THE ROLE OF AMBIDEXTROUS LEADERSHIP FOR INNOVATIVE OUTCOME

Master’s Thesis
to confer the academic degree of
Master of Science
in the Master’s Program
General Management
SWORN DECLARATION

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Abstract

Organizations face the increasing challenge to successfully manage innovation. In this respect, the literature shows that leadership behavior has a major influence on the outcome of innovation processes. This master thesis therefore is based on current studies about ambidextrous leadership, with a focus on the proposed model from Rosing et al. (2011), that points out the importance to change among opening and closing leadership behaviors, in order to successfully manage innovation. However, due to the unpredictability and intricacy of the innovation process, there is little research on the practical application of the two referring leadership behaviors. Resulting, the goal of this master thesis is to define the influence of leadership on the innovational behavior of individuals and teams and to further, extend the introduced model by Rosing et al. (2011) by using a qualitative research method. The findings show that both leadership behaviors have a positive effect on the innovational performance, although a trend towards opening leadership behaviors is highlighted. Besides, the results reveal that both behaviors were constantly present along the innovation process but that they occurred in different intensity. However, the findings differ regarding the process phases, as the idea implementation phase tends to require an increased behavioral flexibility of leaders compared to the generation phase. Overall, the findings highlight that followers require stable and consistently demonstrated leadership behaviors. This master thesis thereby extends the model from Rosing et al. (2011) by suggesting that instead of continuously changing between the referred leadership behaviors, both should be shown simultaneously but in a different intensity, according to the requirements of the specific situation. This study further outlines suggestions about the practical use of the findings, followed by the limitations and identified gaps that could be analyzed by future studies.

Keywords: Leadership, Innovation, Ambidexterity, Flexibility
1. Introduction

The relation between innovation and leadership is increasingly discussed within academic literature and it is often stated that leadership has a significant influence on the successful management of innovation (Mumfort et al., 2002; Stoker et al. 2001; Jansen et al., 2009), while in turn, it is also discussed as one of the major challenges (Oke et al., 2009). Further, studies found that if innovations are realized successfully, it positively contributes to the growth and survival of an organization (Gnyawali and Srivastava, 2013) and to the organization’s possibilities to gain competitive advantage amongst its competitors (Keupp et al., 2012; Wagner, 2012). However, besides the importance of successfully managing innovation, leaders face the challenge to deal with the conflicting demands of improving the current situation while simultaneously, increasing efficiency within organizations (Bledow et al., 2009). These two contrary activities are explained within existing literature as the need to do both, exploitation and exploration, in order to ensure the long-term success of companies.

In this context, March (1991) revealed the concept of ambidexterity as an approach to balance the activities of exploitation and exploration. While exploration refers to experimentation, creativity and risk-aversion, exploitation targets the improvement of the status-quo and rather applies to the execution and implementation of created ideas (March, 1991). Hence, the concept of organizational ambidexterity enables the successful management of both, adapting to changes in the environment and at the same time, deal with the requirements of the daily business (Gibson and Birkinshaw, 2004). As both activities are defined as fundamental for successful innovation, ambidexterity is presented as a major element of innovation (Rosing et al., 2011). Although the theory of organizational ambidexterity originally referred to the whole system, the successful execution of this concept is especially challenging for innovation leaders (Bledow et al., 2009; Probst et al, 2011). Hence, it is crucial that innovation leaders are able to adapt their leadership behaviors according to the needs of the situation (Rosing et al., 2011). However, besides the discussed influence of leadership on innovation, so far ambidexterity on the individual level and its correlation with innovation was not in the focus of previous research papers (Keller and Weibler, 2014, Oke et al. 2009). In addition, so far, studies that address both relating topics rather reveal contentious findings (Rosing et al., 2011).

Beyond, the literature review revealed that traditional literature of leadership is not able to respond sufficiently to the intricacy of the innovation process and that more than one leadership style is needed to successfully manage the requirements of the innovation
process (Rosing et al., 2011; Anderson et al., 2004, Bledow et al., 2011). Hence, there is the requirement of an alternative approach for leaders to effectively manage innovations. Rosing et al. (2011) therefore developed a model referring to the theory of ambidextrous leadership that concentrates on the individuum. Their approach responds to the need for a research study that is able to capture the dynamic and intricacy of the approach of innovation over a longer time period (Yukl, 2009) by using two particular types of behaviors referring to the innovational context, namely opening and closing leadership behaviors. Opening leadership behaviors are defined to increase the variance in the behaviors of employees and foster exploration by encouraging employees to think divergent, experiment, challenge the status-quo and by creating an atmosphere and working culture where mistakes are seen as a learning opportunity. Contrasting, closing leadership behaviors encourage exploitative actions and decrease the variance in followers’ behavior. Examples for closing behaviors would be an increased focus on goal definition and monitoring combined with pre-structured tasks and a homogeneous approach to accomplish tasks. Continuing, the process of innovation is described as an ongoing circle of generating and implementing ideas (Amabile, 1988) that requires diverse leadership behaviors. The stage for idea creation asks for increased creativity and open leadership behaviors, while the phase of implementing ideas rather demands a leader to focus on closing leadership behaviors. However, Rosing et al. (2011) point out the practical impossibility to sharply divide the two phases over the course of innovation. Instead, both are constantly required and as a consequence, demands innovation leaders to flexibly switch between the contrary leadership behaviors depending on the specific requirements of the current situation.

1.1. Research Gap

Referring to the previously discussed topics of ambidextrous leadership in the course of innovation, this master thesis aims to extend existing findings in this field by focusing on the previously discussed research gaps. First, the model of Rosing et al (2011), which has been used as the basic concept in this thesis, was only studied theoretically so far. Hence, this master thesis fills this gap through conducting a qualitative research to better explore and define the practical relevance of opening and closing leadership behaviors in the innovational context.

Further, previous studies did not define concrete leadership behaviors that positively contribute to innovation outcome. As a result, this master thesis deepens the understanding of the particular influence of leaders by providing an overview about the leadership behaviors that best contribute to innovation. Besides, previous studies left open the question
about how the contrasting leadership behaviors appear within the different stages of the innovational process. This gap should be answered by this master thesis.

Finally, although existing literature reveals that there are several factors that affect the leadership behavior while pursuing ambidexterity in organizations (DeKloet, 2012), the authors Rosing et al. (2011) do not provide any information about which internal or external conditions are influencing the relationship between innovation and leadership.

1.2. Research Goal

This master thesis aims to provide an understanding about the effect of different leadership behaviors on the innovational output. Therefore, those leadership behaviors, that were found to have a significant influence on the innovational outcomes over the course of innovation, are further discussed within this master thesis and extend the initial concept introduced by Rosing et al. (2011).

Moreover, the use of a qualitative research design provides very personal information about the situation of the employees and leaders of the chosen case company, which further leads to new theoretical and practical insights in this research field.

Additionally, as the literature review reveals, existing leadership approaches in the innovation context lack precision and practical orientation. Hence, the study also aims to define concrete actions for leaders, managers and Human Resource departments within organizations.

Resulting, the present master thesis provides an overview about the influence of the contrasting leadership behaviors on the individual innovational output by answering the subsequent research question:

**What is the role of the ambidextrous leadership for innovative outcome?**

The research question acts as a basis for the whole master thesis. To answer this central question, two further supporting research questions are outlined:

1. Which opening and closing leadership behaviors do best support ambidexterity in practice?
2. **Which opening and closing leadership behaviors are required in which phase of the innovation process?**

By answering those research questions, new insights for researchers as well as for practitioners are provided.

### 1.3. Structure of this thesis

Within this chapter, the structure of this master thesis is presented. After the introduction part, in which the research gap and aim of this thesis are outlined, the following chapter gives an overview about the status-quo and compares essential theories and models for the chosen topic.

In this context, chapter 2.1 and chapter 2.2 introduce the major topics, namely innovation as a process and the concept of ambidexterity, and further points out the influence of leadership on innovational outcome by discussing different leadership theories and stating out the model of Rosing et al. (2011), that is used as the basic concept for this research.

After the theoretical introduction, chapter 3 shows the methodology used in this thesis. In this context, the chapter explains the used research design including the collection and analysis of the data.

Next, the results of the empirical research are outlined and are divided into two major sections. Chapter 4.1 shows the divergent leadership behaviors that were identified to be important for individual and team innovative outcome. In chapter 4.2, the appearance of opening and closing behaviors in the two innovational phases, idea generation and idea implementation, are contrasted.

In chapter 5, the findings are discussed by reflecting on the theoretical background and theory of ambidextrous leadership. Moreover, theoretical and practical implications are provided, followed by the limitations and possible topics for future research.

Within the final chapter, the main message and findings of this master thesis are highlighted.
2. Conceptual background

This chapter presents the conceptual background of this master thesis and includes the concepts of innovation as such and innovation as a process (Chapter 2.1.1). Further, ambidexterity on a general level as well as on the individual level is explained (Chapter 2.1.2), followed by the role and influence of leadership on innovation, with a focus on the model of ambidextrous leadership introduced by Rosing et al., that is used as the basis model for this master thesis (Chapter 2.2). Hence, this chapter provides definitions and scientific findings within the literature for the chosen research topic.

2.1. Innovation and ambidexterity

The next subchapters contain definitions and introduce the topics of innovation and ambidexterity to get a basic understanding of the development of ambidextrous leadership, that is further discussed in chapter 2.2.

2.1.1. Innovation and the concept of exploration and exploitation

Within the academic literature, innovation has become of main interest throughout the past decades (Cui & Loch, 2011; Keupp et al., 2012). However, so far there have exist diverse approaches in defining innovation. One of the first authors who mentioned the importance of being innovative was Schumpeter, who stated that innovation is a major part of economic change that is defined as a new combination of method and purpose (O´Sullivan, 2008). Another viewpoint on innovation derives from Barnett (1953), who defines any upcoming reflection and any newly created thing or behavior as innovation, as they differ qualitatively from the already existing (Robertson, 1967). Hence, innovation goes beyond the concept of new product creation and can be defined as any new behavior, idea or object. Within academic literature, researchers also differentiate between the theories of innovation and creativity. While creativity is stated to be a main element in the innovational context (O´Sullivan, 2008) that supports people to think outside of the box to generate new and beneficial ideas (Amabile et al., 1996; West, 2002), the concept of innovation is rather defined as a combination of the divergent phases of exploration and exploitation (Roberts, 1988).

The definition of innovation as a process is described by the author Rickards (1985), who refers to innovation as a construct, where new created ideas and solutions are transferred into practice to solve existing problems. West and Farr (1990) have a similar approach, who
interpret the process of innovation as any execution of newly created methods and products that are beneficial for either a company, a single person or a group of people (Rosing et al., 2011). In this context, Sheremata (2000) defines two phases that are needed for successful innovation, which are knowledge creation and knowledge implementation. This is comparable with the approach of the authors De Jong and Den Hartog (2007), who introduce the two contrary stages of idea generation and implementation. Within the phase of idea generation, creativity is encouraged in order to find solutions for specific problems. In comparison, the implementation of generated ideas refers to the actual realization (De Jong and Den Hartog, 2007).

So far, within academic literature most of the theoretical concepts in regard to innovation refer to the distinction between the two described process steps (West, 2002; Farr et al., 2003; Amabile, 1988). This highlights the need for companies to constantly balance their actions between being efficient by continuous improvement and the need to increase variety and adaptability, to ensure the long-term success and survival of the organization. Within academic research, those activities are defined as exploration and exploitation, that ask for different conditions. Exploration refers to the need of being creative, experimenting with different ideas, taking risks and divergent thinking, in order to enable the generation of new ideas. Contrarily, exploitation refers to efficiency, the execution of routines and sticking to pre-defined rules, which is especially demanded for the realization of generated ideas (March, 1991). The concept of differentiating among the contrasting activities is widespread and used by various researchers.

2.1.2. Ambidexterity

This subchapter covers the concept of ambidexterity, whereas the first part refers to ambidexterity as an approach to balance the two activities, exploration and exploitation, followed by the different types of ambidexterity, with a focus on the construct of individual ambidexterity.

2.1.2.1. Ambidexterity as an approach to balance exploration and exploitation

As shown within the previous chapter, companies constantly face the challenge to balance both, exploration and exploitation. One of the concepts that addresses the need for finding the right balance is called ambidexterity. As one of the first authors, Duncan (1976) introduced the approach of ambidexterity in an organizational context. The concept refers to the need of companies to be efficient by exploiting already existing processes and
structures, and at the same time to flexibly adapt to changes that occur in the organizational environment. In this context, March (1991) states that “the ability of a firm to exploit its current competencies as well as to explore new opportunities represents the core of organizational learning” (Bonesso et al., 2013, p.392). Hence, ambidexterity demands a balance between radical and incremental innovation to ensure the long-term existence of a company.

Further, the literature shows that in practice, it is often needed that companies simultaneously demonstrate both activities, exploration and exploitation (Lavie et al., 2010). As an example, when implementing totally new ideas, at the same time it might be necessary to explore new ways of how to actually realize the generated ideas in practice (Van de Ven, 1986).

Resulting, even though the phase of idea generation is linked to exploration and the realization rather refers to exploitation, both activities are necessary throughout the innovation process. Hence, exploitation and exploration are interacting continuously and therefore, cannot be solely separated into different phases (Rosing et al., 2011). In consequence, the concept of ambidexterity describes the necessity of the simultaneous engagement in explorative and exploitative activities for the long-term survival of the organization.

2.1.2.2. Contextual Ambidexterity

As stated above, it is necessary for a company to act ambidextrous by focusing on both, exploitation and exploration. In this regard, the theory of ambidexterity can be further distinguished between sequential (structural) and simultaneously (contextual) ambidexterity, which is essential to derive a fundamental understanding of the different leadership concepts that are discussed within the next chapter. Structural ambidexterity refers to companies that differentiate the activities of exploration and exploitation by single organizational units or teams, in order to successfully manage both activities simultaneously (O’Reilly & Tushman, 2004). This sequential approach of ambidexterity is appropriate for companies that face rather incremental and discontinuous change and therefore are only interrupted on a temporarily basis (Tushman & O’Reilly, 1997).

Contrarily, the concept of contextual ambidexterity highlights the need of creating an environment that encourages the interrelation between the two particular activities. Hence, ambidexterity in this context can be best achieved by giving individuals the choice how to balance and flexibly change among the two activities (Carmeli & Halevi, 2009). In that
regard, contextual ambidexterity refers to the need to focus on both activities simultaneously although in a different intensity, to successfully manage and react to occurring problems (Rosing et al., 2011). Consequently, this master thesis focuses on ambidexterity as a contextual approach, as the main literature on ambidexterity states that this concept is more effective in promoting innovation compared to structural ambidexterity (Tushman et al., 2010). In addition, contextual ambidexterity better supports the research topic and the pre-defined research questions.

2.1.2.3. Individual Ambidexterity

As mentioned in the previous chapter, there is the need for organizations to successfully manage the exploitation of already existing processes, while at the same time explore new ways to be creative. However, the challenge of being ambidextrous refers not only to the organizational level but spans all different levels of a company, namely the individual, the team and the organizational level (Bledow et al., 2009).

As this master thesis aims to understand in which way leaders influence the innovative actions and behaviors of individuals, the approach of individual ambidexterity is used and further discussed within this thesis.

When approaching the literature regarding individuals in the context of ambidexterity, it is stated that leaders’ behavior play a major role in allocating scarce resources to the two diverse activities of exploration and exploitation, in order to successfully handle the unforeseeable events that emerge along the innovation process. (Bledow et al., 2011). Hence, leaders are requested to inspire employees by acting as a visionary, while simultaneously optimize organizational processes (Probst et al., 2011).

However, although many researchers highlight the role and responsibility of the leader to create an environment where employees are able to flexibly change between the two contrasting activities of exploration and exploitation, depending on the requirements of the situation (Bledow et al., 2011; Simsek, 2009; Gibson & Birkinshaw, 2004), there doesn’t exist a recommended leadership style which best fit to ambidexterity on the individual level (DeKloet, 2012).

Resulting, as the literature review further highlights that becoming “ambidextrous is first and foremost a leadership challenge” (Probst et al., 2011, p.1), the gap of identified beneficial leadership behaviors should be closed by the findings of this master thesis.
2.2. The role of leadership for innovation

The role of leaders over the course of innovation is an increasingly discussed topic within the literature. Various authors highlight the importance of leadership for the successful execution and management of innovations (Mumfort et al., 2002; Stoker et al., 2001), whereas others claim that the management of innovations demonstrates a major challenge for leaders (Oke et al., 2009).

In order to understand the evolution of leadership in the context of innovation, this chapter first of all gives an overview about the theoretical basics of leadership, with an increased focus on transformational and transactional leadership. Afterwards, the fundamental theory of this master thesis, the concept of Rosing et al. (2011), is further discussed, which explains ambidextrous leadership in a more dynamic way.

2.2.1. Introduction to leadership theories

Within the academic literature, there has been an intensified discussion about leadership and the appropriate leadership style over the past decades (Bennis, 2007; Bucic et al., 2010; Larsson & Vinberg, 2010). However, with the increased notion of the concept, various contrasting leadership approaches have been mentioned.

In this regard, the first time the two terms management and leadership were discussed in a different manner was by Zaleznik and Vries (1975). Since then, both concepts are clearly distinguished within the scope of leadership theories. Within modern theories, a leader is described as someone who focuses on seeking new opportunities and ways on how to solve an existing problem and thereby encourages innovation within an organization (Probst et al., 2011). In this context, the main responsibility of leaders is to develop and enable people to act innovative by giving them the autonomy to make decisions by themselves combined with a participative leadership style. In the literature, this is also defined as “doing the right things” (Verma & Wideman, 1994). Beyond, leaders are also expected to “do things right”. This means that beside thinking outside of the box, leaders also need to have functional know-how and expertise, to carry out tasks in an efficient way. Hence, it is also within the responsibility of leaders to structure, plan and create goals, to manage scarce resources and to successfully deal with complexity and change (Kotter, 1996).

The previous differentiation between managers and leaders is important, as this master thesis focuses on the leadership component rather than on the management definition. In
the leadership context, a popular approach to differentiate diverse leadership styles is the theory of transformational and transactional leadership. This concept is also used as a theoretical basis for the ambidextrous leadership model introduced by Rosing et al. (2011), that in turn serves as the basis model for this research study. Therefore, the next chapter discusses the approach of transformational and transactional leadership in more detail.

2.2.2. Transformational and transactional leadership

Within the literature, the positive influence of transformational leadership on innovation is highlighted by several authors (Bucic et al., 2010, Jansen et al., 2008, Nemanich & Vera, 2008). In this context, transformational leaders mainly stimulate exploration by motivating people to experiment with different ideas and methods (Sosik et al., 1997). Further, researches show that transformational leadership encourages a good learning environment and culture within an organization and therefore, supports the achievement of ambidexterity (Nemanich and Vera, 2009). Nevertheless, the authors disagree on its positive influence for innovational outcome.

One of the authors that referred to transformational leadership in a critical way are Van Knippenberg and Sitkin (2013). The authors state that the concept is not precise in defining the specific dimensions that need to be included or excluded and hence, criticize that the concept is missing a clear definition. Further, they claimed that the concept does not provide a description about the moderating aspects that effect the relation between team outcome and transformational leadership behavior (Van Knippenberg & Sitkin, 2013).

The complementing leadership behavior to transformational leadership is defined as transactional leadership. In comparison, transactional leadership refers to effectiveness by improving already existing competencies, routines and processes (Vera & Crossan, 2004). However, the discussed effects of transactional behavior on innovation varies within the literature.

As by definition, transactional leaders do not encourage and support exploration and experimenting with ideas, it is also not assumed that this behavior encourages innovation and creativity (Rosing et al., 2011). Despite, it is argued that transactional behavior supports the expansion and development of already existing know-how and as a result, is connected to the exploitative part of innovation (Jansen et al., 2008).
Summarizing, none of the two leadership behaviors, neither transformational nor transactional, presents a satisfying description of the interacting relationship between innovation and leader’s behavior. Further, the authors Rosing et al. (2011) state that one single leadership style is not sufficient to promote innovation effectively, as it does not refer to the duality of innovation (Bledow et al., 2011). This duality refers to the identified necessity to balance exploitation and exploration throughout the innovation phases (March, 1991) by combining different leadership behaviors according to the needs of the situation. Resulting, innovation requests the usage of situational leadership behaviors rather than the concept of stable leadership behaviors (Rosing et al., 2011) and therefore, another concept that describes leadership in the context of innovation is needed.

2.2.3. Ambidextrous Leadership

As discussed previously, stable leadership behaviors, such as transformational and transactional leadership are not suitable for more variable behaviors such as exploitation and exploration. To better understand and address the need of equally variable leadership behaviors, the theory of ambidextrous leadership was developed. This approach is discussed to be efficient especially for the successful management of the duality and intricacy of the innovational process. Therefore, the next subchapters contain the evolution of ambidextrous leadership within academic research, with a focus on the concept of Rosing et al. (2011), that is used as the fundamental theory for this master thesis.

2.2.3.1. Origins of Ambidextrous Leadership

As the concept of ambidexterity shows, there is the necessity to show both, transactional and transformational leadership behaviors, according to which leadership style is more beneficial at certain times (Vera & Crossan, 2004). This results out of the required flexibility towards the speed and intricacy of the organizational environment and the innovation process. Hence, there is an increased pressure to exploit and explore simultaneously and forces leaders to behave ambidextrous, to ensure the long-term survival of the company (Tushman & O´Reilly, 1997). In this context, ambidextrous leadership is highlighted “as the ideal managerial leadership style” (Bucic et al., 2010, p.244), with which a leader is able to demonstrate both, transactional and transformational leadership styles, although the degree of the specific approach can vary (Bass, 1999).

Even if the findings within empirical research highlight the importance of ambidextrous leadership for innovation, this research topic is still at the beginning, although with increased attention (Bonesso et al., 2013; Gibson & Birkinshaw, 2004).
The first conceptualization of ambidextrous leadership within the innovational context was created and introduced by Rosing et al. (2010), followed by a published model in 2011, that shows the influence of ambidextrous leadership over the course of innovation (Rosing et al., 2011). In comparison to other research studies, that mainly discusses ambidexterity in regard to the overall organizational performance, Rosing et al. mainly focus on the innovation performance of organizations (Bonesso et al., 2013; Gibson & Birkinshaw, 2004; Probst et al., 2011).

### 2.2.3.2. Ambidextrous leadership in the innovation context

Rosing et al. (2011) define ambidextrous leadership “as the ability to foster explorative and exploitative behaviors in followers by increasing or reducing variance in their behavior and flexibly switching between opening and closing behaviors. That is, ambidextrous leaders are able to support their followers in the attempt to be ambidextrous” (p.957). In regard to this definition, the authors differ between two innovation phases, namely creativity and implementation. However, as a result of the intricacy of the innovation process, Rosing et al. (2011) argue that is not possible to clearly differentiate and separate those two phases. For instance, within the creativity stage it is also necessary to exploit, as the usage of already existing knowledge and know-how can benefit the generation of creative ideas (Bain et al., 2011). As a consequence, there is a need to continuously switch between the activities of exploitation and exploration throughout the innovation process.

Based on this situation, Rosing et al. created a model that includes three main components, that is opening and closing leaderships behaviors together with the need to change between those two behaviors depending on the requirements of the current innovation phase, as shown in figure 1.

![Figure 1: Ambidextrous Leadership model by Rosing et al. (2011), p967](image-url)
In this context, opening leadership behaviors encourage exploration, combined with an open working atmosphere, where employees are required to think diverse, to try out new things and to experiment with different ideas. Therefore, leaders who show opening behaviors, challenge how things have been executed before and allow employees to use a different approach. In this regard, Rosing et al. define opening leadership “as a set of leader behaviors that includes encouraging doing things differently and experiment, giving room for independent thinking and acting, and supporting attempts to challenge established approaches” (Rosing et al., 2011, p.967), that highlights the positive effect of opening leadership behaviors on the motivation of employees to create new ideas.

In contrast, closing leadership behaviors are described to support exploitation and refer to leadership behaviors that reduce variances and encourage efficiency by taking advantage of the already existing competencies. In this context, failures and risks should be avoided by behaving and acting according to pre-defined rules, established routines and given goals. Accordingly, the authors define closing leadership “as a set of leader behaviors that includes taking corrective action, setting specific guidelines and monitoring goal achievement” (Rosing et al., 2011, p.967). Figure 2 shows examples of concrete opening and closing leadership behaviors, as defined by Rosing et al. (2011).

![Table of opening and closing leadership behaviors](image)

Figure 2: Examples of opening and closing leadership behaviors by Rosing et al. (2011)

The third component of the model is the need to flexibly adapt the leadership behavior to the needs of the actual innovation phase. In more detail, this means that leaders are not only required to use both, closing and opening leadership behaviors, but moreover have to flexibly change their behavior according to the specific needs of the situation. As a result, Rosing et al. (2011) describe an ambidextrous leader as someone, who successfully promotes explorative activities by showing opening leadership behaviors and at the same time, is able to encourage employees to be exploitative by demonstrating closing leadership behaviors, combined with the ability to change the behavior if needed. Hence, this leads to the situation that leaders are required to demonstrate more than one leadership style, however it is not clear which exact behaviors best contribute to individual innovation output. Further, there is a lack of research on the practical usage of the model introduced by Rosing
et al (2011) and it is unclear, how the leadership behaviors evolve throughout the innovation process. Consequently, this master thesis aims to get more theoretical and practical insights on the influence of single leadership behaviors on the innovative outcome over the course of innovation.
3. Methodology

This chapter covers the methodology of this master thesis. First, the applied research method as well as the reasoning behind it is explained. Afterwards, the case company and its main history relevant for the study is introduced. Following that, the data collection and data analysis including the coding template used is described in detail.

3.1. Research Design

Based on the defined research aim, a qualitative research method and precisely, a case study research design, is used. This method was chosen, as it is expected to get more in-depth results than it might be possible to get with the use of quantitative research (Creswell, 2013). Although the topic of ambidextrous leadership is not new within the literature (cf. Bledow et al., 2011; Probst et al., 2011), there is only limited research that focuses on the relation between innovation and ambidextrous leadership. Besides, the authors Rosing et al. (2011) state that there are still several research gaps that need to be addressed in future research and further claimed the need to expand their introduced concept of ambidextrous leadership.

Consequently, existing papers within this research field do not provide sufficient recommendations about which specific leadership behaviors are best contributing to the innovational motivation and actions of individuals and teams and additionally, fail to provide practical implications for the introduced model by Rosing et al. (2011).

As a result of the identified research gap, a qualitative research method in combination with a case company was chosen (Creswell, 2013). When identifying an adequate company, the overall innovation mindset and behavior was essential. The company “Silhouette” has a substantial history and future interest in innovation and hence, was chosen as the case company for this master thesis.

Silhouette is a family-owned enterprise, that focuses on the design, production and distribution of eyeglass frames and sunglasses. The company was found in 1964 by Anneliese and Arnold Schmied in Linz, Upper Austria. Since 2018, Arnold Schmied manages the enterprise together with Andreas Meier and Thomas Windischbauer with around 1600 employees and 13 distributorships worldwide. Their products are available in more than 100 countries, with an export ratio of 95 percent, and are produced locally in Austria (Silhouette, 2018).
Beside their own brands Silhouette and Neubau eyewear, Silhouette International is also a producer for sunglasses of the licensed brand adidas sport eyewear since 1993. In 2017, the company achieved a sale of around 2.1 million glasses worldwide with an annual turnover of 170 million Euro in 2017 (Silhouette, 2018).

Since the foundation of the company, Silhouette has been through major innovation steps, as shown in figure 3. Their first radical innovation was the development of the SPX material, whose specific characteristic was its lightness. Through the invention of the Titan Minimal Art (TMA), a frameless eyewear concept in 1999, the company received worldwide recognition. As a result, the NASA came back to the eyewear of Silhouette in 2000 due to their frameless and light products, which was unique within this industry. The next big officially communicated innovation step was in 2016 through the launch of Neubau eyewear and Atelier Collection, which aimed to address the needs of a wider range of customers in the market. In 2017, Silhouette became a full-range supplier of eyewear frames and eyeglasses through the implementation of Vision Sensation (Silhouette, 2017).

Between the innovation of the TMA in 1999 and the next big innovation step in 2016 through the launch of their additional own brands, Silhouette worked on a lot of different ideas, like for instance a prototype that was addressing the topic augmented reality, which is communicated to be the forerunner of today’s Google glasses. However, they stopped working on this idea after the creation of the prototype, hence, the idea has never been implemented and realized. Also, Samsung contacted Silhouette to be a partner in creating 3D eyewear for their 3D televisions. However, after the creation of the prototype of the 3D eyewear, Silhouette decided not to continue working on this idea and sold the rights to Samsung (cf. Interview 2, pp.2ff).

Figure 3: Historical innovation steps of the company Silhouette (Silhouette, 2017)
Silhouette also went through some major changes in the management. As a family-owned enterprise, the company was managed by the owners until around 2000, afterwards the business was handed over to the next generation, the three sons of the owners. In around 2012, it was the first time that an external management and professional board was hired. Since then, there have been a lot of changes within the professional management and board, until two years ago, when the new board was hired that is managing the company till now (cf. Interview 4, p.4, p.8, p.11). This information regarding the changes in the management is essential, as the findings of this master thesis show that it has a major influence on the innovation outcome. This factor is further discussed in the results and discussion chapter of this research paper.

3.2. Data collection

To examine the importance of leaders’ behavior as well as the role of leadership over the course of innovation and its importance for innovative performance, a single case study method (Yin, 2009) was used. In more detail, the case consisted of a medium-sized Upper-Austrian company that is known for its innovation history. In order to explore the experiences and perceptions of the employees and leaders in detail, a semi-structured interview method was used (Broom, 2005; Petty et al., 2012), as this method is mentioned to be the most often used form to collect data in the area of qualitative research (Creswell, 2013; Cassell and Symon, 2004).

The data collection started with a meeting and an interview with the current management board, where the first interview partners were defined, who were either directly involved in innovation projects in the past, are long-term employees and hence have sufficient insights into the company and its history, are quite new within the company and therefore provide a more objective and recent view on the innovation behavior of the company or are customers of Silhouette and hence, are able to provide an outside perspective. Afterwards, the snowball sampling method was used to identify further interviewees. The final sample size was reached, when no further interview partners could be identified and when additional interviews did not add any new information. The final number of interviews include heterogenous participants with a difference in leadership layer, duration of employment, age and department.
As suggested by Yin (2009), to ensure triangulation of the findings, additional supporting documents and other sources of evidence (e.g. web pages, company presentations and product catalogues) were collected and analyzed.

### 3.3. Data analysis

Based on the chosen research questions as well as the defined theoretical model that is used as a basis for this master thesis, a template analysis, developed by Nigel King, was chosen for analyzing the interviews conducted, in order to summarize the topics identified in an adequate and useful manner. The template analysis in general starts with already existing codes, that include topics that are applicable for the analysis. After those pre-existing codes are defined, the next step starts with reading through the transcripts and mark all of the sections in the data that are important and contribute some answers to the research questions. When pre-existing codes appear not to be useful for specific segments of the data, either new topics are defined and included in the initial coding template or codes are modified in consideration of the different transcribed data sets. After the final template is created, single text parts that are not useful for answering the research questions are illuminated and the findings are further interpreted (King, 1998).

For the template used within this master thesis, a-priori codes were used based on academic literature of Rosing et al. (2011), where the authors defined specific opening and closing behaviors shown by leaders over the course of innovation. In this respect, the transcribed interviews were read through and the particular leadership behaviors together with their occurrence in the innovation process were marked and classified according to the initial template.

If it was not possible to allocate a specific leadership behavior as mentioned in the interviews to an already existing cluster, additional categories were inserted. Already existing codes have been changed, if the categories were too narrowly defined. However, none of the initial codes were deleted within the analysis phase.

Table 1 outlines the used coding scheme, including the code, the specific opening or closing behavior together with a short explanation of the category. Within this table, opening behaviors are marked by an “O”, whereas closing leadership behaviors are highlighted by a “C”, plus a reference number. Leadership behaviors, that already existed in the initial template but have been adapted are marked as modified (mod.). Codes and leadership behaviors that were additionally created are labeled as “new”. Pre-existing codes that have
not been changed and have been identically used from the initial table, are not specifically marked as such. When specific leadership behaviors were identified to have an overall negative effect on individual innovation outcome, it is indicated by a minus (-) in the table. Additionally, the coding A was introduced for additional factors that have an impact on innovation outcome, precisely for the factor “Change in Management”. Although it is not a leadership behavior as such, this factor has been identified to have a crucial influence on the overall innovation outcome and hence, is considered as an overall influencing factor within this master thesis.

For the first sub question, all identified leadership behaviors were collected and categorized with the template below. Those leadership behaviors, that have been mentioned by at least half of the employees interviewed, have been marked to have an important influence and therefore are further used in the results chapter. All other leadership behaviors are not further mentioned in the results part. In order to answer the second sub question, the statements have been categorized regarding the different innovation phases, idea generation and idea implementation, as already introduced in chapter 2.1.1. If referring a leadership behavior to a particular innovation stage was not practicable, or if the results showed that a behavior is important from beginning to the end of the process and therefore, cannot be assorted in one of the two identified stages, this leadership behavior is labeled as having an overall impact over the course of innovation. Leadership behaviors that have not been mentioned by at least three employees interviewed are not further observed in the results for the same reason as for the first sub question.
<table>
<thead>
<tr>
<th>Code</th>
<th>Opening / Closing Leadership Behavior</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>O1</td>
<td>Provide employees a high degree of autonomy and resources for independent thinking and acting</td>
<td>Giving room, sufficient time and resources to employees to enable them to generate new ideas and to act and decide independently within their own area of responsibility</td>
</tr>
<tr>
<td>O2</td>
<td>Enable the team and create a space to work creative and innovative</td>
<td>Support teams with tools, resources (time, human resources, physical resources, budget) and the right working environment to stimulate creativity and innovation and to create a space for possibilities</td>
</tr>
<tr>
<td>O3</td>
<td>Encouraging experimentation with different ideas</td>
<td>Support experimenting with and trying out different ideas and methods</td>
</tr>
<tr>
<td>O4</td>
<td>Motivating to take risks</td>
<td>Encourage employees in risk-taking and exceeding limits</td>
</tr>
<tr>
<td>O5</td>
<td>Allowing errors</td>
<td>Accept that error making is natural and now and then necessary over the course of innovation, and create a safe atmosphere for error making</td>
</tr>
<tr>
<td>O6</td>
<td>Encouraging error learning</td>
<td>Encourage and support individuals / teams / organization to learn from errors</td>
</tr>
<tr>
<td>O7</td>
<td>Giving room for own ideas</td>
<td>Give the possibility for team members to bring in own ideas</td>
</tr>
<tr>
<td>O8</td>
<td>Create an open communication and discussion atmosphere with flat hierarchies and short decision paths</td>
<td>Welcome informal discussions within team and between leader and employees, and accept informal decisions</td>
</tr>
<tr>
<td>O9</td>
<td>Giving feedback and commanding to think in different ways</td>
<td>Provide feedback without making own decisions</td>
</tr>
<tr>
<td>O10</td>
<td>Encourages sharing and exchange of information, know-how and experiences</td>
<td>Support the exchange of information and previous experiences within team, within the company and with parties outside of the organization</td>
</tr>
<tr>
<td>O11</td>
<td>Allowing different ways of accomplishing a task</td>
<td>Not give any specification of tasks in advance, and ask the team to establish their own way of how to accomplish a task</td>
</tr>
<tr>
<td>O12</td>
<td>Creating a participative atmosphere by involving employees in innovation processes</td>
<td>Actively involve employees in the implementation phase of innovations</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>---</td>
<td>---</td>
<td>---</td>
</tr>
<tr>
<td><strong>O13 new</strong></td>
<td>Being present and demonstrating interest and willingness to actively support ideas</td>
<td>Being around, actively go to employees to ask for information and have an honest interest in any idea employees are having, and giving them the feeling that the leader supports ideas through actively listen to and standing behind those ideas, even if not completely convinced</td>
</tr>
<tr>
<td><strong>O14 new</strong></td>
<td>Rewarding innovative behavior through appreciation</td>
<td>Reward innovation through giving employees the credit for new ideas, through a compliment or personal / team recognition</td>
</tr>
<tr>
<td><strong>O15 new</strong></td>
<td>Showing commitment to innovation and acting as a role model</td>
<td>Leader is committed to innovation by seeing it as something important for the organization, has an overview about the big picture and acts as a driver for innovation through being a role model</td>
</tr>
<tr>
<td><strong>C1 mod</strong></td>
<td>Establishing routines and rules</td>
<td>Set concrete instructions how things should be accomplished and provide necessary tools to allow employees to follow pre-defined rules and routines</td>
</tr>
<tr>
<td><strong>C2</strong></td>
<td>Takes corrective actions</td>
<td>Actively interfere to change the direction and to solve disagreements within a team</td>
</tr>
<tr>
<td><strong>C3 new</strong></td>
<td>Setting and communicating a clear vision and goals</td>
<td>Define a clear vision and a fixed organizational or project-specific goal to which you stay committed throughout the project / task; or to clearly communicate the goal and vision of a specific change to employees</td>
</tr>
<tr>
<td><strong>C4 new</strong></td>
<td>Defining a clear and stable overall strategy, structure and time-table</td>
<td>Provide direction with a stable strategy and structure and create a time schedule with specific deadlines</td>
</tr>
<tr>
<td><strong>C5</strong></td>
<td>Monitoring and controlling goal attainment</td>
<td>Monitor and control the progress of a task or project, especially regarding to quality, cost and deadlines</td>
</tr>
<tr>
<td><strong>C6 (-)</strong></td>
<td>Sanctioning errors</td>
<td>Punish if errors are made</td>
</tr>
<tr>
<td><strong>C7 new</strong></td>
<td>Rewards innovative behavior</td>
<td>Reward innovative behavior by giving physical or financial rewards to employees</td>
</tr>
<tr>
<td><strong>C8</strong></td>
<td>Pay attention to uniform task accomplishment</td>
<td>Demand a uniform way to execute tasks</td>
</tr>
<tr>
<td><strong>C9 new</strong></td>
<td>Making decisions</td>
<td>Decisions are made by the leader including decisions about necessary resources</td>
</tr>
<tr>
<td>ID</td>
<td>Description</td>
<td>Details</td>
</tr>
<tr>
<td>------</td>
<td>------------------------------------------------------------------------------------------------</td>
<td>------------------------------------------------------------------------------------------</td>
</tr>
<tr>
<td>C10</td>
<td>Controlling adherence to routines and rules</td>
<td>Make sure that the formerly established routines and rules are respected in regard to task execution and demonstrated behavior</td>
</tr>
<tr>
<td>C11</td>
<td>Define responsibilities and pre-structure and allocate tasks</td>
<td>Define responsible people / teams and split up the whole project into packages. Further, divide the tasks among team members and make decisions about the role of each employee</td>
</tr>
<tr>
<td>C12</td>
<td>Sticking to plans and ideas and pushing them forward with a sense of consistency and persistence</td>
<td>Hold on to an existing plan / idea with no intention to scrap it even if it is insecure or risky; to push forward ideas and consistently work on them to ensure the successful implementation</td>
</tr>
<tr>
<td>C13</td>
<td>Acting careful with long and formal decision-making processes</td>
<td>Leader tends to be on the safe side by weighing the advantages against the disadvantage. Further, the leader tends to include lots of different parties and handles innovation and decision-making processes very professional and formal</td>
</tr>
<tr>
<td>A1*</td>
<td>Change in Management</td>
<td>This factor refers to the amount of changes in the management and analyzes, how often the contact person for employees regarding innovation changes</td>
</tr>
</tbody>
</table>

Table 1: Clusters of opening and closing leadership behaviors
4. Results

This chapter presents the results that arose through the analysis of the collected data and further highlights the findings addressing the research questions. Chapter 4.1 covers the single opening and closing behaviors of leaders including statements that are mentioned by the interviewees, which were observed to be important for innovation in general. Chapter 4.2 compares the identified leadership behaviors regarding the timely occurrence over the course of innovation, dividing the findings into the contrasting phases of idea generation and implementation, when meaningful.

Throughout this chapter, open leadership behaviors are marked with an “O” for opening behaviors, whereas closing leadership behaviors are highlighted by the initial letter C, followed by the referring number, as already shown in table 1 in chapter 3.3. The additional factor influencing the innovational individual behavior identified in this study is marked by the letter A plus the referring number highlighted with the symbol “*”, as “change in management” is not a leadership behavior by definition.

4.1. Open and closing leadership behaviors

This chapter aims to analyze the data according to the first research question. In this respect, the leadership behaviors of the initial concept created by Rosing et al. (2011) have been utilized and further adjusted along the analysis of the recorded interviews, as already explained in detail within the methodology chapter. Thereby, the results of this section relate to single behaviors of leaders, divided into opening and closing behaviors. Table 2 gives an overview about the most important opening and closing leadership behaviors for the innovation outcome of individuals and teams, that have been identified and ordered by their importance. The findings in the table will be further discussed within the next subchapters.
### Displayed opening and closing leadership behaviors

<table>
<thead>
<tr>
<th>Displayed Opening Behaviors</th>
<th>Displayed Closing Behaviors</th>
</tr>
</thead>
<tbody>
<tr>
<td>Being present and demonstrating interest and willingness to actively support ideas (O13)</td>
<td>Sticking to plans and ideas and pushing them forward with a sense of consistency and persistence (C12)</td>
</tr>
<tr>
<td>Showing commitment to innovation and acting as a role model (O15)</td>
<td>Acting careful with long and formal decision-making processes (C13neg.)</td>
</tr>
<tr>
<td>Providing employees a high degree of autonomy and resources for independent thinking and acting (O1)</td>
<td>Setting and communicating a clear vision and goal (C3)</td>
</tr>
<tr>
<td>Enabling the team and create a space to work creative and innovative (O2)</td>
<td>Defining a clear and overall strategy, structure and time-table (C4)</td>
</tr>
<tr>
<td>Creating an open communication and discussion atmosphere with flat hierarchies and short decision paths (O8)</td>
<td>Making decisions (C9)</td>
</tr>
<tr>
<td>Encouraging sharing and exchanging information, know-how and experiences (O10)</td>
<td>Define responsibilities and pre-structure and allocate tasks (C11)</td>
</tr>
<tr>
<td>Encouraging experimentation with different ideas (O3)</td>
<td></td>
</tr>
<tr>
<td>Motivating to take risks (O4)</td>
<td></td>
</tr>
<tr>
<td>Allowing errors (O5)</td>
<td></td>
</tr>
<tr>
<td>Encouraging error learning (O6)</td>
<td></td>
</tr>
<tr>
<td>Rewarding innovative behavior through appreciation (O14)</td>
<td></td>
</tr>
</tbody>
</table>

Table 2: List of opening and closing leadership behaviors identified to be important in the innovation process

#### 4.1.1. Opening leadership behaviors

Important opening leadership behaviors that were mentioned by all employees and leaders interviewed are “Being present and demonstrating interest and willingness to actively support ideas” (O13) and “Showing commitment to innovation and acting as a role model” (O15). Opening behaviors that were stated by the majority of the people interviewed are “Providing employees a high degree of autonomy and resources for independent thinking and acting” (O1), “Enabling the team and create a space to work creative and innovative (O2), “Creating an open communication and discussion atmosphere with flat hierarchies and short decision paths” (O8), “Encouraging sharing and exchanging information, know-how and experiences” (O10), “Encouraging experimentation with different
ideas" (O3) and “Motivating to take risks" (O4). The opening leadership behaviors that were mentioned by half of the participants are “Allowing errors" (O5), “Encouraging error learning” (O6) and “Rewarding innovative behavior through appreciation” (O14).

In regard to the leadership behavior “Being present and demonstrating interest and willingness to actively support ideas" (O13), the results reveal that the innovation leader needs to be present and actively contact employees to ask for information and needs to show an honest interest and appreciation towards any idea the employee is sharing. Such an atmosphere, combined with the willingness of the leader to actively support the ideas proposed, positively influences the motivation of employees to come up with new ideas. This correlates with the mentioned behavior that a leader has to “show commitment to innovation and act as a role model” (O15), as the leader plays a major role in how innovation is seen within the company and is the main driver for innovation. The commitment of the leader towards innovation enables employees to act accordingly and therefore is a main driver for innovation, as the statements of the interviews reveal:

„des heißt er is zu mir kommen is vor mir und hod gschaut was ma Neues mochn und vorher war ganz kloa ah (...) dass er sich für alles interessiert hod was bei uns herin passiert“ (Interview 3, p.3f, ll.137-139)

„da Unternehmensgründer woa eigentlich a unser unser Obertechniker der woa jeden Tog draßn in da Fertigung woa´s Unternehmen natürlich nu viel viel kleiner und der hod des woa glaub i vom Kopf und und da Motor für diese Innovationen“ (Interview 5, p.25, ll.1209-1212)

In order to motivate employees to bring in their own ideas and different approaches, it is crucial to provide employees a high degree of autonomy and resources for independent thinking and acting (O1). The employees interviewed agree on that the motivation increases if people get responsibility and if the leader allows employees to do things their own way:

„hob hoid früher hob i hoid a gewisses Budget zur Verfügung ghobt in dem i mi bewegen konnte und wo i daun sogn konnte ok i glaub des is jetzt wichtig und hob mi daun amoi im Joa quasi abgestimmt und hob oba Freiheiten ghobt zu agieren“ (Interview 1, p.4, ll.161-163)

Regarding to the item „Enable the team and create a space to work creative and innovative" (O2), it is highlighted among the majority of the people interviewed that it is necessary for being innovative and creative, to provide an informal and open working atmosphere and necessary resources. Regarding the resources needed, participants share the opinion that time resources are crucial to be able to step out of the daily routine and get
into a state to think outside of the box. Hence, especially for idea generation, the leader should encourage the experimentation with different ideas (O3), as the findings show that most of the time, innovation is not the result of a single idea but rather the outcome of testing diverse approaches and thereby, generating a loop that synthesize lots of different ideas. This needed leadership behavior also correlates to the need to create an open communication and discussion atmosphere with flat hierarchies and short decision paths (O8), as employees interviewed share the opinion that an open communication atmosphere that gives room for diverse and informal discussion as well as quick decision processes, support experimentation and the overall innovational behavior of individuals and teams:

„da sind wir (..) paar Leute (..) die eine Idee haben weil sie miteinander spinnen oder ein Problem haben irgendwas lösen wollen und dann entsteht das und man kann nach so einem Gespräch sind keine moderierten Teamsitzungen gewesen keine sonst was einfach miteinander blödelt oder beim Kaffee oder sonst was ja und auf einmal kommt“ (Interview 6, p.7, ll.330-334)

„das war früher wie ma mitn Familienvorstand gesprochen hat ma den mit dem streiten können diskutieren und Faust am Tisch hauen ist alles möglich gewesen super“ (Interview 6, p.20, ll.979-980)

Combined with an open communication and discussion atmosphere, participants mentioned that a leader should encourage sharing and exchanging of information, know-how and experiences (O10) within the team and between different departments, but also with parties outside of the company. These results highlight that creativity and the generation and extension of ideas are often the output of diverse discussions within a team combined with the exchange of different perspectives, instead of the result of an individuum:

„und früher vor 10 Jahren jede Marke (..) schaut dass die andere nicht reinschaun derfen in die Marke ganz streng und völliges Unverständniss ja heute is a Austausch die gehen gemeinsam Mittagessen die fragen wie findest du des“ (Interview 5, p.23, ll.1101-1103)

Most of the employees interviewed also agree on that a leader has to encourage employees to take risks (O4) and to exceed the current limits with the aim of making innovation possible. This goes along with the mentioned need that a leader has to create an environment where errors are allowed (O5) and that encourages error learning (O6). The leader should accept that error-making is natural and helpful in the innovation process and consequently, should create a safe environment where failures are not sanctioned. Moreover, the leader needs to ensure that teams as well as the entire company is learning from errors so that improvements and innovation can happen:
Once individuals or teams generated new ideas and showed innovative behavior, half of the interviewees highlights the need to recognize and reward innovative behavior through appreciation by the leader (O14). The findings show that rather than physical or financial rewards, the leader should show his appreciation through a seriously meant compliment on a personal level. This is fundamental for the purpose of responding to the employee’s commitment and innovational behavior and to ensure that the employee stays motivated. If individual innovation behavior is appreciated, employees rather tend to put more effort in innovational behavior than it is expected from them:

„das ist dann schon toll wenn man merkt das was da hat sich wer Gedanken gemacht der meint des ehrlich der hat das bei dem ist das wirklich angekommen was da passiert ist und das ist wertgeschätzt worden das alleine ist so ein gutes Gefühl“ (Interview 6, p.22f, ll. 1100-1103)

Looking at the previous mentioned opening behaviors that were stated to be fundamental for the individual motivation to engage in innovational activities, the main difference between those findings when compared to the theoretical base provided by Rosing et al. (2011) is, that several leadership behaviors have been included. Those behaviors especially refer to the leader as a main driver for innovation by acting as a role model combined with supporting any idea of employees through giving autonomy and resources to employees and by creating an open and informal working atmosphere. As an example, that holds true for the defined items like “Shows commitment to innovation and act as a role model” (O15), „Is present and demonstrates interest and willingness to actively support ideas“ (O13) and „Enables the team and creates a space to work creative and innovative“ (O2).

4.1.2. Closing leadership behaviors

The closing leadership behaviors mentioned by all employees interviewed as being important is “Sticking to plans and ideas and pushing them forward with a sense of consistency and persistence“ (C12). Closing behaviors stated by most of the employees
interviewed are “Setting and communicating a clear vision and goal” (C3), “Defining a clear and overall strategy, structure and time-table” (C4), “Making decisions” (C9) and “Define responsibilities and pre-structure and allocate tasks” (C11). The leadership behavior “Acting careful with long and formal decision-making processes” (C13neg.) was stated by the majority to has a negative effect on one’s innovational behavior.

All employees highlighted the importance that a leader has to stick to plans and ideas and to push them forward with a sense of consistency and persistence (C12). Especially when ideas are already generated, it is critical for the innovation success to hold on to those ideas and to push them forward persistently:

“jetzt san ma am Punkt wo ma des hm ahm die Entwicklung nicht weiter getrieben haben sondern so weit san das ma des wieder abgedreht haben weil ma ned kontinuierlich weiterentwickelt haben aus unterschiedlichsten Gründen” (Interview 1, p.3, ll.136-139)

These findings state that ideas often take some time to be successful. Therefore, it is crucial to be consistent even if the outcome is insecure or risky. Consistency in this regard also supports the motivation of employees to show and come up with new ideas continuously and to stick on to them until the implementation was successful.

The importance of consistency goes along with the statement, that it is crucial that the leader gives an overall orientation by setting and communicating a clear vision and goals (C3), followed by defining a stable overall strategy, structure and time-table (C4) and further defines clear ownership and responsibilities by allocating tasks accordingly (C11). This is crucial in order to give employees a general direction and stability, and to transparently define the area in which one can act independently. The results further highlight that the absence of a clear structure negatively influences the innovational performance:

„dass die das Ruder übernommen haben dass ma ein Programm ghobt haben sagt das ist es das wollen wir erreichen das ist der Zeitrahmen und damit hat ein jeder weiß was hingeht“ (Interview 6, p.26, ll.1252-1254)

„oda daun is ned kloa wer is jetzt verantwortlich dafür oiso speziell a bei meinen Themen oiso i hob jo viele Dinge in die Höhe gezogen oba oba im operativen Doing is immer die Frage wer hod die Ownership und der der Ownership hod soids jo eigentlich voran treiben jo“ (Interview 1, p.9, ll.432-435)
For most of the participants it is crucial throughout the innovation process that the leader is able to make decisions (C9), in order to stay motivated and to continue with the innovational behavior shown by the employee:

„da gibts jetzt Ideen die vielversprechend sind ja oder nein sieht man sich raus aber das wichtigste sind die Entscheidungen“ (Interview 6, p.25f, ll.1249-1251)

This necessity goes along with the statement, that it is harmful for innovation if leaders tend to be on the safe side by sticking to long and formal processes and hence, avoid quick decision-making. Therefore, if a leader tends to act careful, combined with long and formal decision-making processes (C13neg.), the individual innovation behavior and the overall output is affected in a negative way:

„ah vielleicht wärs wenn ma sich dort sofort entschieden hätten wärs vielleicht noch richtig gewesen oder genügend gewesen ja drei Jahre später man hat sich nicht schnell entscheiden traut“ (Interview 2, p.5, ll.207-209)

Summarizing the previous stated closing leadership behaviors that have a main influence on innovative outcome, compared to the theoretical base from Rosing et al. (2011), further leadership behaviors have been added. The added items mainly focus on the responsibility of the leader to provide employees with a clear direction, structure and overall orientation and to push things forward by quick decision-making. As an example, this is the case for the stated items like “Setting and communicating a clear vision and goal” (C3), “Defining a clear and overall strategy, structure and time-table” (C4) and “Making decisions” (C9).

4.1.3. Summary opening and closing leadership behaviors

Looking at the results, a preference for opening leadership behaviors over the course of innovation can be observed. However, beside the importance to demonstrate opening behaviors, it is crucial that the leader is able to provide a clear direction and further, defines the area in which individuals are allowed to act independently, as this increases the enthusiasm and energy employees are showing towards innovation.

In general, the findings reveal that both behavior streams are linked to each other and hence, opening and closing leadership behaviors cannot be investigated strictly separated with respect to one another. For instance, sticking to plans and ideas and pushing them forward with a sense of consistency and persistence (C12) is mutually reliant on the leader’s
competence to make decisions (C9), while simultaneously a precise goal definition (C3), a pre-defined strategy (C4) and clear responsibilities (C11) are required.

4.2. Evolvement throughout the innovation process

This chapter focuses on the required leadership behaviors along the two divergent innovation stages, in particular the idea generation and the idea implementation phase. The phase of idea generation mainly covers the identification of a problem or an opportunity as well as the actual creation of new ideas, whereas the implementation step is about the assessment and selection of developed ideas among with the actual implementation. The outcomes presented within this chapter therefore cover the occurrence of the referring leadership behaviors within the innovation process and are demonstrated in figure 4.

Occurrence of leadership behaviors along the innovation process

Figure 4: Occurrence of opening and closing leadership behaviors along the innovation process (own illustration)

Within this model, important leadership behaviors are illustrated as circles and mapped based upon their occurrence in the innovation process. The areas are divided into the idea generation phase, the idea implementation phase and the overall innovation process, which is demonstrated by the arrow at the top of the model. If behaviors were mentioned to be solely important in one of the two stages, the circle is placed in the respective area at the bottom. The higher the circle is placed, the higher is the occurrence throughout the whole innovation process. When a circle is placed near another area or box, this means that the respective leadership behavior is also essential in this particular phase. For instance, the leadership behavior “Enabling the team and create a space to work creative and innovative”
(O2) is placed overall in the box “Idea Generation” because the results show that the behavior is most frequently shown in this innovation phase. However, the results reveal that this leadership behavior is also relevant for idea implementation and hence, throughout the whole innovation process. The color intensity of the circles demonstrates the frequency of the leadership behavior mentioned by the people interviewed and hence, the importance and influence of this behavior on individual and team innovative outcome. The darker the color of the circle, the higher the frequency. The grey colored circles and behaviors have a low frequency, however they are mapped in the model for a better interpretation and overview.

Additionally, the item A1*, which defines the Change in Management, is demonstrated in the model as an additional factor in the blue circle. Although it is not a leadership behavior as such, this factor has been identified to have a crucial influence on the overall innovation outcome and hence, is considered as an overall influencing factor within this master thesis.

### 4.2.1. Leadership behaviors in the idea generation phase

With regard to the leadership behaviors that are most suitable for the phase of idea generation, the model indicates a preference for opening leadership behaviors. Some interviewees agree on that especially for the generation of new ideas the leader needs to show an open-minded and tolerant behavior combined with allowing a high level of autonomy, to motivate employees to come up with diverse ideas in an independent way.

Especially for the identification of a problem or an opportunity, the results show that it is crucial that the innovation leader encourages the exchange of know-how, information and experiences (O10) among colleagues inside of the organization, as well as with external partners and customers:

„die Leute müssen reden miteinander die müssen die Dinge miteinander machen die müssen miteinander das Gefühl kriegen kann das jetzt funktionieren oder nicht“ (Interview 2, p.9, ll. 382-384)

For being creative and the actual generation of ideas, it is essential that the leader enables the team and creates a working space that encourages creativity and innovation (O2). The interviewees often mentioned the requirement of time resources and the need of a relaxed atmosphere to break out of the daily routine and rush of the daily business, to be able to think outside of the box:
“da muss ich energiegeladen sein und paralell dazu aber total oba kommen ich muss total runterkommen ich brauch für mich die Ruhe die Muse da muss die Umgebung passen da muss ich so sitzen dass ich mich relaxt fühl also wirklich meinen ganzen meine Energie fokussier und ned auf des Ganze sondern nur auf des und dann lang ich da an zu Möglichkeiten da mach ich oft weiß ich nicht moch i oft 50 Versionen des is ned ja und auf einmal kommt do kennt was drinnen sein ja und ah wennst aber im Tagesgewühl stehst dann kommst du nie zu dem Punkt” (Interview 2, p.12, ll.516-523)

In this sense, the importance of giving employees the time and encourage them to experiment with different ideas (O3), stimulate open communication and discussions (O8) and giving employees room for individual ideas (O7) is greater at the early stage of the innovation process, compared to the end of the process.

For the overall motivation of employees to generate ideas and hence, show innovative behavior, it is crucial that the leader sets an example and demonstrates his commitment towards innovation (O15). Further, the leaders needs to be interested and actively offer support for new generated ideas (O13). On the contrary, the establishment of a clear vision (C4) and a stable strategy (C3) was mentioned to be additionally relevant especially in the early phase of a project. By giving an overall orientation, leaders establish the common basis in which the team is allowed to operate. In this context, also consistency and persistence (C12) is required, as generated ideas often take time to further grow and develop. During this phase it is crucial that the leader holds on to the idea. Showing consistency and sticking to plans is especially of importance when the idea comes to the transition from the idea generation to the implementation phase, as the statement below underlines:

“im Unternehmen hods immer hunderte von Projekten gegeben und von diesen hundert san ned sehr vü wirklich umgesetzt wordn sondern san irgendwaun eingschlofn beendet wordn etc” (Interview 5, p.34, ll.1669-1671)

4.2.2. Leadership behaviors in the idea implementation phase

In comparison, the model shows that especially in the implementation phase, a mix of the two referring leadership behaviors is important. Specific leadership behaviors that are particularly dominant in the idea implementation phase relate to the need of stability and consistency, combined with a leader’s attitude that welcomes risks and pushes things forward through quick decision-making. Hence, the results show that it is crucial that the leader sticks to previously defined goals (C3), strategies (C4) and ideas and that he pushes them forward (C12) in order to successfully implement the generated idea. This also holds
true in times of uncertainty, when complications occur or when an idea takes more time to show success during the implementation phase:

„wir hobb den Prototypen immer bei uns der funktioniert oiso da a do wieder des Thema Innovation jo oba ned konsequent dann weiter verfolgt vielleicht aus einer Unwissenheit oder Unsicherheit des mog durchaus sein“ (Interview 5, p.26, ll.1287-1290)

If this is the case, it is important that the leader also makes sure that the team is enabled, and that a creative and innovative working space is provided (O2), in order to solve upcoming problems or unexpected scenarios during the implementation phase.

Additionally, it is harmful for innovation if the leader acts careful and builds up barriers through long and formal decision-making processes (C13neg.) especially in the stage of the assessment and implementation of generated ideas. In the interviews it was often stated that generated ideas were not successfully realized because it took too much time to make a final decision and hence, the perfect timing to realize the innovation and to bring it to the market was missed:

„ah vielleicht wärs wenn ma sich dort sofort entschieden hätten wärs vielleicht noch richtig gewesen oder genügend gewesen ja drei Jahre später man hat sich nicht schnell entscheiden traut drei Jahre später wärs sicher zu wenig gewesen wenn man sieht was da heute an Erungenschaften“ (Interview 2, p.5, ll.207-211)

In this context, to further support the quick realization of generated ideas, it is necessary that the leader creates a culture that allows and motivates people to take risks (O4) and additionally, provides employees a high degree of autonomy and resources for independent reflection, thinking and acting (O1) throughout the whole implementation phase. This is especially important for the realization stage, as often the success of new generated ideas is unclear and hence, comes along with insecurity and uncertainty. Consequently, courageous and exploitative behavior is needed.

Additionally, in those phases of insecurity, it is especially important that the leader is present as well as interested (O13) and shows high commitment to innovation (O15), to make sure that everyone stays motivated and holds on to generated ideas also during times of uncertainty, in order to successfully realize the implementation:
4.2.3. Leadership behaviors throughout the innovation process

Looking at the results of the two referring stages in the innovation process and taking into consideration the important leadership behaviors that tend to be essential along the innovation process, the findings reveal that for increasing individual innovative outcome, employees need predefined and communicated goals, vision (C3) and strategies (C4) by the leader as a guidance and common basis in which individuals are allowed to operate. If this direction is not given by the leader, the results reveal that employees tend to feel lost. Once the standards are set, the leader’s commitment towards innovation (O15) and his support and presence (O13) throughout the process is necessary, especially when times of insecurity or uncertainty occur. In this context, it is of importance that the behavior of the leader is overall stable with sticking to defined plans and ideas (C12), in order to make sure that the generated ideas are implemented successfully:

„weil hod sicher auch früher wahnsinnig vü Ideen gegeben (..) aus meiner Sicht ma hods oba nie konsequent umgesetzt ma hod entweder jahrelaung herum diskutiert oder ma hod wos gmocht und hod daun kurz zehn Minuten vor Zwölf gsogt na doch nicht“ (Interview 5, p.15, ll.700-703)

With the intention of creating an overall innovative culture, it is crucial that the leader provides a working space that supports creativity (O2) and where discussions about different ideas are welcome and allowed (O8). This is essential, as the results of the qualitative research show, that most of the time ideas are not generated by individuals, but rather represent the outcome of team or group discussions. The creation of flat hierarchies, where the leader acts as a colleague and partner instead of solely being a manager, further positively contributes to the willingness of employees to come along with new approaches, as it lowers the barriers to share critical thoughts as well. However, once the employees are working on ideas, it is essential that leaders make quick decisions (C9). This is necessary not just in the idea generation phase, to let people know with which idea they should move on, but also in the idea implementation phase, where decisions about resources and strategies are needed.
4.2.4. Change in Management

Although it is not a leadership behavior as such, the results of the interviews reveal that the factor “Change in Management” has a major influence on the overall innovation outcome and hence, is considered as an influencing factor within this master thesis. The findings of the interviews conducted show that the higher the number of changes within the management team, the higher the negative effect on the innovative behavior of individuals and teams. In the interviews it is often stated that the new management team was not able to identify themselves with the ongoing innovation projects and existing strategies. As a result, those projects and strategies were not further prioritized and has been put on ice:

“des is eindeutig deswegen gescheitert weils do an an Shift im Management geben hod do woa anfoch kaun ma e sogn do hohn sich Vorstände austauscht und daun san hoid Klassiker diese Projekte leiden daun oiso die die ruhen oder werden überhaupt völlig gecanceled weil do kana an Kopf hod” (Interview 1, p.3f, ll.146-149)

„und seitdem seit dem zweiten Vorstandswechsel eigentlich (..) drehen die Reifen sich durch weil der zweite Vorstand einen verständlich zum gewissen Grad (..) kane Beziehung zum Sigma hod“ (Interview 5, p.3, ll.119-121)

Further, through the ongoing changes in the management team and hence, the ongoing changes in strategies and innovational projects, the employees learned to simply wait and to sit out the current management team, which negatively impacted the overall innovation motivation and performance:

„oba ah man lernt do draus jo is e nur drei Joa do oder kumt a Neiche jetzt wiss ma genau wos der wieder vorhot [.....] i glaub a wos wichtig wär is a beständigere ah ah bissl mehr oiso längere Phasen“ (Interview 1, p.13, ll.630-634)

These findings relate to the importance of the leader’s commitment towards innovation (O15) and the necessity, that the management sticks to plans with a sense of consistency and persistence (C12). In this context, if the management does not act as role model and visionary (O13), people are not committed to innovational projects.

4.2.5. Summary evolvement of the leadership behaviors

Summarizing, the findings show that there are several behaviors that cannot be solely matched into one phase of the innovation process, as they are not always strictly distinguishable from each other. This is especially the case when times of uncertainty arise.
For instance, if corrective actions are needed during the implementation phase, it is essential to come up with creativity and exploitation in order to solve a specific problem.

Further, the analysis reveals that the differentiation between the particular innovation stages can approximately be located within the start of the second implementation phase, when the focus shifts from exploration towards the realization of ideas. The major finding is that comparing opening and closing leadership behaviors, all employees interviewed showed a strong tendency towards opening behaviors during the beginning and stated a mix of opening and closing leadership behaviors during the end of the process. The presented results are in conformity with the previous statement that none of the particular leadership behaviors can be solely attributed to a certain innovation stage, as changes between them occur frequently.

Accordingly, the results show that stable leadership behavior is mostly favored by employees and increases the employee's commitment and motivation towards innovation. This also goes along with the finding that a high number of changes in the management have a negative effect on individual innovational behavior.

Considering the outlined key success elements, the employees interviewed point out that there is an enormous responsibility attributed to the leader regarding the success of innovation as well as the overall contribution of employees. In consequence, the role as a main driver for innovative outcome can be assigned to the leader.

The presented results further highlight that by displaying both particular leadership behaviors, the innovation leader is able to act as a front man and connector. Those findings are comparatively contrasted against the actual literature within the following chapter.
5. Discussion

This chapter presents the interpretation of the results, that have been outlined in the previous chapter and will be discussed in detail by matching them with the existing research models and ambidextrous leadership theories, to further examine the relation between innovation and leadership. By taking the results of the discussion into consideration, implications for theory and practice are stated, followed by the limitations of this master thesis and suggestions for future research. In chapter 6, the conclusion is outlined by reflecting on the research questions and objectives defined in the beginning of this master thesis.

Tendency towards opening leadership behaviors

First of all, the findings as discussed in the former chapter show that although both leadership behaviors were shown, there is a preference towards opening leadership behaviors along the innovation process. This statement is faced contrary findings in the existing research. On the one side, the results correspond to the conclusion made by Zacher and Rosing (2015), that innovation outcome is especially high during the time when leaders focus on showing open behaviors. On the other side, they are in contradiction with contrary findings within the literature, that companies prefer exploitative behaviors and hence, leaders might focus more on demonstrating closing behaviors to handle paradoxes and the appropriate allocation of scarce resources (Andriopoulus & Lewis, 2010).

Besides, the findings show that the opening leadership behaviors referring to the leader have the highest influence. This is consistent with the literature that states that leaders play a significant role in influencing the innovative performance of employees along the different innovation phases (Mumford et al., 2002; De Jong and De Hartog, 2007). Leaders therefore can guide employees successfully by adopting their leadership behavior throughout the innovation process. Hence, referring to the role of the leader towards innovation, interviewees mention that a leader has to be strongly supportive and interested in the ideas of the employees. This need can be supported by the statement in the literature that ideas are also confronted with resistance within the company (Mumford, 2002). As a result, if leaders do not demonstrate interest for the generated ideas of their employees and step back from supporting them once the ideas were communicated and submitted, this will lead to a negative influence in innovative outcome, as employees will feel unsatisfied, unmotivated and lose track, which can further lead to the result that ideas are not implemented due to the insufficient support by the leader.
Next to that, creating a working space with room for creativity, error learning, autonomy, open communication and risk-taking is mentioned to result in a positive influence on innovation. In regard to the necessity of an open and informal communication and information exchange with internal and external stakeholders, the findings show that such an environment creates space for unplanned possibilities and further expands existing ideas. This is also supported by the interviewed customers, who can be identified as the external stakeholders of the case company. The direct customers mentioned that they see it positive if the company is in direct exchange with its customers to get feedback, to learn and to generate and leverage existing know-how and ideas. In this context, the customers also state the willingness to contribute to the success and innovativeness of the case company, as they are motivated by improvements and a long-lasting, supportive relationship (cf. Interview 7, pp. 6f, ll. 324-338; Interview 8, p. 15, ll. 777-793). Also within existing literature, the importance of possibilities to exchange with internal as well as with external parties is highlighted. Within the company, this can be realized by initiating or allowing regular coffee breaks and communication areas, where employees have the chance to discuss and exchange ideas with each other (De Jong & Den Hartog, 2007). However, as the previous statement reveals, also a regular exchange and the external perspective of customers is helpful to promote exploration for the creation of new ideas and products. Consequently, if leaders do not support events where employees have the possibility to get in contact with internal and external stakeholders for information and idea exchange, they will be less likely to show innovative behavior and ideas.

Further, the results show that the leader has main influence on improving the ability of his employees to challenge their own ideas and to see challenges as a motivator to further improve ideas in the generation phase. For instance, the employees interviewed stated that the founder of the company was always present, asked them about the status, gave them feedback as well as challenged and motivated them to think outside to box. This outcome is in consistency with previous studies that point out that the intellectual stimulation of employees especially during the generation phase has major influence on the individual innovative behavior (Elenkov et al., 2005; Mumford et al., 2002).

Moreover, interviewees mentioned that it is crucial for creative problem solving, that beside their daily routines, they are supported by the leader through sufficient resources and time to think and act in an innovative way. Overall, this can be referred to the findings in the literature that the innovation process cannot be planned long-term due to its character of being nonlinear and chaotic (Anderson et al., 2004) and hence, opening leadership
behaviors are essential to encourage and support explorative activities whenever needed along the whole innovation process, to maximize the creative capacity of the team.

Beside the tendency for opening behaviors along the process, specific closing leadership behaviors were also stated to be crucial for individual innovative behavior. The employees interviewed mentioned that it is crucial that the leader gives an overall vision and orientation through a pre-defined strategy and goals in order to set the frame and let employees know to which extend and in which way they are allowed to act independently and bring along innovative ideas. These findings correlate to the study by Mumford et al. (2002) that shows that employees need to be aware about the possibilities, restrictions and problems, in order to make use of their ability to create innovative ideas and solve problems. If the vision of the leader and the overall goal is not communicated and shared with the employees, they tend to feel lost and uncertain regarding their innovative behavior. Hence, it will hinder the innovation behavior, if this information is missing (De Jong & Den Hartog, 2007). As a result, it is relevant that the leader possesses the organizational skills and takes the time to clearly communicate and explain pre-defined visions, goals and strategies, as this has a major influence on the further progress of the innovation process. This characteristic can be linked to the functional leadership approach by Adair (2006), which defines responsibilities and key functions the leader is accountable for. To some extent, those key functions can also be related to the outlined closing leadership behaviors within this study. This is for instance the case for the key function “defining the task” by Adair (2006), which means that a leader has to define SMART goals, that can further be associated with the closing leadership behavior of “setting and communicating a clear vision and goal” (C3). Consequently, there is also a functional role assigned to the leader. However, these findings can differ when compared with other industries or company sizes, as for instance in Start-ups or Advertisement agencies, the desired final results are often not previously defined and might be looser at the start of the innovation process. In contrast, not communicating the vision and a previously defined outcome could also encourage the ability of employees to think diversely and to come up with different and abstract ideas, as the innovation process is not directed in a certain way.

Moreover, the results reveal that sanctioning errors hinders being creative and hence, has a negative influence over the course of innovation. This is consistent with the findings from Cheng & van de Ven (1996) that show that for creative behavior and for idea generation, explorative activities are not only supportive but required, which in turn is encouraged by demonstrating opening behaviors (Rosing et al, 2011). Additionally, as already discussed, an open and supportive working and communication environment, where people are
challenged and allowed to experiment, is essential for innovation. In this regard, the results further show that it is often due to previous failures and learnings that an idea is further developed and finally, successfully implemented. Consequently, it is crucial that the leader allows error-making without sanctioning them, as it positively contributes to the motivation of employees to take risks.

All in all, although there can be observed a preference towards opening leadership behaviors especially in the idea generation stage, there is an identified need for closing leadership behaviors, that focus on pre-defining goals and tasks, as within daily business, constraints are given in form of scarce resources, like limited budget and time resources.

**Dynamics of opening / closing leadership behavior in Innovation Process**

The previous discussion reveals that leading an innovation processes asks for a different set of leadership behaviors, that either support exploitative or explorative activities. Opening and closing behaviors demonstrated by leaders were both found to be present over the course of innovation, although in different intensity. In this regard, the results reveal that especially at the beginning, in the stage of idea generation, a focus on opening leadership behaviors should be demonstrated, whereas the need for closing behaviors increases towards the end of the process. Nevertheless, none of the particular leadership behaviors are shown exclusively in one of the referring phases of the innovation process and hence, it can be concluded that the two are inseparable and rather complement each other. As a result, explorative and exploitative activities should be balanced during the process, although the focus and intensity continuously changes along the innovation process. In general, this finding can be referred to the assumption by Rosing et al. (2011), who stated that closing and opening behaviors are complementing each other and therefore underline the statements of previous studies, that exploration and exploitation are inseparable and that individuals have to show both, adaptability and alignment (Gibson and Birkinshaw, 2004). Consequently, beside the necessity to change between opening and closing behaviors over the course of innovation, the single phases ask for a different mix of leadership behaviors (Zacher & Rosing, 2015). This means that leaders are required to continuously adjust their behavior to the intended individual behavior of their employees and to the specific needs of the current situation. Hence, it is the responsibility of the leader to choose the appropriate leadership behavior in a specific situation.

Another finding is that primarily in the idea creation stage, there is rather a focus on opening leadership behaviors while in the idea implementation phase a mix of both, closing and opening leadership behaviors are required. This first of all supports the previously discussed
literature, that especially at the start of the innovation process creativity and explorative activities are required (Rosing et al., 2011), and that the innovation leader should enable employees to act independently and to create various new ideas, that are assessed at a later stage (Cheng and Van de Ven, 1996; Oke et al., 2009; West, 2002).

However, the outcomes of this master thesis are also in contradiction to already existing literature. Although the results support the findings that along the innovation process, closing behaviors are increasing and getting more important especially towards the end of the process, this study additionally highlights the necessity to have a mix of both leadership behaviors within the implementation stage. According to the analysis, the increased need for closing leadership behavior can be located during the switch from the idea generation phase to the exploitation and actual implementation phase. In this regard, the employees interviewed argued, that especially for the realization of previously generated ideas it is necessary that the leader is able to make decisions, to set a clear structure and to define the next steps to give an overall orientation. Further, the interdependencies between different departments and teams increase towards the end of the entire process, as there are increased deadlines and scarce resources that need to be managed and hence, there is the necessity to show more closing behaviors. Those findings refer to the statement of Cheng and van de Ven (1996), who emphasize the periodic and orderly patterns of different activities along a specific project, although those leadership behaviors were mentioned to be rather demonstrated in a punctual than in a permanent way.

On the other side, the results show that beside the importance of closing behaviors for the realization of ideas, opening leadership behaviors are essential during this stage too. This finding rejects the statement by Rosing et al. (2011), that the idea implementation phase demands leaders to focus on closing leadership behaviors. In further detail, although in general it is assumed that explorative behaviors are rather associated to creativity and exploitative actions are related more to the implementation stage, there is also the necessity to be exploitative during the creativity phase, as it is crucial that created ideas are not only new but also beneficial for the organization and hence, this also asks for the exploitation of already existing know-how and knowledge. This also holds true conversely, as during the idea implementation phase, creative and explorative activities are required as well (Rosing et al., 2011). In specific, the results show that among others, especially the opening leadership behaviors like creating an open communication and discussion atmosphere (O8), being present, interested and supportive (O13) and giving employees a high degree of autonomy (O1) are essential for the realization of ideas.
The need for the innovation leader to be interested, supportive and present during the idea implementation phase can be argued with the results that during the implementation phase, there are often occurring unexpected problems. In order to manage those problems successfully, explorative behaviors and activities, that support quick problem-solving, are needed. Hence, if the leader is present, discusses and challenges generated solutions of employees and gives them feedback and support, this would improve the innovation outcome. This finding is also related to the increased need for open communication and the need to allow errors and encourage employees to learn from previous made mistakes.

Further, the importance for increased autonomy of individuals or teams can be argued by the findings that leaders may do not have the capacity to control the innovation process in detail and by the need of organizations to speed up the process. The results show that often innovations failed due to being too slow in decision-making and in the implementation of ideas. Hence, if leaders delegate responsibilities to the team and empower them to make decisions independently, this can help to improve innovative outcome. This is consistent with the studies by Dougherty (1998) and McDonough and Barczak (1991), that stress out the need to forward autonomy to team members and to give them the ability for independent decision-making. Moreover, the necessity of autonomy and independency can be referred to the concept of contextual ambidexterity, as the authors Gibson and Birkinshaw (2004) state that ambidexterity can be accomplished successfully if employees are encouraged and enabled to decide independently whether to focus on alignment or on adaption in particular situations. This given authority again positively influences the innovation outcome of employees and highlights the importance of focusing on both, exploitative and explorative activities over the course of innovation (Tushman & O’Reilly, 1997).

Consequently, the findings of this master thesis do not point out an explicit distinction between the two phases of the innovation process. Hence, it can be claimed that the two referring phases are overlapping and therefore are interwoven and interdependent rather than exclusive. This finding is in consistency with already existing literature. As illustrated by Anderson et al. (2004), the phases of creativity and implementation are inherent and do not proceed in a linear manner and hence, cannot be separated into different stages. Additionally, Rosing et al. (2011, p.966) argued that alternatively to distinct phases, it is often the case that unpredictable circumstances occur unsteadily. The results of this master thesis support the statement that it is impracticable to separate exploitative and explorative behaviors and highlight the correlation between ambidextrous leadership and contextual ambidexterity. In this regard, the concept of contextual ambidexterity points out that during the innovation process, exploitative and explorative activities and behaviors are shown by
individuals and teams in an unpredictable manner (Rosing et al., 2011). Hence, the timely occurrence of specific events cannot be predicted easily and therefore, predefined actions need to be adapted along the innovation process. These findings further require the leader to stimulate and support both, exploitative and explorative activities demonstrated by employees, which can be accomplished through the concept of opening and closing leadership behaviors as introduced by Rosing et al. (2011).

However, while the authors Rosing et al. (2011) point out the requirement of the leader to change between the two referring leadership behaviors depending on the specific needs of the situation, the results of this master thesis rather recommend that leaders should balance both leadership behaviors in such a way, that both behaviors are presented simultaneously, although in a different intensity and degree depending on the circumstances.

Preference for displaying behaviors in a stable manner

Referring to the previous discussed findings that the two innovation phases cannot be separated sharply and that there is the necessity to demonstrate both, opening and closing leadership behaviors, although to a different degree according to the circumstances, the single phases can be seen as overlapping. In this context, employees prefer leadership behaviors that are demonstrated in a stable and constant way over the entire process of innovation. This statement can be underlined by several findings of the conducted qualitative research. First of all, the model, as illustrated in figure 4 in chapter 4.2, points out that for most of the mentioned leadership behaviors it was not possible to assign them to a specific innovation phase. For instance, the stated need for leaders to create a working culture, that allows making mistakes and error learning, can be related to the findings of Nemanich and Vera (2009). In this regard the authors argue that, if the leader demonstrates transformational behavior, it positively influences the accomplishment of organizational ambidexterity by creating a learning culture. This also correlates to the finding that the behavior “sanctioning errors” has not been mentioned at all during the interviewees as an item that improves innovative outcome.

Further, the necessity to demonstrate behaviors in a more constant way can also be underlined by the conducted interviews, as each interviewee mentioned the desire for more constancy and persistence. In this context, it is essential that the leader shows constant commitment towards innovation and strongly supports the created ideas of employees. If the leader steps back or decreases the support and interest right after the idea is submitted by the employee, this will cause disappointment and the feeling of being lost, and will further lead to the situation that employees lose track and ideas are not implemented successfully.
Another finding in this thesis that supports the statement of constant leadership behavior is the item Change in Management. This factor was present in all interviews and seems to have a crucial influence on the innovative outcome of individuals and teams. It is stated that changes in management come with changes in strategies and processes. Moreover, current innovation projects and ideas are not further considered as the new management does not have a relation to the existing strategies and projects. This leads to uncertainty and a feeling of being lost by employees and as a result, leads to decreased innovative behavior. The item change in management can also be referred to the preference for constant leadership behavior, as frequent changes in behavior as well as in management result in employees feeling lost as well, as they do not know what to expect from the leader.

As a consequence, the findings of this master thesis suggest that leaders should demonstrate leadership behaviors in a more constant way, which is in contradiction to Rosing et al. (2011), who rather suggest to continuously change among opening and closing leadership behaviors. However, the results from the interviews show that it is not always practicable and realizable to behave in a constant way and that further, changes rather happen gradually. Hence, there is the necessity for future studies to further analyze the specific factors or circumstances that cause the leader to change the behavior throughout the innovation process.

To sum up, the previous discussion shows that both leadership behaviors are necessary to maximize innovation outcome. Further, as the findings highlight that it is beneficial if behaviors are shown on a more permanent basis, it can be said that both, opening and closing behaviors are important and should be demonstrated along the entire innovation process, however in varying intensity and degree, according to the circumstances. Moreover, in order to maximize the innovation outcome, the results of this master thesis suggest a balance between opening and closing leadership behaviors rather than to flexibly change between them, as stated by the initial concept of Rosing et al. (2011).
5.1. Implications for theory

This study outlines the importance of leadership behaviors on influencing the individual and team innovation outcome. Although it was already known that exploration and exploitation are both important components for innovation and that leaders should encourage both by changing between opening and closing leadership according to the situation (Rosing et al., 2011), the insights provided by the concept of Rosing et al. (2011) have not yet been put into practice.

In the following, several points are mentioned that can be seen as the main contributions in regard to the role of leadership behavior for innovation outcome: First of all, it has been remarked that overall, there is a preference for opening leadership behaviors throughout the innovation process. Although this finding corresponds to the studies like Zacher and Rosing (2015), who stated that innovation outcome is high when leaders focus on showing open leadership behaviors, it is also in contradiction with the findings of other researchers like for instance Andriopoulos & Lewis (2010), who rather highlighted the importance of closing leadership behaviors.

Moreover, it was pointed out that especially for the creation of ideas, opening leadership behaviors are required, while the implementation stage rather claims for a mix of the two referring leadership behaviors. On the one side, these findings are in accordance with existing literature that highlights that especially at the beginning of an innovation process, more creative and explorative activities are required, whereas towards the end of the process the need for exploitative behavior increases (Rosing et al., 2011). Nevertheless, although the results of this master thesis underline the increased demand for closing leadership behaviors towards the end of the process, the findings additionally reveal that for the implementation of created ideas, rather a mix of the two referring behaviors is needed.

One more point that is contributing to the existing literature is the finding that stable and persistent leadership behavior is favored by employees and increases the employee’s commitment and motivation towards innovation. If the behavior of leaders is changing permanently, followers rather get confused and lost and hence, act more careful and reserved in showing innovative behavior. These findings are in contradiction to the model created by Rosing et al. (2011), that points out the necessity that the leader flexibly changes between opening and closing leadership behaviors throughout the innovation process. In contrast, the findings of this master thesis rather recommend to demonstrate leadership
behaviors in a stable way by balancing opening and closing leadership behaviors, however in varying intensity and degree, according to the actual situation.

5.2. Implications for practice

As this master thesis analyzes the influence of leadership behavior on innovation outcome, several practical implications can be deviated and used by Human Resource (HR) departments, managers and leaders, in order to get a better understanding how to positively influence the innovation behavior of employees and as a result, maximize innovation output.

Train Leaders

The results of this master thesis point out that the leader has a major impact on the innovative behavior and outcome of individuals and teams and hence, there is a significant responsibility attributed to the leader as well as to the overall organization. Therefore, it is crucial that leaders possess the skills needed to ensure high innovative outcome. As a result, as Probst et al. (2011) confirms within their study, there is an important role of the HR department within an organization to promote and further develop ambidextrous leadership and hence, the HR department is demanded to offer adequate development programs that train leaders on all levels on behaving ambidextrous and that address the specific requirements of innovation leadership.

As the results of this master thesis show, besides management skills, the leader should also focus on the development of soft skills to positively influence the innovative behavior of individuals. Therefore, despite the need to define goals, strategies and to structure tasks, a leader should be able to act as a visionary, show interest and actively support employees in the generation and implementation of ideas throughout the innovation process. In this context, leaders should also be trained in how to positively use the given differences within a team and how to motivate employees to create and realize creative ideas through effective teamwork. Resulting, leaders need to be educated how to generate effective and highly innovative teams by building on the individual strengths of the single team members.

Going back, it is the responsibility of the HR department to assess the leadership skills and to further train and develop them to ensure that employees demonstrate innovation behavior. The establishment of an annual performance review and regular leadership skills assessments as well as regular peer learning sessions could encourage the awareness and exchange of leadership experiences and challenges in different situations and therefore,
could help leaders to further develop their competences. Also, programs that prepare employees in advance to become leaders and to develop the needed skills before taking over a management position, can help them to feel confident and to behave constant, while at the same time, adapt the leadership behavior if required. Hence, regular and practice-oriented trainings towards the awareness, that different circumstances and employees require a difference in leadership style and behavior, should be offered and supported.

**Practical Implications for Change in Management**

Another thing, HR departments often have an influence on, is the frequency of changes on the position and hence, also the changes in management and leader’s positions. As the results reveal, frequent changes within the management have a negative influence on the innovative behavior due to several reasons. First of all, changes in management often come along with changes in strategies and processes. In this context, actual innovation projects and ideas are not considered any more, as the new management does not have a relation to those strategies and hence, are not further pursued. This leads to uncertainty and a feeling of being lost by employees and as a result, leads to decreased innovative behavior. As a result, changes in management especially during ongoing innovation projects should be prevented in general. However, if changes in management occur, the organization should make sure that actual strategies, visions and goals are further pursued, in order to create a more stable and constant behavior in management and thereby, ensure that ideas and innovation projects are implemented successfully.

**Demonstrate stable leadership behaviors**

The change in management can also be compared to the need to demonstrate leadership behaviors in a more stable and consistent way, as the findings show that frequent changes in leadership behavior will cause confusion and disappointment as well as the feeling of being lost, as they do not know what to expect from the leader. Instead, employees desire more persistence and constancy in demonstrated leadership behaviors which in turn, also increases the employee’s commitment and motivation towards innovation. In this context, it is crucial that the leader shows constant commitment towards innovation and strongly supports the created ideas of employees over the entire innovation process.

**Assign Challenging Assignments**

The findings of this study further reveal that, in order to make sure employees feel motivated and to further encourage innovative behaviors, challenging tasks should be assigned to employees. This encourages employees to find solutions independently, to allow them to experiment with different ideas and to explore unknown paths through thinking outside of
the box. Hence, by giving employees ambitious goals and assignments, the innovation behavior and the overall innovation output of employees can be increased.

**Allow more time to set framework**
Another practical implication is to increase the available time resources of leaders, especially at the beginning of an innovative process, to give time for the creation and definition of desired outcomes and goals and to further allow the leader to better get to know the team members. The improved relationship would also lead to the ability to better structure tasks and define responsibilities based on the employee’s strengths and competences. On the other hand, the results highlight the importance to give employees sufficient available time resources as well, as it enables them to create new and beneficial ideas. In the interviews it was often stated, that employees need time and a relaxed atmosphere, to be able to break out of the daily routine and rush of the daily business and to get into a state that allows to experiment with different ideas.

Further, the results show that often innovation is not the result of a single idea, but rather is the outcome of trying out and experimenting and thereby, generates a loop that synthesize lots of different ideas. In this sense, it is important that leaders make sure that employees have space to try out different approaches, combined with a culture that allows making errors and that encourages error-learning. For instance, the leader could put this into practice by defining a day or percentage of time, in which employees should put aside their daily tasks and where there is time for creativity. If possible, the leader could also create innovation rooms that allows a local distinction between working on daily routines versus on innovative tasks. Besides, leaders should allow meet-ups in the kitchen, where employees informally discuss ideas by a cup of coffee, as this creates a space for possibilities and new ideas and further, supports the innovational behavior of individuals and teams.

**Increase decision-making power**
Another aspect that should be focused on by leaders is the necessity to give increasing decision-making power to individuals or teams. The findings of this master thesis show that leaders may do not have the capacity to control the innovation process in detail and that there is the need to speed up the process, as it was often mentioned that innovations failed due to being too slow in decision-making and in the implementation of ideas. Hence, leaders should delegate responsibilities and autonomy to the team and thereby, empower them to make decisions independently, as this can help to improve innovative outcome.
More decision-making autonomy should be also given to single project leaders in regard to team and staffing decisions. In this regard, if leaders are able to choose the project team members based on their assessed strengths and previous experiences to approach problems, this would benefit the overall quality of teams and innovation outcome.

Further, the leader should encourage and enable the employees to decide independently, which situation requires a focus on alignment and in which situation adapted behaviors are demanded, as this is expected to result in a higher degree of innovation outcome as well.

**Practical Implications for Idea Management**

Another practical implication is to rethink and improve idea management and suggestion systems, as those approaches often decrease the employee´s motivation to submit new ideas and further, hinders idea implementation. Although the idea management process may generate new ideas and can result in high cost or time savings for the organization, the findings show the necessity to give regular feedback and to reward the innovative behavior of employees in a more personal and regular way. Hence, leaders and managers should be aware of each idea and suggestion of employees and should reward them by giving compliments and commendations in person. This is worth more than any extrinsic motivator like additional payments or prizes.

Further, the findings of this master thesis reveal that during the innovation process, often too much time is lost until the idea is actually implemented, which negatively effects the success of the implementation. In this context, idea management systems often tend to give feedback and further, pursue generated ideas only some significant time later, which leads to employees losing interest and risks the successful implementation of generated ideas. Hence, to increase overall innovational behavior, the results recommend providing autonomy and an open and creative working environment, instead of guided idea workshops and idea management systems. Thereby, employees would be encouraged to participate and act innovative throughout the innovation process, instead of punctually and triggered by extrinsic motivators. Resulting, it is recommended to use idea management and suggestion systems not as the main and only source for idea generation and motivation. Instead, it is suggested to make individual work behavior an important topic on the management and leadership level in general and to increase the awareness of other prioritized possibilities that encourage employee´s innovative behavior, like regular face-to-face feedback sessions.
5.3. Limitations

The following chapter initially reflects on the limitations that come along with the chosen research method and the case company.

Regarding the chosen method of a qualitative research it needs be stated that through qualitative research, no generalizable results can be produced (Lee, 1999). Therefore, the results and findings of this master thesis are only suitable and specified towards the studied events within the chosen case company and can vary depending on several factors, like for instance the industry, the size of the company or the particular cultural environment. Hence, the interpretation needs to be done in consideration of the individual context. As a result, the findings of this thesis are only applicable to other contexts under specific conditions.

A further limitation towards the chosen research design that needs to be pointed out is that the interpretation of the statements in the interviews are bound on the subjectivity of the author of this master thesis. For instance, another researcher with a different background may would do the coding of the interviews in a different way, which could result in partially different findings and conclusions.

Another limitation can be stated regarding the moderate number of the interviews carried out. Although the population interviewed consists of employees and leaders from different hierarchy levels, with different backgrounds and departments, different age and the length of time within the company, along with a mix in gender and internal / external stakeholders, the reliability of the findings could be improved and chances for subjective and self-reported bias could be decreased by including a higher number and a more diverse mix of internal and external stakeholders in future research.

In regard to the research design, it should be stated that the findings could be low in reliability and validity due to the less structured and open approach that was chosen in this master thesis. In this context, the findings of this master thesis can only be tested and verified by conducting another study, as the actual results can hardly be reproduced (Corbin & Strauss, 1990). Additionally, this master thesis also faces another limitation of the selected research design, which is the risk of absent information due to the subjectivity of the situations.

In addition, it needs to be highlighted that participants seemed to have difficulties at some occasions to openly communicate and share specific situations and historical events, as often it was asked by the interviewees to pause the audio recording during the interviews.
In future research, this gap may could be closed by using an additional research design for full data acquisition.

Besides, the cultural context should be pointed out as due to the location of the case company, the analysis was done only in the Western-European environment and hence, the use of the findings might be limited in other countries and cultural environments.

Finally, the timeframe of the investigation could be stated as a limitation as well. As the results of this master thesis show, changes in behaviors of leaders do occur in a gradual rather than in a radical way. Therefore, the variety and changes in leadership behavior should be evaluated over a longer time frame, to ensure more objective and deeper insights into this complex research topic.

5.4. Future Research

As Rosing et al. (2011) already pointed out within their study, the conception of ambidextrous leadership is at the very beginning and hence, there is still the need and room to further evolve the situational contingencies and the complex character of the innovation process, and to practically as well as critically analyze this topic. Hence, future research should emphasize the specific factors or situational events that cause a switch in the behavior of leaders over the course of innovation. In order to address this need, different research approaches like diary studies or situational interviews and judgment tests could be used to examine the daily fluctuations of leadership behaviors based on the specific requirements of the situation and to receive more generalizable results (McDaniel et al., 2001). Another possibility would be to observe leadership behaviors and the employee’s reaction over a wider time horizon, by which the instability and temporal adaptability of leadership behavior could be assessed.

Further, neither this master thesis nor the study investigated by Rosing et al. (2011) addressed the different degrees of innovativeness, which could result in a difference in the role and evolvement of leadership behavior throughout the process. Hence, future studies should focus on the difference regarding the desired innovative outcome.

Future research could also expand the qualitative research on ambidextrous leadership to other industries and further, use case companies with a different company size, as for instance organizations in a highly innovative industry or start-ups. Besides, also the
organizational culture as well as the individual character seems to influence the individual innovation behavior (Bledow et al., 2011). Resulting, organizational cultural differences should be taken into account by future studies.

In connection with the company culture, future research could also extend the results to other countries with a different cultural context, as the work mentality and general attitude towards innovation and leadership may differ. The described need for examining innovation and creativity in a more international context was also stated by Rank et al (2004), who mentioned that “cultural values likely influence if and how creativity and innovation are enacted and cultivated in different countries” (p.524).

A major influencing factor often mentioned during interviews was the difference in the overall leadership of an organization, differentiated between managed by the family versus managed by an external hired board. As the results revealed that innovation outcome was partially better, and the innovation motivation of employees was higher during the time the family managed the company, there should be further research on this impacting factor.

Related to the difference in management, the findings also revealed that a frequent change in management and hence, a frequent change in leadership behavior and strategies have a negative influence on the innovation behavior of employees and on innovation outcome. Hence, for future studies it is necessary, to further take additional factors into account that are correlating tremendous with the leadership and individual innovative behavior and are influencing these factors as such, rather than examining the influence of leadership behavior as an isolated factor.

Finally, the last factor identified that needs to be analyzed by future studies is the previously presented practical gap, whether and to which extent the competence of behaving ambidextrous can be educated or if instead, if it is a characteristic of an individual that is given. Hence, future research should examine characteristics and skills that are required by a leader in order to be able to successfully change between open and closing behaviors in a flexible way. Those results could further support HR departments in the right nomination and further development of managers and leaders.
6. Conclusion

For the final conclusion of this master thesis, the highlights and answers to the defined research questions are summarized. One of the goals of this thesis was to give an overview about specific leadership behaviors that influence the innovative performance of individuals and teams. In this regard, the analysis reveals that although both leadership behaviors are essential for superior innovative outcome, a preference of opening leadership behaviors has been identified. This emphasizes that the leader is most of all assigned to transformational and inspirational leadership combined with supporting and encouraging tasks in the innovation context. Hence, referring to the behavior of innovation leaders, it is especially of importance that leaders act interested and supportive towards the ideas of the employees. Beside the preference for opening leadership behaviors along the process, specific closing behaviors are crucial for individual innovative behavior. In this context, the leader needs to give an overall vision and orientation through a pre-defined strategy and goals, to set the overall frame and let employees know to which extend and in which way they are allowed to act independently and bring along innovative ideas.

Regarding the question of the evolvement of the particular leadership behaviors along the innovation process, the analysis shows that the innovation phases require a different mix of leadership behaviors. While during the idea generation phase, leadership behaviors focus on opening leadership, the idea implementation phase rather requires a relatively balanced distribution of both leadership behaviors. Hence, the diversity of behaviors was highest during the implementation stage, which is interpreted as the need for high ambidexterity especially in this phase.

On the overall level it can be pointed out that closing behaviors increased, while opening behaviors were stable throughout the innovation process, although the focus of the demonstrated opening leadership behaviors changed. While at the start of the innovation process, the referring opening leadership behaviors tend to encourage experimenting, out-of-the-box thinking, creativity and open discussions and exchange, the second stage of the process rather requires opening behaviors that demonstrate commitment, presence, interest and support of the leader, combined with giving employees autonomy and allow them to be risk averse.

Referring to the findings that the two phases of the innovation process are not sharply separable and therefore, there is a need to demonstrate the two leadership behaviors in both phases of the innovation process, the single phases can be defined to be overlapping.
In this context, it was especially highlighted that employees need the leader to demonstrate leadership behaviors in a more stable way and hence, it can be concluded that employees prefer leadership behaviors that are displayed in a constant manner.

Besides the different requirements along the innovation process, there are indications for other contextual factors that seem to affect the innovation behavior and decision, which leadership behavior is required to be demonstrated, like the frequency of change in management as well as the influencing factor, if the company is led by the owners or by an external management.

Summarizing, the two particular leadership behaviors need to be demonstrated simultaneously and in a rather constant and stable way, in order to positively influence the innovative performance of teams and individuals. Hence, the research contributes to the existing literature by underlining that instead of changing between opening and closing leadership behaviors, as proposed by the initial model, an integrative approach of balancing opening and closing leadership behaviors and therefore, show rather stable leadership behaviors over the entire innovation process, is suggested. In this regard, open and closed leadership behaviors should be present simultaneously but with a different intensity. Concluding, if the execution of ambidextrous leadership is seen as the successful situational adjustment of the two diverse leadership behaviors, then this master thesis indicates a positive correlation between the demonstrated leadership behavior and the innovative performance of individuals and teams.
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