



School of Management

BLEKING INSTITUTE OF TECHNOLOGY
Master Thesis MBA-program

How to motivate employees in order to succeed with Open Innovation Projects

Supervisor

Urban Ljungquist, PhD

Authors

Patrik Bergschöld

bergschold@gmail.com

Martin Källgren

martin.kallgren@gmail.com

Submission Date: 26 May 2014

Abstract

Today, internal resources are limited and could not master all new technologies that have emerged during the last few decades. The complexity and depth needed is too costly to maintain in house so the internal innovation functions have to be decreased as they do not generate enough return on their investment. Companies need to find new ways to meet their growth targets and one way is to leverage their innovation capabilities by using external innovations and not just rely on internal innovation. But changing the game from internal closed to open innovation comes with challenges when it comes to company culture and how the employees adapt. Open innovation can create conflicts between the internal team and external team. The internal employee might feel that their work is taken from them, increasing the risk of losing their jobs and specialists might become skeptical to an alternative solution in an innovation. To harvest the full advantage of open innovation the internal employees need not to resist open innovation and become motivated to participate and work with open innovation according to a best practice. This has led us to the Research Question: How could employees' motivation be enhanced in Open Innovation Projects?

The purpose of this paper was to identify key motivational factors for employees in open innovation projects as well as what can be done to enhance motivation in open innovation. Our hope is that the findings can be utilized in making open innovation projects more efficient and in the end contributing to a more efficient use of resources and a stronger economy.

We have done a multiple case study with six European companies working with open innovation. Ten in-depth interviews have been conducted with employees at these companies. Based on extensive motivational theory like intrinsic and extrinsic motivational factors, we have analyzed the motivations of the employees with qualitative methodology.

Our findings show that to succeed with open innovation there are certain factors that stand out particular to open innovation, while other factors are relevant to all types of innovation. In order to fully exploit the potential of open innovation you need to find employees that are motivated by working with external contacts and celebrate collaboration. The employees need to have self-awareness that open innovation pose an opportunity to take advantage of external competence for his or her development as well as the opportunity develop better and faster products or service for the company. To enhance motivation among the employees each organization can facilitate open innovation centrally to reduce to resistance to undertake the effort to change way of working. Another key area to enhance motivation for open innovation is recognition of employees.

Acknowledgements

First and foremost, we would like to thank our supervisor, Dr. Urban Ljungquist, for guiding us during the journey. His advices and critical thinking has been crucial to get us going in the right direction. Especially in the early phases of the Thesis his help shaping the foundation of the Thesis was necessary.

We are extremely grateful for having the pleasure of interviewing ten people about open innovation and for that they gave us straightforward and honest answers to our questions. We feel and admire their dedication for innovation, and their will to share their knowledge and thoughts were impressive.

We also like to thank our families for putting up with us during late evenings of studying with the thesis as well as previous courses along the MBA.

Table of contents

1	Introduction	1
1.1	Background	1
1.2	Problem discussion	2
1.3	Problem formulation and purpose.....	3
1.4	Delimitations	4
1.5	Thesis' structure	4
1.6	Expected result	5
2	Theoretical Background.....	6
2.1	Open Innovation.....	6
2.2	Motivation.....	8
2.3	Extrinsic motivators.....	10
2.4	Intrinsic motivators.....	11
2.5	Culture and resistance	12
2.5.1	Resistance in general	13
2.5.2	Resistance - the Not Invented Here Syndrome	14
2.6	Motivation in innovation.....	16
2.7	Motivation in Open Innovation.....	18
2.8	Theoretical framework.....	20
2.8.1	The framework	21
3	Method	23
3.1	Research approach and process	23
3.1.1	Research Process	23
3.1.2	Research Design.....	25
3.2	Developing frame of reference	26
3.3	Quality	27
3.3.1	Validity	27
3.3.2	Reliability	28
3.4	Data collection.....	28
3.4.1	Literature review.....	28
3.4.2	Empirical Data Collection	29
3.5	Data analysis	31
3.6	Sharing the thesis	33
3.7	Limitations of methodology	33
4	Case description and Empirical results	34

4.1	Introduction and overview	34
4.2	Overall result	34
4.3	Description and results per company.....	36
4.3.1	Company A	36
4.3.2	Company B	37
4.3.3	Company C	39
4.3.4	Company D	40
4.3.5	Company E.....	42
4.3.6	Company F.....	43
5	Analysis.....	46
5.1	Extrinsic motivational factors in Open Innovation	46
5.1.1	Working with Open Innovation increases individual knowledge and raises competence among employees.....	46
5.1.2	Open Innovation give individuals the opportunity to achieve result with their tasks	47
5.1.3	Recognition - as motivational factor	48
5.1.4	The effect of monetary rewards.....	50
5.1.5	Purpose and strategy.....	50
5.1.6	Factors of less importance	51
5.2	Intrinsic motivational factors Open Innovation	51
5.2.1	Open Innovation enables opportunity for collaboration with external partners.....	51
5.2.2	Interest and curiosity as motivator in Open Innovation	52
5.2.3	Open innovation can be fun, enjoyable and inspirational.....	53
5.2.4	Establish friends and contacts - Networking.....	53
5.2.5	Minor intrinsic factors	54
5.2.6	New findings for intrinsic motivators	54
5.3	Intrinsic versus Extrinsic motivation - our hypothesis.....	54
5.4	Resistance factors to Open Innovation	55
5.4.1	The presence of not-invented-here (NIH) - syndrome	55
5.4.2	The challenge of keeping necessary level of control.....	56
5.4.3	Personal preference to Open Innovation.....	57
5.4.4	More work with Open Innovation creating resistance or less motivation	58
5.4.5	New resistance factors.....	59
6	Conclusions and Implications	60
6.1	Summary of findings	60
6.2	Managerial implications and future research.....	62
6.2.1	Future Research.....	63
6.3	Conclusion	63
7	References	64
8	Appendix A - Interview guide.....	68
8.1	Interview guide English	68

8.2 Interview guide Swedish.....72

List of figures

<i>Figure 1.1: Overview of case study implementation and its purpose</i>	4
<i>Figure 2.1: The innovation funnel</i>	7
<i>Figure 2.2: Showing the structure of our theoretical background, from general, to more specific and finally the theoretical framework which builds on the previous theories.</i>	8
<i>Figure 2.3: Showing the concept of our theoretical framework.</i>	21
<i>Figure 3.1: Our case study process</i>	24
<i>Figure 3.2: Interactive model of research design</i>	26
<i>Figure 3.3: Screenshot showing work in progress with data analysis</i>	31
<i>Figure 3.4: Categorization of data against theoretical framework</i>	32

List of tables

<i>Table 2.1: Comparison of the Agency Theory and Stewardship Theory</i>	9
<i>Table 2.2: Major knowledge management tasks</i>	15
<i>Table 2.3: Attitudes to the major knowledge management tasks</i>	15
<i>Table 2.4: Theoretical framework</i>	21
<i>Table 4.1: Overview - companies which are included in the Thesis</i>	34
<i>Table 4.2: Overview of the results.</i>	35
<i>Table 4.3: Results Company A – directly related to framework</i>	36
<i>Table 4.4: Results Company A – Enhancements suggestions</i>	37
<i>Table 4.5: Results Company B – directly related to framework</i>	38
<i>Table 4.6: Results Company B – Enhancements suggestions</i>	39
<i>Table 4.7: Results Company C – directly related to framework</i>	39
<i>Table 4.8: Results Company C – Enhancements suggestions</i>	40
<i>Table 4.9: Results Company D – directly related to framework</i>	41
<i>Table 4.10: Results Company D – Enhancements suggestions</i>	42
<i>Table 4.11: Results Company E – directly related to framework</i>	42
<i>Table 4.12: Results Company E – Enhancements suggestions</i>	43
<i>Table 4.13: Results Company F – directly related to framework</i>	44
<i>Table 4.14: Results Company F – Enhancements suggestions</i>	45
<i>Table 6.1: Main findings</i>	60
<i>Table 8.1 Questions in English</i>	69
<i>Table 8.2 Frågor på Svenska</i>	73

1 Introduction

1.1 Background

In early 1900's, when modern science was young, there was a clear distinguisher between science research and applied research, the former taking place in academia and the latter in industry. The science community looked down at persons like Thomas Edison for commercializing his research (Chesbrough, 2003a). The new science had, at the time, little practical applications and companies had to perform their applied research themselves (Chesbrough, 2003a). This fostered an innovation process where everything was done within the company, a closed innovation model. This traditional way to innovate was the predominant way in the post-World War II (WWII) decades with companies like XEROX, IBM, HP, AT&T (Bell labs), DuPont to mention a few in the United States (Chesbrough, 2003a). What had happened in the post WWII time was a growth of knowledge in society in general, now more people were educated with a growing University system that also looked at applied research (Chesbrough, 2003a). Application specific knowledge was no longer just confined to the large companies research labs, due to the university research, but also spin offs from the larger companies. This gave an opportunity for startup companies like Microsoft and Apple to capture external knowledge and challenge the larger companies without having any internal research capability. The next step in this direction was the growth in available venture capital during the 1980's (Chesbrough, 2003a), before that time financing was difficult for startup companies. Also the continued growth in applied knowledge at universities meant that knowledge traditionally confined to a company research center was now distributed at many universities (Chesbrough, 2003a). So from the 1980's and on the external knowledge was available as well as financing, reducing the need for large research labs supporting a closed innovation model. The landscape for companies was in favor of open innovation and the gradual paradigm shift from closed to open innovation is still ongoing (Chesbrough, 2004).

The development into a more "open" innovation put new demands on employees and their managers. Open innovation involves external resources as partners, customers and suppliers meaning employees must be ready to assimilate external technology and knowledge as wells as contributing to the demand of external resources. In the specific context of open innovation understanding employees' motivation for open innovation is crucial. Recent research within this area have been done by , for example, De Jong (2009) and Sauermann et al. (2010) looking at intrinsic and extrinsic factors to motivate people for open innovation.

Market forces has turned innovation into a more open process, it does no longer only happen inside the company. The new demands on employees must be understood by managers and they must understand the specific context of open innovation and how they shall motivate their employees for open innovation in order to maintain and increase the competitiveness of their company.

1.2 Problem discussion

Today, most markets are highly competitive. Over time any market will, competitive or not, most likely end up in perfect competition if companies in the market can not differentiate their products and services (Keat, et al. 2013). Companies therefore try to differentiate their products and services to earn an above normal profit. Companies are by their owners challenged to maintain growth in profit, year in and year out. To be able to do this they must stay ahead of competition by differentiating their products. Innovation is one of the strongest sources for product differentiation and growth; therefore companies have innovation departments or functions that constantly strive for getting new profitable products to the market. Traditionally, companies had huge innovation functions in the form of departments or research centers; they were at their peak prior to the 1980's (Chesbrough, 2003a). Today, internal resources are limited and could not master all new technologies that have emerged during the last few decades. The complexity and depth needed is too costly to maintain in house so the internal innovation functions has to be decreased as they do not generate enough return on their investment (Chesbrough, 2003a). Innovation today is to a great extent optimized internally when it comes to how the work is managed. Methods and processes has evolved and matured up till now and companies cannot expect much growth coming from internal optimization.

Companies need to find new ways to meet their growth targets and one way is to leverage their innovation capabilities by using external innovations and not just rely on internal innovation. This is what we call open innovation (Chesbrough, 2003a). Open innovation is today more and more being used to leverage the innovation capabilities (Chesbrough and Crowther, 2006). But changing the game from internal closed to open innovation comes with challenges when it comes to company culture and how the employees adapt.

Open innovation can create conflicts between the internal team and external team. The internal employee might feel that their work is taken from them, increasing the risk of losing their jobs and specialists might become skeptical to an alternative solution in an innovation (Clagett, 1967; Katz and Allen, 1982). This resistance for external knowledge and less motivation for internal team is called Not-invented-here (NIH) syndrome (Clagett, 1967; Katz and Allen, 1982). Companies that are using regulative methods are likely to find more resistant employees, because it can affect the internal reward system (Minshall and Mortara, 2009). Those most likely to resist change to open innovation are the technical staff and middle management (Slowinski et al., 2009). Working holistically with strategy and management one can overcome this type of NIH-syndrome and Not-Sold-here (NSH) syndrome behavior (Slowinski et al., 2009; Hussinger et al., 2011). NSH-syndrome is a resistance to selling internally developed ideas and technology. This implies that it is strongly related to company culture. Aligning the organization with reward systems and good communication is important to overcome the NIH-syndrome (Chesbrough and Crowther, 2006; Slowinski et al., 2009).

The motivation for innovating internally and motivation for going after open innovation could differ quite a lot. Incentive systems around external cooperation could be one way of motivating employees in open innovation. Open innovation need a Senior Management commitment in order to be sustained and succeed (Chesbrough and Crowther, 2006; Slowinski et al., 2009). Minshall and Mortara (2009) found that creating a culture that was accepting open innovation is important to succeed. An open

innovation core team is also crucial to create and maintain long term relationships with universities and other partners. They should overcome resistance for open innovation by helping managers as well as providing tools for new functions. The “blue-sky” R&D is typically de facto open, has a supportive culture, is externally connected; need intrinsic motivators (Mortara et al., 2010). Gassman et al. (2010) means that both company values and specific artefacts like different systems and platforms influence the company culture for open innovation. For an open innovation to be successful this culture has to value external knowledge. Implementing open innovation should be linked to the firm’s strategy (Slowinski et al., 2009). However Herzog (2011) study implicates that a proactive, creative and results-oriented personality are more driven by intrinsic motivational factors than extrinsic.

To harvest the full advantage of open innovation the internal employees need not to resist open innovation and become motivated to participate and work with open innovation according to a best practice. If not, then external knowledge will not be utilized to its full potential and the return on investing in open innovation will not be as high and in worse case erode a company's innovation capability. Therefore it is important to understand what motivators work for employees and how to avoid resistance by employees in open innovation settings.

The research on the areas of the practical implementation to support motivation for the employees in open innovation is quite scarce. Focus has been on higher level strategy and higher level solutions. We believe it is of great importance to attend to motivation of employees in R&D projects working in an open innovation setting. Therefore we focus on this area.

1.3 Problem formulation and purpose

We have chosen to focus on the practical aspect of employee motivation in open innovation. We aim at finding key incentive implementation factors for motivating employees in order to succeed with open innovation Projects, as well as factors for resistance among employees. We have below stated the research question.

Research Question: How could employees’ motivation be enhanced in Open Innovation Projects?

The purpose of this Thesis is to identify key motivational factors for employees in open innovation projects as well as what can be done to enhance motivation in open innovation. This will be done by shedding light on what can be done to counter resistance for open innovation and how employees can be motivated by enhancing the extrinsic as well as intrinsic motivational factors, Figure 1.1. The findings can then be utilized by others in making open innovation projects more efficient and in the end contributing to a more efficient use of resources and a stronger economy.

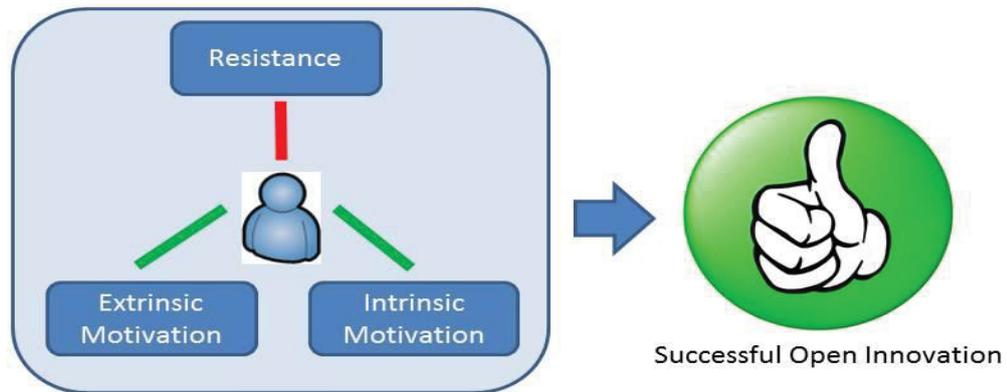


Figure 1.1: Overview of case study implementation and its purpose

1.4 Delimitations

We are only covering profit driven organizations that work with open innovation with the aim to generate business ideas and innovations. We aim to find motivators for employees in these profit driven companies where innovation take place in-bound in a context with external partners, like customers, universities and other companies. We are performing a multiple case study of European companies, some of which are present globally. The results can only be generalized for these companies but could serve as a guideline to other companies and industries.

1.5 Thesis' structure

This section will provide an overview of the structure of this paper.

Chapter 2: Theoretical Background

This chapter provides a theoretical foundation with regard to motivation and how it relates to innovation and open innovation. The chapter covers the following:

- extrinsic motivators
- intrinsic motivators
- cultural aspects
- innovation and open innovation motivators

Chapter 3: Method

This chapter discusses and describes the methods for the Thesis with regards to data collection, data reduction, analysis and link to theory.

Chapter 4: Case Description

This chapter provides a description of the case study companies and interviewees as well as empirical results.

Chapter 5: Analysis

The chapter provides analysis of the collected and reduced data relating back to the theoretical framework.

Chapter 6: Conclusion and Implications

Chapter six provides to the point conclusions from the analysis, highlighting the most important findings and its implications for theory or future use.

1.6 Expected result

In the field of Open Innovation we want to find out if there are specific challenges in how to overcome resistance and motivate employees in order to succeed. We expect to find out whether companies have identified these challenges, how they work to manage them and what implementations they have made.

In relation to theory we find the following two hypotheses relevant to our purpose:

H1: Intrinsic factors are the main motivators for employees in open innovation

H2: NIH-Syndrome is present and need to be addressed in Open Innovation projects

2 Theoretical Background

In this section we will review the literature relevant to our research; these theories are the foundation of our research. As we aim to understand how companies shall motivate their employees in order to succeed with open innovation projects, we are focusing on factors that are motivating employees. In order to be able to enhance and identify key motivational factors we argue that it is equally important to understand what is not motivating them. We start with a theoretical overview of open innovation and then turn to motivation.

2.1 Open Innovation

This chapter is meant to give the reader a broad overview of what open innovation is in order to understand what distinguishes it from traditional closed innovation. To start with we define innovation and open innovation.

Invention and innovation are sometimes used in the same way but there is a difference. Innovation can be defined as “translating an invention into something that people will pay for - it brings something new to the market” (Huff et al., 2013, p. 5). Innovation is not just a new idea or research result it is actually taking this new solution to the market.

Chesbrough (2003a) founded the expression “Open Innovation” in his book “Open Innovation - The New Imperative for Creating and Profiting from Technology” as a way for firms to leverage their innovative capacity using external resources. Firms had used external sources for innovation before, but more in terms of a single partner. What had happened now was a new and broader type of strategic external sourcing of innovation. Companies typically no longer do all their innovation internally but instead also collect ideas and innovations from external sources as well as output internal innovations to external firms, we call this open innovation (Chesbrough, 2003a).

Open innovation can be said to be “. . . the use of purposive inflows and outflows of knowledge to accelerate internal innovation, and expand the markets for external use of innovation, respectively” (Chesbrough et al., 2006, p. 1). Typically we call the innovation setting open when a company has several partners working with innovation in a flexible set up (Chesbrough, 2003a). Today this is common to some extent in all industries (Chesbrough and Crowther, 2006).

A comparison between open and closed innovation can be seen in Figure 2.1 below. In the closed model, a research or development project has little or no contact with the external world. In the open innovation model on the other hand, the company’s border to the external context is open so that in and out flow can occur. Intellectual Properties can be in/out licensed, ventures can be created, spin in/off of technology can occur and products and technology can be acquired or divested, all during the course of the innovation process. (Chesbrough, 2003a; Chesbrough, 2003b; Kirschbaum, 2005)

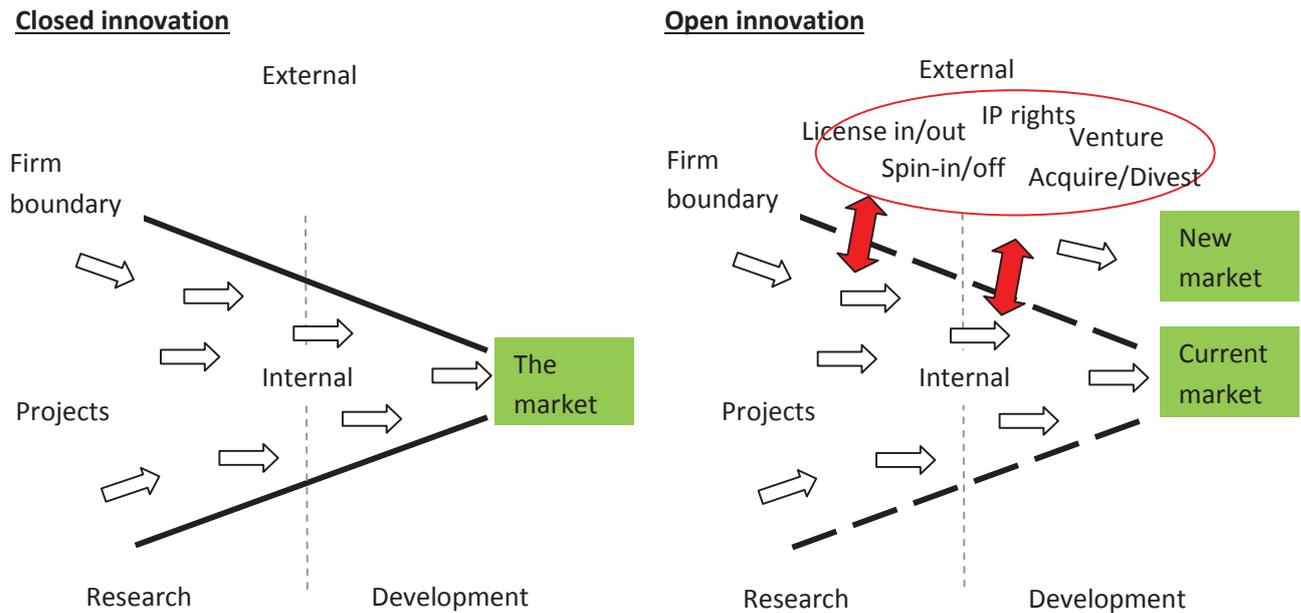


Figure 2.1: The innovation funnel (Chesbrough 2003a, Chesbrough 2003b, Kirschbaum 2005)

Some companies had, during the early 2000's, been successful in implementing this new way of innovating. Procter and Gamble (Huston and Sakkab, 2006) and DSM (Kirschbaum, 2005) are examples of a large firms that has shifted to Open Innovation. They realized that R&D spending had to be contained and new ways to innovate had to be adopted to meet growth targets.

Early on, most focus for Open Innovation was on high-tech or complex industries and companies (Chesbrough, 2003a; Chesbrough, 2003b). Open innovation was mainly a way to leverage technology development and hold R&D cost down. Later as open innovation has moved into more mature industries, these firms tend to focus more on adopting open innovation to meet growth targets (Chesbrough and Crowther, 2006).

Open Innovations is now used in larger scale at many companies were most likely the strongest objective is monetary. Joint development in the car industry is common as well as finding new drugs in the pharmaceutical industry. If done efficiently companies can benefit by adapting to open innovation. Risks can be shared and each company can focus on what it does the best.

D'Antoni and Rossi (2014) compare an open and close regime of innovation and finds that the open regimen is superior to the closed. With an inside-out open innovation a company will sell more new products and be more likely to get radical innovations (Inauen and Schenker-Wicki, 2012). On the other hand incremental or sustainable innovations have a greater innovation performance for closed innovation (Inauen and Schenker-Wicki, 2012).

The field of open innovation is large as it impacts most innovative activities today. Open innovation can

be done in many ways, be more or less open and in inbound and outbound directions (Dahlander and Gann, 2010).

2.2 Motivation

Our literature review on motivation starts with a broad overview about well researched theories as the Agency and Stewardship theory as well as the Job Characteristics theory. These theories are meant to get the reader a grasp of what we are looking for in our study. After that, we elaborate over theories that are directly related to our research. These are extrinsic and intrinsic motivational theories as well as cultural and resistance factors affecting employee motivation. Finally we discuss the most important theories that compose our theoretical framework, which is developed research based on previously mentioned theories.



Figure 2.2: Showing the structure of our theoretical background, from general, to more specific and finally the theoretical framework which builds on the previous theories.

To be motivated means to be moved to do something. A person who feels no impetus or inspiration to act is thus characterized as unmotivated, whereas someone who is energized or activated toward an end is considered motivated (Ryan and Deci, 2000). Two common theories for how employees act in a company are the Agency theory and the Stewardship theory (Davis et al., 1997). These theories try to explain why employees in a firm act in a certain way and what motivates them to do so. We regard it important to understand these theories for our research question. A major distinction between Agency and Stewardship theories is the focus on extrinsic versus intrinsic motivation. The Agency theory focuses on extrinsic behaviors like tangible and exchangeable goods that have a market value. Contrary, in stewardship theory, the rewards cannot be measured in money. Typical rewards are opportunity for growth, achievement and self-actualization. These are all intrinsic, intangible rewards that enforce employees to work harder for the organization (Davis et al., 1997). Table 2.1 shows an overview of the Agency and Stewardship Theory.

Table 2.1: Comparison of the Agency Theory and Stewardship Theory

	Agency Theory	Stewardship Theory
Model of man	Economic man	Self-actualizing man
Behavior	Self-serving	Collective serving
Psychological Mechanism		
Motivation	Lower order/economic needs (physiological security, economic)	High order needs (growth, achievement, self-actualization)
	Extrinsic	Intrinsic
Social Comparison	Other managers	Principal
Identification	Low value commitment	High value commitment
Power	Institutional (legitimate, coercive, reward)	Personal (expert, referent)
Situational Mechanism		
Management Philosophy	Control oriented	Involvement oriented
Risk orientation	Control mechanism	Trust
Time frame	Short term	Long term
Objective	Cost control	Collectivism
Cultural Differences	Individualism	Collectivism
	High Power Distance	Low Power Distance

Another commonly used theory we like to cover briefly is the Job Characteristic theory originally constructed by Oldham et al. (1987). The Job Characteristics model has been widely used to explain motivation among workers. The theory was constructed to specify under which conditions the workers prospered at work (Oldham et al. 1987). According to them there are three critical psychological states that would lead to favorable work motivation.

- Experience meaningfulness of the work: The degree the worker perceives the work as intrinsically meaningful and can create value to other people or the external environment.
- Experience responsibility for outcome of the work: The degree the worker feels accountable and responsible for the result.
- Knowledge of the results of the work: The degree of feedback of how well the worker is performing.

According to Oldham et al. (1987) the states above will be achieved if five certain job dimensions are fulfilled.

- Skill variety: Motivation improve when the job requires various activities and include different job related skills and talents, rather than just elementary and routine activities.
- Task Identity: The degree to which the job can generate a visible and complete work piece. Workers also feel much more motivated if they are involved in the whole process rather than just a brick of the work.
- Task Significance: The degree to which the job impacts other people, either the organization or the external environment. There is more feeling of meaningfulness if the job improves well-being of others than at the job.
- Autonomy: The degree to which the job provides the employee with significant freedom, independence, and discretion to plan and decide the work. High level autonomy jobs where the outcome depends on the workers' own effort and decisions, rather than instructions from a manager. In that case the jobholder experience greater personal responsible for their accomplishments.
- Feedback: The degree direct and clear information about the performance of the worker doing his/her job.

What we can see in these models in general is that the motivation typically comes from two origins, externally from the person or from within the person. The next sections will therefore cover these two aspects of motivation.

2.3 Extrinsic motivators

This section will review the literature on the type of motivators that comes externally from the person - extrinsic motivation. Extrinsic motivation is one of the cornerstones of this thesis and includes key motivators for employees. There is a lot of research done which we consider relevant and important for our thesis.

Extrinsic motivation refers to performing an activity with a feeling of being pressured, tension, or anxiety just to make sure that one would achieve the result that he or she desires (Lindenberg, 2001). Deci and Ryan (2000) define extrinsic motivation as a construct that pertains whenever an activity is done in order to attain some separable outcome. Vallerand (2004) say, extrinsically motivated people do not engage in an activity because of pleasure, rather they expect some kind of reward that are external to the activity itself. Participating in an activity to receive a reward or to avoid punishment are classic extrinsic motivations.

In the Agency theory, a principal - agent relationship is created when one party, the principal, enters into a contractual agreement with a second party, the agent. The principal delegates to the agent who is responsible for carrying out a function or set of tasks for the principal (Kassim and Menon, 2003). The model man underlying the Agency Theory is a rational worker that sees to maximize his or her individual utility. Both principal and agents tries to maximize utility for least possible expenditure. As long as the utility function coincides between agents and principals there is no so called agency problem, but if they do, an agency cost will occur. The agency cost occur when either principal or agent maximize their own utility at the expense of the other. For a firm it is important to minimize agency cost in order to function

properly (Davis et al., 1997). Miller and Sardais (2011) mention a classic example, the greedy bankers who enrich themselves on behalf of shareholders and clients. No matter result some of the bankers grab huge bonus which has harmed the reputation of the business. Their actions have literally created huge agency cost in some cases.

As Musselwhite (2011, p. 49) writes *“Recognition extends the motivating effects of personal achievement into responsibility and accountability, which are motivating for the employee, valuable for the manager, and cost-effective for the organization”*. He argues for the importance of acknowledging the employees and by doing so raising their trust and self-affirmation. He mentions leadership areas as coaching, rewarding, acknowledgement and feedback are leadership tools where managers often fail.

According to Vallerand (2004) there are four categories of extrinsic motivations, external regulations, introjected regulation, identified regulation and integrated regulation. External regulations refer to behavior that is regulated through external means, for example obtaining rewards or avoiding social pressure or punishment (Vallerand, 2004). Introjected regulations mean internalizing reasons for an action. It is the process in which a person gets a belief, attitude or behavioral regulation and do change it into a personal goal or value (Vallerand, 2004). Identified regulation is an autonomous and self-determined form of extrinsic motivations. It means consciously valuing a goal or regulation so that said action is accepted as personally important (Oudejans, 2007). Integrated regulation is the final step of internalization and refers to the process by which persons more totally alter the regulation into their own so that it will come from their sense of self. The regulations are fully assimilated with self so they are in self evaluations and belief on personal needs (Oudejans, 2007).

Merchant and Van der Stede (2012) means that incentive systems are important because they motivate employees to achieve and exceed organizational goals. They discuss effort directing and effort inducing purposes for incentives to direct employees to high priority areas. These are important to motivate employees to work with subjects that are in line with company objectives. Many employees need incentives to work hard or cooperate with other groups (Merchant and Van der Stede, 2012). Theory suggests that monetary awards will motivate people to behave in your favor (Merchant and Van der Stede, 2012). This is well known and commonly used in incentive systems at companies worldwide.

2.4 Intrinsic motivators

Intrinsic motivators are the second cornerstone of the thesis and like extrinsic motivators there are several important researches done relevant to our thesis.

Intrinsic motivation is when people engaging in an activity for their inherent satisfactions rather than for some separable consequence like rewarded or avoid punishment (Ryan and Deci, 2000; Malone and Lepper, 1987). When intrinsically motivated, a person is moved to act for the fun or challenge entailed rather than because of external pressures, or rewards.

Stewardship Theory derives from psychology and sociology and is designed to examine situations where executives and stewards are motivated to act in the best interest of their principals. In the Stewardship

theory the behavior is ordered so that organizational and collective, self-serving and individualistic behavior has higher utility. This means that in an organization, a “steward” will favor interest of her organization before her individual interest. In the case where the interest of the steward and the principal is not aligned the steward perceives great utility from cooperative behavior. The stewardship theorist assumes a strong correlation between success of the organization and satisfaction of the steward. (Davis et al., 1997)

Malone and Lepper (1987) have divided intrinsic motivations in two major categories, individual and interpersonal motivations. The individual motivations are challenge, curiosity, control and fantasy. People seem to enjoy doing an activity that poses them a good *challenge*, if too difficult or too easy it will be of little intrinsic motivation. An enjoyable *challenge* there should be attainable goals and continuous feedback on the activity and thereby enhance self-esteem. A person will also be intrinsically motivated when something in the environment attracts attention and there is an perfect level of discrepancy between current knowledge and what knowledge that could be achieved if the person engaged in the activity - by Malone and Lepper (1987) referred to as *curiosity*. *Sense of control* is one of the key factors to why people feel intrinsically motivated. People want to feel a sense of control about what happens to them and what they are about to do. Having choices is important in order to perceive a feeling of control. *Power* is also contributing to a feeling of control (Malone and Lepper, 1987). There are different types of power. Expert power which is an intrinsic kind of power related to person and his knowledge, while institutional and reward power is related to organizational power (Davis et al., 1997). Being able to *fantasize* about event and activities has strong impact on intrinsic motivations. In fantasy, one can imagine the satisfactions with success, power and fame, and they can master situations that would be unavailable in real life (Malone and Lepper, 1987).

Malone and Lepper (1987) further define three forms of interpersonal motivations, *competition*, *cooperation* and *recognition*. They are interpersonal because they depend on other people. Sometimes interpersonal motivations are decomposable to the individual motivations. People feel intrinsically motivated when they can compare their performance to others in a favorable way. The “winner” often gains from the competition while the “loser” normally will suffer. The intrinsic value of cooperation is based on that people feel satisfaction from helping others to achieve their goals. As with *competition* it is different between people how important they consider cooperation in order to enjoy the activity. *Cooperation* also requires interpersonal skills of the person involved. When people get appreciated and recognized by others they feel satisfaction. For *recognition* to work the result of an achievement must be visible to others, either the process of work or the final product (Malone and Lepper, 1987). Closely related to motivation is the culture at the company and within the culture there can be resistance to change.

2.5 Culture and resistance

In order to understand how employees are motivated we regard it important to understand how the culture in a company affects motivation. Resistance is another research area important to us as we aim to understand what the biggest resistance factors affecting motivation among employees are.

A key area for motivation is how the employees identify themselves with the organization. An employee that identifies him- or her with an organization will work harder towards the organization's goal. The organization becomes an extension of the steward's psychological sphere. An employee that identifies herself with the organization will be more likely to work harder for her organization and overcome problems. On the other hand, when managers take decision to externalize problematic areas in order to self-actualizing goals or that they don't want the organization to be identified with them, they often make things worse. This is because they avoid responsibility and make decision to rectify the issues (Davis et al., 1997).

According to the Social Identity Theory people tend to classify themselves and others in different social categories. An organization can, as a social category, reinforce characteristics of its members. The Social Identity theory argues that an individual can identify themselves with an organization and assimilate success and failure on themselves. Thereby they can enhance their own self-esteem. (Ashforth and Mael, 1989)

The culture of an organization can heavily affect motivational factor of employees. Organizations with individualistic people are often focused short term and do business on economic terms, while collectivist culture sees success in terms of success of the group. Collectivists prefer long term relationships and spend more time to get to know each other (Davis et al., 1997). As Musselwhite (2011) write managers have an important role of creating a good culture. He says when employees feel managers are caring more about the job than about them, they may feel insignificant. He also states that when managers show as much concern about them as about the job, employees are likely to show trust. Logically, he states trust is characteristic for high-performance companies.

As Oldham et al. (1987) write, not all employees will respond to highly motivational work. There must be a "fit" between job and worker. For the "fit" to be present, the worker must have knowledge and skill to be able to perform well, otherwise the worker will be frustrated which have impact on self-esteem. Psychological needs of the worker are also crucial for highly motivating jobs. Individuals that have less interest for growth and strengthen capabilities are less prone to exploit the opportunities. Last, work context are important to perform in highly motivating jobs. Work context can be pay, co-workers, manager or job security. In order to succeed, these factors must not steal too much of the energy of the worker (Oldham et al., 1987).

2.5.1 Resistance in general

As mentioned above we regard it important to understand reasons for resistance in order to know how to overcome resistance and enhance motivational factors for working with open innovation.

Resistance identifies a motivational state: the motivation to oppose and counter pressures to change. It is a reaction against change. It can refer to having a goal to resist and protect existing attitudes. (Linn and Knowles, 2004).

Resistance can be divided into four different faces, *reactance*, *distrust*, *inertia* and *scrutiny*. *Reactance* is caused by external threats that affect a person's freedom of choice. When a person is experiencing that

limited freedom to act, a feeling of uncomfortable state will occur, that will result in motivation to reassert that freedom. *Face of distrust* underlies both affective and cognitive reactions to change. When people don't know the motive of a proposal they will become suspicious. They wonder what the true facts are behind the change. When people realize that they are exposed for a change or a proposal they will become much more careful and on the alert. The proposal will be questioned and thoroughly examined. Strengths will be accepted and appreciated, but on the other hand weaknesses will be evaluated and countered - also called *scrutiny*. *Inertia* is resistance that is a state of mind which means that when a change is asked for a person is trying to stay put with the original. What differentiates this "resistance" is that it is not reactant to the change of proposal; it does rather not want a change. (Linn and Knowles, 2004)

As Atkinson (2005) says, we must examine the reason to why people resist change. The effective change maker will not focus to "win the war". The point is to help people to reframe things to see beyond their negatively viewpoint. Two general strategies for change are the Alpha and the Omega strategy. The Alpha strategy aims to persuade by increasing the approach forces. By adding incentives, arguing with more convincing reasons, having more credible sources, it is increasing its attractiveness. Practical examples of this strategy are adding incentives, increase source credibility, persuasive messages and so forth. The Omega strategy on the other hand is not as much studied and is focusing on decreasing avoidance forces, by removing or disengaging someone's reluctance to change. Practical examples are sidestepping resistance, address resistance directly and use resistance to promote change (Linn and Knowles, 2004).

2.5.2 Resistance - the Not Invented Here Syndrome

The Not-Invented-Here syndrome (NIH) is a particular interesting reason for resistance in open innovation since it is resistance for externally developed products, ideas or services. NIH- syndrome has been studied for a long time with a paper from Clagett (1967) as the starting point. It can be explained as a resistance to accepting ideas and products that are originating externally to the company (Clagett, 1967; Katz and Allen, 1982). The fact that it is referred to as a syndrome shows that it has a negative effect. The NIH-syndrome is mostly found in innovation but can also be found in related functions.

The resistance from NIH-syndrome could be reduced by involving the internal team for the whole process of knowledge inflow (Clagett, 1967). It is also important that there is focus on reducing the resistance factors not just trying to get support for the innovation (Clagett, 1967). Katz and Allen (1982) found that stable groups with a narrow competence increased the NIH-syndrome as team members isolated themselves from external knowledge and any critical feedback. Teams experienced with external knowledge are also of importance to reduce NIH-syndrome (Mehrwald, 1999). Merhrwald (1999) further finds that not well suited incentive systems can create resistance to external knowledge.

The source of the external innovation strongly affects the NIH-syndrome (Hussinger et al., 2011), where innovations from suppliers and customers do not generate resistance whereas innovations from competitors meet greater resistance. The NIH-syndrome is also stronger at high-performance firms compared to lower performing firms (Hussinger et al., 2011).

The NIH-syndrome can grow strong and manifests itself as a reluctance to accept external ideas and innovations, thinking the best is always what is invented in-house. In relation to NIH-syndrome a Not-sold-here (NSH)- syndrome can be identified as a reluctance to transfer knowledge externally (Lichtenthaler et al., 2011). Employees can get the impression that innovations are given away to competition and that the company gets drained on knowledge.

Taking on a more holistic approach to the NIH-syndrome other positive aspects can be found in relation to the negative (Lichtenthaler and Ernst, 2006). Lichtenthaler and Ernst (2006) has looked at six knowledge management tasks, Table 2.2, and the six related syndromes that can be identified (Lichtenthaler and Ernst, 2006), Table 2.3.

Table 2.2: Major knowledge management tasks (Lichtenthaler and Ernst, 2006)

	Knowledge acquisition	Knowledge accumulation	Knowledge exploitation
Internal	Make	Integrate	Keep
External	Buy	Relate	Sell

Table 2.3: Attitudes to the major knowledge management tasks (Lichtenthaler and Ernst, 2006)

	Knowledge acquisition	Knowledge accumulation	Knowledge exploitation
Internal	Not-invented-here	All-stored-here	Not-sold-here
External	Buy-in	Relate-out	Sell-out

Further explanations to the attitudes described in Table 2.2 and Table 2.3 are listed below.

Knowledge acquisition is where external knowledge is taken into the company, inbound open innovation. The knowledge management decision to make it your self can end up in a Not-invented-here attitude (Lichtenthaler and Ernst, 2006). The Not-invented-here attitude is if there is a negative attitude to acquiring external knowledge and a too strong focus on internal knowledge (Lichtenthaler and Ernst, 2006). On the other hand the knowledge management decision to buy can end up in a buy-in attitude (Lichtenthaler and Ernst, 2006). The buy-in attitude occurs when the organization is too focused on external knowledge (Lichtenthaler and Ernst, 2006). Employees think that the external knowledge is better and this attitude can decrease an organization's internal innovation capabilities in a negative way.

Knowledge accumulation is the gathering of knowledge and in this perspective also where the knowledge is placed. Wanting to integrate external knowledge can end up in an all-stored-here attitude (Lichtenthaler and Ernst, 2006). This all-stored-here attitude wants the company to know everything and has a negative attitude toward others knowing more than you. Deciding to relate to external knowledge can lead to a relate-out attitude to external knowledge. This attitude lets too much knowledge to be

accumulated externally to the company.

Knowledge exploitation has to do with when internal knowledge is taken externally, outbound open innovation. The keep or sell decision has some related attitudes. If knowledge is kept internally and not sold this could lead to a not-sold-here attitude (Lichtenthaler and Ernst, 2006). This is an attitude to external knowledge commercialization that is more negative than an ideal attitude would be (Lichtenthaler and Ernst, 2006). Employees think that all external commercialization is no good. Deciding to extensively sell off internal knowledge relates to a sell-out attitude, an overly positive attitude to the external exploitation of knowledge (Lichtenthaler and Ernst, 2006). Selling of too much will erode the internal innovation capability of the company.

NIH-syndrome and NSH-syndrome attitudes should according to Procter & Gamble be reduced by incentive systems and reward systems respectively (Lichtenthaler et al., 2011). Lichtenthaler et al. (2011) identified four type of companies that had different ways to handle the in and out flow of innovation. NIH-syndrome correlates with poor performance as in-bound innovation and weak NIH-syndrome attitudes are important for success.

2.6 Motivation in innovation

This chapter discusses theory relevant for our theoretical framework. The theories discussed build upon theories from previous chapters about extrinsic and intrinsic motivators as well as resistance factors but are applied on innovation.

De Jong (2006) argues that there are three main arguments to why individuals decide to proceed with innovations. The first argument is *pay-off*, which is the perceived gain from to exploiting the opportunity compared to not doing it. There must be a set of reasonable outcome in terms of monetary rewards, organizational advancements, recognition, self-belief, job security or avoidance of boredom. *Situation control* (Krause, 2004) is the second argument which determines if an individual believes the situation is possible to influence. If there is enough situational control, the implementation is probable. Part of the situational control is factors as knowledge, time, budget, authority and staff. De Jong's (2006) final argument is *intrinsic motivation*, which is described earlier in the Thesis. Amabile (1996) defines intrinsic motivation to innovations as the individuals' positive reaction to a task, which can be manifested as interest, involvement, curiosity, satisfaction and challenge.

Wendelken et al. (2014) have identified a numbers of intrinsic factors motivating people to innovate. They argue that people innovate for fun and enjoyment as well as for object and task related issues, which is when it is interesting for someone personally to see how something is accomplished. Another issue pointed out is the possibility to establish new contacts and make friends. Also cooperation with others, meaning to work with others in good way, respect and let others express themselves are all factors contributing to employees motivation for innovation.

A number of extrinsic factors are also considered significant for employees' motivation for innovation. Employees participate in innovation due to career related issues; they see it as a possibility to show off.

They also see it as a possibility to gain knowledge and competence from an area which they normally are not present. Motivations related to external recognition is also a significant factor. (Wendelken et al. 2004)

Gobble (2012) reviews the literature on motivators for creativity and innovation. Some intrinsic key factors are found where intellectual challenge, autonomy, and mastery was most important (Gobble, 2012). The extrinsic key factors found where compensation, recognition, progress and value from work, what the manager is thinking, and communication about overall company goals/purpose (Gobble, 2012).

Sauermann and Cohen (2010) finds that motives matter and also rank when it comes to how motivated employees are in innovation settings. The most important factors are challenging work and responsibility (Sauermann and Cohen, 2010). Less important are controlling effort, preference for challenge, independence, and salary (Sauermann and Cohen, 2010). Job security is associated with less performance in innovation and basic research and applied R&D productivity are stronger in relation to these motives than development (Sauermann and Cohen, 2010).

De Jong (2006) means that certain people are more prone to innovate than others, he argue that there are certain characteristics as sociability, ambition and activeness, which are connected to these people. Other characteristics are needed for achievement, self-efficacy and risk-taking. Also people with ability to influence and control their environment are more successful innovators.

Availability of resources is critical for employees in order to be committed to innovations. In most companies it is common that innovations projects lack in priorities compared to others and cut back on time and budget which is resulting in that employees perceive incentive to innovate as diminishing. (de Jong, 2006)

Of Oldhan et al.'s (1987) five factors for general job motivators, variety, task identity, task significance, autonomy and feedback, De Jong (2006) points out two, variety and autonomy, as significant for innovation. According to De Jong (2006) perceived job variety is positively correlated to proceed with new ideas. They also argue autonomy makes individuals more enthusiastic and committed. It is also said that autonomy should have a positive effect on situational control.

Another important area to motivating employees for innovation is external work contacts. Having external contact has a positive effect on both pay-off and situational control. A network of external contacts will make it possible to gather resources improving situational control. It also improves the possibility for good feedback and assesses an idea with better precision. (De Jong, 2006)

Factors related to organization are also affecting the motivation of people to innovate. Culture and climate for innovation are informal aspects of an organization. Informal support from colleagues, encouragement for entrepreneurial and risk taking behavior as well as practical support for innovation are important to motivate people. (De Jong, 2006)

A European study by Garcia-Goni et al. (2012) investigated the relation between motivation and innovation in the health care industry. Position was found to be one distinguisher as managers had higher motivation to promote innovation whereas first line employees was less motivated to drive and adopt innovations (Garcia-Goni et al., 2012). De Jong (2006) argues that leadership is one of the key factors to motivate people for innovation. They play an important role for creating an innovative climate. They also play an important enhancement role working with personal traits, resources and distributing tasks.

De Jong (2006) argues that rewarding too much for innovation, intrinsic motivation will diminish. Instead a small reward could be considered as recognition and possibly has a positive effect on the employee. When looking at the actual performance of innovation, Barros and Lazzarini (2012) have found that promotion as incentive is superior to monetary incentives for promoting innovation. The importance of incentives for innovation decreases as the innovation process is opened up (Fu, 2012). Firms having incentives for innovation have a higher efficiency for innovation than those that do not (Fu, 2012). Long term incentives like stock options are more efficient (Manso, 2010; Inderst and Mueller, 2010) than short term like performance related pay (Fu, 2012).

Getting involved in too much external collaboration is counterproductive and leads to less efficiency in innovation (Fu, 2012; Laursen and Salter, 2006), but sourcing knowledge externally has a linear relation to innovation efficiency (Fu, 2012), the more external knowledge sourcing the more efficient the innovation.

2.7 Motivation in Open Innovation

Theory discussed in this chapter is highly relevant for our thesis and part of the theoretical framework which we describe in the following chapter. Like the previous chapter, these theories build on previously discussed theories, intrinsic and extrinsic motivators but are applied on open innovation. We have found a lot of research on how to motivate external resources to participate in open innovation but, there is no extensive research available on motivational aspects on open innovation regarding employees.

A study of Minshall and Mortara (2009) found that creating a culture that was accepting open innovation is important to succeed. To implement open innovation it is useful to create an open innovation implementation team that focus on open innovation culture. They should help and encourage employees within the company by creating networks and help bring external resources into research and development. An open innovation core team is also crucial to create and maintain long term relationships with universities and other partners. They should help overcome resistance for open innovation by helping managers as well as providing tools for new functions.

The type of Research and development (R&D) strongly correlates to how easy it is to implement open innovation in a study by Minshall and Mortara (2010). Science "Blue-Sky" R&D are inherently open whereas applied R&D is less open and need a cultural change in order to accept open innovation. The "blue-sky" R&D is typically de facto open, has a supportive culture, are externally connected, need

intrinsic motivators (Minshall and Mortara, 2010). Garrido-Moreno and Padilla-Melendez (2012) has found that in academic setting researchers main factor is the social networking, when it comes to engagement in knowledge transfer exchanges in open innovation. An open innovation implementation team should support the “blue-sky” R&D function with a safe environment to interact with external experts (Minshall and Mortara, 2010). The present internal culture is a very important factor. An academic oriented R&D department has easier to accept external ideas and innovations whereas an applied R&D department has a more difficult time (Minshall and Mortara, 2010). The applied R&D function need a change of perspective, has a achievement culture, problem solving approach and need extrinsic motivators (Minshall and Mortara, 2010). The open innovation team should support with finding market driven targets (Minshall and Mortara, 2010). Internal openness was also found to be key when implementing open innovation (Minshall and Mortara, 2010).

Gassman et al. (2010) means that both company values and specific artefacts like different systems and platforms influence the company culture for open innovation. For open innovation to be successful, this culture has to value external knowledge. Implementing open innovation should be linked to the firm’s strategy, the firm also needs to know what external innovation it is interested in and the cultural aspect for the employees is very important (Slowinski et al., 2009). Changing the culture and getting the employees motivated to accept and get involved in open innovation is the key to success (Slowinski et al., 2009).

A research study by Herzog (2011) argues that intrinsic or extrinsic motivation for employees do not differ between open and closed innovation. Employees are equally attracted to their work regardless of innovation strategy. Herzog (2011) also argue that the intrinsic motivation factors are slightly more important than the extrinsic for open innovation. However Herzog (2011) study implicates that a proactive, creative and results-oriented personality are more driven by intrinsic motivational factors than extrinsic. Herzog (2011) also say that employees within open innovation have a very positive attitude to external technology; they consider it as an important alternative or think it is needed to achieve market success. Contrary, employees within closed innovation believe they can be successful without external knowledge and technology.

Resistance to open innovation is often related to Not-invented-here (NIH)-syndrome and is one of the largest barriers to open innovation. As described above it is a phenomenon where employees resist ideas, knowledge and technology developed externally. This resistance is related to the methods of motivation used in the company, which normally are “regulative” or “appreciative”. When regulative relates to measurement of employees and rewards for reaching goals, while appreciative is where employees have accountability and autonomy. Companies that are using regulative methods are likely to find more resistant employees, because it can affect the internal reward system. (Mortara and Minshall, 2009)

Mortara and Minshall (2009) argue that Not-invented-here (NIH)-syndrome could be reduced for open innovation by demonstrate practical benefits of external knowledge and ideas, involve employees early in the process, educate employees to think wider than just your own project, improve communication,

lead by example and change the motivational culture.

The most likely to resist change to open innovation is the technical staff and middle management (Slowinski et al., 2009). The technical staff like scientists and engineers sees an increased workload in coordinating the external collaboration giving less time to technical work (Slowinski et al., 2009). This is mainly from an applied R&D perspective. Middle management sees a risk in lost head counts, smaller budgets and more coordination work making them resistant to change (Slowinski et al., 2009). Some are hesitant to follow Middle Management upon an open innovation implementation, there for the Open Innovation should have commitment higher up in the organization (Slowinski et al., 2009). Open innovation therefore need a Senior Management commitment in order to be sustained and succeed (Chesbrough and Crowther, 2006; Slowinski et al., 2009). Aligning the organization with reward systems and good communication is important to overcome the NIH-syndrome (Chesbrough and Crowther, 2006; Slowinski et al., 2009).

If working holistically with strategy and management one can overcome this type of NIH and NSH behavior (Slowinski et al., 2009; Hussinger et al, 2011). This implies that it is strongly related to company culture. To succeed with open innovation companies need not to just focus on strategy formation but key is to change employee attitude and Lichtenthaler et al. (2011) suggests the following.

- Managers should communicate the open innovation strategy throughout the company
- Support should be given from top executives
- Suitable incentive systems should be adapted
- Design organizational structure to support open innovation
- Institutionalize open innovation in corporate culture by quick-win deals to reduce NIH attitudes

2.8 Theoretical framework

We have based our theoretical framework primarily on theories from sections 2.6 and 2.7. The dependent factors of the framework are selected from a wide range of theories relevant for motivating for innovation that we have encountered during the literature review. With our problem formulation in mind we have categorized the framework in three major categories;

Extrinsic and *intrinsic motivations* are two major theories about what makes people motivated. The theories have been applied on innovation with theories in sections 2.6 and 2.7. These building blocks are the foundation of our theoretical framework, as shown in Figure 2.3 below.

In order to understand what enhances the motivation of employees we have added one more building blocks to our theoretical framework, *resistance*. *Resistance* is a building block because we considered it necessary to understand which the most dependent motivational resistance factors are in order to avoid and suppress them. Figure 2.3 showing the theoretical building blocks with intrinsic and extrinsic motivation and resistance as building blocks.

Each category has sub variables which construct the category. We believe this framework can support our purpose to find out which factors that is most significant and thereby explaining how employees' motivation for open innovation can be enhanced.

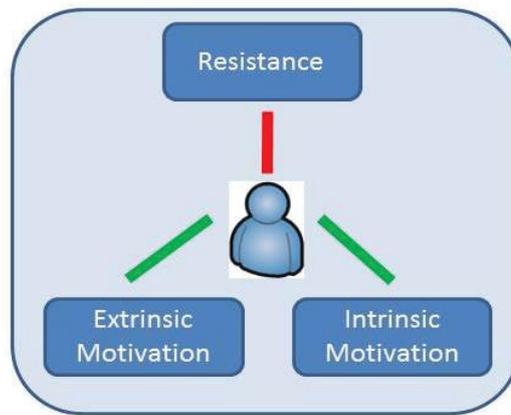


Figure 2.3: Showing the concept of our theoretical framework.

2.8.1 The framework

Below we have described our actual framework, Table 2.4, with each category, extrinsic motivational factors, intrinsic motivational factors and resisting factors, all with subcategories explained and referenced.

Table 2.4: Theoretical framework

Motivational factors		
Extrinsic factors	Description	References
Monetary rewards	Rewarding employees with monetary funds, like bonuses.	Gobble (2012), Manso, (2010), Inderst and Mueller(2010), Slowinski et al. (2009), Minshall and Mortara (2009), Fu (2012); De Jong (2004)
Career and responsibility	Incitement for career improvement or to gain more responsibility at work	Wendelken et al. (2014), Barros and Lazzarini (2012)
Gain competence and knowledge	Gain more competence or knowledge for your own winning	Wendelken et al. (2014)
External recognition	Get motivate by being externally recognized for you accomplishments, like from your manager	Wendelken et al. (2014), Gobble (2012)
Culture	How the culture of the company affects motivation	Mortara et al.(2010), Gassman et al. (2010)
Result improvement	Motivation by being able to achieve better with your own working tasks	Herzog (2011), Gobble (2012)

Coaching and feedback	Being motivated by being coached or having better feedback	Mortara and Minshall (2009)
Purpose and strategy	Motivation by understand and appreciating the purpose and strategy	Lichtenthaler et al. (2011), Slowinski et al. (2009)
Intrinsic factors		
Interest and curiosity	Motivated by your own interest and curiosity	Amabile (1996), Wendelken et al (2014)
Satisfaction for helping others	Motivated by the satisfaction of helping others	Amabile (1996)
Challenge	Motivation by the challenge proposed	Amabile (1996), Gobble (2012), Sauermann et al (2010)
Fun, enjoyment and inspiration	Having fun and being inspirated	Wendelken et al (2014)
Establish friends and contacts	Motivation by finding new friends	Wendelken et al (2014), Garido-Moreno and Padilla-Melendez (2012)
Cooperation	Feeling motivated by cooperating with other people	Wendelken et al (2014), De Jong(2006), Morta et al (2010)
Autonomy	Feeling autonomy with working tasks	Gobble (2012), DeJong (2006), Minshall and Mortara (2009)
Mastery	Motivated by the feeling that one can master certain tasks	Gobble (2012)
Resistance factors		
Not-invented-here syndrome	Resistance for external knowledge	, Minshall and Mortara (2009), Slowinski et al. (2009), Hussinger et al (2011)
Lost power and control	Experiencing ability to control and power yourself and others	Slowinski et al. (2009)
Personal traits	Certain traits more dependent for resistance	De Jong (2006), Herzog (2011)
Increased workload	Too many tasks to do in parallel	Slowinski et al. (2009)

3 Method

3.1 Research approach and process

This section gives an overview of the process and design of the research on how employees' motivation can be enhanced in open innovation projects. There are many options on how to get answers to that question. We could for example perform an experiment, conduct a survey, analyze archival records of old surveys, or perform a case study (Yin, 2009). An experiment would have taken too long and required commitment from many people. Conduct a survey was actually something we considered as it was a fast way to reach out to many people. The negative part with that was the possible limit in depth in the answers. Our research question deals with subjective items possibly deeply rooted in the person, not being able to ask probing question we saw as a major drawback. As open innovation is a quite new phenomenon at most companies it would be very difficult to find archival survey data that dealt with open innovation and again we would have no way of composing questions relevant for our research question. We ended up in that we needed to perform a case study. Yin (2009) writes that, in general, case studies are the preferred method when a "how" or "why" question are being posed. It is also preferred when the investigator has little control over events or the case studied is a contemporary phenomenon within a real-life context. We have therefore chosen to perform a case study. According to Yin (2009), creating a case study is an iterative process and indeed we have iterated our way forward.

As our research question dealt with what people feel and think, it was necessary to use a qualitative approach. Qualitative research is a field of inquiry that crosscuts disciplines and subject matters. A qualitative research study shall aim to gather in-depth understanding of human behavior. (Glenn, 2010). With qualitative methods one might get statistical results but they do not speak for themselves. That is why qualitative methods focus on evidence that will enable one to understand the meaning of what is going on (Gillham, 2005). A quantitative case study involves statistically counting and measuring empirical data, either descriptive statistics which describe averages and means or inferential statistics which with one is supposed to draw significant interferences from quantitative data. (Gillham, 2005)

We have performed a qualitative case study since our goal was to understand how employees behave in relation to open innovation projects. Our approach was to conduct a multiple case study with several interviewees at each company. A qualitative study is the most appropriate for our problem formulation and hypothesis since it gives us the possibility to gain deep understanding of specific events. A quantitative study would likely give us a broader study with less depth.

An obvious weakness to case study research and especially single case study is, as Yin (2009) comment, "How can you generalize from a single case study?" We have therefore conducted a multiple case study of six companies from different industries. Yin (2009) also mentions the difficulties in writing a good case study in a structured process in a defined way as a weakness as well as biased views of the authors.

3.1.1 Research Process

Ghuri and Grønhaug (2010) proposes a sequential research process starting with the topic and problem and ending with writing report and take action. This was not suitable for us as we needed to iterate the

different stages to be able to refine the research. We have followed a process based on Yin (2009, p.2) for case studies and its schematic can be seen in Figure 3.1 below.

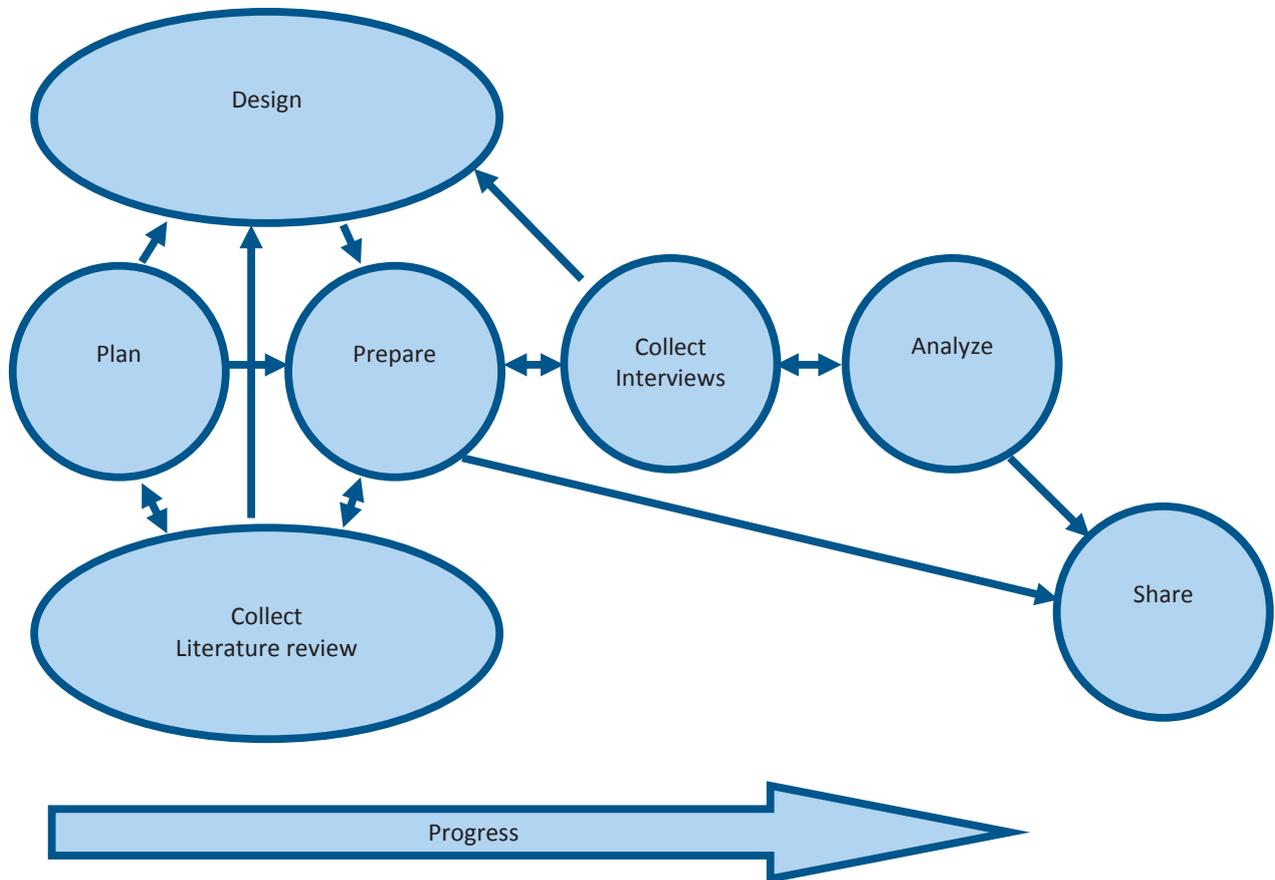


Figure 3.1: Our case study process based on Yin (2009, p.2)

Planning

As figure 3.1 shows, Yin argues that a case study should start with a planning phase which should consider identification of research questions and also decide what case study method should be used. (Yin, 2009). In the planning phase we had already started to consider potential ways of collecting data and where to collect data. This as establishing that contact or getting access to the right individuals was something we thought was potential difficult.

Designing

The research design was done according to Maxwell (2013) and can be seen in Figure 3.2.

Collect - literature review

Yin (2009) writes that previous research should be reviewed in order to develop sharper and more insightful questions about the topic, not to develop questions about what is already known on a topic.

Therefore we have put much time into reviewing literature.

Prepare

We prepared by writing an interview guide and book interview meetings. Also the report was early on created and built as the research progressed.

Collect - interviews

We conducted interviews and wrote them down in transcript.

Analyze

The data was analyzed toward the theoretical framework and hypothesis.

Share

The report was compiled and submitted.

The planning, collecting literature, designing the research and preparing was done much in parallel. For example after having reviewed literature we realized we had to change the problem formulation resulting in changes in the design and preparation. The later stages of collecting interview data, analysis and share was more done in sequence.

3.1.2 Research Design

Yin (2009) clarifies this phase as the “logical plan for getting from here to there, where here is an initial set of questions and there is a set of conclusion (answers) about these questions”. The research design of a qualitative study needs to be constructed and reconstructed so the model needs to be interactive (Maxwell, 2013), see Figure 3.2. In the design phase a definition of the likely case should be outlined, theory and propositions should be developed (Yin, 2009). The case study design should be identified and the method to keep high quality should be considered (Yin, 2009). Maxwell also in his model highlights the goals of the research (Maxwell, 2013), Figure 3.2

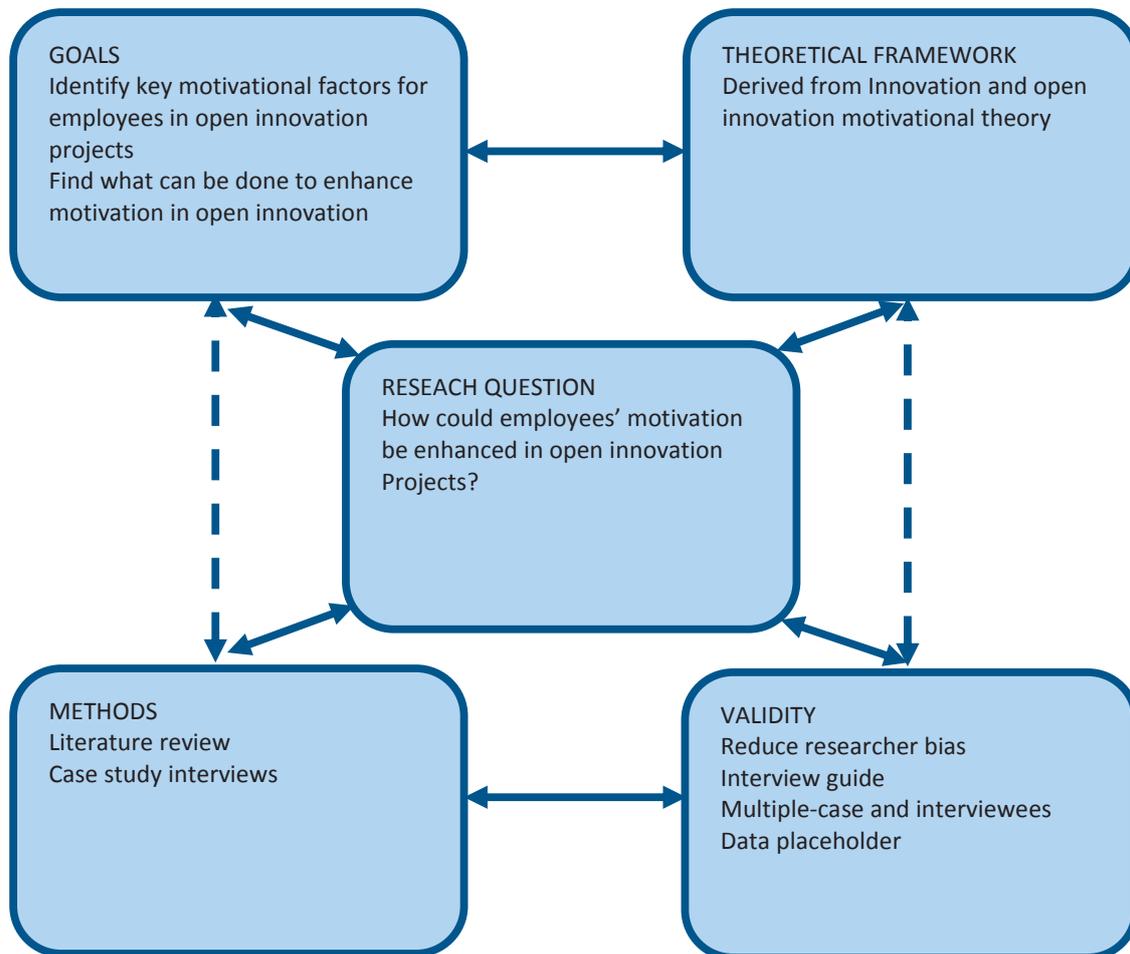


Figure 3.2: Interactive model of research design (Maxwell, 2013)

We understand the importance of keeping the consistency between the theoretical framework and the research questions in order really address the initial research question and nothing else. Our goal was to identify key factors to motivate employees to work with and accept open innovation and construct a theoretical framework out of that. As previously mentioned we have decided to perform a qualitative case study. Consequently our plan was to form questions based on how and why in order to relate the answers to given theory and to find logic patterns (Yin, 2009) between the answers and the theory. Making sure the quality of the case study is high is very important to address in the design. The validity cannot be confirmed to some objective truth but refers to the correctness and credibility in more of a common sense way (Maxwell, 2013). The construct validity, internal validity, external validity and reliability were addressed (Yin, 2009).

3.2 Developing frame of reference

When constructing a theoretical frame of reference one should, according to Maxwell (2013), not only just go over the existing literature of the subject but also consider other sources and own experience,

sources from outside the field and have a critical view of the existing literature. The theoretical framework should according to Maxwell (2013) be *constructed* not found as a ready to use framework. There is no pre-defined method for measuring motivation in open innovation projects. Instead we aggregated relevant theory from different existing sources on the theme for open innovation as well as innovation. By mapping them into categories we can create a frame of reference that can help us identify patterns between the different cases we study and identify factors standing out for open innovation. We decided to focus on theory about extrinsic and intrinsic motivational factors. We have also theories about why people resist change and what might enhance it. We believe that this theory will support our research question and help us understand and analyze our research result.

3.3 Quality

3.3.1 Validity

One of the central issues in qualitative research is validity (also known as credibility) (Glenn, 2010). Validity is a main part of our research design and needs to be addressed from several angles.

Two major threats to validity are research bias and reactivity (Maxwell, 2013). Glenn (2010) argue that one always has pre-expectation and it is important for researchers to be aware of what biases they have. Researcher bias is the influence of the researcher on the research, having to do with the researcher's beliefs. We both have jobs roles with a good portion of creativity and we easily adapt to change. We could therefore be biased to a too positive attitude toward open innovation. We have also an engineering background where focus was much on science and its application. We have therefore made an extensive literature review on motivational theories and theories on change resistance to better understand the mechanisms around motivation and resistance - getting a more balanced view. We have kept an awareness of that we are likely biased and to avoid that in our result we have both worked on the data treatment for all answers as well as independently analyzed the answers and then combined the two views.

Reactivity is how the researcher influences the situation, and this can never be fully eliminated (Maxwell, 2013). Yin (2009) also say for case studies based on interviews it is important articulate questions properly and not give leading questions. To handle credibility we have create open ended interview questions with objectivity. We have created questions that could be used in other cases as well.

External validity (Yin 2009) talks about if the case study result could be generalized beyond the case study. Internal validity (Yin 2009) gives meaning to look at for an explanatory case studies and talks about internally in the company. As Yin said, when collecting evidence data it is important for the quality of the case study to collect information from two or more sources converging the same facts (Yin, 2009). Also we have diverted our data collections to triangulate answers and results from more than one perspective. We have made sure external or internal validity was met by interviewing different people with the same questions. The transcripts were sent to the interviewees for validation so that nothing had been misinterpreted or written down wrong.

By using numbers in the data analysis one can handle both qualitative answers and also record amounts of certain evidence and this can be efficient (Maxwell, 2013). We have kept collected data both literature related to theoretical framework and statements from interviewees in a data matrix, Figure 3.4. In the matrix we have categorized the answers and weighted them per company and in total. With this data placeholder we could easily quantify statements, rank importance and link to literature. This matrix made the analysis much more valid with a clear link to the original data source.

3.3.2 Reliability

Reliability (Yin 2008) is concerned with if following the same procedure leads to the same result if the case study was repeated by someone else. According to Yin (2009) a case study can have six sources of evidence; documentation, archival records, interviews, direct observations, participant-observation, and physical artifacts. Having several sources of evidence will give a more reliable case study but with the time and resources at hand we used one source of evidence namely interviews. It is important to be clear and include details and be accurate in describing the method. Yin (2009) suggests that a case study protocol is developed. This will increase the reliability of the case study. Case study protocols are more important for multi-case studies which we have performed (Yin, 2009). We have made sure to document questions in a structured way.

Our case study protocol was made in the form of an Interview guide, Appendix A. The interview guide contained an introduction to the interviewee on the subject of open innovation and motivation as well as our problem formulation and research question. Practical details was included; the time needed for the interview, if the interview could be recorded, that the answers would be anonymous, they would get a transcript to approve and they would receive the final submitted version via mail. The questions were then asked in the order of the guide and probes were used according to the guide when applicable as well as other probes were used depending on the answers. Some interviewees wanted to see the questions in advance so more than half of the interviewees have read the guide prior to the interview. The guide was available in English as well as Swedish and the appropriate version was used for each interview. Swedish nationals were interviewed in Swedish and all other nationalities were interviewed in English. The Swedish interview answers were then translated to English before entered in to the paper. The interviews were all recorded, written down and categorized by the same person but the other person controlled the categorization when it was entered into the data matrix.

3.4 Data collection

3.4.1 Literature review

Glenn (2010) writes that the review of literature can be directed directly to the topic, to the background of the topic, or to the applications and the usefulness of the topic. The literature review and research question can be independent, depending how much information the researcher has from the beginning. The literature review has been an iterative process as we have managed to dig deeper into the topic and gained further knowledge about concept and frontline theories. We have read a large amount of peer reviewed journals as well as books in order to develop an extensive understanding on both Open

Innovation and Motivation as concepts. It has also been necessary to read many articles not directly related to the topic to gain background knowledge of both motivation theory as well as innovation theory, most of which is not referenced in the Thesis. The articles we read all come from credible sources most of which are peer-reviewed journal articles. Examples of sources are Summon@bth and its affiliated journals and Google Scholar.

3.4.2 Empirical Data Collection

When collecting evidence data it is important for the quality of the case study to collect information from two or more sources converging the same facts (Yin, 2009, pp.114-115). As Yin (2009, pp.102) writes the use of multiple sources helps construct validity and reliability for the case study. By using multiple sources of data a “triangulation” of the evidence can be made. Yin (2009) mentions six sources of evidence, documentation, archival records, interviews, direct observations, participant observations and physical artifacts. Glenn (2010) says categorizing data into patterns is the primary basis for organizing and reporting results from qualitative studies.

Yin writes about two different kinds of interviews. Targeted interviews, that focuses directly on case study topics. Insightful interviews that provides perceived causal inferences and explanations (Yin, 2009). We have worked with semi-structured (or insightful) interviews. Since we focus on open innovation projects we aim to gather data from people in relevant positions. We believe these are managers running open innovation projects, project managers of open innovation projects, project members in open innovation projects and also employees responsible for bringing home the effects of an open innovation project.

Interviews for this case study have been made at management and employee level. We have made semi-structured interviews focusing directly on case topics, by creating a questionnaire with questions proposed by the theory framework. Semi-structured interviews have been made aiming to get a more general and open discussion about motivators and resistance and provide the case study with common sense.

Gillham (2005) discuss the importance of conducting semi structured interviews in structured way. He argues that;

- The same kind of questions should be asked to all involved
- The kind of form of questions should go through a process of development to ensure their topic focus
- To ensure equivalent coverage, interviews are prompted by supplementary questions, if they haven't dealt with the sub-areas of interests
- Approximately equivalent interview time for each interview

We have therefore constructed an interview guide that contains an introduction to the subject, practical details like confidentiality and the main questions with probing questions see Appendix A. The interview guide was written in both English and Swedish. We have considered both the thematic and the dynamic aspects (Kvale and Brinkmann, 2009) when writing the interview guide. Thematic is the “what” of the

interview, to achieve this we have a introduction defining and describing the area of interest and specific questions that we ask (Kvale and Brinkmann, 2009). The dynamic is the “how” of the interview was achieved by having short questions written and during the interview stated in everyday language and not confronting (Kvale and Brinkmann, 2009). We kept away from using academic language and terms specific to theory to get a more dynamic interview (Kvale and Brinkmann, 2009). Gillham (2005) also states the importance of open questions and that probes should be used if the interviewer judges there are more to be disclosed for a question. We used both written down possible probes but also probing questions spontaneously arising during the interview.

When it comes to the quality of the interview the answers should be rich and relevant to the topic (Kvale, 2008). To achieve that we have short questions, as this is preferable so that the focus can be on the answers giving room for longer detailed answers (Kvale, 2008). Semi-structured interviews will in comparison to unstructured interviews minimize bias by beforehand have stated questions with subject matter addressed in sequence and interview objects picked out that are representative (Ghauri and Grønhaug, 2010). Open ended questions demands greater skill and responsibility of the interviewer to steer the interview to focus on the research problem (Ghauri and Grønhaug, 2010). The interviewers own background may also influence the interpretations and the end results (Ghauri and Grønhaug, 2010). Therefore clarification of the answers should be done continuously throughout the interview by the interviewer and the interpretations should also be done continuously (Kvale, 2008). The interpretations are also preferably verified throughout the interview so that the interview becomes self-explanatory (Kvale, 2008). We have clarified and verified the answers when needed to make sure we have a unbiased understanding of the answers.

It is important to have a clear understanding of what you want to ask and to whom (Ghauri and Grønhaug, 2010). To get a clear link between research question and interview questions a interview guide need to be constructed that should be reviewed (Ghauri and Grønhaug, 2010). One could go as far as running a pilot study on a few interviewees (Ghauri and Grønhaug, 2010) but for our purposes we have only construct an interview guided and had it reviewed before starting the interview series.

Further preparations for the data collection are to find target interviewees and book telephone meetings with them. It is important to provide them with information about problem formulation and the amount of time needed for the interview (Ghauri and Grønhaug, 2010). We have performed short and effective telephone interviews of 30-40 minutes covering ten main questions. We have in addition to this sold in the interview to the interviewee as an opportunity for them to afterward take part of the results and get them an idea of how their company compares to others in open innovation. The interviewee has also well before the interview time be asked if confidentiality is needed and if voice recording is acceptable.

The interview was started with an introductory part to get the respondent familiar with the objective and problem formulation. It is also very important to all the way through the interview keep the language simple and explaining any terminology (Ghauri and Grønhaug, 2010). The questions have not been leading in any way (Ghauri and Grønhaug, 2010) and in the case of a semi-structured interview

they should be open ended. It is important to get detailed and lengthy answers but at the same time control the time and not letting the answers drift into non relevant areas (Ghauri and Grønhaug, 2010). We have made sure to keep a balance of richness in answers and the time of the interview. After the interview we as soon as possible wrote up any additional notes and the recording as well as transformed the selected data into a data placeholder (Ghauri and Grønhaug, 2010) as this is important to avoid losing the holistic view of the interview answers. Writing up the interviews is the transformation step into the data analysis.

3.5 Data analysis

First of all the acquired data has to be managed in some way. Ghauri and Grønhaug (2010) proposes an interactive model of data collection, data reduction, data display, and conclusions. Data reduction has the operations of categorization, abstraction, comparison, dimensionalization, integration, iteration and refutation (Ghauri and Grønhaug, 2010). Yin (2009) means that it can be a good idea to start arranging and categorizing the data but if you do not have a strategy the whole case study might be in jeopardy.

The analysis can be based on four general strategies, relying on theoretical propositions, developing a case description, using both qualitative and quantitative data and examining rival explanations. Yin also states that there are five different analytical techniques; pattern matching, explanation building, time-series analysis and logic models and cross-case synthesis. (Yin, 2009). We have used an analytical strategy where we match our findings to the framework of theory as well as two broad hypotheses derived from theory. Deciding how to analyze the answers from the interviews should be done before starting the actual interviewing process (Kvale and Brinkmann, 2009). We have made it clear which theory that is related to certain questions before starting the interviews.

The interview transcripts were color coded to organize and extract the relevant information, see Figure 3.3 below.

	<p>- Why are they most motivating? I think it is my curiosity. Fundamentally there are three things that motivate people: Mastery - that you are motivated by building capabilities. Self direction - have the freedom to organize your surroundings. Purpose - that they can see why there are doing it. All these are in place for our set up with open innovation. Working independently and not bound by a system. I do not know if it is specific for open innovation but for how we have approached open innovation, not being bound by a process. Not applying our development process and having freedom has been very motivating. The mastery part is also motivating in that you constantly learn new things. And also that you can get things to move very quickly compared to doing it from scratch.</p>
4	<p>How motivated are you about working with Open Innovation compared to Closed Innovation. Yes 100% more I would say. For me it is very motivating. New impulses all the time and meeting people. Ability to combine new stuff without any constrictions.</p> <p>Probe: - Do you have trust in that the open innovation will lead to better results than closed innovation? I am 100% sure that you can do so much more with an open innovation approach than with a closed innovation approach. The only but is that you risk that what you do does not necessarily benefit your organization. I am sure you can create results which are much more</p>

Figure 3.3: Screenshot showing work in progress with data analysis

Simultaneously as the data was extracted it was also categorized and inputted into a data matrix containing all relevant statements and literature grouped by interviewee, company and categories, see Figure 3.4 below. The data extraction and categorization was done iteratively. Going back to the transcript to see if something more could be added and the categories in the data matrix were grouped and changed to give most meaning. Before the interviews were inputted the data matrix only contained categories derived from literature, both general motivation literature and innovation and open innovation specific.

	A	B	C	D	E	F	S	T	U	V
1	Category	Type	General literature	Innovation literatu.	Open innovation litter	Strength (x/total)	Summary	Weight	D1	D2
25	Fun, enjoyment and inspiration	Frame	Fun (Ryan and Deci, 2000; Malone and Lepper, 1975)	Wendelken et al. (2014)		5	Excitement and motivation for new ideas	1		people in-house are motivated by these new ideas coming in. This is exciting for them.
26	Establish friends and contacts	Frame		Wendelken et al. (2012)	Padilla-Melendez and Garrido-Moreno	5	Finding unique people with unique skills	1		You find unique people with unique skills for that innovation. I find that motivating. This you could not necessarily do by inwardly looking.
27	Cooperation	Frame	Cooperative behavior (Davis, Schoorman and Donaldson, 1997), Cooperation (Malone and Lepper, 1975), work context - co-workers (Oldham et al., 1987)	Wendelken et al. (2014), deJong (2006)		8	working with external people with new ideas	2	Building new partnerships and working with people I would not normally work with. Dealing with external collaborations, academics and so on. On a selfish basis that is great.	- diversity of knowledge in mind working on a problem. If you are in that camp and believe you are more motivated by something from the outside. That is something that I am motivated by; getting fresh thinking on a problem is very useful. Working with other is motivating, getting to think differently. Challenging your beliefs and the way you work.
28	Autonomy	Frame	Autonomy (Hackman and Oldham, 1976)	Gobble (2012), deJong (2006)	Mortara and Minshall (2009)	2				
29	Mastery	Frame	achievement (Davis et al., 1997)	Gobble (2012)		1				

Figure 3.4: Categorization of data against theoretical framework

The theoretical framework was set to be innovation and open innovation literature and only those categories were used to group the answers. Any statements not fitting into our theoretical framework was identified and categorized in new categories.

Summaries was made for each company and category as well as a weighting of the answers. The weighting was based on number of answers and importance. If there were only one interviewee for a company the answers was weighted with 2 if very important or 1 if important. For companies with 2 or more interviewees each answer was weighted with 1. A total weight for all categories was compiled to get an overview all cases. Ghauri and Grønhaug (2010) means that comparing different cases can reveal valuable information.

Each category of answers was analyzed against the theoretical framework with reference to Interviewees statements. We have use the data collected to see if it matches the theoretical framework and based on that drawn conclusions on how employee behave in relation to open innovation projects. We have also analyzed the data in relation to the two hypotheses. The goal was to gain information to

be able to draw conclusions for the case study. To avoid bias in the analysis both authors have analyzed the data collected and the results will then be compared and compiled.

3.6 Sharing the thesis

The last phase is sharing the case study by defining material to be able to effectively communicate the result (Yin, 2009). This paper has been written with guidelines from the course instructor on what chapters and sections it should contain, and BTH School of Management requirement of the formatting and this we have followed. We have had the report reviewed by others and have done rewriting in order to iteratively compose the final version.

Regarding interviews we have presented the answers according to the questions, and have kept the answer anonymous. Quotes have been put in appropriate context as a part of the analysis. Kvale and Brinkmann (2009) argue that only the best quote should be used and they should be kept short and this is what we have done.

3.7 Limitations of methodology

Difficulties in finding people negative to open innovation might bias the answers towards a too positive result. Other factors could then get more significant impact on the result.

Interviewing people at work about their feelings about a method deployed by their employer, and recording meanwhile, could possible impact the answers. Both by avoiding some answers, but also giving the answers less clear, making it harder for us to interpret the answers. Besides that it is also an ever present risk that a question or an answer is misinterpreted. We have tried to design question as open as possible.

The fact we conducted a multiple case study help decreasing the risk that the result is biased due to few sources or the culture of one specific company. At this case we have interviewed employees from six different companies. However, the basis is somewhat weak in order to draw definite conclusion and needs to be confirmed by further research.

4 Case description and Empirical results

4.1 Introduction and overview

In this chapter we describe our cases. We have interviewed employees from six different companies, all present in different industries, Table 4.1. In total we have made ten interviews. Below we have described the general background of each company as well as how they work with open innovation at current date. We will also present the empirical results from our interviews. We have not published the entire interviews; instead we have present general results in a table and also key results per company. We would like to point out that these are personal views of the people we interviewed and these views do not necessarily correspond with the official company view.

We performed a multiple case study by interviewing people working with open innovation. Most people were in leading positions, functioning as an open innovation drivers. The open innovation (in this chapter referred to as OI) maturity at the companies varied from one year and a few percent of Open Innovation to twenty years and a majority of projects being open innovation. All companies are European some of which are present globally. Combined the companies have about 200 000 employees operating on all continents and in six different markets and the size varies from medium to enterprise (Wikipedia, 2014).

Table 4.1: Overview - companies which are included in the Thesis

Company	Industry	Size	No of interviewees
A	High-tech	Enterprise	2
B	Instrumentation	Enterprise	3
C	Manufactured goods	Enterprise	1
D	Pharmaceuticals	Enterprise	2
E	Food	Enterprise	1
F	Logistics	Medium	1

4.2 Overall result

Table 4.2 below is showing an aggregated result where all companies is included. The results have been weighted to show the significance for each motivational factor in order to include how much each interviewee regards it as important. If only one interview was made at a company then the results was weighted with importance 1 or 2, for companies with 2 or more interviewees each answer was weighted with 1. This was done to compensate for the bias from having many interviewees from one company giving that company too much weight. The weighting formula is as follows;

- ‘ ‘ empty means none regarded it important
- ‘+’ means 1 to 3 interviewee-weights regard it as important
- ‘++’ means 4 to 5 interviewee-weights regard it as important
- ‘+++’ means 6 to 7 interviewee-weights regards it as important
- ‘++++’ means 8 or more interviewee-weights regards it as important

The tag frame means that the category is part of the theoretical framework, the tag new means that this is a new category not part of the theoretical frameworks. New are then new findings not found in our extensive literature review on open innovation.

Table 4.2: Overview of the results. (Gray background are part of framework, green background are new factors.)

Extrinsic - external to the person	Frame/New	Importance
Monetary rewards, Measurable goals - KPI targets	Frame	
Responsibility and carrier	Frame	+
Gain competence and knowledge	Frame	++++
External recognition	Frame	++++
Culture - the internal culture of OI affecting motivation	Frame	++
Result improvement	Frame	+++
Coaching and feedback	Frame	++
Purpose and Strategy	Frame	+++
Seeing others succeed	Frame	+
Intrinsic		
Interest and curiosity	Frame	+++
Satisfaction - helping others	Frame	+
Challenge	Frame	+
Fun, enjoyment and inspiration	Frame	++
Establish friends and contacts	Frame	++
Cooperation	Frame	++++
Autonomy	Frame	+
Mastery	Frame	+
Personal growth	New	+
Creativity, achievement and fantasize	New	+
Resistance		
NIH	Frame	+++
Lost Power and Control	Frame	++++
Personal traits	Frame	+++
Increased workload	Frame	+++
Unwillingness related to change	New	+
Cooperation difficulties	New	+

4.3 Description and results per company

This section describes the case companies as well as shows the empirical data. The evidence or findings in the tables in this section is the order of importance. The dark blue on top is most important and the light blue is of least importance. Findings directly related to the theoretical framework are presented as well as enhancement suggestions from our respondents, Table 4.3 to Table 4.14.

4.3.1 Company A

Briefly about the company

Company A is an enterprise size European high-tech company selling their products to other businesses worldwide. Interviews were conducted with two people involved in driving the open innovation (OI) initiative. The company has worked with OI for about three years and only sees a modest increase in OI at the company for the future (Respondent A1, A2). The number of projects using OI is less than 1 % according to Respondent A1 but Respondent A2 means that it is about 15-20 %. The company's reason for going after OI is to extend the capacity to be able to keep up with technology developments (Respondent A1), and get disruptive technology (Respondent A2). There is no overall strategy for the company as a whole to work with open innovation only for the one unit (Respondent A1).

Working practice

The company has been working with OI a few years and the OI initiative is mainly concentrated to a group within the company (Respondent A1, A2). OI is conducted in non-core technology areas and with partners not as public OI (Respondent A1, A2). The work with OI is still somewhat ad-hoc but there are some set ways on how to set up the project organizations (Respondent A1). There are processes and tools available for making decisions about external new ideas (Respondent A2). For internal ideas there is a platform steering group that will make the decision of making it in-house or partner up in OI (Respondent A2). There is also an OI strategy team with a purpose to be experts on OI issues, stimulate OI proposals, support projects, and being responsible for the OI process (Respondent A2).

Findings directly related to framework

Table 4.3: Results Company A – directly related to framework

Extrinsic	Summary A	Weight A
Coaching and feedback	encourage and support OI initiatives	2
External recognition	sanctioned high in organization and is exposed in the organization	2
Purpose and Strategy	Clear strategy and goals for the work	2
Result improvement	shorter time to market and getting new ideas	1
Seeing others succeed	getting some quick wins with OI that can be shared in the organization	1
Monetary rewards, Measurable goals - KPI targets	Monetary incentives will have no effect	0
Intrinsic	Summary A	Weight A

Cooperation	working with partners and other cultures	2
Interest and curiosity	it is my interest that drives me	1
challenge	the challenge of taking in new ideas and trying to change the organization	1
Resistance		
Summary A		Weight A
NIH	NIH syndrome is quite common and part of the culture	2
Lost Power and Control	result in resistance at middle management and expert levels	2
Personal traits	resistance to OI is to a great extent linked to personal trait	2
Unwillingness related to change	General unwillingness to change can be de-motivating	2
Cooperation difficulties	Cooperation difficulties with external parties can create de-motivation and create resistance	1

Enhancement suggestions

Table 4.4: Results Company A – Enhancements suggestions

Enhancing factors	Summary A	Weight A
Communicate Strategy and goals	Clear strategy and goals on what have to be done, combine a top-down and bottom-up approach	2
Supporting functions	Good project organization with project team, steering groups and have good communication. OI process as well as process to handle new OI ideas and support for the project team with legal aspects and partner visits.	2
Strong Leadership	take the dialog with the employee about resistance and OI and let them try for themselves	2
More Recognition	expose OI internally but also externally to the company is a motivator	1
Sufficient resources	allow for time to actively seek externally in OI	1
Change Culture	Creating a OI culture by having this support function grounded high up in the organization and bring down any barriers to OI	1

4.3.2 Company B

Briefly about the company

Company B is an enterprise size European instrument manufacturer selling their products to other businesses worldwide. Interviews were conducted with three people involved in the conceptual innovation work and research related work. The development projects done with closed innovation are to a great extent running efficiently (Respondent B1). The company has worked with OI for about 4 years and most definitely will increase in the future (Respondent B1, B2). Very few projects in innovation as a whole use OI but of the really new technologies or type of products it is about 10-25 % (Respondent B1, B2, B3). The reasons for using OI are to created growth in turnover (Respondent B1) and get to the market faster (Respondent B2). The OI is present in the current strategy but embedded in statements about using social media and disruptive technology (Respondent B2) and its visibility to the whole company is quite limited (Respondent B1, B2).

Working practice

The company has no public OI it is only conducted for disruptive innovation and targeted areas in the research and early stages of development (Respondent B1, B2, B3). For example the company is involved in OI in government funded OI projects (Respondent B3). OI is conducted ad-hoc and there are no processes or tools available to support OI (Respondent B1).

Findings directly related to framework

Table 4.5: Results Company B – directly related to framework

Extrinsic	Summary B	Weight B
Purpose and Strategy	answer to “why do we do this” is motivating	3
Gain competence and knowledge	Gain competence and knowledge is motivating	3
External recognition	management talking about and getting recognition to successful OI	2
Culture - the internal culture of OI affecting motivation	make people understand the difference of OI and closed innovation and where it should be used	2
Result improvement	the end result with OI is better and that is motivating	2
Responsibility and carrier	get the OI task delegated is motivating	1
Coaching and feedback	getting feedback about your OI idea	1
Monetary rewards, Measurable goals - KPI targets	Monetary rewards is not an efficient incentive	0
Intrinsic	Summary B	Weight B
Fun, enjoyment and inspiration	fun work tasks and inspirational work context	2
Establish friends and contacts	meeting and getting to know new people	2
Cooperation	Cooperation in networks	2
Autonomy	free and limitless working environment	2
Interest and curiosity	working with what you are interested in and curious about	2
Satisfaction - helping others	Good to be able to help others	1
challenge	Thriving from the challenge	1
Mastery	The mastery part is motivating since you learn new things	1
Resistance	Summary B	Weight B
Lost Power and Control	Lost Power and Control - at expert levels, and management level	3
NIH	NIH syndrome type resistance is present	2
Personal traits	Personal traits - the resistance and NIR syndrome are related to a person’s basic nature	2
Increased workload	OI complicates the work and adds work	1
Cooperation difficulties	Cooperation difficulties - when less progress at the external people	1

Enhancement suggestions

Table 4.6: Results Company B – Enhancements suggestions

Enhancing factors	Summary B	Weight B
Sufficient resources	getting time to work in OI projects	2
Change Culture	focus on changing the culture in areas where it is important by providing a comfort zone	2
Strong Leadership	strong management support and mediating between the internal and external creates motivated employees	2
More Recognition	the word need to be spread about OI	1
Supporting functions	Efficient idea handling system	1
Communicate Strategy and goals	Rules on what can be shared or not?	1
Involve	involve people in the OI process and get them to meet the partners	1

4.3.3 Company C

Briefly about the company

Company C is an enterprise size European company selling their products to other businesses. An interview was conducted with one person that was the initiator of OI at the company. The department has a large share of consultants in-house. The main areas of OI are an external network for open innovation making up only a few percent of all innovation projects (Respondent C1). If innovation contests, where ideas and innovations often come from the outside and collaborations with suppliers is included, then the share of OI projects is higher (Respondent C1). The company has been working with OI for one year and sees an increase in the future (Respondent C1). The reason for using OI is to grow organically by an increase in innovation (Respondent C1). There are no stated strategies for OI at the company yet (Respondent C1).

Working practice

Internal innovation events have been held with many OI ideas as results. The event was a one day competition where the whole department was shut down and focused only on this competition. On an experimental level there are external OI networks with a clear purpose but without clear roles and Respondent C1 had some kind of chairman position in the network. The company has no public OI.

Findings directly related to framework

Table 4.7: Results Company C – directly related to framework

Extrinsic	Summary C	Weight C
External recognition	Get recognition for doing something good for the company	2
Culture - the internal culture of OI affecting motivation	Everybody wants to participate in internal innovation competitions. A culture colored by having many consultants, so an acceptance for external ideas.	2
Gain competence and knowledge	Joy of creating something new	1

Coaching and feedback	Employees get positive encouragement for their ideas	1
Purpose and strategy	The organization should be able to answer why we do OI	1
Monetary rewards	There are no economical incentives at the company	0
Intrinsic	Summary C	Weight C
Interest and curiosity	Exciting new way of working and curiosity for the technology	2
Fun, enjoyment and inspiration	Innovation competition is a fun event	1
Creativity, achievement and fantasize	Creating something new	1
Resistance	Summary C	Weight C
Increased workload	Increased risks seen by management	2
Lost Power and Control	Lack of trust to the partner can create resistance	1
NIH	Very little of NIH	0

Enhancement suggestions

Table 4.8: Results Company C – Enhancements suggestions

Enhancing factors	Summary C	Weight C
More Recognition	Getting recognition for ideas and see them being implemented	2
Supporting functions	Innovation events and making sure to capture the ideas and get feedback to the submitter	1

4.3.4 Company D

Briefly about the company

Company D is an enterprise size European pharmaceuticals company selling their products to consumers worldwide. Interviews were conducted with two managers of research and science areas. The company just recently moved into public OI when they launched their OI web portal (Respondent D1, D2). The company has worked with OI for about 3 years (Respondent D1) to 9 years (Respondent D2) depending on when you start calling it OI. Of all innovation projects a reasonable part comes from OI and they see an increase in the future (Respondent D1, D2). Again the definition of OI is important and according to Respondent D2 OI is a continuum. The reason for the company to use OI is more diversity of projects and thinking (Respondent D1) and be active in high risk areas (Respondent D2). There is a clear strategy for OI at the company.

Working practice

The company has a OI web portal (Respondent D1, D2) where the company has posted topics and items that can be seen by anybody. People and experts in-house will review the incoming ideas and then decide if to go forward (Respondent D2). The company also has external OI networks (Respondent D1). External OI ideas are typically delegated to employees internally as a champion of that idea in form of a role like project manager (Respondent D1). Tools for OI like presentation material are available for all employees and support from Intellectual Property (IP) attorney and business development is available

(Respondent D1). OI is also promoted internally by conferences and presentations (Respondent D2).

Findings directly related to framework

Table 4.9: Results Company D – directly related to framework

Extrinsic	Summary D	Weight D
External recognition	Getting recognition and support from senior management and recognition outside the company	2
Responsibility and carrier	Carrier benefits, and responsibility for an external collaboration. enhancing CV	1
Gain competence and knowledge	New discoveries, new ways of leadership and new way of working	1
Seeing others succeed	Successful OI projects will motivate others to be more open	1
Purpose and strategy	Proud about working with OI	1
Culture - the internal culture of OI affecting motivation	sub cultures some are motivated by OI some are not	1
Monetary rewards	Not any monetary incentives	0
Intrinsic	Summary D	Weight D
Cooperation	working with external people with new ideas	2
Satisfaction - helping others	OI in our industry can really help people and that is motivating	2
Interest and curiosity	OI can lead to more interesting science and that is motivating	1
Fun, enjoyment and inspiration	Excitement and motivation for new ideas	1
Establish friends and contacts	Finding unique people with unique skills	1
Personal growth	understand that there are other ways of working, personal journey	1
Creativity, achievement and fantasize	Creating and moving science forward by OI	1
Resistance	Summary D	Weight D
NIH	Seen a lot	1
Lost Power and Control	People want to come up with the idea themselves. No control over the external world	1
Personal traits	Motivators differ for set up and personality	1
Increased workload	More work with sharing information having to sign agreements	1
Cooperation difficulties	Collaboration not working as intended can be de-motivating	1

Enhancement suggestions

Table 4.10: Results Company D – Enhancements suggestions

Enhancing factors	Summary D	Weight D
Supporting functions	Getting tools like e-mail templates, presentations, business cards and support from IP attorney and business development. IT tools is also an enabler	2
More Recognition	Getting to champion an external idea internally	1
Sufficient resources	Funding set aside for OI	1
Change Culture	Staging the openness from little in the beginning toward more and with signed CDA - this will remove some of the concerns	1

4.3.5 Company E

Briefly about the company

Company E is an enterprise size Nordic food producer developing, producing and selling numerous food brands to consumers and businesses. Interview was conducted with a person within the research and innovation department. About 75 % of the innovation projects are open innovation projects, whereas the product development projects are not that open generally (Respondent E1). The company has been working with open innovation for over 20 years and they cooperate with other companies as well as Universities (Respondent E1). There are no strategies at the corporate level for open innovation but at the research and innovation department level it is stated that we should utilize OI (Respondent E1).

Working practice

This company has been working with “open innovation” in their innovation projects for a long period of time. They have cooperation with customers, partners and universities. Research and innovation are central parts of the company and it is organized centrally within the organization. They have one person responsible for open innovation and when executing projects the central organization takes a central role in helping and supporting projects according to their different needs. The central organization is responsible for maintaining contacts with partners as well as supporting the rest of the organization with small as well as big issues regarding innovation. This company also has a well-established framework for recognizing employees for achievement. They have several internal magazines and Intranet which is frequently used to highlight good performance or ideas.

Findings directly related to framework

Table 4.11: Results Company E – directly related to framework

Extrinsic	summary E	Weight E
Gain competence and knowledge	Acquiring competence and knowledge are key factors to work with OI	2
External recognition	External recognition from the company and surrounding colleagues	2

Result improvement	Result improvement with internal activities by using external knowledge and competence is main driving factor	2
Monetary rewards	Monetary incentives in addition to salary will not improve motivating, other than just short term	0
Intrinsic	summary E	Weight E
Establish friends and contacts	Establishing new friends and contacts are main motivating factors to OI	2
Cooperation	Cooperation with external people, both them helping us and we helping them is motivating.	1
Resistance	summary E	Weight E
NIH	An internal resistance to bring in external knowledge and not be able to say that it has been created by themselves is percent but not common	1
Lost Power and Control	As an employee it is harder to control and steer the work in OI, there are many wills to handle	1
Personal traits	A greater drive to involve and cooperate with external parties - more creativity and coordination needed	1
Increased workload	Priority for the daily work gives little time left	1

Enhancement suggestions

Table 4.12: Results Company E – Enhancements suggestions

Enhancing factors	summary E	Weight E
More Recognition	Recognize employees for achievements in OI	1
Sufficient resources	Earmark funds for OI	1
Supporting functions	Facilitate and support OI centrally to help the organization	1

4.3.6 Company F

Briefly about the company

Company F is a medium sized Nordic Logistics Solutions Company. An interview was conducted with a person within the product development department of the company. Most projects in the innovation phase, (before they are based on a real business case) are carried out in an open environment at some extent, with customers or partners. They have earlier been much closed with their innovations, but since 2012 started to work in a more “open” manner. There are no outspoken strategies about open innovation, but there are “writings” in the strategies that emphasize and “open” way of working with innovation. Also transforming to a more open innovation is anchored at highest management level. (Respondent F1)

Working practice

It is over the last couple of years this company has started to consider open innovation as a central way of working for their innovation projects. They have created a specific methodology which they use in

open innovation. Their philosophy is to invite customers, partners and other external contributors as early as possible in the innovation process. By having workshops with external resources with different background they argue that they get other perspectives and can proceed and evaluate innovations faster. They get fewer problems focused and more solution prone. To inform about innovation accomplishments and progresses the intranet is used. Also, to recognize outstanding individual performance within innovation a informal “prize” is handed out regularly.

In order to take their open innovation to the next level and incorporate it even more in the company, “open innovation mentors” are planned, but not yet implemented. The company also aims to work to become a bigger player in open innovation in their network in order to become established as an innovation partner.

Findings directly related to framework

Table 4.13: Results Company F – directly related to framework

Extrinsic	Summary F	Weight F
Gain competence and knowledge	Knowledge and competence will be improved by cooperating with external resources.	1
External recognition	Publications in ongoing innovations and recognition for best idea or innovation	1
Result improvement	Improve results with internal activities. By bringing in external resources utility and need for an innovation will be earlier exposed. Consequently, unsuccessful innovation can be closed earlier, saving time and money.	1
Monetary rewards	Monetary incentives in addition to salary will have no motivating effect	0
Intrinsic	Summary F	Weight F
Fun, enjoyment and inspiration	Inspiration and enjoyment is significant when working with Open Innovation	1
Cooperation	Cooperation with external resources - bringing in other views and thoughts are motivating	1
Resistance	Summary F	Weight F
NIH	Some do not what us to share information	1
Personal traits	Resistance to cooperate and lack of drive to cooperate with other people at some occasions.	1
Increased workload	Some resistance regarding sharing knowledge with external parties	1
Unwillingness related to change	Unwillingness related to change in order to adapt to new way of working	1

Enhancement suggestions

Table 4.14: Results Company F – Enhancements suggestions

Enhancing factors	Summary F	Weight F
More Recognition	Publications in ongoing innovations and recognition for best idea or innovation	1
Sufficient resources	reserve time	1
Personal traits	motivation based on self fulfillment	1
Supporting functions	Create support for Open Innovation within the company to help the company improve	1
Involve more	involve employees part time in OI projects	1

5 Analysis

The following chapter presents the data in three sections;

1. *Extrinsic motivational factors for open innovation*
Describes the most significant motivational factors to why employees want to work with open innovation for extrinsic reasons
2. *Intrinsic motivational factors for open innovation*
Describes the most significant motivational factors to why employees want to work with open innovation for intrinsic reasons
3. *Resistance factors for open innovation*
Identifies personal resistance towards open innovation and barriers for successful open innovation.

In relation to the motivational factors identified we will also analyze the answers we have got to enhance respectively factor.

5.1 Extrinsic motivational factors in Open Innovation

5.1.1 Working with Open Innovation increases individual knowledge and raises competence among employees

Many companies work with open innovation because they don't have the competence and/or ability to maintain the competence in-house. (Respondent, A1, E1). There are many reasons for that, either they work with a wide range of business areas or they have difficulty finding specific competence. Some companies (Respondent A1) argue that they only hire core competence and need to find other ways to attain other competence. The reason for this could be financial or strategic. Other reasons are to be able to get disruptive innovation knowledge into the organization to be able to avoid spending several year of building up knowledge about a new technology (Respondent A2, B1)

"...improving my own competence is one of the most important reasons to why I work with open innovations" - Respondent E1

"...what you do when looking outside is getting new ideas and the learning curve is steep and that is motivating. You learn a lot and gain knowledge quickly" - Respondent B1

Working with open innovation itself was also seen as a source of knowledge as you can learn how to work with external parties (Respondent D1).

"....developing new skills, I had to work in a more collaborative way, with influencing skills so I have seen it as part of me learning new skills, new ways of leading. " (Respondent D1)

Working with open innovation compared to closed innovation gives employees the opportunity to attain

competence not available inside the company, or as Wendelken et al. (2004) puts it, gives employees an opportunity to gain knowledge from an area they are not normally present at.

An enhancing factor linked to gaining competence in OI projects is adding enough resources. If given time and resources this will allow for employee to gain more knowledge and this will be motivating.

“...time allocated to open innovation projects are necessary in order to enable us to work in this way” - Respondent B3

Some of the companies we have talked to are still somewhat immature working with open innovation. In order to enable this way of working, time must be given to adapt. Also working in a more collaborative environment with external partners are more time consuming since people are normally not working at the same place.

5.1.2 Open Innovation give individuals the opportunity to achieve result with their tasks

“... I am 100% sure that you can do so much more with an open innovation approach than with a closed innovation approach, you can get very far quickly”.- Respondent B1

For our context of open innovation, this is the most business related reason to why companies work with open innovation. Most of our respondents give straightforward answers to why their company work with open innovation (Respondent A1, B1, C1, E1, F1). They need to develop a new product or service but don't have the ability to do it on their own. On a corporate level they are struggling to increase turnover and want to achieve organic growth. With an inside-out open innovation a company will sell more new products and be more likely to get radical innovations (Inauen and Schenker-Wicki, 2012). It is also something that Chesbrough (2003a) declares in the definition of open innovation, when he phrases “open innovation as a way for firms to leverage their innovative capacity using external resources”.

A respondent (E1) mentions that open innovation gives the product developer at the company an opportunity to use external knowledge and ideas in order to improve their own products and results. Other respondents motivate their answer in similar ways;

“...being able achieve better with my working tasks” - Respondent A1

“...we are motivated by achieving better and faster results with our own innovation tasks” - Respondent E1.

“...the main reason to involve external knowledge and resources, is to as early as possible understand business need and value. We believe that if you involve external partners early,

you will find out earlier what the idea is capable of, and consequently also be able to dismiss the idea early to save time and money” - Respondent F1

They are all doing it to achieve results with their working task. Whether, they use open innovation or any other type of innovation are not particularly interesting (Gobble, 2012) for this motivational factor. In this case they believe open innovation can give them progress and value.

Worth mentioning is that Herzog (2011) in his study also say that employees within open innovation have a very positive attitude to external technology, they consider it as an important alternative or think it is needed to achieve market success. Contrary, employees within closed innovation believe they can be successful without external knowledge and technology.

We have got little indication that employees want to engage in open innovation for career related issues (Wendelken et.al, 2014; Barros and Lazzarini, 2012). However, the fact that most of our respondents strongly consider open innovation a tool to achieve result with their own task could mean they see it as a possibility to show off for management, giving them a better position for advancements.

Many of our respondents mentions supporting function and centrally organized tools to facilitate open innovation as important to succeed. In order to succeed with their working task they must be able to focus on the tasks and cooperation. Organizing, maintaining contacts and legal issues must be handled by others.

“...Getting tools like e-mail templates, presentations, business cards and support for Intellectual property rights, business development and IT tools is an enabler for open innovation” - Respondent D1

“...Create support for Open Innovation within the company to help the company improve” - Respondent F1

It correlates well to the argumentation of Mortara and Minshall (2009), who mean that companies should encourage employees by creating networks and help bring external resources into research and development. Also they say than an open innovation core team is crucial to create and maintain long term relationships with universities and other partners

5.1.3 Recognition - as motivational factor

Wendelken et al. (2004) and Gobble (2004) both highlights the importance of external recognition as one of the most important extrinsic motivational factors. Most of our respondents mention external recognition as important for them. This is likely applicable to all type of innovation work, inside or outside of a company. However it is important to underline that to our respondents find recognition and appreciation from management as more important than bonuses and monetary rewards in the long run.

“...that the innovation work is acknowledged and recognized, that it results in something that creates value to the company. That is the same mechanism as for closed innovation.” - Respondent A1

“...ultimately it is all about getting recognition for what you have achieved. It is 100% based in positive recognition.” - Respondent C1

Some of our respondents argue that this is an area which management often fails. As one of our respondents state;

“...if you do not hear negative things then it is good. If they say it is good then it is really, really good. The whole spirit is to not getting applauded for you progress”. - Respondent B2

The answers from our respondents indicate that many companies have room for improvement. Our respondents state the importance of appreciation and recognition both from co-workers and management.

“...I don't believe in individual monetary incitements for open innovation, it is appreciation and recognition that is important to motivate people to work with open innovation”. - Respondent E1

“...exposure of result and achievement to others are important in order to motivate” - Respondent A1

The acknowledgement and appreciation should be taken serious from management perspective and they should consciously consider how this is achieved. Our respondent mentions, internal magazines, Intranets as possible way to spread knowledge of the achievements of their employees and thereby providing possibility of public appraisal and feedback for individuals.

The way a company is working with feedback and recognition is tied to the culture of the company. An organization of individualist are likely to focus on short term results, possible forgetting the importance of recognition on achieved results only focusing on future. Managers caring about individuals rather than just the job will create thrust among employees and improve performance. We believe managers that cherish culture of recognition will improve the intrinsic motivational factors among employees.

Given the fact that employees working with open innovation regard external recognition as very important and also score high on interest and curiosity as well as task achievement we can draw the conclusion that employees are highly motivated for what they are doing, probably more than an average employee. That could be the reason why they tend to be much more motivated by external recognition for they are achieved than monetary rewards.

5.1.4 The effect of monetary rewards

“I do not at all believe that monetary rewards, except monthly salary, will help other than short term.” - Respondent E1

Fu (2012) argue that firms that have incentive for innovation have a higher efficiency than those who not, he say that long term incentives are most efficient. But he also argues that the importance of incentives for innovation decreases as the innovation process opens up. One of our respondents state;

“...I do not think it is a valid incentive, in fact it could be even demotivating” - Respondent B1

That statement correlates to de Jong (2006) who says that too much monetary rewards for innovation will likely diminish the intrinsic motivation for innovation.

It should be considered that all of our respondent holds a position at their companies and likely receives a decent salary. Their responses must be read in the light that they already receive monetary rewards as salary and is answering the questions as if further monetary rewards would increase motivation.

5.1.5 Purpose and strategy

Many respondents (B1, B2, B3, C1, D2) say that understanding the purpose of the work and what it can be useful for is important.

“An organization that is good at answering these questions, the more existential questions, becomes better, including the OI program. Some people need the deeper why from an individual perspective.” - Respondent C1

Respondents A1 and A2 are more focused on the motivation coming from clear goals and strategies. In both case it is motivation from an understanding of why we are here doing this work. This is not an exclusive factor for OI work and it is probably important for other work as well but it clearly is important for OI as well. Lichtenthaler et al. (2011) states that managers should communicate the OI strategy and that this will increase motivation. Linking OI to firm strategy is also important according to Slowinski et al. (2009). Both fits well with what the respondents have answered. As some of the firms we have talked to are fairly new with OI they probably see the backside of this coin where OI is not part of the strategy or have a difficult time to find the purpose and this might lead to unnecessary resistance and an innovation culture that does not favor OI. The purpose and strategy is closely linked to other motivational factors like recognition from management and other external parties. Culture is also closely linked to purpose and strategy as without a purpose and strategy that includes OI it would be very difficult to change or create a culture of OI as purpose and strategy can be seen as a guiding star in your everyday work.

We get indications from some of the companies we have talked to that the strategy about open innovation is somewhat fuzzy. We believe this can depend on immaturity for working with open innovation, lack of confidence about open innovation from management or a fear of sharing too much information externally. One of our respondent say;

“...A more firm strategy is needed, if an open innovation project got green light then it should be carried out at full strength. Also creating a open innovation strategy team close to top management helps clarifying strategy and overcome obstacles” - Respondent A2

To avoid the fear of sharing too much information, one of our respondents (B3) argue for clear rules for what can be shared on what cannot be shared. That would enhance motivation for open innovation.

5.1.6 Factors of less importance

Coaching and feedback, culture, were of overall less importance.

“... the positive encouragement is what is most important. But it needs to come from someone that one wants it from.” - Respondent C1

Of even less importance was seeing others succeed, responsibility and career.

“...showing and labeling the successful projects that come from OI more and seeing how others are successful in OI, success fuel success.” - Respondent D2

The fact that these factors were found to be of less importance for the companies and respondents in this study does not mean they are not important.

5.2 Intrinsic motivational factors Open Innovation

5.2.1 Open Innovation enables opportunity for collaboration with external partners

Open innovation, by its nature, involves a lot of collaboration. All our respondents tell us about collaboration environments including partners, customer, universities, suppliers and employees. In order to succeed collaboration must work. As one of our respondents state;

“...open innovation need to rely on trust and relation building, getting cooperation up and running where there is a good flow of work.” - Respondent B1

It is obvious to us from the interviews that many of our respondents enjoy cooperating with others, both helping others to achieve but also for their own interest.

“...it is much more inspiring to work broad and together with other partners, a whole other potential” - Respondent A1

“...together with other partners finding areas in common to collaborate around is very motivating” - Respondent E1

Wendelken et. al (2014) say that working with others in a good way, with respect, and to let others express themselves, are all factors that contributes to an employee's motivation for innovation. This is confirmed very colorfully by one of our respondents;

“...I can see that lights are on in the eyes of our employees when they are coming out from our open innovation workshops! You get dynamics in the group and appreciate other people values, angels and problems. Above all you get inspiration by cooperating with others” - Respondent F1

5.2.2 Interest and curiosity as motivator in Open Innovation

Personal interest and curiosity can be a motivator in any kind of work. OI opens the door to other technologies so the likeliness to be working on something groundbreaking is higher in OI than in traditional innovation. Many of our respondents talks about theirs and others interest and curiosity driving them in OI (Respondent A1, B1, B3, C1, D2). The passion for the OI work is quite evident as two of our respondent state:

“...where else can you find these type of budget for getting into something you are passionate about” - Respondent B1

“Scientists are motivated to do cool science...doing something you would not normally do, that could be motivating” - Respondent D2

These statements go well with Amabile (1996) and Wendelken et al. (2014) view on what interest motivates a person for a task. All respondents were in one way or the other involved in OI because they wanted to, so the general attitude could be somewhat biased to OI. One could argue that interesting innovation takes place internally as well. Indeed it does but to encounter new and disruptive innovation, what many believe to be really interesting, most of the time you will have to look outside the company.

One of our respondents (Respondent F1) shared with us that when an employee, no matter position, came up with an innovative idea and that idea was chosen to proceed with, that person was allowed to participate in the development of that product. This was done to show the appreciation for the initiative and involve the employee in order to enhance motivation for the employee and others as well. Or as another of our respondents frankly puts it when asked how motivate employees;

“...Involving people, getting people to meet the external people face to face realizing that they could just as well be a colleague...scouting for partners you can do it in several different ways and just involve people when doing it all of a sudden it becomes themselves that found that partner” - Respondent B2

Enhancing motivation could then be done by matching interests with task so that you let employees get involved in that what interests them. Also letting curious employees join open innovation projects could be enhancing motivation.

5.2.3 Open innovation can be fun, enjoyable and inspirational

Several of the respondents think that their open innovation work is fun. Below a quote about an open innovation day event;

“An innovation day ends with a voting where everybody gets to grade the ideas. The winners get a bottle of Champagne and celebration from the crowd. So it is very fun - an innovation party.” - Respondent C1

Wendelken et al. (2014) states that employees are motivated to innovate due to fun and enjoyment and this corresponds well with what several of the respondents have answered. The fun and enjoyment is not exclusively for OI (Respondent B3) but we believe that it has importance in similar ways for OI as for traditional innovation. In fact for some individuals the open part makes it even more inspiring motivating.

“...it is very inspiring to attend the open innovation workshops...the energy is high and one exits the workshop with much more energy and a better result.” - Respondent F1

Others think that the fun, enjoyment and inspiration is part of everyday work with open innovation (Respondent B2, B3, D2, E1, F1).

5.2.4 Establish friends and contacts - Networking

Linked to the first part in this section about collaboration is actually making friends and contacts in these collaborations when working with OI. Getting to meet experts and external partners is in itself a motivator, or as one of our respondents states:

“New impulses all the time and meeting people...you could in principle go out and talk to a Nobel Prize winner, not that we have so far” - Respondent B1

When collaboration is more related to the tasks and the process of working together, establish friends and contacts is more focused on the meeting and the persons. In OI one could get opportunities to meet the most prominent experts in a certain field and I could see that you could get star struck when getting to meet the world's best expert in the field, the same person you have read articles from and about. This meeting is then a motivator in itself. In closed innovation this meeting would never have taken place. On another level working open will get you in contact with people with the same interests and this can be a foundation for future friendships that can be valued for a long time to come. This fits well with our theoretical framework where getting new friends and contacts is of importance in innovation work

(Wendelken et al., 2014) and in fact found to be the most important factor for engagement in academic OI settings (Garrido-Moreno and Padilla-Melendez, 2012)

5.2.5 Minor intrinsic factors

Some of the intrinsic factors in our framework were found to be of less importance according to the respondents. Satisfaction from helping others in OI collaboration was rated low and this could be explained by that the OI activities was set up as in-bound and not out-bound. The Challenge in OI work was also rated low and this was quite surprising. OI leads to working with new ideas and technologies and there must be a lot of challenge in this work. But our respondents did not see the challenge in itself as an important motivator. Autonomy in working with OI was only seen as important at company B (Respondent B1, B3) so this must be very depended on the maturity as well as the working practice at the company. Mastery was only mentioned by Respondent B1 and it could be that this intrinsic motivator is embedded in the extrinsic motivator of Gain competence and knowledge. The difference between the two is that for mastery you feel satisfied learning something where as for the extrinsic - Gain competence and knowledge you focus on how you can benefit from using the knowledge.

5.2.6 New findings for intrinsic motivators

We also found two intrinsic factors that were not part of our theoretical framework. Two of our respondents mentioned that creating and achieving in open innovation work was motivating (Respondent C1, D2). Creating and achieving is not exclusive for open innovation but is very much part of Innovation as well but as Respondent D2 states:

“...feeling that you can move science forward. I like to achieve and create. Creating is one of my personal drives. So it is much easier to create different and useful things in partnering with the outside world” - Respondent D2

The impact of one creating or achieving in open innovation can have far greater implications than for traditional closed innovation. This is closely related to the extrinsic factor Result improvement but the difference is that for the intrinsic factor you do it for you own self-fulfillment.

Personal growth was also a factor we did not have in our theoretical framework. Respondent D2 states:

“...understand that there are other ways of working and the knowledge out there. This has been a journey for me - personal growth.” - Respondent D2

This has not so much to do with the knowledge itself but how working with OI can alter truths about how you thought the world worked, a process where you change your way of thinking. Both these new intrinsic factors are rated low but could be interesting in relation to the other more important factors.

5.3 Intrinsic versus Extrinsic motivation - our hypothesis

Analyzing the responses we cannot clearly determine whether intrinsic factors are more significant than extrinsic to motivate employees for open innovation. As mentioned, Herzog (2011) argue that extrinsic and intrinsic motivations do not differ in traditional innovation, whereas in open innovation intrinsic, motivations are slightly more significant. However, intrinsic factors are strong and many of our respondents mentions cooperation, fun and enjoyment as well as interest and curiosity as important (Respondent A1, B1, B3, C1, D2). As we have indicated, the reason for this might be the kind of people working with open innovation. They are likely to have personal traits which fit innovative work and go to work partly because of interest, an important finding for management when motivating these employees.

5.4 Resistance factors to Open Innovation

There are certain barriers and motivational factors that negatively affect working with open innovation for employees.

5.4.1 The presence of not-invented-here (NIH) - syndrome

From the answers our respondents, we find that the Not-invented-here (NIH)-syndrome is present at most companies (Respondent A1, B1, E1, F1), but to various extent. We believe it might be related to the level of open innovation maturity, but that is a question for further research.

One of our respondents report;

“...I have experienced that a lot of people have reservations against it, very strong reservations actually. They are very much motivated by the reasons related to Not-invented-here-syndrome”. - Respondent B1

While other Respondents (C1, E1, F1) cannot confirm so much resistance related to NIH-syndrome. They argue that some employees are unwilling to share knowledge (Respondent F1). Something which Lichtenthaler et al. (2004) calls the not-sold-here (NSH)-syndrome and refers to as the reluctance to transfer knowledge externally, because employees get the impression that innovations are given away externally and the knowledge gets drained. It is obviously clear that some employees want to be able to say that this is something which they have done and keep control of that knowledge (Respondent E1). Some employees want to maintain their positions as expert for several reasons, or as one of our Respondents insightfully puts it;

“...they go from being the expert to not being the expert. - An observation there is that you remove what has been all his life his reason for being.” - Respondent B1

The fact that the extent of NIH -syndrome varies, can be explained by Hussinger et al. (2011) who argue that innovations from suppliers and customers do not generate resistance as much as innovations from competitors. Also the NIH-syndrome is much stronger at high performance firms. We have not been able to distinguish the firms to prove this in our answers.

To treat the Not-invented -here (NIH) syndrome leadership must be strong and culture must nurture open innovation. As one of our respondents argue leadership must make it clear that we should not spend time of something where we can find a solution externally. The same respondent also explains the necessary change of culture as;

“...I must picture myself not as solely an employee at my company but as much a representative of the external companies in our company” - Respondent B1

In order to avoid NIH-syndrome and succeed with the implementation of open innovation processes, similar to other change management activities, the implementation must be wisely done.

“...The aim should not be to change the whole culture at our company; the focus should be to use OI where it is suitable, getting people to understand the difference. - No but for our company this is where it makes sense to do OI for disruptive innovation. This is to break without internal development paradigm” - Respondent B1

Finally leadership must be firm and consequent;

“I think it is also a matter of strong leadership and strong management buy in toward that openness if you do not want to end up with a lot of frustrated colleagues. - If top management go in the forefront and really promotes new ideas and innovations from the outside...then I think more people will go in to open innovation “- Respondent B2

As we expected NIH-syndrome is present (hypothesis H2) at most companies we have encountered. However, it is not the most significant factor and the presence varies from company to company. We believe it is likely to be related to the culture at the company, the maturity of open innovation and the type of company. High-technology companies might suffer harder.

5.4.2 The challenge of keeping necessary level of control

“...in open innovation, the company cannot have full control of the entire process. You depend on external parties, what they are ready to invest and what brain power they put in” - Respondent A1

Working with open innovation projects means a higher need for coordination and more people and organization with different wills and possibly deviating goals (Respondent A1). For an employee this means he or she is likely less able to control the exact process of working. There is a need to compromise in order to achieve a smooth working situation. This means open innovations might not be suitable to all kind of people.

“...there is a need to be careful about your own competence and competitiveness. You have to maintain your knowledge and power, making sure it won't leak and prevent competitors to overhaul you.” - Respondent A1

Working in collaboration with other organization in open innovation context means exposing your own knowledge to others with the reward of gaining others knowledge at the same time. Respondent B1 points out that there is a risk that the open innovation not necessarily benefit the organization, but it can create results which are much more impressive and with higher value if you do participate.

As we discuss in more detail below, our respondents recurring mention certain personal traits as important to succeed with open innovation. Some people can live with a little less control in daily work, while other cannot. We believe to adapt to a situation where you are not in power and can control the daily work fully people must have dynamic traits and drive to overcome the extra effort needed to cooperate with other people.

Also previously mentioned enhancing factors are supporting central organizations and increased recognition for achievement. By working with them a company can overcome the resistance of lost control and power.

5.4.3 Personal preference to Open Innovation

Most of our respondents (A1, A2, B1, B2, D2, E1, F1) regard personal traits crucial to succeed with open innovation. They mention certain personal traits which they believe are needed for people working with open innovation.

“...I think to succeed with open innovation you need to bring creative and driven people, and they must do it for self-fulfilling reasons.” - Respondent F1

“It is a personal trait if you like it or not. Some people think it is exciting to work in new constellations and with new ideas whereas others like it the way it is and want to run in old common tracks” - Respondent A1

Herzog (2011) argue that intrinsic motivation factors are slightly more important than extrinsic for open innovation. His study also implicate that people with personal traits as proactive, creative and result-oriented are more driven by intrinsic factors than extrinsic. We find the same result from our interviews. The results must be read in the light of that open innovation are still relatively new to many companies that we have been in contact with. Normally, when a trend is new it is led by innovators eager to break new ground and likely driven by intrinsic factors. When, or if, open innovation become mainstream as an innovation process the motivation factors to succeed might change.

However, specific to open innovation is the extent of collaborative activities, so to succeed you need to involve employee that like to collaborate with other people and have a certain extent of social skills. De Jong (2006) has spotted the same patterns for traditional innovation skills. He mentions sociability,

ambition and activeness as characteristics for people who are good at innovating. Other characteristics are need for achievement, self-efficacy and risk-taking. Also people with ability to influence and control their environment are more successful innovators.

This implies that it is very much linked to the personality if the person is an inward looking person or an outward looking person. People that are introvert should be less motivated by OI as it demands that you are achieve in the relation to the external party. Even though the technology is very interesting for the person and he or she has other parts that motivate, it will all fall if the person is not an extrovert person. Also there is a belief that it is difficult if not impossible to change those that are resistant to OI to become pro OI (Respondent B1, B2).

“I think you cannot change people’s basic nature” - Respondent B2

When it is so closely linked to who we are then it will be very difficult to change. This does not necessarily only relate to OI as other type of roles and work situations will demand an outward looking personality. A sales and marketing role for example most likely needs to be held by a person with a preference to meeting new people liking to work with external parties and the same goes for OI. Management should be aware of this when choosing the right people to implement open innovation or when hiring people, as respondent B2 puts it:

“So the trick is to choose the persons feeling comfortable with OI.” - Respondent B2

5.4.4 More work with Open Innovation creating resistance or less motivation

Working with OI can in some situations create more work (Respondent B2, C1, D2, E1, F1). At middle management level they cannot handle the increased workload and increased risk (Respondent C1). Slowinski et al. (2009) found that middle management saw OI as increased work making them resistance to OI. One of our respondent states that:

“Being open can be problematic what to share and not, signing agreements and so on.” - Respondent D2

Since working with OI will increase the workload then it is important to mitigate this by supporting functions and processes. For example provide templates for communication, getting support from a business development person as well as an intellectual property (IP) attorney can be enhancing actions (Respondent D1).

As we have pointed out, our respondents indicate that there is a higher level of drive to coordinate and cooperate needed for each employee working with open innovation. In order not to lose those on the edge of perceiving open innovation as not fruitful, a company should assist in some areas. Centrally helping with networking and contacts, both internally and externally, are mentioned by our respondents. Helping with setting up a framework for cooperation is also essential to succeed and not discourage and employee.

“...it is very important that the company can provide contacts and process for open innovation, making it much easier for an employee or group within the company” - Respondent E1

Some of our Respondents (C1, E1, F1) mention different methods to practically cope with the resistance or barrier described above. They all agree the importance to centrally help the organization. This can be practically done by having coaches for open innovation or having special events dedicated to open innovation.

The answers we get very much underline the findings from the article of Mortara and Minshall (2009). They say that to succeed a central implementation team should be implemented. Their aim should be to help encourage employees by creating networks and help bring external resources. They should also maintain and strengthen long term relationships crucial for future open innovation.

5.4.5 New resistance factors

We found additional resistance factors not part of our theoretical framework. These are not rated that high in relation to the other resistance factors. One was the *unwillingness related to change*.

“The largest resistance is toward adapting to the new working processes” - Respondent F1

This is not unique to OI but seem to be relevant as Respondent A1, A2 and F1 commented about this general resistance to change in OI. An enhancing action could be to work on the culture and try to change it as one of our respondents states:

“The aim should not be to change the whole culture at our company the focus should be to use OI where it is suitable, getting people to understand the difference.” - Respondent B1

Another factor not part of the framework for resistance was the *cooperation difficulties with the external parties* (Respondent A2, B3, D2). As respondent D2 states:

“Only when the collaboration does not pan out as intended. The drivers for the internal team and external team might not be aligned then that can be de-motivating as this stops progress.” - Respondent D2

Not seeing the drive and progress at the external party as well as not being aligned can be demotivating for the internal employees. Here it could be important with a strong leadership from project management as well as involve employees more with the OI work (Respondent B2, F1) to enhance motivation.

6 Conclusions and Implications

The purpose of this chapter is to give a summary of the key findings on how to enhance motivation for employees in open innovation. We want to give an understanding about the key motivational factors as well as resisting factors in order to be able to succeed with open innovation.

6.1 Summary of findings

Our purpose of the thesis was to find key motivational factors for open innovation among employees. By identifying them and understand what resists employees to work with open innovation we can conclude how to enhance employee motivation for open innovation. We interviewed ten employees from six different companies. All companies from different industries and their maturity from working varied from low level to high level.

Main findings are compiled in table 6.1 below in order of importance for each motivational category; extrinsic, intrinsic and resistance. We have found five major enhancement actions that can be done to increase motivation as well as decrease resistance. Below are the major enhancing activities related to motivational factors. Table 6.1 shows where the relation is most significant.

Table 6.1: Main findings

Enhancing actions	Creating supporting functions for OI work	Increase recognition of OI work	Get OI work sufficient resources - most importantly allocated time	Communicate the purpose and strategy of the OI work	Getting people with the right personal trait to work with OI
Extrinsic					
1. External recognition		x		x	
2. Gain competence and knowledge			x		
3. Purpose and strategy				x	
4. Result improvement	x				
Intrinsic					
1. Cooperation	x		x		x
2. Interest and curiosity					x
Resistance					
1. Lost power and control	x	x		x	
2. NIH	x	x		x	x
3. Personal Traits		x		x	x
4. Increased workload	x		x		

Despite the difference in maturity of open innovation, the responses we got show patterns that are consistent for the majority in many cases. Especially interesting to us are findings that can be considered more relevant for open innovation than innovation in general.

We decided to look at motivation from two angles, intrinsic and extrinsic motivation. Interestingly two motivational factors are standing out regarding extrinsically motivating factors for open innovation among the companies. Being externally recognized is considered very important to our respondents. This is likely a finding that is valid for most type of innovation task and other working tasks as well. Another particular interesting finding is the importance of gaining knowledge and competence from working with open innovation. Open innovation enables employees to broaden their views and people that are challenged by this and have a drive to develop themselves are likely to be motivated by working with this kind of innovation. Almost as important to the employees is doing open innovation in order to achieve better and faster result with the individual working task. Most of our interviewees believe they will deliver better result working with open innovation, of course a very strong motivational factor.

Probably the strongest response of all is the fact that monetary rewards have no impact on motivation for working with open innovation. This is made clear from all of our interviewees. Of course this must be read in the light of that they all hold a position and probably have decent salaries. But on top of that, they would not respond to monetary rewards. A conclusion we can draw from this is that people working with innovation, and particularly where open innovation is in its infancy, are motivated people with a lot of own drive and curiosity. However, it is an interesting finding since the employees working with innovation are likely to have this kind of personal traits which make the finding relevant.

Cooperation with other people as a motivational factor is highly relevant in open innovation. Inspiration and dynamics are words mention by our respondents when talking about cooperation in open innovation. It is obvious that employees working with open innovation flourish in a cooperative surrounding. Hand in hand with that finding is another intrinsic factor. Several of our respondents mention interest and curiosity as well as making new contacts and friends as highly relevant factors when working with open innovation. Again, the innovation context draws people with higher education and more than average interest in their work.

The reason to why employees resist open innovation does not seem to be unison or dependent on a single factor. There are several reasons to why employees resist open innovation. A certain level of Not-invented-here (NIH) related resistance seems to be present at most companies, a reason to why it varies can be the difference of maturity working with open innovation. Loss of power is a frequently mentioned factor which is highly relevant to open innovation context. Many of our respondents mean that there is a challenge to work with other organizations that are likely to have somewhat other goals. It is not possible to maintain the same level of either power or control. Again, the personality of the employees is particularly relevant as our respondents argue that non-collaborative people struggle in an open innovation environment.

Achievement for self-fulfillment and personal growth were two new findings not included in our theoretical framework and for which we have found no previous support in theory. None of them showed a particular strong significance. A resistance factor with significance outside the theoretical framework was unwillingness related to change and cooperating difficulties. Unwillingness related to change are common to any company no matter source of change, but to management to succeed it is important to consider going into open innovation as a change management issues which must be handled wisely. Cooperating difficulties are present in certain companies and are especially important in open innovation due to the nature of work.

Starting working with the thesis we had two hypotheses;

H1: Intrinsic factors are the main motivators for employees in open innovation

H2: NIH-Syndrome is present and need to be addressed in Open Innovation projects

Regarding H1 we cannot confirm it is true. Intrinsic factors are important but the answers we have got imply that extrinsic factors are at least as important to motivation. As expected, the existence of H2 is confirmed. It is not standing out as we believed early on, instead it must be consider as one of many other resistance factors. Some of the employees we have talked to work at companies with rather immature level of open innovation, it would have been interesting to see if the NIH-Syndrome would be more or less distinctive with a set of companies which were much more open innovation mature.

6.2 Managerial implications and future research

To management, finding skilled and highly motivated people to work with open innovation will not be enough. All organizations need to continually work with the motivation of their employees. In order to succeed it is crucial to enhance motivation as well as avoiding resistance factors. Managers need to reinforce the positive factors and suppress resistance factors. Our findings show that to succeed, managers should work to facilitate open innovation in various ways.

By facilitating and supporting open innovation this can be achieved. Facilitation can be made by supporting open innovation centrally or having open innovation coaches. By helping employees resistance factors can be suppressed and open innovation can run smoothly. The companies we have talked to solve this with different approaches, some use mentors, others centralize competence and external network relationships.

Recognition for achieved tasks within open innovation is crucial to management to succeed with open innovation, both in order to keep high achieving employees motivated but also to promote open innovation within the organization by visualizing achievements. Management should consider various ways to recognize employees in a thought out manner. Companies we have talked to use Intranets, magazines and awards. The point is to recognize the individual and reach out to the rest of the organization with the message.

Finally, look for the right traits of the people that should be hired. Open innovation not only demands deep intelligence and ability to analyze very tricky problems. In order to succeed employees must have analyzing abilities together with social and cooperative abilities. They must enjoy cooperating with other people.

6.2.1 Future Research

An area which we have touched in this thesis is what personal traits that are most valued in open innovation. This might differ in different phases but it is obvious that open innovation, especially to technology intensive companies, put new demands on the innovators. For further research we suggest digging deeper in what kind of personalities and personal traits that are most suitable for open innovation and how to organize and set up teams with this in mind. Another area of interest is research related to implementing open innovation in an organization. In Sweden, a few companies are mature in working with open innovation, many do it in a small scale other don't use it at all. How has the successful companies managed to implement it? What distinguish them from those just touching it? A final research area with potential business interest is trying to measure the effect of open innovation related to traditional innovation.

6.3 Conclusion

Our findings show that to succeed with open innovation there are certain factors that stand out particular to open innovation, while other factors are relevant to all types of innovation. Innovation in the shape of "open innovation" sets requirements of personal traits on employees involved. It goes beyond traditional innovation in terms of ability for cooperation and willingness to assimilate external ideas.

In order to fully exploit the potential of open innovation you need to find employees that are motivated by working with external contacts and celebrate collaboration. The employees need to have self-awareness that open innovation pose an opportunity to take advantage of external competence for his or her development as well as the opportunity develop better and faster products or service for the company.

To succeed with open innovation in a broader perspective, depending on people with a lot of driving spirit will not be enough. You need to enhance to motivation and reduce resistance on all employees involved. Our findings show that monetary incitements are not effective. Common resistance factors are that employees fear losing control and power of their innovations. Also the factor to change way of working with innovation is a factor mentioned often.

To enhance motivation among the employees each organization can facilitate open innovation centrally to reduce to resistance to undertake the effort to change way of working. Another key area to enhance motivation for open innovation is recognition of employees. An organization must understand the value of recognizing employees for their efforts in open innovation, they must do it in public and individually.

7 References

- Amabile, T. M. (1996) *Creativity in Context*, Boulder: Westview Press.
- Ashforth, B. E. and Mael, F. (1989) 'Social Identity Theory and the Organization', *Academy of Management Review*. vol. 14, no.1, pp. 20-39.
- Atkinson P. (2005) 'Managing resistance to change', *Management Services*, vol. 49, no. 1, April, pp. 14-19.
- Barros, H. M. and Lazzarini, S. G. (2012) 'Do Organizational Incentives Spur Innovation?', *BAR*, Rio de Janeiro, vol. 9, no. 3, art. 4, July-Sept. pp. 308-328.
- Chesbrough, H. (2003a) *Open Innovation: The New Imperative for Creating and Profiting from Technology*, Boston: Harvard Business School Publishing.
- Chesbrough, H. (2003b) 'The era of open innovation', *MIT Sloan Management Review* , vol. 44, no. 3, pp. 35-41.
- Chesbrough, H. (2004) 'Managing Open Innovation', *Research Technology Management*, Jan-Feb, pp. 23-26.
- Chesbrough, H. and Crowther, A. K. (2006) 'Beyond high tech: early adopters of open innovation in other industries', *R&D Management*, vol. 36, no. 3, pp. 229-236.
- Chesbrough, H., Vanhaverbeke, W. and West, J. (2006) *Open Innovation : Researching a New Paradigm*, Oxford: Oxford University Press.
- Clagett, R. P. (1967) *Receptivity to Innovation – Overcoming N.I.H*, Master Thesis, MIT.
- Dahlander, L. and Gann, D. M. (2010) 'How open is innovation?', *Research Policy*, vol. 39, pp. 699-709.
- D'Antoni, M. and Rossi M. A. (2014) 'Appropriability and Incentives with Complementary Innovations', *Journal of Economics & Management Strategy*, vol. 23, no. 1, pp. 103–124.
- Davis, J. H., Schoorman, F. D. and Donaldson, L. (1997) 'Toward a stewardship Theory of Management', *Academy of Management Review*, vol. 22, no. 1, pp. 20-47.
- De Jong J. P.J. (2006) 'The decision to innovate', *Scientific Analysis of Entrepreneurship and SMEs*, August, Zoetermeer: SMEs and Entrepreneurship programme publications.
- Fu, X. (2012) 'How does openness affect the importance of incentives for innovation?', *Research Policy*, vol. 41 , pp. 512-523.

García-Goñi, M., Hernández-Quevedo, C., Nuño-Solinís, R. and Paolucci, F. (2012) 'Pathways towards chronic care-focused health care systems: evidence from Spain', *Health Policy*, vol. 108, no. 2-3, pp. 236-245.

Gassmann, O., Enkel, E. and Chesbrough, H. (2010) "The future of open innovation", *R&D Management*, vol. 40 no. 3, pp. 213-21.

Ghauri, P. and Grønhaug, K. (2010) *Research Methods in Business Studies*, 4th edition. Harlow: Pearson Education

Gillham, B. (2005) *Research Interviewing: the Range of Techniques*, Berkshire: McGraw-Hill Professional Publishing

Glenn, J. C. (2010) *Handbook of Research Methods*. Jaipur: Global Media

Gobble, M. (2012) 'Motivating Innovation', *Research Technology Management*, November-December, pp. 66-67.

Herzog, P. (2011) *Open and Closed Innovation Different Cultures for Different Strategies*, 2nd edition, Berlin: Springer Gabler.

Huff, A., Möslin, K. and Reichwald, R. (ed.) (2013) *Leading open innovation*, Cambridge: MIT Press

Hussinger, K. and Wastyn, A. (2011) 'In search for the not-invented-here syndrome: The role of knowledge sources and firm success', *ZEW Discussion Papers*, [Electronic], no. 11-048, Available: <http://ftp.zew.de/pub/zew-docs/dp/dp11048.pdf> [13 Feb 2014]

Huston L. and Sakkab, N. (2006) 'Connect and Develop: Inside Procter & Gamble's New Model for Innovation', *Harvard Business Review*, vol. 84, no. 3, pp. 58-66.

Inauen, M. and Schenker-Wicki, A. (2012) 'Fostering radical innovation with open innovation', *European Journal of Innovation Management*, vol. 15, no. 2, pp. 212-231.

Inderst, R. and Mueller, H. (2010) 'CEO replacement under private information' *Review of Financial Studies*, vol. 23, pp. 2935-2969.

Kassim, H. and Menon A. (2003) 'The principal-agent approach and the study of the European Union: promise unfulfilled?' *Journal of European Public Policy*, vol. 10, no. 1, February, pp. 121-139.

Katz, R. and Allen, T.J. (1982) 'Investigating the not invented here (NIH) syndrome – a look at the performance, tenure, and communication patterns of 50 R-and-D project groups', *R&D Management*, vol. 12, no. 1, pp. 7-19.

Keat, P., Young, P. and Erfle, S. (2013) *Managerial Economics - Economic tools for today's decision makers*, 7th edition, Boston: Pearson.

- Kirschbaum, R. (2005) 'Open innovation in practice', *Research-Technology Management*, vol. 48, no. 4, pp. 24–28.
- Krause, D. E. (2004) 'Influence-based leadership as a determinant of the inclination to innovate and of innovation-related behaviors: An empirical investigation', *Leadership Quarterly*, pp. 79-102.
- Kvale, S. (2008) *Doing Interviews*, Thousand Oaks: SAGE.
- Kvale, S. and Brinkmann, S. (2009) *Den kvalitativa forskningsintervjun*, 2:a uppl., Lund: Studentlitteratur.
- Laursen, K. and Salter, A. (2006) 'Open for innovation: the role of openness in explaining innovation performance among UK manufacturing firms', *Strategic Management Journal*, vol. 27, pp. 131-150.
- Lichtenthaler, U., Hoegl, M. and Muethel, M. (2011) 'Is your company ready for open innovation?' *MIT Sloan Management Review*, Fall, vol. 53, no. 1, pp. 45-48.
- Lindenberg, S. (2001) 'Intrinsic Motivation in a New Light', *KYKLOS*, vol. 54, Fasc. 2/3, pp. 317-342.
- Linn J. A. and Knowles E. S. (ed.) (2004) *Resistance and Persuasion*, Mahwah: Lawrence Erlbaum Associates Publishers.
- Malone, T. and Lepper (1987) 'Making Learning Fun: A Taxonomy of Intrinsic Motivations for Learning'. In Snow, R. & Farr, M. J. (ed.), *Aptitude, Learning, and Instruction Volume 3: Conative and Affective Process Analyses*, Hillsdale: Publisher?
- Manso, G. (2011) 'Motivating Innovation', *Journal of Finance*, October, vol. 66, no. 5, pp. 1823-1860.
- Maxwell, J. A. (2013) 'Qualitative Research Design, An Interactive Approach', Thousand Oaks: SAGE.
- Mehrwald, H. (1999) *Das 'Not Invented Here'-Syndrom in Forschung und Entwicklung*, Wiesbaden: Dt. Univ.-Verl.
- Merchant, K. A. and Van der Stede, W. A. (2012) *Management Control Systems*, 3rd edition, Harlow: Pearson.
- Miller, D. and Sardais C. (2011) 'Angel Agents: Agency Theory Reconsidered', *Academy of Management Perspectives*, vol. 25, no. 2, pp. 6-13.
- Mortara, L. and Minshall, T. (2009) 'Creating an environment for Open Innovation', *IFM Briefing*, vol. 1, no. 4, Institute for Manufacturing, University of Cambridge.
- Mortara, L., Slacik, I., Napp, J. and Minshall, T. (2010) 'Implementing open innovation: cultural issue', *Int. J. Entrepreneurship and Innovation Management*, vol. 11, no. 4, pp. 369-397.

Musselwhite, C. (2011) 'Creating a Culture of Motivation', *American Society for Training & Development*, September, pp. 46-49.

Oldham, G. R., Kulik, C. T. and Hackman R. J. (1987) 'Work Design as an Approach to Person-Environment Fit', *Journal of Vocational Behavior*, vol. 31, pp. 278-296

Oudejans, R. (2007) 'Linking extrinsic and intrinsic motivation to job satisfaction and to motivational theories. A comparison between the public sector (nurses) and the private sector (call centre agents)', *Faculty of Economics and Business Administration*. University of Maastricht.

Padilla-Meléndez, A. and Garrido-Moreno, A. (2012) 'Open innovation in universities: What motivates researches to engage in knowledge transfer exchanges?' *International Journal of Entrepreneurial Behaviour & Research*, vol. 18, no. 4, pp. 417-439.

Ryan, M. R., Deci, E. L. (2000) 'Self Determination Theory and the Facilitation of Intrinsic Motivation, Social Development and Well-being', *American Psychologist*, January, vol. 55, no. 1, pp. 68-78.

Sauermann, H. and Cohen, W. M. (2010) 'What makes them tick? Employee motives in firm innovation', *Management Science*, vol. 65, no. 12, pp. 2134-2153.

Slowinski, G., Hummel, E., Gupta, A., Gilmont, E. R. (2009) 'Effective Practises for Sourcing Innovation', *Research Technology Management*, January-February, pp. 27-34.

Vallerand, R. J. (2004) 'Intrinsic and Extrinsic Motivation in Sport', *Encyclopedia of Applied Psychology*, vol 2, pp. 424-435.

Wendelken, A., Danzinger, F., Rau, C. and Moeslein K. M. (2014) 'Innovation without me : why do employees (not) participate in organizational innovation communities', *R&D Management*, vol. 44, no. 2, pp. 217-236.

Wikipedia (2014) *Small business*, [online], Available: http://en.wikipedia.org/wiki/Small_business [23 May 2014].

Yin, R. K. (2009) *Case Study Research Design and Methods*. Thousand Oaks: SAGE.

8 Appendix A - Interview guide

8.1 Interview guide English

Introduction to the interviewee

Open innovation can be said to be “. . . the use of purposive inflows and outflows of knowledge to accelerate internal innovation, and expand the markets for external use of innovation, respectively”

In closed innovation a company do not use external ideas and do not cooperate with other organizations when it comes to innovation. Ideas and innovations developed within the company is not sold to others for other markets. In close innovation there is a belief that to get it right one have to do it in-house.

In open innovation organizations can and should use external ideas as well as internal ideas. External ideas, knowledge and technologies are brought into the firm's own innovation work. Ideas and innovations developed within the company could be sold to other organizations for other markets. Open innovation can create a conflict between the internal team and external team. The internal employee might feel that their work is taken from them increasing the risk of losing their jobs. Specialists might become skeptical to an alternative solution in an innovation. This resistance for external knowledge and less motivation for internal team is called Not-invented-here (NIH)- syndrome.

Motivation needed for innovation internally is typically supported by incentive systems, around idea and patent submission also intrinsic factors are important. The motivation for innovating internally and motivation for going after open innovation could differ quite a lot. Incentive systems around external cooperation could be one way of motivating employees in open innovation.

We have chosen to focus on the practical aspect of employee motivation and in open innovation. We aim at finding key incentive implementation factors for motivating employees in order to succeed with Open Innovation Projects, as well as factors to for resistance among employees. We have below stated the research question.

Research question: How could employees' motivation be enhanced in Open Innovation Projects?

The purpose of this Thesis is to identify key motivational factors for employees in open innovation projects.

Practical details

Ask the interviewee if it is ok to record the interview and also if the interviewee wants to be anonymous in the final Thesis paper. Questions will be asked in Swedish, if their native language is not swedish than English will be used. The interview will take about 45 minutes. As a participant you will get a copy of the finished thesis.

The questions are stated below in Table 8.1 with references and purpose for the question.

Table 8.1 Questions in English

No	Questions	References	Purpose
	General questions on OI		To understand how open innovation is handled at company level
1	<p>What share of the innovation projects at your company would you consider to be open innovation oriented?</p> <p>Probe:</p> <ul style="list-style-type: none"> - would you consider your company to be mostly open innovation oriented? - For how long have the company worked with open innovation? - Do you think there will be an increase in open innovation projects in the future? 	<p>* the stage of maturity will influence how employees accepts OI and their motivation (Slowinski et al., 2009)</p>	<p>* To get an idea how mature the company is with open innovation</p>
2	<p>What are the main reasons for the company to work with open innovation?</p> <p>Probe:</p> <ul style="list-style-type: none"> - Do you or does your company have any general goals or strategies to work with Open Innovation projects? 	<p>* Strategically working with open innovation will improve the chance of success (Lichtenthaler et al., 2011)</p> <p>* Open Innovation has moved into more mature industries, these firms tend to focus more on adopting Open Innovation to meet growth targets (Chesbrough and Crowther, 2006)</p> <p>* open innovation should be linked to the firms strategy (Slowinski et al., 2009)</p>	<p>* Find out if there is a link to strategy</p> <p>* Find out the the underlying reason.</p>
	Questions related to PF		
3	<p>To what extent do you find it motivating to work in Open Innovation?</p> <p>Probe:</p> <ul style="list-style-type: none"> - Is it by your own choice? - What factors are you considering most motivating when working in an Open Innovation Project? - Why are they most motivating? 	<p>* Incentive factors as monetary, promoting, stock options, acknowledging (Barros and Lazzarini, 2012)</p> <p>* incentive systems (Gobble, 2012; Manso, 2010; Inderst and Mueller, 2010)</p> <p>* intrinsic (Wendelken et al., 2014; Amabile, 1996; Padilla-Melendez and Garrido-Moreno, 2012; Mortara and Minshall, 2009; deJong, 2006; Sauermaann et al., 2010)</p> <p>* result improvement (Herzog,</p>	<p>* Understand why the person is working with open innovation.</p> <p>* Understand what motivational factors the person consider most important and why</p>

		<p>2011) * extrinsic (Gobble, 2012; Manso, 2010; Inderst and Mueller, 2010; Slowinski et al., 2009; Mortara and Minshall, 2009; Danziger et al., 2014; Barros and Lazzarini, 2012; Herzog, 2011; Mortara and Minshall, 2009; * Internal culture (Mortara and Minshall, 2010; Gassman et al., 2010)</p>	
4	<p>How motivated are you about working with Open Innovation compared to Closed Innovation. Probe: - Do you have trust in that the open innovation will lead to better results than closed innovation? - Is participating in Open Innovation projects something that makes you feel proud about working with this company?</p>	<p>* Not-Invented-Here (Lichtenthaler and Ernst, 2006; Clagett, 1967; Katz and Allen, 1982; Mehrwald, 1999; Hussinger et al., 2011)</p>	<p>* Find out if there is a difference in motivation - possible link to motivational factors specific for open innovation</p>
5	<p>Why do think employees would like to work with Open Innovation compared to closed innovation? Probe - Are intrinsic (self fulfilling) or extrinsic (external incentives) factors important?</p>	<p>* Incentive factors as monetary, promoting, stock options, acknowledging (Barros and Lazzarini, 2012) * incentive systems (Gobble, 2012; Manso, 2010; Inderst and Mueller, 2010) * intrinsic (Danziger et al., 2014; Amabile, 1996; Padilla-Melendez and Garrido-Moreno, 2012; Mortara and Minshall, 2009, De Jong, 2006; Sauer mann et al., 2010) * result improvement (Herzog, 2011) * extrinsic (Gobble, 2012; Manso, 2010; Inderst and Mueller, 2010; Slowinski et al., 2009; Mortara and Minshall, 2009; Danziger et al., 2014; Barros and Lazzarini, 2012; Herzog, 2011; Mortara and Minshall, 2009; * Internal culture (Mortara and Minshall, 2010; Gassman et al., 2010) * Not-Invented-Here (Lichtenthaler and Ernst, 2006; Clagett, 1967; Katz and Allen,</p>	<p>* To understand what person think is the key factors to motivate employees on a general basis and why.</p>

		1982; Mehrwald, 1999; Hussinger et al., 2011)	
6	<p>Are you less motivated when working with Open Innovation compared to Closed Innovation?</p> <p>- what are the main challenges for you?</p> <p>- do you feel resistance toward external knowledge?</p>	<p>* Not-Invented-Here (Lichtenthaler and Ernst, 2006; Clagett, 1967; Katz and Allen, 1982; Mehrwald, 1999 ;Hussinger et al., 2011)</p> <p>* Lost power and control (Slowinski et al., 2009)</p> <p>* Personal traits (De Jong, 2006; Herzog, 2011)</p> <p>Increased workload (Slowinski et al., 2009)</p>	<p>* Understand what the person consider is a challenge with open innovation on a general motivational basis.</p> <p>* What the person finds least motivating for himself</p>
7	<p>Have you experienced any resistance in your company against Open Innovation projects compared to closed innovation projects?</p> <p>Probe:</p> <p>- If so, why do you think there are resistance?</p> <p>- What do you think can be done to overcome the resistance?</p>	<p>* Not-Invented-Here (Lichtenthaler and Ernst, 2006; Clagett, 1967; Katz and Allen, 1982; Mehrwald, 1999 ;Hussinger et al., 2011)</p> <p>* Lost power and control (Slowinski et al., 2009)</p> <p>* Personal traits (De Jong, 2006; Herzog, 2011)</p> <p>Increased workload (Slowinski et al., 2009)</p>	<p>* Understand if there are any resistance against open innovation and externally developed knowledge.</p> <p>* Understand if there are any Not-invented-here syndromes at the company and what they do about it.</p>
8	<p>What are the incentives for open innovation compared to closed innovation at your company?</p> <p>Probe</p> <p>- What are your personal incentives?</p> <p>- Do these incentives get you motivated and to what degree?</p>	<p>Incentives (Mehrwald, 1999;Fu, 2012; Manso, 2010; Inderst and Mueller, 2010; Lichtenthaler et al., 2011)</p> <p>Overcoming resistance (Lichtenthaler et al., 2011)</p> <p>Extrinsic/intrinsic (Mortara and Minshall, 2010; Gassman et al., 2010)</p>	<p>* Understand how the company work to develop and motivate their employees for open innovation. What do they practically do and do they help.</p>
9	<p>How do you think your company should work to motivate the employees in open innovation compared to closed innovation?</p> <p>- What is most important?</p> <p>- How would that affect you?</p> <p>- How would that affect others</p>	<p>Incentives (Mehrwald, 1999;Fu, 2012; Manso, 2010; Inderst and Mueller, 2010; Lichtenthaler et al., 2011; Merchant and Van der Stede, 2012)</p> <p>Overcoming resistance (Lichtenthaler et al., 2011)</p> <p>Extrinsic/intrinsic (Mortara and Minshall, 2010; Gassman et al., 2010)</p>	<p>* Understand how the company could work to develop and motivate their employees for open innovation. What could they practically do.</p>

8.2 Interview guide Swedish

Introduktion för den intervjuade

Öppen innovation kan beskrivas som "...utnyttjandet av ändamålsenlig inflöde och utflöde av kunskap för att accelerera företagets traditionella interna innovation, samt öka möjligheterna för att externa parter skall kunna dra nytta av andras innovation.

I traditionell intern innovation utnyttjar ett företag inte i stor utsträckning idéer framtagna externt och de samarbetar inte med andra organisationer i sitt innovationsarbete. Man säljer heller inte de outnyttjade innovationer man tagit fram till andra marknader och organisationer. Inom traditionell intern innovation är övertygelsen att det rätta sättet att genomföra innovation är att göra det "in-house".

I öppen innovation kan och ska organisationer använda externa idéer men också interna idéer. Externa idéer, kunskap och teknologier tas in i organisationen egna innovationsarbete. Idéer och innovationer som utvecklats i organisationen kan säljas till andra organisationer inriktade på andra marknader. Öppen innovation kan skapa konflikter mellan den interna organisationen och den externa. De internt anställda kan komma att känna att deras arbete tas från dem och kan se en ökad risk för att förlora sina jobb. Specialister kan komma att bli skeptiska till externa lösningar och innovationer. Det här motståndet till extern kunskap och den minskade motivationen den potentiellt medför kallar vi "inte upfunnen här" syndromet på engelska not-invented-here (NIH) syndrome.

För att motivera medarbetare att arbeta med traditionell intern innovation används ofta incitamentssystem såsom bonus. Andra faktorer såsom personlig utveckling eller intresse kan också vara viktiga. Graden av motivation hos medarbetarna kan skilja sig åt mellan traditionell och öppen innovation. Incitamentssystem kring samarbeten kring öppen innovation kan mycket väl vara ett sätt att motivera anställda även med öppen innovation.

Vi har fokuserat på de praktiska aspekterna för att motivera anställda att arbeta med öppen innovation. Vårt mål att hitta nyckelfaktorer för hur ett företag skall motivera sina medarbetare för att lyckas med öppen innovation, samt att hitta faktorer som skapar motstånd mot öppen innovation bland medarbetare.

Forskningsfråga: Hur kan medarbetares motivation förbättras i projekt inom öppen innovation?

Syftet med mastersuppsatsen är att identifiera nyckelfaktorer för att motivera medarbetare i projekt inom öppen innovation

Praktiska detaljer

Den intervjuade kommer att få frågan om det är ok att intervjun spelas in och om han/eller hon vill vara anonym i den slutgiltiga uppsatsen. Frågor kommer att ställas på svenska men det finns också möjlighet

att genomföra intervjun på engelska. Intervjun kommer att vara i ungefär 45 minuter. De som har deltagit i intervjuer kommer att få uppsatsen skickade till sig när den är slutförd.

Intervju frågor med relaterade referenser och syften kan ses i nedan tabell, Table 8.2.

Table 8.2 Frågor på Svenska

Nr	Fråga	References	Syfte
	Generella frågor angående öppen innovation		To understand how open innovation is handled at company level
1	Hur stor andel av innovationsprojekten hos ditt företag utnyttjar sig av öppen innovation? Följdfråga: - Anser du att ditt företag generellt är mer inriktad mot öppen innovation än traditionell intern innovation? - Hur länge har ditt företag arbetat med öppen innovation? - Tror du att andelen projekt inom öppen innovation kommer att öka i framtiden?	* the stage of maturity will influence how employees accepts open innovation I and their motivation (Slowinski et al., 2009)	* To get an idea how mature the company is with open innovation
2	Vilka är huvudorsakerna för att ditt företag arbetar med öppen innovation? Följdfråga: Har du eller företaget några mål eller strategier vad gäller arbetet med öppen innovation?	* Strategically working with open innovation will improve the chance of success (Lichtenthaler et al., 2011) * Open Innovation has moved into more mature industries, these firms tend to focus more on adopting Open Innovation to meet growth targets (Chesbrough and Crowther, 2006) * open innovation should be linked to the firms strategy (Slowinski et al., 2009)	* Find out if there is a link to strategy * Find out the the underlying reason.
	Frågor relaterade till problemformulering		
3	I vilken utsträckning känner du dig motiverad att jobba med öppen innovation? Följdfråga: - Var det ditt eget val att jobba med öppen innovation?	*Incentive factors as monetary, promoting, stock options, acknowledging (Barros and Lazzarini, 2012) * incentive systems (Gobble, 2012; Manso, 2010; Inderst and Mueller, 2010) * intrinsic (Danzig et al., 2014;	* Understand why the person is working with open innovation. * Understand what motivational factors the person consider most important and why

	<p>- Vilka faktorer anser du mest motiverade i arbetet med projekt inom öppen innovation? - Varför är dessa mest motiverade?</p>	<p>Amabile, 1996; Padilla-Melendez and Garrido-Moreno, 2012; Mortara and Minshall, 2009, deJong, 2006; Sauermaann et al., 2010) * result improvement (Herzog, 2011) * extrinsic (Gobble, 2012; Manso, 2010; Inderst and Mueller, 2010; Slowinski et al., 2009; Mortara and Minshall, 2009; Wendelken et al., 2014; Barros and Lazzarini, 2012; Herzog, 2011; Mortara and Minshall, 2009; * Internal culture (Mortara and Minshall, 2010; Gassman et al., 2010)</p>	
4	<p>Hur motiverad känner du dig med att arbeta med öppen innovation jämfört med traditionell (intern) innovation? Följdfråga: - Känner du övertygelse i att öppen innovation kommer att leda till bättre resultat än traditionell intern innovation? - Känner du dig stolt över att arbeta med öppen innovation hos ditt företag?</p>	<p>* Not-Invented-Here (Lichtenthaler and Ernst, 2006; Clagett, 1967; Katz and Allen, 1982; Mehrwald, 1999; Hussinger et al., 2011)</p>	<p>* Find out if there is a difference in motivation - possible link to motivational factors specific for open innovation</p>
5	<p>Varför tror du anställda vill jobba med öppen innovation till skillnad från traditionell stängd innovation? Följdfråga: - Är de intrinsiska (självuppfyllande) eller extrinsiska (externa incitament) faktorerna de viktigaste?</p>	<p>* Incentive factors as monetary, promoting, stock options, acknowledging (Barros and Lazzarini, 2012) * incentive systems (Gobble, 2012; Manso, 2010; Inderst and Mueller, 2010) * intrinsic (Wendelken et al., 2014; Amabile, 1996; Padilla-Melendez and Garrido-Moreno, 2012; Mortara and Minshall, 2009, deJong, 2006; Sauermaann et al., 2010) * result improvement (Herzog, 2011) * extrinsic (Gobble, 2012; Manso, 2010; Inderst and Mueller, 2010; Slowinski et al., 2009; Mortara and Minshall, 2009; Wendelken et al., 2014; Barros and Lazzarini, 2012; Herzog, 2011; Mortara and Minshall, 2009; * Internal culture (Mortara and Minshall, 2010; Gassman et al.,</p>	<p>* To understand what person think is the key factors to motivate employees on a general basis and why.</p>

		2010) * Not-Invented-Here (Lichtenthaler and Ernst, 2006; Clagett, 1967; Katz and Allen, 1982; Mehrwald, 1999; Hussinger et al., 2011)	
6	Känner du dig mindre motiverad att arbeta med projekt inom öppen innovation än med traditionell (intern) innovation? Följdfråga: - Vilka huvudutmaningar gällande motivation ser du med öppen innovation? - Känner du något motstånd eller ovilja med att utnyttja externt framtagna idéer eller innovationer?	* Not-Invented-Here (Lichtenthaler and Ernst, 2006; Clagett, 1967; Katz and Allen, 1982; Mehrwald, 1999 ;Hussinger et al., 2011) * Lost power and control (Slowinski et al., 2009) * Personal traits (De Jong, 2006; Herzog, 2011) Increased workload (Slowinski et al., 2009)	* Understand what the person consider is a challenge with open innovation on a general motivational basis. * What the person finds least motivating for himself
7	Har du i ditt företag upplevt något motstånd mot öppen innovations projekt jämfört med traditionella interna innovations projekt? Följdfråga: - Om så, varför tror du det finns ett motstånd? - Vad tror du kan göras för att överbrygga detta motstånd? - Hur hanterar du detta motstånd?	* Not-Invented-Here (Lichtenthaler and Ernst, 2006; Clagett, 1967; Katz and Allen, 1982; Mehrwald, 1999 ;Hussinger et al., 2011) * Lost power and control (Slowinski et al., 2009) * Personal traits (De Jong, 2006; Herzog, 2011) Increased workload (Slowinski et al., 2009)	* Understand if there are any resistance against open innovation and externally developed knowledge. * Understand if there are any Not-invented-here syndromes at the company and what they do about it.
8	Vilka incitament för öppen innovation finns hos ditt företag jämfört med traditionell (intern) innovation? Följdfråga: - Har du några incitament för dig personligen? - Innebär dessa incitament att din motivation för att delta i öppen innovation ökar och i så fall, i vilken utsträckning?	Incentives (Mehrwald, 1999;Fu, 2012; Manso, 2010; Inderst and Mueller, 2010; Lichtenthaler et al., 2011) Overcoming resistance (Lichtenthaler et al., 2011) Extrinsic/intrinsic (Mortara and Minshall, 2010; Gassman et al., 2010)	* Understand how the company work to develop and motivate their employees for open innovation. What do they practically do and do they help.
9	Hur tycker du att ditt företag skall arbeta för att skapa motivation hos era medarbetare för öppen innovation till skillnad från traditionell (intern) innovation ? Följdfråga - Vad tror du är viktigast för att lyckas? - Hur påverkar det dig	Incentives (Mehrwald, 1999;Fu, 2012; Manso, 2010; Inderst and Mueller, 2010; Lichtenthaler et al., 2011; Merchant and Van der Stede, 2012) Overcoming resistance (Lichtenthaler et al., 2011)	* Understand how the company could work to develop and motivate their employees for open innovation. What could they practically do.

	- Hur påverkar det andra	Extrinsic/intrinsic (Mortara and Minshall, 2010; Gassman et al., 2010)	
--	--------------------------	--	--