor the most intelligent that survives. It is the one that is most adaptable to change."

14.1 Theoretical contributions

According to Whetten (1989), a theoretical contribution can be done by identifying "whats", "hows", "whys", and "where, when, and whos" in a theoretical model. Usually models are not created from scratch, but developed from existing models (Whetten, 1989), and this is also the case of this study. The "whats", or the building blocks, of the proposed theories (business model innovation process and barriers to business model innovation) existed in the literature before I started to conduct this research, but this study has added to the "hows" and the "whys" of business model innovation theory.

I have identified “whats” in the different stages of business model innovation (acquiring understanding and a mutual interest in the topic, the experimentation and searching stage, and the stage after deciding to implement a new business model). To these I have added a “how” by creating a business model innovation process model where these stages follow each other to create a process, with enablers and barriers that affect the creation of business model innovations. In this sense, new theory has been created. Contributing with “hows” can according to Whetten also be done by creating a list of factors that affect the “whats” (BMI process stages). This too has been done in this study. The added “hows” (barriers and enablers of BMI) haven’t got a value per se, but when comparing the results to those suggested by the literature – this is a theoretical contribution (Whetten, 1989). The research conducted led to suggesting that a few more barriers and enablers should be added (and one considered to be removed) to the ones proposed in the literature. This study is thus not only reaffirming the existing theories on barriers, but developing it, which constitutes a theoretical contribution according to Whetten (1989).

14.2 Managerial contributions

The results of this study bring several managerial implications. Firstly, this study highlights and brings more clarity to the area of barriers hindering companies to renew their business models. Out of the barriers found, many are of an universal nature and could be used as a checklist in most organizations to identify barriers to change in general and business model innovations in particular. Secondly, the practical measures to overcome the barriers suggested by the practitioners and experts in the two researched industries bring valuable insight to any business managers on how the current business could be reconsidered to better support business model innovation. As many of the barriers are related to the attitudes and culture of the top management team a list of barriers and means to overcoming the barriers can be a fruitful platform for discussing the hiding barriers to change in any company and top management team.

14.3 Research restrictions and suggestions for future research

This is a master’s thesis and has been done over a period of 8 months. Due to the nature of the research, the scope has been limited to only two industries, with 8 and 9 respondents in each. As the research is of a qualitative nature, having a research team to conduct the analysis to ensure that there has been no bias from the researcher’s side would have improved the reliability of the results. Because of the nature of the study, this however has not been possible.

Another limiting factor was that there was a bias towards the bigger corporations in both of the industries researched. This may affect the results as the barriers perceived by smaller player might have been different than those of the dominant players in the market.

Also, there has been a focus mainly on the barriers to business model innovation, in contrast to researching enablers. However, as shown in the research the enablers and barriers seem to be flip sides of the same coin, and by comparing the most important enablers and barriers one can draw the conclusion that the findings are truly significant for the industries studied. Also, comparing two industries that both experience the same problem instead of having one industry with a history of successful business model renewal and one industry which is experiencing problems in this field could have brought some more attention to the differencing factors, however finding a researchable industry which filled the requirements for being a successful at business model renewal proved to be difficult in the Finnish market.

To expand the generalizability of the study it would be beneficial to conduct the same research in other industries as well. The chosen industry could preferably be contrasting to the industries researched in this study: good potential research subjects could be young industries or industries focused on selling highly specialized products to niche markets. In the business model research in general, further development of metrics for evaluating business models should be developed to improve comparability between alternative business models. This would also have a significant managerial impact, as it would ease the process of choosing in which development project to invest.

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16 Appendices

16.1 Interview questions

Background:

Name and position?

Current responsibilities?

Could you tell me a bit about your professional background?

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Background of my study:

What is a business model?

- Definition (i.e. not strategy)
- Use

What is a business model innovation?

- Why are BMI needed?
- Difference between BMI and Product innovation (systemic view)
- The importance of Exploration

What am I interested in finding out?

- The barriers to BMI in the forest industry vs. the telecom industry

.....

Warm-up: General about BM and BMI

Could you describe your industry in general terms when it comes to business model innovations and activities that are related to BMI?

- What is the general attitude towards business model innovation in your industry?
- How much of the innovation activities are focused on products/process innovation vs. BMI?
- Which are the most significant business model innovations that have been done in the industry in your opinion?

.....

Barriers of business model innovation:

Which are in your opinion the greatest barriers to creating business model innovations in your industry?

- Would you say the biggest barriers are cognitive, structural or something else ?
- Are these barriers the same for other industries as well?

Three levels of barriers: how do the barriers you have described fit into this picture?

- Which are the biggest cognitive barriers to BMI? (do people in this industry generally agree that there is a need to change?)
- Which are the biggest barriers to exploring and deciding which business model to pursue?
- Which are the biggest challenges to implementing BMI?
- Would you say the greatest barriers are in the beginning of the process or in the end of the process? (i.e. level 1 vs. level 3)

General barriers discussed in the literature

- What is the top management's role in BMI?
- What is the role of IT in BMI?
- What is the role of corporate culture in BMI?

Overcoming the barriers

- Which are the biggest enablers of BMI in your opinion?
- Which ways of overcoming the barriers are there in your opinion?



- Is there something you think that I should have asked you about?
- Who would you recommend that I talk to within your industry? Could you name a few persons?
- Would you like to give feedback about the interview?