

MASTER THESIS

“WHAT ARE THE ANTECEDENTS AND
OUTCOMES OF SELF-PERCEIVED
ENTREPRENEURIAL LEADERSHIP AS
REPORTED BY LEADERS?”

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DOCUMENT NUMBER

Final version 01

18-05-2018

UNIVERSITY OF TWENTE.

Management Summary

Leading in a turbulent time and an increasingly competitive and entrepreneurial economy, a new form of leadership is required which has been termed *entrepreneurial leadership*. Key themes in the entrepreneurial leadership literature indicate a lack of perception studies, while leadership perception is seen as highly important when leaders that understand their own perceptions influence the way in which they behave like a leader and subsequently influence thereby the behavior of their employees, and even influence the outcome in term of firm performances. Therefore, this study aimed to explore two goals from a leadership perspective. First, if leaders' entrepreneurial behavior is influenced by their perception components (affective, cognitive, behavior), and secondly if the entrepreneurial behavior of leaders has an effect on (perceived) firm performances. Qualitative interview results were translated by a generalization design into a quantitative dataset of 96 respondents and analyzed by conducting both a multiple linear regression and an ordinal logistic regression. The results showed that the attitude components of affective (e.g. social intelligence) and behavior (e.g. leadership style, TFL) are positively and significant related to the share of entrepreneurial leadership in total leadership behavior of leaders. The perception component cognition (e.g. past experience) seems not to be significant related and therefore seems to be less important in terms of predicting the share of entrepreneurial leadership in the total leadership behavior of leaders. In turn, the share of entrepreneurial leadership influencing the outcome in terms of organizational performances. Statistically significant relationships are shown between both the share of entrepreneurial leadership and the economic performances of the firm as well as for the outcome of employee commitment performance of the firm. Additionally, there is no significant relationship towards the outcome of the social firm performance, although there is positive correlation between the share of entrepreneurial leadership and the social performances of the firm. So, based on the perception of leaders it is recommended to increase the overall share of entrepreneurial leadership in their total leadership behavior which eventually increase the (perceived) firm performances. To come to a higher share of entrepreneurial leadership, this study recommended to focus on socially driven components where both affective (social intelligence) and behavior (TFL) are socially driven and contribute significantly to the share of entrepreneurial leadership in the total leadership behavior of leaders.

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1. Introduction

Leading in a turbulent time and an increasingly competitive and entrepreneurial economy, a new form of leadership is required that is termed entrepreneurial leadership (Gupta, MacMillan, & Surie, 2004). Tarabishy, Solomon and Fernald (2005, p. 21) describe entrepreneurial leadership as *“a new style of evolving leadership ... which offers a break from the past and movement into the future”*. Hence, entrepreneurial leadership is often seen as a link between leadership activities such as vision communication, decision making, problem solving and encouragement together with entrepreneurial activities such as risk-taking, innovation and proactiveness to foster continuous innovation as a competitive advantage (Tarabishy et al., 2005; Kuratko, 2007).

The publications dealing with entrepreneurial leadership ranges widely, nevertheless the literature show some key themes and patterns in order to understand the paradigm, such as; different leadership styles derived from or seem more effective in the entrepreneurial setting; the role of context-industry or culture; personality traits; and environmental influences (Azam Roomi & Harrison, 2011). Despite considerable attention to these key themes and patterns of entrepreneurial leadership, the literature indicates a lack of perception studies towards the paradigm (Azam Roomi & Harrison, 2011). Lee, Martin, Thomas, Guillaume and Maio (2015) indicate the importance of filling up this literature gap by stating that leadership perception is seen as highly important while leaders that understand that their own perceptions influence the way in which they behave, and subsequently influence thereby the behavior of their employees.

Leadership perception studies typically measure the leader's leadership style by asking followers whether or not their leader acts in a way that represents that style of leadership (Lee et al, 2015). Thus, it can be argued that the vast majority of leadership research is based on the measurement of follower's perceptions of their leader. Although, in organizations, beside the perceptions of employees, perceptions of leaders and managers shape the climate and effectiveness of the working environment (Otara, 2011). Hence, Otara (2011) argued that perception is the way we all interpret our experiences, and that we frequently forget this important element that should be seen as vital for any leader while having the right perception will become a significant skill for any effective leadership. Therefore, perception should be seen as a pertinent tool in leadership and sets great leaders apart in their ability to manage perceptions in the process of handling people and organizational issues. As claimed by Lee et al. (2015), leadership perceptions can also be considered as an attitude consisting of three attitude components (affective, cognitive and behavior), and is supported by several other studies (Katz & Stotland, 1959; Rosenberg & Hovland, 1960; Olson & Zanna, 1993; Zanna & Rempel, 2008).

In response to the lack of perceptions studies towards the paradigm of entrepreneurial leadership, this explanatory research aims to explore two goals. First, if leaders' entrepreneurial behavior is influenced by their perception components as introduced by Lee et al. (2015), and secondly if the entrepreneurial behavior of leaders has an effect on perceived firm performances. This leads to the following research question to be answered: *“What are the antecedents and outcomes of self-perceived entrepreneurial leadership as reported by leaders?”*. This study seeks to contribute to the lack of perception studies focusing on the perception of the entrepreneurial leader, and besides, firm performances. Furthermore, it gives the scientific literature a new way and a basis for future research. We address the call that the perceptions of leaders are often forget and must be seen as a vital skill (Otara, 2011). Therefore, it would be an interesting subject to better understand how

leadership perceptions influence entrepreneurial behavior and in turn influence perceived firm performances. The results will be practical relevant where the results show how the leader perceptions influence their own entrepreneurial behavior, and how this finally influence the perceived firm performances. Besides, by using the leader point of view, these outcomes will be directly useful in practice, and gain advantage of these results in practical situations. If leaders understand that their own perceptions influence the way in which they behave like an entrepreneurial leader and subsequently influence thereby the behavior of their employees, then they can develop an insight into how these perceptions can be formed and how to change them (Lee et al., 2015; Day, 2001).

This paper is structured as follows: in the next section, existing literature on leadership perception, entrepreneurial leadership, attitudes and behavior, and the relation between EO and firm performance will be reviewed. Deriving from the theory an established framework is presented, which will be tested in this study. Afterwards, the sample and the original qualitative approach to collect, and the quantitative study to examine the data will be described in the methodology section. Based on the analysis of the data, results with regard to the research question will be presented and subsequently discussed. Finally, conclusions will be drawn to answer the research questions, along with limitations and recommendations for future research as well as for practice.

2. Theory

2.1 Entrepreneurial Orientation and Leadership

2.1.1 Entrepreneurship and Leadership

To explore entrepreneurial leadership as a new paradigm, it is important to first create an understanding about both terms of entrepreneurship and leadership. From a firm-perspective, Miller (1983) introduced in his study on entrepreneurship a definition for entrepreneurial firms incorporating specific traits. These firms are considered to have entrepreneurial dimensions by taking risky opportunities (risk-taking), to be the first in the market for new products (proactiveness), and to be innovative in such product markets (innovativeness). Based on Miller (1983), Lumpkin and Dess (1996) extended the three dimensions of entrepreneurship into five dimensions of entrepreneurial orientation (EO), by adding the two dimensions autonomy and competitive aggressiveness. EO has been defined as the way entrepreneurship is done including the processes, tasks and decisions by finding new opportunities to build a new entity, ventures, and products, to gain new knowledge and capabilities by creating a learning organization to diversify and to innovate (Lumpkin and Dess, 1996; Lee & Peterson, 2001; Real, Roldan & Leal, 2014; Knight, 1997).

While the introduced EO dimensions refer to activities taken by entrepreneurial companies, the ideas of risk-taking, proactiveness and innovativeness were later taken to describe the traits of entrepreneurship in general and of an individual entrepreneur. Some scholars even see entrepreneurship more of an individual characteristic than of a firm (Tarabishy, Solomon & Fernald, 2005; Kuratko, 2007). Therefore, the behaviors associated with an entrepreneurial firm are nowadays more associated with the behaviors of individuals. Prior studies of Davis (2007) and Kroeger (2007) suggest that entrepreneurial behaviors of individuals enhance the EO of firms through integration of the EO dimensions. Such individual entrepreneurial behaviors are taking risks, being innovative, independent, goal-oriented and seeking for opportunities (Tarabishy, Solomon, & Fernald, 2005). All of them can be found in the introduced dimensions of entrepreneurial firms by Miller (1983): risk-taking, innovativeness and proactiveness. Those three dimensions of entrepreneurship are considered to be integrative, meaning they can be combined in an individual and balanced way while all should present to be considered an entrepreneur (Gupta, MacMillan, 2004; Kuratko, 2007). Note, that these individual EO dimensions originate from a business context, and therefore we assume that we cannot claim that the individual EO dimensions relate to other contexts.

Concentrating on the leadership perspective, leaders have a specific set of characteristics and attributes. On an individual level, traits of leaders are defined as: having confidence, the will to be a leader and to motivate others, the right influence on employees within the company, being honest and rational with a good understanding of the environment and management (Tarabishy, Solomon, & Fernald, 2005). However, the development of leadership is considered in a social network at a more collective level (Day & Harrison, 2007). Therefore, supportive social and firm structures are needed that contribute to interactions and relationship development between individuals, resulting in a development of leadership (Leitch, McMullan, & Harrison, 2013). Yet, both concepts of leadership and entrepreneurship have an individual perspective describing specific tasks of individuals, and subsequently incorporate the idea of having a supporting culture and structure to be able to perform such tasks.

2.1.2 Entrepreneurial Leadership

Cogliser and Brigham (2004) considered entrepreneurial leadership on the intersection of entrepreneurship and leadership. This is underscored by several studies that identified the traits and behaviors of entrepreneurial leaders, by combining the traits of leaders and entrepreneurs (Chen, 2007; Tarabishy et al., 2005; Vecchio, 2003). Moreover, Tarabishy et al. (2005) add that the term entrepreneurial leadership is seen as a tautology by many people, by emphasizing that entrepreneurship and leadership having as good as the same meaning. Stuart (1987) identified entrepreneurs on an individual leadership perspective as being tolerant of uncertainty, having communication and relationship building skills, being encouraging, creative, independent and flexible. All these traits originate from the EO dimensions of risk-taking, innovativeness, proactiveness and autonomy skills of entrepreneurs (Lumpkin and Dess, 1996; Miller, 1983), along with communication and motivation skills of leaders. In addition, Nicholson (1998) tested entrepreneurial leader characteristics against those of normal managers and the general public. The results state that entrepreneurial leaders are more confident, competitive, thoughtful and less vulnerable, whereas competitive traits are linked to the competitive aggressiveness dimension of EO (Lumpkin & Dess, 1996). Furthermore, in the opinion of Gupta et al. (2004) characteristics that are relevant for entrepreneurial leadership are those that enable a leader to mobilize the capacity to meet the entrepreneurial challenge. Therefore, they drawn up five points that are critical to have as an entrepreneurial leader:

1. Extract exceptional commitment and effort from organizational stakeholders
2. Convince them that they can accomplish goals
3. Articulate a compelling organizational vision
4. Promise their effort will lead to extraordinary outcomes
5. Preserve in the face of environmental change

Despite the considerable amount of research on the influence of these factors on entrepreneurial behavior, defining a universal “psychological profile” of the entrepreneur have led to non-conclusive evidence (Brandstätter, 2011; Shane, Locke & Collins, 2003). Recent contributions suggest this may be due to the fact that there are differences within the motivations and personality traits, and largely outnumber the similarities among them. Therefore, an approach aimed at identifying an array of single personal attributes that distinguish between different entrepreneurial types is unsuitable to capture the complexity of the phenomenon (Gartner, 2010). To deal with this issue, a configurational approach to personality can be used. This approach suggests that personality traits in combination influence the individual behavior, which means that each personality factor should always be considered in interaction to other factors. As a consequence, different combinations of factors could lead to the same outcome.

2.2 Leadership Perception

Psychological investigation of human behavior began with the study of perception in 1879, by Wilhelm Wundt in Germany. Since, it has been significant in understanding human behavior. Importantly, is the revelation that no two people experience and interpret sensations, situations, or their own feeling the same way. In addition, to external influences people also react to internal feelings, ideas and expectations based on past experience and other personal experiences they might have (Otara, 2011). Hence, Otara (2011) highlight the effect of

perception in leadership within an organization, and state that the perception of managers and employees shape the climate and effectiveness of the working environment. Moreover, managers should realize that all individuals have different perceptions, and that by using their perceptions they are not by definition effective and efficient leaders, while their followers may have a very different perception.

In this study, we follow Lee et al. (2015) in considering that leadership perceptions to be considered as an attitude. Lee et al. (2015) gives several main benefits for this approach. First, the application of attitude research to leadership perceptions gives new and important insights into aspects of its underlying content, structure and functions. Second, attitude research has extensively examined the relationship between both implicit and explicit attitudes and consequences such as information processing, persistence and behavior. It can therefore, be utilized and create an understanding of the link between leadership perceptions and work outcomes such as performance (Ajzen, 1991). Third, the greater understanding of leadership perceptions that arise from using an attitude framework gives many practical implications concerning leadership development.

It has been suggested that evaluative responses can be classified into affective, cognitive and behavioral components of an attitude (Katz & Stotland, 1959; Rosenberg & Hovland, 1960; Zanna & Rempel, 2008) Olson and Zanna (1993) agree, by stating that most attitudes researchers agree that affective, cognitive and behavioral antecedents of attitudes can be distinguished by using this model of attitudes. In general, people who have a positive attitude toward an attitude object, tend to have aligned attitudinal components, whereby cognition, affect and behavior are uniformly favorable towards the object (Eagly & Chaiken, 1995). However, people with a negative attitude regarding an attitude object have unfavorable cognitive, affective and behavioral components that express un-favorability towards the object. In the context of the current study it is important to determine the perception components (i.e., affect, cognition, and behavior) towards the attitude object of entrepreneurial leadership (EL), which is represented by the share of entrepreneurial leadership in the total leadership behavior.

2.3 Past Experience influencing EO

First, from a perception point of view, past experience is seen as an important cognitive component which influence leader reactions or behaviors in a given situation (Otara, 2011), which is in line with the findings of Breckler and Wiggins (1991) who note that cognitions are strong predictors of reactions. The topic past experience has been studied by several researchers, focusing on identifying what influences the behavior of individuals. Hence, past experience in these studies and model determinations has been seen as an indirect variable, in which *self-efficacy*, *intention*, and *perceived behavioral control* were treated as moderator factors that were influenced by past experience and in turn influence behavior (Ajzen, 1991; Bird, 1988; Krueger, Reilly & Carsrud, 2000). So, less emphasis was put on identifying to what extend past experience influence the behavior of individuals, in this case entrepreneurial leaders, directly. Nevertheless, we assume by identifying the variables *intention*, *self-efficacy*, and *perceived behavioral control*, it will give a better insight how past experience influences behavior, and in this study the share of entrepreneurial leadership.

Bird (1988) identified *intention* as how a human sees his potential behavior in the lights of his experience and is influenced by two factors: (1) contextual; external influence of politics, economy and social environment; and (2) personal; internal influence of past experience, personality and capabilities of individuals. In short, this model states that past experience as

a personal factor influence the way of thinking and subsequently influence the intentions resulting in a behavior and/or action (Krueger, Reilly, & Carsrud, 2000). *Self-efficacy* became also a factor linked to intended behavior and is defined as the extent to which an individual belief in his strengths to reach a certain goal and to be able to act upon it (Boyd & Vozikis, 1994; Lent & Hacket, 1987). Thereby, experience seems to have a strong influence on the self-efficacy and its development (Lent & Hacket, 1987; Zhao, Seibert & Hills, 2005). As discussed by Wood and Bandura (1989) and Zhao et al. (2005), it will determine the course of peoples' intentions and therefore the behavior. Hence, past success positively influences behavior through self-efficacy while past failure has an opposite effect (Wood & Bandura, 1989). Next, Ajzen (1991) identified *behavioral control* as how an individual sees the obstacles and comfort them in behaving in an intended way. The better the experience with positive and negative aspects in performing the intended behavior the more likely the intended behavior will be performed. In addition, Ajzen (1991) states that next to the personal experience, experiences of influential people will also influence the direction of the intention.

To sum up, in this study the overall (work-related) past experience is seen as the cognitive component towards the leader's entrepreneurial leadership attitude object. Furthermore, all the selected studies identified past experience as being a direct factor influencing the intentions, self-efficacy, and perceived behavioral control while those three factors influence the behavior. Additionally, none of the studies made a closer link between past experience and behavior, while other factors appear to be influential next to past experience. Nevertheless, we recognize in this study an effect on the behavior by arguing that the overall (work-related) past experience influence the individual entrepreneurial behavior of leaders significantly. The following hypothesis is therefore formulated:

H1: Perceived influence of the overall (work-related) past experience by leaders, significantly increase the share of entrepreneurial leadership in their total leadership behaviors.

2.4 Social Intelligence influencing EO

Social intelligence is seen as the affective component towards the attitude object, due to the conclusion of Otara (2011) that interpersonal skills is one of the three generally noted major skills leaders provide in many organizations. Hence, feelings and emotions are related to the affective component and shares characteristics of social intelligence (Lee et al., 2015). The concept of social intelligence is often related with the concept of emotional intelligence. Whereas most of the existing research has focused on emotional intelligence as an ability with regard to influencing entrepreneurial attitudes and behaviors, the social part is seldom discussed (Brundin, Patzelt & Shepherd, 2008; Zampetakis, Kafetsios, Bouranta & Moustakis, 2009; Awwad & Ali, 2012). Even though, most of the researchers have argued that emotional intelligence derives from social intelligence (e.g. Albrecht, 2006; Cross & Travaglione, 2003; Lara, Kovacic & Avsec, 2011), due to a long history which has started before the history of emotional intelligence (Walker & Foley, 1973).

In the opinion of Silvera, Martinussen and Dahl (2001) it is hard to define social intelligence due to different reasons, yet, social intelligence can be defined as the ability to understand as well as manage oneself and other persons in social situations, which is supported by several studies (Albrecht, 2006; Cross & Travaglione, 2003; Lara, Kovacic & Avsec, 2011; Delic, Novak, Kovacic & Avsec, 2011; Walker & Foley, 1973). The literature on social intelligence provides plenty components, however, *empathy*, *social and situational (un)awareness* respectively, and *social skills* are the most frequently mentioned (Albracht,

2006; Delic et al., 2011; Hampel, Weis, Hiller & Witthöft, 2011; Goleman, 1998). The possession of these social attributes entails a high degree of social intelligence which is eventually crucial for success (Albracht, 2006; Zaccaro et al., 1991). This is due to the fact that people with a high degree of social intelligence appears to be more attractive than people with a lower or even no degree of social intelligence, since people feel more comfortable as they are understood, more motivated or feel supported (Goleman & Boyatzis, 2008; Albracht, 2006). Goleman and Boyatzis (2008) completes this assertion by arguing that employees that are led by socially intelligent rather than socially unintelligent leaders perform better.

To sum up, in this study social intelligence is seen as the affective component towards the attitude object of leader's entrepreneurial leadership. Considering the theory, we argue that employees that are led by socially intelligent rather than socially unintelligent leaders perform better. As found by Neqabi and Bahadori (2012) there is a significant association between managers' emotional intelligence and the employees' entrepreneurial behaviors through encouraging employees in an entrepreneurial way. Therefore, it can be assumed that social intelligence, while emotional intelligence seems to be derived from social intelligence, is an important ability for entrepreneurial leaders with regard to encouraging employees to behave entrepreneurially. In line with this the following hypothesis is formulated:

H2: Leaders with higher self-reported esteem to social intelligence, will have a higher share of entrepreneurial leadership in their total leadership behaviors.

2.5 Strategic Leadership influencing EO

One of the important things to consider in order to understand the vital role of perception is the relation with the component of behavior. As highlighted by Otara (2011), it is important to recognize that every person has a unique frame of reference including internal and external factors that affect behavior. Likewise, a leadership style (behavior) seems therefore very important in creating an attitude towards an attitude object. In other words, leadership style as an attitude rests on the assumption that attitudes influence behavior and so the attitude towards an attitude object.

Studies found that top managers are crucial to firm outcomes because of the decisions they are empowered to make and ultimately, they account for what happens to the organization (Hambrick, 1989). The strategic leadership theory has evolved over the years from the original upper echelons theory developed by Hambrick and Mason (1984) to a study of not only the instrumental ways in which the dominant coalition impacts organizational outcomes but also the symbolism and social construction of top executives (Vera & Crossan, 2004). For this research, we concur with the definition of Northouse (2010) and Yukl (2005) who defined (strategic) leadership as a process of influence and the ability to inspire between leaders and followers where a leader attempts to influence and or inspire the behavior of subordinates to achieve organizational goals.

One of the chief paradigms in the academic field, according to Teece (2016), for analyzing strategic leadership are the styles from Burns (1978), existing of: (1) Transactional leadership, (2) Transformational leadership, and (3) Laissez-faire leadership. The transactional and transformational theories of leadership are developed by Burns (1978), where after Bass (1985) systemized this theory in a business context, see Table 1. Bass (1985) views these leadership types as distinct dimensions, which allows a leader to be transactional, transformational, both, or neither. Transactional leadership seems to be consistent with economic theories, while its core is pay for performance by punishing employees for job and

team performance and the bargaining about tasks, targets and responsibilities. In line, transactional leadership is often related to direct supervision (Avolio & Bass, 1995). In contrast, transformational leadership is all about listening to employees, motivating and encouraging your subordinates. Finally, laissez-faire leadership represents the lack of any leadership type (Boselie, 2010).

TABLE 1: Origins and Characteristics of Transformational, Transactional, and Laissez-Faire leadership, based on Bass (1985)

Transformational leader	
Charisma:	Provides vision and sense of mission, instills pride, gains respect and trust.
Inspiration:	Communicates high expectations, uses symbols to focus efforts, expresses important purposes in simple ways.
Intellectual stimulation:	Promotes intelligence, rationality, and careful problem solving.
Individualized Consideration:	Gives personal attention, treats each employee individually, coaches, advises.
Transactional leader	
Contingent reward:	Contracts exchange of rewards for effort, promises rewards for good performance, recognizes accomplishments.
Management by Exception (active):	Watches and searches for deviations from rules and standards, takes corrective action.
Management by Exception (passive):	Intervenes only if standards are not met.
Laissez-Faire:	
Laissez-Faire:	Abdicates responsibilities, avoids making decisions.

2.5.1 Transactional Leadership

As argued by Avolio and Bass (1995), based on the study of Bass (1985), transactional leadership (TAL) consists of three dimensions, namely: (1) contingent rewards, (2) management by active exception, and (3) management by passive exception. The dimension contingent rewards relate to leaders who promise rewards in exchange for good performances. Management by passive exception relates to leaders who intervenes only if standards are not met, and in contrast, management by active exception relates to leaders who actively monitoring the work of employees to make sure that targets are met by taking corrective action if necessary (Antonakis, Avolio, & Sivasubramaniam, 2003). Therefore, transactional leaders are seen as more task-or-goal-oriented than people oriented (Kwasi, 2015) and define objectives and set expectations from each employee to execute a task (Martin, 2015).

2.5.2 Transformational Leadership

Based on Bass (1985), transformational leadership (TFL) consist of the four dimensions (1) charisma, (2) inspiration, (3) intellectual stimulation, and (4) individualized consideration. Charisma provides a vision and sense of mission, instills pride, and gains respect and trust from employees. This dimension is also known as *idealized influence* where leaders act as role models and are likely to take risks. Inspiration pertains to the way leaders motivate and inspire their subordinates to commit to the vision of the organization, often by expressing important purposes in simple ways. Next, intellectual stimulation relates to the role of leaders in stimulating innovation and creativity by promoting intelligence, rationality, and careful problem solving. Lastly, individualized consideration pertains to leaders that are giving personal attention to each individual’s need for achievement and growth by advising and acting as a coach (Bass & Riggio, 2006).

2.5.3 Laissez-faire Leadership

As stated by Boselie (2010) laissez-faire leaders have a lack of leadership. Regarding to the study of Bass (1985), such leaders abdicates responsibilities and avoid making decisions.

Laissez-faire leaders seem to have neither transformational nor transactional characteristics. Besides, they have a lack of vision and control of the daily work, which can potentially have a negative impact on organizational performances.

Summarizing, as previous stated businesses are nowadays exposed to a plethora of challenges such as competition and short product life cycles. Organizations are therefore required to adapt to the dynamic business environment or there will be the risk of going out of business (Dzomonda, Fatoki, & Oni, 2017). According to Panagopoulos and Avlontis (2010), a leadership style is a crucial requirement if a firm desire to adopt an EO strategy successfully. Besides, various studies like Öncer (2013); Shahraki and Bahraini (2013); and Arham, Boucher, and Muenjohn (2013) report a significant link between leadership style and entrepreneurial orientation. Shahraki and Bahraini (2013), note that transformational leadership style is perfectly suited for firms considering adopting EO. Although, Nahavandi (2000) indicates in their study that a transactional leader could create an entrepreneurial orientation atmosphere in the organization through the concept of exchange, whereas the leader promises the followers benefits if they meet or surpass the set targets. Nevertheless, Dzomonda et al. (2017) found in their study towards 103 SMEs that the transformational leadership style more often is positive correlated to EO of leaders and firms, than the transactional leadership style ($r= 0,870$, $p=0.000$). This finding is consistent with other studies, which investigated similar concepts (Öncer, 2013; Shahraki and Bahraini, 2013; Arham et al., 2013). Based on these findings, the following hypothesis are formulated:

H3: Leaders with a self-reported TAL style will have a lower share of entrepreneurial leadership in their total leadership behavior than leaders with a self-reported TAL-TFL style.

H4: Leaders with a self-reported TFL style will have a higher share of entrepreneurial leadership in their total leadership behavior than leaders with a self-reported TAL-TFL style.

2.6 EO and Firm Performance

The firm performance is the most important dependent variable for researcher concerned with almost all areas of management (Richard, Devinney, Yip, & Johnson, 2009), while it explains how well an organization is doing. The performance can be measured through financial (e.g. profit) and non-financial performances (e.g. customer satisfaction, employee commitment) (Chong, 2008). In this study, we are focusing on the behavior of entrepreneurial leaders and therefore we measure financial as well as non-financial firm performances, by the factors of *economic performance*, *social performance* and *employee commitment performance*.

2.6.1 EO and Economic Performance

In the research of Fairoz, Hirobumi and Tanaka (2010) the degree of EO and its effect on the business performance was examined of SME's in Hambantota District Sri Lanka. The study concluded that there is a moderate degree of EO, and a positive significant relationship between EO on the one hand and market share growth and overall business performance on the other hand. In addition, they reported that sales growth, profit and market share, all representing economic performances, were higher for firms with high EO than for those with low EO. Later, this statement was supported by Smart and Conant (2011), by analyzing 599 business firms in the US, who found that firms and leaders with a high degree of EO have a

stronger impact on organizational performances than firms and leaders with a medium level of EO. Furthermore, they found that medium levels of EO affects performance more strongly than a low level of EO. Earlier research of Matzler, Schwarz, Deutinger and Harms (2008), concluded that leadership behavior of top management can have a strong positive impact on the innovativeness and economic performance of the firm. Thus, based on these studies, we suggest that a higher level of EO will lead to better economic firm performances.

2.6.2 EO and Employee Organizational Commitment

Generally, organizational commitment of employees deals with the relation between the employee and the organization. In early research organizational commitment was mostly focused on the psychological dimensions (O'Reilly & Chatman, 1986). However, other studies differentiate between attitudinal and behavioral commitment (Mowday, Steers, & Porter, 1979). Attitudinal commitment focuses on the mind-set including their values and goals of an employee and its similarity with the organizational ones. In contrast, behavioral commitment concerns extra actions an employee is taking for the organizational well-being. In other words, organizational commitment is not only the identification with, but also the involvement in an organization. Nevertheless, there seems to be little research about EOC, and the influence of entrepreneurial behavior. Even though, this indicate an overall positive influence as seen in the following: De Clercq and Rius (2007) found strong support that an overall entrepreneurial behavior within an organization positively influences EOC. In those organizations employees are more likely to have interpersonal contact with their leaders, while an informal relationship, involving, empowering and giving autonomy to employees and increases the organizational commitment (Vecchio, 2003). Opposing, centralization and formal work settings lead to lower commitment (De Clercq & Rius, 2007). In short, we can assume that a high degree of entrepreneurial leadership will positively effect EOC.

2.6.3 EO and Social Performance

A term that is widely seen for the social performance of the firm is Corporate social performance (CSP). Wood (1991, p. 693) defines CSP as: *“A business organization’s configuration of principles of social responsibility, processes of social responsiveness, and observable outcomes as they relate to the firm’s societal relationships”*. Noteworthy, is that Freeman (2004) state that the aspect of social responsiveness, represents not only shareholders, but everyone who is affected by the organization (e.g. employees, community). Furthermore, Wood (1991) discusses a corporate social policy in which is acted on the corporate social responsibility (CSR). Definitions of CSR are mainly based on Carroll’s (1979) explanation of the concept where CSR is the responsibility of business consisting of economic, legal, ethical and philanthropic expectations of the society. Next to CSP and CSR, a third concept named corporate sustainability (CS) is introduced in the literature (Bansal, 2005), and entails the triple bottom line (people, planet, profit) in which companies are argued to include social (people) and ecological (planet) aims besides the economic (profit) aims. Nevertheless, in almost all definitions of CSP, CSR and CS it becomes clear that they must be integrated in the business processes and philosophy and should not be a separate task of an organization. Thus, for this research it is considered that CSR and CS encompass the same aims and ideas, representing the overarching CSP.

To return to the subject of entrepreneurial orientation, little research is done in linking entrepreneurial orientation and the social performance of the firm. Nevertheless, Bartkoski and Shahzad (2017) found in their research that firms with a high degree of EO are likely to

engage in more strategic CSP than firms that score low on EO. Moreover, they suggest that a more entrepreneurial mindset will lead a firm to develop a competitive advantage through its CSP activities. Based on this research, we assume that a high degree of EO positive affects the social performances of the firm.

To sum up, firm performance is seen as the most important dependent variable for researchers, while it explains how well an organization is doing (Richard et al., 2009). Regarding to the explored factors of firms' performance, we can assume that EO will have a positive effect on all these firm performances. First, studies found that firms and leaders with a high degree of EO have a stronger and positive impact on the economic firm performance than firms and leaders with lower levels of EO (Fairoz, Hirobumi & Tanaka, 2010; Smart & Conant, 2011). Second, although there seems to be little research about EOC and the influence of entrepreneurial behavior, studies found strong support that an overall entrepreneurial behavior within an organization positively influence EOC (De Clercq & Rius, 2007) by creating an informal work environment (Vecchio, 2003). Lastly, corporate social responsibility is a widely known construct for the social performance of the firm, existing of the concepts of CSR and CS (Wood, 1991; Bansal, 2005). Moreover, firms with a high degree of EO are likely to engage in more strategic CSP than firms that score low on EO (Bartkoski & Shahzad, 2017). Thus, based on the analyzed literature a higher level of EO which represents in this study the share of entrepreneurial leadership in the total leadership behaviors, will lead to higher firm performances on the factors *economic*, *social*, and *employee commitment*. Hence, the final hypotheses are formulated as:

H5: Leaders that report a higher share of entrepreneurial leadership in their total leadership behaviors, expect significant higher perceived economic performances of the firm.

H6: Leaders that report a higher share of entrepreneurial leadership in their total leadership behaviors, expect significant higher perceived employee commitment performances of the firm.

H7: Leaders that report a higher share of entrepreneurial leadership in their total leadership behaviors, expect significant higher perceived social performances of the firm.

2.7 Conceptual model

Combining the theoretical findings and hypotheses as presented in the previous paragraphs a conceptual model displaying the proposed relationships between the attitude components, the share of entrepreneurial leadership and firm performances. This model is graphically displayed in Fig. 1.

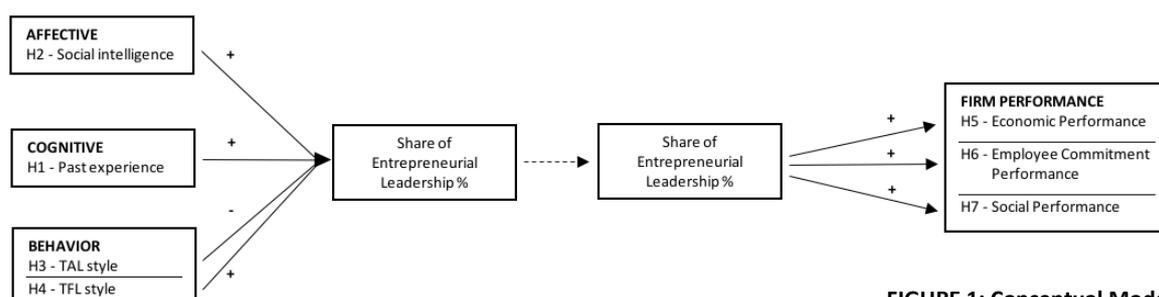


FIGURE 1: Conceptual Model

3. Methodology

3.1 Research Design

The research design forms the framework in order to find an answer to the research question. In this case, after a review has been conducted to develop a theoretical framework, an exploratory quantitative research is utilized to create an understanding between the developed variables by testing the proposed hypotheses between past experience, social intelligence, preferred leadership style, and the share of entrepreneurial leadership in the total leadership behaviors. A secondary goal is to gain insight into the relationship between the share of entrepreneurial leadership in the total leadership behaviors and various types of perceived firm performance by leaders. This exploratory research is based on earlier qualitative research of previous graduate students of the University of Twente, obtained by conducting semi-structured interviews to gain empirical evidence about entrepreneurial leadership as perceived by leaders. Therefore, this study uses a generalization design (Mayring, 2002), where qualitative material will be transformed into numerical data for further quantitative analysis aimed at deriving generalizable results. Research that follows this model starts from open-format data and applies a systematic qualitative procedure to convert it into quantitative data that will be used for further quantitative analyses (Srnrka & Koeszegi, 2007). This design is chosen for several reasons, where the foremost among these being its alignment with the research goal. Further, quantifying is seen as a methodological intervention directed toward the reduction and amplification of data, in addition to the clarification of/and extraction of meaning from qualitative data (Sandelowski, Voils, & Knafel, 2009). Moreover, if qualitative data is to be transformed and used for further statistical analysis, a larger number of participants will be needed (Srnrka & Koeszegi, 2007). Hence, Srnrka and Koeszegi (2007) therefore claimed that the study should contain a “medium-sized” (> 30 respondents (Sykes, 1990)) sample which could be handled with high accuracy and reasonable effort in terms of time, personal and financial resources.

3.2 Selection and Sample

As mentioned, this study is based upon existing qualitative data collected by semi-structured interviews with leaders to obtain information about applying entrepreneurial leadership, experience and behavior towards employees. In order to ensure a sufficient experience, the following sample requirements were included: (1) at least one-year experience in a leadership position and (2) at least three direct reports (people that directly report to the manager in the formal hierarchy of the organization). Besides, the participants were selected on a nonprobability base, in which the units to be observed were selected by having unequal chances of being selected. One such method represented in this study is *purposive sampling*, where the researchers select respondents because of certain characteristics (Vos, 2009). There were no other pre-limitations or sampling criteria such as type of industry, size of organization, or position in the organization as this may limit the understanding and the identification of unintended results. Like Gartner and Birley (2002) suggest, one should look at different entrepreneurial situations in order to expand the basic sense and clarify taken-for-granted beliefs. Moreover, multiple cases were analyzed in order to get a deeper understanding and makes the research more generalizable with a total number of 96 leaders. Two respondents were deleted, due to missing values and/or not answering the main question of this study regarding the share of entrepreneurial leadership in the total leadership behaviors. Moreover,

outliers of the question of direct reports were replaced by the mean ($\mu=46$). The final sample varies between gender (84,4% male, 15,6% female), age (23-64years, $\bar{X}42,4$), function (18,8% owner, 18,8% CEO, 20,8% director, 27,1% manager, 7,3% HoD, 7,3% team leader), type of industry (70,8% service industry, 29,2% product industry), years of experience in current position (0,2-30years, $\bar{X}7,9$), total experience in managerial position (1-44years, $\bar{X}14,2$), the number of direct reports (3-92employees, $\bar{X}20,2$), and location (Netherlands and Germany). An overview of the respondents can be found in Appendix A.

3.3 Data Collection

The semi-structured interviews were conducted in 2014 by a joint effort of 15 graduating students of the University of Twente, in a time period of around one month. Kvale (1983, p. 174) defined this technique as; *“An interview, whose purpose is to gather description of the life-world of the interviewee with respect to interpretation of the meaning of the described phenomena”*. Hence, this method is flexible in its use of predetermined questions, as the researcher was free to seek additional clarification, due to lacking and or insufficient information. Furthermore, organizations or managers, located in the Netherlands and Germany, were directly contacted by phone or email with the request for an interview. Subsequently, data was gathered face-to-face, by phone calls or through a video conference, with the majority conducted face-to-face. The interviews were audio recorded and transcribed. Due to circumstances a few interviewees made notes and transcribed as soon as possible after the interview in order to prevent for any bias to avoid forgetting the information. In addition, the judgement derived from the interviews depend on the precision in which the characteristics has been defined and the competence of the observer in interpreting definitions related to the incident observed (Flanagan, 1954). It is therefore, that all interviewees informed themselves about how to conduct qualitative interviews beforehand and received a uniform interview protocol (Appendix B) to reduce bias among the approaches.

The interview protocol starts with an introduction, in which the scope of the research is explained and background information of the respondent is asked. Secondly, the main interview questions (focus), uses the critical incident technique to find out facts concerning the behavior of both the managers and employees in a situation in which employees has been led in an entrepreneurial way. This technique is useful for measuring entrepreneurial leadership as it can record specific behaviors, minimize the risk of social desirability bias and to leave space for unforeseen results (Flanagan, 1954). Backup questions are formulated in case the respondent find it hard to answer or talks about other issues than entrepreneurial leadership. Third, questions regarding contingency factors (more depth) are asked, and is supposed to find out how particular factors, such as past experience, social intelligence, general leadership style, and circumstances influence entrepreneurial leadership. Hence, in this part the respondents are also asked how often they lead their employees in an entrepreneurial way. Fourth, there is an outcome part (clarifications), that deals with finding out how an entrepreneurial leadership style affects firm performances, in this case representing employee commitment and economic as well as social performance. Finally, the participants can share some final comments or thoughts.

Note that not all interview questions are used but only those with regard to the purpose of this study. The questions about past experience, social intelligence, general leadership style and the share of entrepreneurial leadership derived from the contingency factor part are used. Along with the outcome part, which clarifies the firm performance, in

this case employee commitment, economic, and social firm performance. Questions regarding the respondents' background information are used in the first respect as control variables. The extracted questions from the interview protocol can be found in Appendix C.

3.4 Dependent Variables

In this study, the goal is to explore if leaders' entrepreneurial behavior is influenced by their perception components, and secondly if the entrepreneurial behavior of leaders has an effect on various types of perceived firm performances. It is therefore, that this study has several dependent variables. For the first research goal, the dependent variable is set as the *share of entrepreneurial leadership in total leadership behavior*. This share is measured by a perceived percentage as given by the respondents, by answering the interview question (no.3): "*How often do you lead your employees in an entrepreneurial way (regularly or occasionally)? Could you give a rough percentage?*". Note that not all the respondents answered this question by giving a rough percentage, but by dropping these respondents the sample size would be insufficient (<30) (Sykes, 1990). Therefore, qualitative answers are recoded into a rough percentage, by using a number of specific conditions. First, the answers with a percentage as well as no percentage are divided into a 5-point Likert scale (1 = Always, 2 = Regularly (often), 3 = Regularly, 4 = Occasionally, 5 = Rarely or Never). We assume that none of the leaders never leads their employees in an entrepreneurial way, therefore *rarely* and *never* are taken together in the same category. Second, by dividing the rough percentages to this 5-point Likert scale we are able to calculate a weighted percentage (rounded) for each category (Appendix D). Subsequently, the respondents without a given percentage could so been divided into the different categories and scored the corresponding percentages (Always = 100%, Regularly (often) = 80%, Regularly = 60%, Occasionally = 30%, Rarely or Never = 15%).

For the second goal of this study the firm performances are set as the dependent variable and are all measured with a three-item measurement construct. This construct exists of the variables; *employee commitment*, *economic performance*, and *social performance* of the firm. Data on these firm performances are received from the interview questions (no.10,11, & 12): "*What is in your opinion the effect of leading your employees in an entrepreneurial way on employee commitment – on economic performance – on social performance?*". Each item of the construct is scored on a 3-point Likert scale (1 = Positive effect, 2 = Effect depends, 3 = Negative effect) as perceived by leaders and is developed particular for this study. We regard respondents indicating they experienced a positive effect on either employee commitment, economic performance, and social performance by leading employees in an entrepreneurial way, to the category 'positive'. In contrast, we regard respondents indicating they experienced a negative effect by leading employees in an entrepreneurial way, to the category 'negative'. Notable, is the category 'effect depends' in which we regard respondents that believe the effect on the firm performances through leading employees in an entrepreneurial way is depending on employee as well as contextual characteristics for the variable *employee commitment*, and various side factors such as: the market, global trends, and customer needs, for the variables *economic performance* and *social performance* of the firm. Note that these firm performances are subjective, as it represents the perception of leaders, and therefore could raise potential problems with common method bias. Out of interpretative considerations, we reverse coded these outcome variables so that a small number indicates a negative effect by leading employees in an entrepreneurial way on the firm performances, and in turn a higher number indicates a positive effect.

3.5 Independent Variables

With regard to the first research goal: if leaders' entrepreneurial behavior is influenced by their perception components, we test hypotheses 1 to 4. In order to test hypothesis 1 on the relation between the *cognitive* attitude component and the share of entrepreneurial leadership in the total leadership behavior, we measure the construct *past experience (PE)* through the interview question (no.6): *"How has your past experience influenced you in leading your employees in an entrepreneurial way? Has your opinion changed over time on this matter and if so why/when?"*. This construct is measured using five items on a 5-point Likert scale ranging from 1=Strongly agree to 5=Strongly disagree. The reasons for applying a 5-point Likert scale are twofold, whereas a previous study recommends the usage of several modalities when assessing the entrepreneurial intention to capture the strength of the intent (Thompson, 1995), and secondly, a 5-point Likert scale is especially suitable for collecting data on populations as individuals are used to thinking and evaluating things in terms of the range from 1 to 5 (Jeger, Susanj, & Mijoc, 2014). We regard respondents who indicating that PE strongly influenced their way in leading employees in an entrepreneurial way to the category of 'strongly agree', in contrast we regard respondents who are indicating that PE did totally not influenced the way in leading their employees in an entrepreneurial way to the category of 'strongly disagree'. Respondents that did not share a strong negative or positive opinion if PE influenced the way in leading their employees are regarded to the category 'neutral'. Hence, some respondents did not state explicitly whether they 'strongly agree' or 'agree' with the question whether their PE influenced the way in leading their employees in an entrepreneurial way. Nevertheless, these answers are scaled by the number of examples that has been given in which the respondent explains that their leadership has changed through experience. In line, the category 'agree' contains all respondents with one example, where the category 'strongly agree' contains all the respondents with two or more examples. The same conditions are applied to the categories 'disagree' and 'strongly disagree'. Out of interpretative consideration, we reversed coded this variable so that a small number indicates low agreement and vice versa.

To test hypothesis 2 on the relation between the *affective* attitude component and the share of entrepreneurial leadership in the total leadership behavior, we measure the construct *social intelligence (SI)* through the interview question (no.6): *"How important is social intelligence – empathy, social awareness and skills – for leading employees in an entrepreneurial way?"*. This construct is also measured using five items on a 5-point Likert scale ranging in this case from 1=Very important to 5=Not important. We regard respondents who are indicating that SI is something fundamental to the category of 'very important', in contrast we regard respondents who are indicating that SI is something that should not considered as important to the category of 'not important'. Respondents that mentioned both advantages and disadvantages of SI, and therefore did not make a clear statement about the importance of SI are regarded to the category 'neutral'. The difference between the categories 'very important' and 'important' as well as 'less important' and 'not important', are created by the use of comparative (e.g. fairly important) and superlative (e.g. hugely important) adverbs, better known as intensifiers used mainly to either boost or maximize a word and its meaning (Algeo, 1987). Tagliamonte (2008) states that these intensifications give researchers the opportunity to study qualitative data and is specifically useful in coding processes. As with the previous independent variable, we reversed coded this variable so that a small number indicates that SI is seen as less important and vice versa.

To test hypothesis 3 and 4 on the relation between the *behavior* attitude component and the share of entrepreneurial leadership in the total leadership behavior, we measure the construct preferred leadership style through the interview question (no.9): “*How would you describe your leadership in general?*”. We speak in terms of preferred leadership style while the data is obtained by self-report of the respondents. Hence, this construct is measured by dividing the answers to the nominal categories of transactional leadership (TAL), transactional and transformational leadership (TAL-TFL), and transformational leadership (TFL). Characteristics of TAL and TFL, are evaluated by the factors derived from Bass (1985) and using several conditions. First, a scale evaluation is used which means that when the respondent showed different TAL characteristics, they were evaluated as showing preferred TAL behavior. Second, there have been no distinctions made between the amount of showed characteristics, and so respondents with one characteristic of e.g. TAL are valued the same as respondents with more than one TAL characteristic. This, because in several cases the same characteristics were repeatedly mentioned, but above all as shown in that the literature there are different ways to behave like a transactional leader, as well as for transactional and transformational leaders, and transformational leaders (Bass, 1985; Bryman, 1993). Third, cases that showed both TAL and TFL characteristics are seen as leaders that are both transactional and transformational and use these competences (behavior) when the situation occurs. Fourth, an important distinction between TAL and TFL is, that TAL seems to be consistent with economic theories, while its core is pay for performance (e.g. result-oriented, budget focus) (Avolio & Bass, 1995). On the other hand, TFL involves motivation and inspiration so that employees exceed the basic requirements of a job (e.g. individual-oriented, sharing knowledge) (Bass & Riggio, 2006). It is therefore, that respondents who showed no characteristics that underlie the factors derived from Bass (1985) within their answers, could still be assigned by the extension of Avolio and Bass (2006), and Bass and Riggio (2006).

Finally, with regard to the second research goal in order to explore if the entrepreneurial behavior of leaders has an effect on various types of perceived firm performances, we test hypotheses 5 to 7. In order to test hypothesis 5 to 7 on the relation between the *share of entrepreneurial leadership in total leadership behavior* and the outcome variables of firm performances (*employee commitment, economic performance, and social performance* of the firm), we used the same construct measurement as discussed in section 3.4 through the interview question (no.3): “*How often do you lead your employees in an entrepreneurial way (regularly or occasionally)? Could you give a rough percentage?*”. Hence, it represents a continuous variable, measured by the leaders’ self-reported share (percentage) of entrepreneurial leadership in their total leadership behavior. The overarching aim is to define if the share of entrepreneurial leadership relates to the level of perceived firm performances.

3.6 Control Variables

For both research goals, we also include a small number of control variables to determine if differences in the share of entrepreneurial behavior can be contributed to personal characteristics besides the attitude components, and if the control variables determine the firm performances as perceived by leaders. We include gender, age, function, type of industry, experience in specific position, total experience in managerial position, and the number of direct reports (people that directly report to the manager in the formal hierarchy of the organization).

3.7 Data Analyses

In this research two analyses have been conducted, one regarding to analyze the qualitative semi-structured interview data into quantitative data by using the generalization design (Mayring, 2002), and secondly this quantitative data is analyzed using SPSS Statistics 22.0 to conduct the analysis of multiple linear regression and ordinal logistic regression, in order to test the hypotheses and answer the research question.

3.7.1 Generalization Design

First, the qualitative data were analyzed through the generalization design based on the content analysis method. The content was derived from the interviews, which in turn were transcribed into text. Content analysis, is an approach to the analysis of documents and texts that seeks to quantify content in terms of predetermined categories and in a systematic and replicable manner (Bryman & Bell, 2015). The content analysis was conducted for the extracted interview questions, regarding to this particular study, and followed the blueprint providing guidelines for the qualitative analysis process (Srnrka & Koeszegi, 2007). This blueprint, comprising of five-stages can be found in Appendix E. The first two stages representing *material sourcing* and *transcription* and were conducted by 15 previous graduating students of the University of Twente. The third stage *unitization* comprises dividing material into units of coding and analysis, which seems to be a crucial step and depends on the data and the research question (Holsti, 1970). In line with the available data and research question, for each extracted question the most appropriate unit has been selected existing of words and phrases. Next, the *categorization* stage develops a category scheme, and is the process of structuring and condensing data by grouping the qualitative material in insightful ways (Mayring, 2002). Therefore, this study include categorization on the basis of nominal and ordinal (nonmetric), and ratio (metric) evaluation. To determine the ordinal scales a 5 and 3-point Likert scale is used, to categorize the answers concerning the questions of past experience, social intelligence and three firm performance variables. The final stage *coding* means a systematic assignment of codes (numbers) to units based on the category scheme. A systematic approach is highly important to achieve reliability and generalizability, as discussed by Miles, Huberman and Saldana (2014). Comparable are these finding to the study of Flick (2002), as coding should have clear specifications and consciousness which will not only help researchers to detect wrong coding and, if necessary, to recode the data-set more easily, but also to allow others to understand and replicate the study. It is worth noting that, to ensure the quality of the coding process, an inter-coder reliability test is executed by an MScBA graduating student at the University of Twente in the form of Cohen's Kappa. Cohen's Kappa is a measure of the degree of agreement over the coding of items by two people (Bryman & Bell, 2015). The closer the coefficient is to 1, the higher the agreement and the better the inter-observer consistency, with a coefficient of 0.75 or above is considered very good; between 0.6 and 0.75 is considered as good; and between 0.4 and 0.6 it is regarded as fair (Bryman & Bell, 2015). The inter-reliability test is conducted for all the extracted research questions, excluding the background information questions of the participants. Results showed a high reliability while only two questions were graded as 'good', the other questions were graded as 'very good'. Appendix D, gives a detailed coding book and contains all questions, unitizations, categories, possible codes, calculated Cohen's kappa, definitions, and conditions that were used in the data analysis.

3.7.2 Statistical Analysis

In order to maintain as close as possible to the original distribution values, it is concerned to identify the patterns and relationships underlying the missing data. Missing data may eliminate many observations and so it may be that an adequate sample is reduced to be inadequate (Olson, Kvien, & Uhlig, 2012). By conducting a Missing Value Analysis with the program SPSS version 22.0 and using an EM-test in testing MCAR (Missing Completely At Random), the results indicates that missingness is assumed not to matter for this analysis ($p=0.774$) (Garson, 2015). Listwise and pairwise deletion are the most common techniques to handling data with MCAR (Peugh & Enders, 2004). In this study, we choose pairwise deletion (available-case analysis) in favor of listwise deletion (complete-case analysis), even though in pairwise deletions standard of errors can be under- or overestimated, it maximizes all data available by an analysis and therefore a strength of this technique is that it increases power in the analysis (Little, 2011).

To assess the effect of the independent attitude component variables, existing of past experience (PE), social intelligence (SI) and preferred leadership style (TAL & TFL), on the share of entrepreneurial leadership of leaders in their total leadership behavior, we used a *multiple linear regression* (Method 1). Given that we will analyze the relationship between a single dependent variable and several independent (predictor) variables, this technique is suitable in which the objective is to use the independent variables whose values are known to predict the single dependent value (Assefa Aga, 2016). In order to be able to conduct a multiple linear regression the data has been first analyzed by an explanatory analysis to verify if it satisfies all requirements regarding: sample size, normality, linearity, homoscedasticity and heteroscedasticity (Osborne & Waters, 2002). According to the requirements of Cohen (1992), the sample size is met with 96 respondents while the preferred ratio of observations to variables in this study is 80. The results for normality, linearity and homoscedasticity (Appendix F) revealed no concerns, while the data showed a normal distribution, and standardized residuals scattered freely along the linear line. Moreover, the data scattered randomly and did not show any obvious patterns and indicates that heteroscedasticity (unequal variance) does not occur between the independent variables of the study (Osborne & Waters, 2002). A Levene's test confirmed homoscedasticity ($F= 1,422 / P= 0,138$) (Caroll & Schneider, 1985).

We run one model to test our hypothesis 1 to 4. Yet, because the theory does not support a different method, this model used the standard enter method and is standard of variable entry. Hence, the standard entry method enters all independent variables simultaneously into the model, whereas each independent variable is evaluated in terms of what it adds to the prediction of the dependent variable that is different from the predictability afforded by all other independent variables (Tabachnick & Fidell, 2007). So, in this model the independent variables of PE, SI, TAL & TFL were simultaneously entered into the model. In order to test hypotheses 3 and 4, regarding to the relation between preferred leadership style of TAL and TFL, and the share of entrepreneurial leadership in the total leadership behavior, we had to recode this item into dummy variables (e.g. 1 = TAL, 0 = all others etc.). The reference category is set as TAL-TFL and is therefore left out of this model. While this category is 'in the middle' it is seen as the most logical choice of reference. Finally, to ensure that the results represents the general population (generalizability) and is appropriate for the situation in which it will be used (transferability), a cross-validation robustness check is conducted. In this case, the data is split into one estimation sample and

one validation sample, whereas the estimation sample generally contain 50-90% of the total sample (Rao & Wu, 2005). We used an estimation sample of a randomly selected 50% and compared the findings with the model estimated on the entire sample to determine the agreement in terms of signs and magnitudes of the partial regression coefficient.

To assess the effect of the share of entrepreneurial leadership in the total leadership behavior, set as the independent variable, on the dependent outcome variables of economic firm performance (EP), employee commitment performance (ECP), and social firm performance (SP), we conducted an *ordinal logistic regression* (Method 2). Given that in this case the dependent variables are not answered with a simple yes or no, but a range of possible answers and are characterized by a gradient of ranking across levels of possible responses, they are called ordered categorical variables (Koletsis & Pandis, 2018). Therefore, the type of ordinal regression *cumulative odds ordinal logistic regression with proportional odds* is used to determine whether the share of entrepreneurial leadership in the total leadership behavior of leaders predict the perceived firm performances, measured by using the three ordered categories: “positive (higher) effect”, “effect depends”, and “negative (lower) effect”. In order to be able to conduct this analysis the assumptions of multicollinearity, and the existence of proportional odds should be met (Sasidharan & Menéndez, 2014). Due to a single independent variable multicollinearity raises no concerns (Zuur, Ieno, & Elphick, 2010). The existence of proportional odds is evaluated by comparing the ordinal model which has one set of coefficients for all thresholds (null hypothesis), to a model with a separate set of coefficients for each threshold (general) (O'Connell, 2006). The proportional odds test raised concerns for the variable SP ($p = .003$), although the independent variable is continuous and therefore it is likely to result in a high proportion of empty cells (O'Connell, 2006), it is recommended to interpret the output with caution. To determine whether the model improves the ability to predict the outcome the model fitting information is used (Appendix G). The statistically significant chi-square statistic ($p < 0,05$) indicates that the Final model gives a significant improvement over the baseline intercept-only model for both the models of EP and ECP. Only the model fit for the model of SP shows that the model gives no better predictions than guessing based on the marginal probabilities for the outcome category.

We run three models to test our hypothesis 5 to 7. Our first model tests hypothesis 5 and predicts the influence of the share of entrepreneurial leadership in the total leadership behavior on the outcome of perceived EP of the firm. The second model tests hypothesis 6 and predicts the influence of the share of entrepreneurial leadership in the total leadership behavior on the outcome of perceived ECP. We run model three to test hypothesis 7, to predict the influence of the share of entrepreneurial leadership in the total leadership behavior on the outcome of SP of the firm. The parameter estimates and calculated odds ratio's representing the core of the output (Liu, 2009), while it telling us specifically about the relationship between the explanatory variable (share of entrepreneurial leadership in total leadership behavior) and the outcome variables (perceived firm performances). Hence, in this analysis we see the independent variable as a covariate, which represents continuous independent variables that are used to predict the dependent variable category (Guisan & Harrell, 2009).

4. Results

4.1 Method 1

We tested hypothesis 1 to 4 by modeling the effect of the attitude components on the share of entrepreneurial leadership in the total leadership behavior. Table 2 contains the results of the regression model, which represents the parameter estimates of the regression analysis and a two-tailed P value of <0.05 was considered as statistically significant. Hypothesis 1 predicted a positive and significant impact of the overall (work-related) past experience (PE) of leaders on the share of entrepreneurial leadership in the total leadership behavior. Although the results show a small and positive ($\beta = 0,035$) relationship between PE on the share of entrepreneurial leadership in total leadership behavior, the results are not supportive while it is not a significant relationship ($p = 0.712$). Additionally, to gain more insight of the effect of PE on the share of entrepreneurial leadership we extended H1 by coding PE into positive past experience (PPE) and negative past experience (NPE), in order to conduct a robustness check whether there is a significant effect of either PPE or NPE on the share of entrepreneurial leadership. PPE exists of the categories: 'agree' and 'strongly agree', and NPE of the categories: 'disagree' and 'strongly disagree'. Results of a two-sample t-test are summarized in Table 3. We found statistical evidence that there is no significant evidence that either perceived PPE or NPE has a significant effect on the share of entrepreneurial leadership in total leadership behavior.

Hence, Table 2 suggest that there is a positive and significant relationship between self-reported esteem of leaders to social intelligence and the share of entrepreneurial leadership in the total leadership behavior ($\beta = 0.213$, $p = 0.047$). Thus, we found support to accept hypothesis 2. On the preferred leadership style, we found evidence that leaders with a self-reported TAL style has a negative non-significant relationship with the share of entrepreneurial leadership in the total leadership behavior ($\beta = -0.106$, $p = 0.361$). While the reference category is the TAL-TFL style, we can assume that the TAL style will lead to a lower share of entrepreneurial leadership in their total leadership behavior than leaders with a self-reported TAL-TFL style. Hence, the results show statistical evidence that leaders with a self-reported TFL style will have a significant higher share of entrepreneurial leadership in their total leadership behavior than leaders from the reference category of self-reported TAL-TFL style ($\beta = 0.344$, $p = 0.002$). Thus, we found support to accept hypothesis 3 and 4.

TABLE 2: Parameter Estimates

Coefficients ^a					
Model	Unstandardized Coefficients		Standardized Coefficients		
	B	Std. Error	Beta	t	Sig.
Constant	-9,013	29,777		-,303	,763
SI	11,229	5,579	,213	2,013	,047*
PE	,887	2,392	,035	,371	,712
TAL	-8,134	8,850	-,106	-,919	,361
TFL	18,799	5,785	,344	3,249	,002**

a. Dependent Variable: Share of entrepreneurial leadership in total leadership behavior?

Note: (1) * $p < 0.05$, ** $p < 0.01$. (2) SI: social intelligence, PE: past experience, TAL: transactional leadership style, TFL: transformational leadership style.

TABLE 3: Independent Samples Test

		Levene's Test for Equality of Variances		t-test for Equality of Means						
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	95% Confidence Interval of the Difference	
									Lower	Upper
Share of entrepreneurial leadership in total leadership behavior?	Equal variances assumed	,706	,403	,156	89	,876	1,2591	8,0595	-14,7549	17,2731
	Equal variances not assumed			,161	18,553	,874	1,2591	7,8136	-15,1218	17,6399

Finally, to ensure that the results represent the general population (generalizability) and is appropriate for the situation in which it will be used (transferability), a cross-validation check is used for the results. The ANOVA results show, that the results of the entire data ($p < 0.001$) is in line with the estimation sample ($p = 0.002$), and therefore can be seen as generalizable and transferable.

4.2 Method 2

We tested hypothesis 5 to 7 by modeling the effect of the share of entrepreneurial leadership in the total leadership behavior on the perceived firm performances (EP, ECP, SP). Table 4 contains the results of the ordinal logistic regression models. In the column 'Exp_B' the results are presented as proportional odds ratio along with the calculated lower and upper 95% confidence interval. Hypothesis 5 predicted a significant positive impact of the share of entrepreneurial leadership on the perceived EP by leaders. The results of Model 1 are supportive of this interference, while an increase of the *Share of entr. Leadership* (expressed in a percentage 0-100), i.e., going from 0 to 1, is associated with an increase of the odds of the perception of EP of the firm, with an odds ratio of 1,021 (95% CI, 1,001 to 1,042), Wald $X^2(1) = 4,053$, $p = .044$. In other words, we would assume that for a one unit increase in *Share of entr. Leadership*, we expect a 1.021 increase in the log-odds of being in a higher level of perceived EP of the firm as perceived by leaders, given all of the other variables in the model are held constant. Thus, we found support to accept hypothesis 5.

Model 2 test the effect of the share of entrepreneurial leadership on the perceived ECP to test hypothesis 6. In the same way, we can state that for an increase of the *Share of entr. Leadership* (expressed in percentage 0-100) is associated with an increase of the odds of the perception of ECP of the firm by leaders, with an odds ratio of 1.030 (95% CI, 1.009 to 1,501), Wald $X^2(1) = 8,136$, $p = 0,004$. So, we can assume that for a one unit increase in *Share of entr. Leadership* we expect a 1.03 increase in the log-odds of being in a higher level of perceived ECP of the firm as perceived by leaders, given all of the other variables in the model are held constant. The results reveal a statistically significant effect of the share of entrepreneurial leadership in total leadership behavior on the perceived ECP of the firm, and therefore supports hypothesis 6.

Finally, Model 3 test the effect of the share of entrepreneurial leadership on the perceived SP of the firm to test hypothesis 7. The results reveal that for an increase of the *Share of entr. Leadership* (expressed in percentage 0-100) is associated with an increase of the odds of the perception of SP of the firm by leaders, with an odds ratio of 1.015 (95% CI, 0.955 to 1.036), Wald $X^2(1) = 2,072$, $p = 0,150$. Although, we can state that for a one unit increase in *Share of entr. Leadership* we expect a 1.015 increase in the log-odds of being in a higher

level of perceived SP of the firms as perceived by leaders, given that all the other variables in the model are held constant, it does not constitute a statistically significant effect and therefore does not support hypothesis 7.

TABLE 4: Parameter Estimates

Model 1: EP											
		Estimate	Std. Error	Wald	df	Sig.	95% Confidence Interval		Exp. B	95% Confidence Interval	
							Lower B.	Upper B.		Lower	Upper
Threshold	[EP = 1]	-3,429	1,112	9,509	1	,002	-5,608	-1,250	,032	,004	,287
	[EP = 2]	-,409	,578	,502	1	,479	-1,543	,724	,664	,214	2,062
Location	Share of entr. leadership	,021	,010	4,053	1	,044	-,001	,041	1,021	1,001	1,042
Model 2: ECP											
		Estimate	Std. Error	Wald	df	Sig.	95% Confidence Interval		Exp. B	95% Confidence Interval	
							Lower B.	Upper B.		Lower	Upper
Threshold	[ECP = 1]	-1,988	,733	7,348	1	,007	-3,425	-,550	,137	,033	,577
	[ECP = 2]	,166	,550	,091	1	,763	-,912	1,244	1,180	,402	3,469
Location	Share of entr. leadership	,029	,010	8,136	1	,004	-,009	,049	1,030	1,009	1,501
Model 3: SP											
		Estimate	Std. Error	Wald	df	Sig.	95% Confidence Interval		Exp. B	95% Confidence Interval	
							Lower B.	Upper B.		Lower	Upper
Threshold	[SP = 1]	-3,675	1,125	10,672	1	,001	-5,881	-1,470	,025	,003	,230
	[SP = 2]	-,771	,609	1,603	1	,205	-1,963	,422	,463	,140	1,525
Location	Share of entr. leadership	,015	,010	2,072	1	,150	-,005	,035	1,015	,995	1,036

Link function: Logit.

a. Independent Variable: Share of entrepreneurial leadership in total leadership behavior?

Note: (1) EP: economic performance, SP: social performance, ECP: employee commitment performance.

5. Discussion & Conclusion

This paper contributes to the research of the entrepreneurial leadership and perception theory. Where the publications dealing with entrepreneurial leadership show some key themes and patterns, it indicates a lack of perception studies to this paradigm (Azam Roomi & Harrison, 2011; Otara, 2011). Lee et al. (2015) underlie the importance of leadership perceptions by stating that this is seen as highly important, while leaders that understand that their perceptions influence the way they behave, will subsequently influence the behavior of their employees. Hence, Otara (2011) state that the perception should be seen as a pertinent tool in leadership and sets great leaders apart in their ability to manage perceptions in the process of handling people and organizational issues. Along with Lee et al. (2015), we consider perception as an attitude consisting of three attitude components (affective, cognitive, and behavior), as supported by several others (Katz & Stotland, 1959; Rosenberg & Hovland, 1960; Olson & Zanna, 1993; Zanna & Rempel, 2008). As a contribution to the research of leadership perception theory and the call that the perceptions of leaders are often forget and must be seen as a vital skill (Otara, 2011), the aim of this study is twofold: (1) investigating if the leaders' entrepreneurial behavior in their total leadership behavior is influenced by their perception components towards entrepreneurial leadership, and (2) if their entrepreneurial behavior has an effect on perceived firm performances. Our empirical model suggests that that the perception components effect the share of entrepreneurial leadership in the total leadership behavior, and in turn, that the entrepreneurial leadership behavior influence perceived firm performances as reported leaders.

5.1 Key Findings

In contrast to prior work (e.g. Ajzen, 1991; Bird, 1998; Krueger, Reilly & Carsrud, 2000), we found that PE representing the cognition component is not significantly related to the share of entrepreneurial leadership. The main argument for this finding, could lie within the fact that these studies did not identify to what extend PE influence the behavior of individuals directly. Hence, scholars make a distinction between positive (PPE) and negative (NPE) past experience (Wood & Dandura, 1989; Ajzen, 1991), in which past success positively influence behavior and past failure has an opposite effect. In an extension, our findings surprisingly suggest that there is no significant relation between either PPE or NPE on the share of entrepreneurial leadership. Potentially, our underlying construction of the cognitive component which is representing solely by the PE might be partially incorrect. Another reason could lie within the originally interview question, which not clearly refer to a specific category of experiences (e.g. entrepreneurial leadership experience). We therefore encourage scholars to search for a closer and direct link between PE and individual behaviors.

In addition, we found that leaders with a higher self-reported esteem for SI, representing the affective component, significantly contribute to a higher share of entrepreneurial leadership in their total leadership behavior. Herewith, we extend the existing literature that mainly focused on emotional intelligence as an ability with regard to influencing entrepreneurial attitudes and behaviors (Brundin, Patzelt & Shepherd, 2008; Zampetakis, Kafetsios, Bouranta & Moustakis, 2009; Awwad & Ali, 2012). Additional support is given by Pordanjani and Dehcheshmeh (2014) that found a significant relationship between SI and overall entrepreneurship attitudes, and of Zampetakis, Mpeldekos and Moustakis (2009) that found that SI has a direct effect on entrepreneurial behaviors, as a set of activities from independent-autonomous to integrative-cooperative behaviors. Although, we encourage scholars to examine a basic generalizable construct of SI, one which can be used in several

contexts and contribute to the lacking attention to SI. Moreover, we encourage in particular to further examine our findings that SI influence the share of entrepreneurial leadership in the total leadership behavior.

Next, we found that TFL as preferred leadership style has a positive and significant impact, whereas TAL has a negative non-significant impact on the share of entrepreneurial leadership. Drawing on the literature, TFL involves motivation and inspiration so that employees exceed the basic requirements of a job (e.g. individual-oriented, sharing knowledge) (Bass & Riggio, 2006). Additional support is given by Stuart (1987) that identified entrepreneurs on an individual leadership perspective as being tolerant of uncertainty, having communication and relationship building skills, being encouraging, creative, independent and flexible. These traits, indicating all people-oriented, originate from the EO dimensions of risk-taking, innovativeness, proactiveness and autonomy skills of entrepreneurs (Lumpkin and Dess, 1996; Miller, 1983). These findings are in line with the opinion of e.g. Thornberry (2006, p. 24) who argued that *“entrepreneurial leadership is more like transformational leadership than it is like transactional leadership, yet it differs in some fundamental ways”*. Surprisingly, we found that TFL is the best leadership style in order to create a high share of entrepreneurial leadership in the total leadership behavior. This finding contradicts the result of Bass (1985) and later of Avolio and Bass (1995), in which they argue that showing both TAL and TFL characteristics is the best for firm performances. From this perspective, we indicate that entrepreneurial leadership behavior should not be seen as a firm performance and that TFL is preferred to create high entrepreneurial leadership behavior. We encourage scholars to further examine this presumption that entrepreneurial leadership behavior is not a firm performance, and therefore TFL instead of TAL-TFL should be seen as the best leadership style to create higher entrepreneurial leadership behavior. In addition, we expected the outcomes of TAL by the findings of (Shahraki and Bahraini, 2013; Arham et al., 2013) that leaders with a preferred TAL will show less impact on the share of entrepreneurial leadership than leaders with a preferred TAL-TFL style or TFL style. Although, Nahavandi (2000) indicates in their study that a transactional leader could create an EO atmosphere in the organization through the concept of exchange, which could indicate the reason that there is no significance.

Further, firm performance is seen as the most important dependent variable for researchers while it explains how well an organization is doing (Richard, Devinney, Yip, & Johnson, 2009), and could be measured through financial and non-financial performances (Chong, 2008). We found that a higher share of entrepreneurial leadership in the total leadership behavior positive and significantly influence the expectation of a higher perceived EP of the firm. Herewith, we confirm scholars that found evidence of a positive and significant relationship between EO and the market share growth and overall business performance (Fairoz, Hiobumi & Tanaka, 2010; Smart and Conant, 2011; Rahim, Abidin, Mohtar & Ramli, 2015). Although, these results were not tested on the perceived performances of the firm as reported leaders, it is likely to assume that these studies support the results of this research, assuming that ‘good’ firm performances will not be missed by leaders.

In addition, we argued that organizational commitment is not only the identification with, but also the involvement in an organization (Mowday, Steers, & Porter, 1979), and that an overall entrepreneurial behavior positively influence employee organizational commitment (EOC) (De Clercq & Rius, 2007). In line with these statements, we found evidence that a higher share of entrepreneurial leadership in the total leadership behavior positive and significantly influence the expectations of a higher perceived ECP of the firm by leaders. One

argument could lie within the findings of Vecchio (2003), stating that employees are more likely to have interpersonal contact with their leaders, and that an informal relationship, involving, empowering and giving autonomy to employees will increase the organizational commitment, in that organizations with a high degree of entrepreneurship. We encourage scholars to compare research from employee and manager perspectives, to find statistical evidence if in both perspectives a higher degree of entrepreneurial leadership increases the expected as well as experienced organizational commitment.

Finally, drawing on the literature we argued that a more entrepreneurial mindset will lead a firm to develop a competitive advantage through its CSP (Bartkoski & Shahzad, 2017). We found that a higher share of entrepreneurial leadership in the total leadership behavior positively influence the expectations to a higher perceived SP of the firm by leaders. Although, we found no significant relationship which is different than expected. There may be several explanations for this absence. As argued by Porter and Kramer (2006), there are four prevailing justifications for SP including (1) moral obligation, (2) sustainability, (3) license to operate, and (4) reputation. Furthermore, as discussed by Iyigün (2015) it is impossible for a company to achieve good SP without creating values to its employees, shareholders, customers, society and all of its stakeholders. From this perspective, we argue that there is great complexity through the numerous of different stakeholders and challenges in order to create 'good' SP. In addition, Ismail (2009) argued that the skills of leaders for SP are very hard to clarify due to the diverse roles and range of disciplines involved. However, three main areas of skills are seen as relevant, first business skills, second people skills, and finally technical skills. Awareness and understanding, are represented in all the main areas, and therefore could be seen as the most important values. To recap, a possible explanation of the absent of a significant relationship between the share of entrepreneurial leadership and the outcome of SP of the firm as perceived by leaders, could be the great amount and influences of stakeholders, challenges in order to create 'good' SP, and different leadership skills highlighting the awareness and understanding of social performances and activities. Which makes sense, while this study takes the perceived firm performances as the outcome variable, and so awareness and understanding due to all these complexities can be lacking in the perception of leaders. We therefore encourage scholars to enrich this relationship by testing more factors that underlie the SP of the firm.

5.2 Limitations & Future Research

One limitation for the first part (Method 1) of this study is related to the construction of our independent variable, the cognitive attitude component. Our variable captures only the overall (work-related) PE of the leader. In doing so we might underestimate the impact of factors that influence PE of individuals. Besides, there might be a limitation within the originally interview question which not clearly specify a category of past experience. For this reason, it is assumable that respondents interpret the question differently and bias could exist. While we empirically tested the relationship between the attitude components and the share of entrepreneurial leadership in the total leadership behavior of leaders, we encourage scholars not to test the theoretical framework in more diverse settings but to extent with more elaborating variables regarding the attitude perception components. While it is obvious that the components are not only represented by PE, SI, and a leadership style (TAL&TFL). One limitation for the second part (Method 2) of this study could relate to the awareness and understanding of the respondents due to the complexities of the firms' SP. In which unawareness and incomprehension of managers could lead to a narrow view of the SP, and

so provide a misrepresentation of the performance. In addition, we can argue about some overall limitations of this research. For instance, although the use of a detailed and extensive codebook the data had to be recoded from qualitative data into quantitative data. Even though by using a generalization design (Srnrka & Koeszegi, 2007) and an inter-coder reliability (Cohen's Kappa), conducted by an MScBA graduating student of the University of Twente, to reduce the bias of interpretation, we assume there is still bias due to personal interpretation in order to transform words into numbers. Besides, the sample diversification is limited to a rather close sample mostly taken from German and Dutch leaders with emphasis on certain industries and should therefore be extended to other industries and countries. As a recommendation, future research can be extent into comparing cultural differences in behaviors and comparing different industries. Next, in this research we make use of self-reported data by leaders, in which desirable answers could be given. Future research should contain not only leader perceptions but compare these finding with employee perceptions as well. Lastly, whereas this current study is only focused on current leaders there should be research to find out what kind of attitude components influence people to not become more entrepreneurial oriented in leading employees, by looking closely at leaders and employees at the same time. For instance, factors that influencing employees in which leading employees in an entrepreneurial way becomes more difficult.

5.3 Research Implications

Although, we never intended to explain the effect of the attitude perception components on the entrepreneurial behavior of leaders, and in turn explaining the effect of the entrepreneurial behavior on perceived firm performances by developing a full model, the findings create several contributions. First, to our knowledge this is the first research examining the attitude components in relation to entrepreneurial leadership behavior. In particular, this study extends the existing literature in trying to make a closer and direct link between the cognitive component of PE and entrepreneurial leadership behavior, where the studies of (Ajzen, 1991; Bird, 1998; Krueger, Reilly & Carsrud, 2000) treated PE as a direct effect on several moderator variables, and so this study provide a basis for future research. Besides, in contrast to most of the prior research, our findings refine and extend the importance of SI on the entrepreneurial behavior of individuals whereas most scholars take emotional intelligence instead of SI. Surprisingly, our findings contradict the result of Bass (1985) and later of Avolio and Bass (1995), and so we contribute a new insight to the theory by arguing that the TAL-TFL concept seems not to be related to entrepreneurial leadership behavior as it does to firm performances, while TFL is preferred to create high entrepreneurial leadership behavior instead of showing both TAL and TFL characteristics. Subsequently, this study contributes to the theory of entrepreneurial leadership behavior and perceived firm performances. Our findings, suggest that a higher share of entrepreneurial leadership increase the expectations of the perceived firm performances. As argued by Lee et al. (2015), leaders that understand that their own perceptions influence the way in which they behave like a leader, and eventual influence thereby the behavior of their employees. Our findings suggest an extension by stating that leaders who understand that their own perceptions influence the way in which they behave and eventual influence thereby the behavior of their employees, also influence their expectations of their own perceived firm performances.

5.4 Practical Implications

In addition to the theoretical contributions, this study also offers practical implications. First, current and future managers can use the findings of this study to follow if entrepreneurial leadership behavior is desired in the organization, and besides the right perception can set great leaders apart in their ability to manage processes of handling people and organizational issues (Otara, 2011). One important factor to consider in general is that manager must realize that all individuals have differing perceptions, and that by using their perceptions they are not by definition effective and efficient leaders, while their followers may have a very different perception. Nevertheless, insight in the perceptions and the contribution of the attitude components towards the share of entrepreneurial leadership can contribute to influence the way in which leaders will behave and thereby influence the behavior of their employees. For instance, our findings argue that PE does not significantly contribute to the share of entrepreneurial leadership, and so in practice the focus should not lie on PE in order to develop a higher share of entrepreneurial leadership in the total leadership behavior of the leaders, as well as for creating an entrepreneurial leadership attitude at employees while the perceptions of leaders influence their behaviors. Instead, it is recommended to focus on the attitudes components of SI and TFL style were both components significantly contribute on the share of entrepreneurial leadership. Therefore, it is especially recommended for leaders to create a high esteem for social intelligence and encourage a transformational leadership style. Hence, our findings indicate that positive perceived firm performances accompanied with a higher share of entrepreneurial leadership. Leaders therefore, should increase the share of entrepreneurial leadership behaviors to meet higher perceived firm performances. Overall, the findings could be used as a tool for management teams to evaluate the skills and/or appropriateness of the leader to contribute to both the overall entrepreneurial orientation and performances of the firm. This because, as discussed, the insight in the perceptions can contribute to influence the way in which leaders can behave and thereby influence the behavior of their employees. Therefore, the perception of leaders can be seen as a key-element in establishing firm performances. Furthermore, this study can contribute in situations whereas firms wants to create or implement an EO strategy with the aim to create beneficial outcomes in terms of firm performances.

6. References

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7. Appendices

APPENDIX A.
OVERVIEW PARTICIPANTS

Participant ID	Type of Industry	Gender	Age	Function	Exp. in specific position	Total exp. in managerial function	Direct reports	
1	Service market	Male	45	Director		9	18	65
2	Service market	Female	40	Manager		2	5	32
3	Service market	Male	54	Director		1,5	34	400
4	Service market	Male	50	Director		9	19	10
5	Service market	Male	63	Manager		3	44	9
6	Service market	Female	38	Director		8	8	25
7	Service market	Female	50	Manager		3	20	65
8	Service market	Male	29	Manager		0,5	10	8
9	Service market	Male	30	CEO		2	2	5
10	Product market	Male	37	Manager		3	3	5
11	Service market	Female	25	Manager		3	2	8
12	Service market	Female	34	CEO		6,5	6,5	24
13	Service market	Male	27	Director		1	1	4
14	Product market	Male	49	CEO		11	17	4
15	Service market	Male	54	CEO		4	19	30
16	Service market	Male	39	Director		2	10	3
17	Product market	Male	62	CEO		9	22	20
18	Service market	Male	26	CEO		1	1	3
19	Service market	Male	57	Director		10	23	300
20	Service market	Male	49	HOD (Head of Department)		1	14	800
21	Service market	Male	43	Manager		14	14	12
23	Service market	Male	29	HOD (Head of Department)		1	1	3
24	Service market	Male	60	Director		20	20	4
25	Product market	Male	28	Manager		1,5	1,5	150
26	Product market	Male	58	Manager		0,2	20	40
27	Product market	Male	39	Manager		8	13	12
28	Service market	Male	25	CEO		2,5	5,5	9
29	Product market	Male	50	Manager		6	15	25
30	Service market	Male	37	Manager		2	5	28
31	Service market	Male	50	Owner		20	20	4
32	Product market	Female	60	CEO		25	25	7
33	Product market	Female	32	Team Leader		2	5	5
34	Product market	Male	64	Manager		3	25	15
35	Product market	Male	43	Manager		4	7	92
36	Service market	Female	47	Team Leader		6	6	21
37	Service market	Female	39	Manager		7	8,5	11
38	Service market	Male	58	Manager		7	12	44
39	Service market	Female	50	Manager		23	29	30
40	Service market	Male	53	Director		2	30	10
41	Service market	Male	45	Owner		22	22	3
42	Service market	Male	53	Director		24	24	14
43	Service market	Male	55	Manager		20	18	450
44	Service market	Male	54	CEO		5	12	120
45	Service market	Female	33	HOD (Head of Department)		3	5	9
46	Service market	Male	55	CEO		19	29	350
47	Service market	Male	48	Director		5	32	40
48	Product market	Male	40	Director		16	16	21
49	Service market	Male	40	Owner		20	20	11

50	Service market	Female	40	Manager	2	8	8
51	Product market	Male	40	Manager	8	12	9
52	Product market	Male	40	Director	26	29	30
53	Service market	Male	29	Director	1,5	1,5	5
54	Product market	Male	30	Director	10	10	8
55	Service market	Male	37	CEO	6	15	15
56	Service market	Male	30	CEO	1,5	3	8
56	Product market	Male	27	Director	3	5	6
58	Product market	Male	36	Director	13	16	8
59	Product market	Male	40	CEO	10	14	10
60	Service market	Male	32	Owner	2	15	26
61	Service market	Male	37	HOD (Head of Department)	10	15	200
62	Service market	Male	50	Accountant	16	23	47
63	Service market	Male	32	Accountant	4	14	20
64	Product market	Male	27	Owner	2	2	18
65	Service market	Male	31	Manager	5	8	30
66	Service market	Female	27	Manager	2	2	5
67	Service market	Male	28	Team Leader	2,5	2,5	17
68	Service market	Male	50	Manager	12	22,5	53
69	Service market	Male	36	Team Leader	6	8	12
70	Service market	Male	27	Manager	3	3	50
71	Service market	Male	40	HOD (Head of Department)	6	10	25
72	Service market	Male	45	Accountant	9	9	30
73	Service market	Male	30	Manager	3	3	16
74	Service market	Male	50	CEO	2	21	6
75	Product market	Male	46	Owner	13	16	16
76	Service market	Male	50	HOD (Head of Department)	1	12	80
77	Service market	Male	39	Owner	9	9	8
78	Service market	Male	39	Manager	3,5	3,5	11
79	Product market	Male	50	HOD (Head of Department)	10	25	13
80	Service market	Male	55	CEO	10	10	12
81	Product market	Female	47	CEO	7	15	4
82	Service market	Male	50	Director	5	23	9
83	Service market	Male	46	CEO	2	15	5
84	Product market	Male	58	Owner	30	30	6
85	Service market	Male	58	Owner	13	13	8
86	Product market	Male	43	CEO	7	14	6
87	Service market	Male	40	Owner	7	20	11
88	Service market	Female	42	Director	8	17	20
89	Product market	Male	48	Director	2	20	6
90	Product market	Male	53	CEO	17	28	7
91	Service market	Male	35	Owner	13	13	8
92	Service market	Male	57	Owner	30	30	19
93	Service market	Male	47	Owner	15	15	20
94	Product market	Male	53	Owner	13	13	15
95	Product market	Male	42	Owner	1	22	20
96	Product market	Male	23	Owner	7	7	4
97	Service market	Female	35	Owner	7	11	6
98	Service market	Male	35	Owner	10	12	16

APPENDIX B.
INTERVIEW PROTOCOL ENTREPRENEURIAL LEADERSHIP
- English Version –

Introductory information on the respondent's background

- Name of organization
- Type of industry / generally what type of product(s) or service(s)
- Name of respondent
- Gender
- Age
- Name of function / position in the organization / main task-responsibility
- Experience in this specific position,
- Total experience in any managerial position
- Approximately, how many direct reports (=people that directly report to the manager in the formal hierarchy of the organization)
- What type of work do people under the manager do (direct reports and others in the hierarchy below manager)

Main interview question (critical incident technique)

1. Could you mention an example in your career of when you led your employees in an entrepreneurial way? If you have multiple examples please take the most recent one. Please take your time to choose and describe one example.
 - i. What happened in this situation or project? What was it about?
 - ii. Which specific behaviors did you demonstrate in this example? How did you show them?
 - iii. Could you describe in greater detail what you did or said exactly?
 - iv. Why did you show these behaviors?
 - v. What kind of behaviors did your employees show in this example? Could you describe them exactly?
2. BACKUP IN CASE RESPONDENT FINDS IT HARD TO ANSWER OR TALKS ABOUT OTHER ISSUES THAN ENTREPRENEURIAL LEADERSHIP (=OTHER TOPICS THAN THOSE RELATED TO RISK-TAKING, PRO-ACTIVENESS, INNOVATIVENESS, AUTONOMY, OWNERSHIP, OR COMPETITIVE AGGRESSIVENESS OR ENCOURAGING THESE)
 - i. Can you mention an example in your career of when you encouraged your employees to take risks or take ownership; be autonomous, pro-active or innovative; or learn from competitors?

!!! -> If question 2 not necessary: explain here that in the literature entrepreneurial leadership is characterized by risk-taking, pro-activeness, innovativeness, autonomy, ownership and competitive aggressiveness and encouraging these in employees.

Contingency factors

3. How often do you lead your employees in an entrepreneurial way (regularly or occasionally)? Could you give a rough percentage?
4. In which circumstances do lead your employees in an entrepreneurial way, when do you think it is most useful? Too what extent is such behavior useful?
5. In which circumstances do you think it is not useful?
6. How important is social intelligence – empathy, social awareness and skills – for leading employees in an entrepreneurial way?
7. How has your past experience influenced you in leading your employees in an entrepreneurial way? Has your opinion changed over time on this matter and if so why/ when?
8. Could you also give a recent example of when you did not behave in an entrepreneurial manner towards your employees and why?
9. How would you describe your leadership in general?

Outcomes

10. What is in your opinion the effect of leading your employees in an entrepreneurial way on employee commitment? Please explain
11. What is in your opinion the effect of leading your employees in an entrepreneurial way on economic performance of the firm?
12. What is in your opinion the effect of leading your employees in an entrepreneurial way on the social performance of the firm? E.g. employee wellbeing (people) or environmental sustainability (profit)?

Closure of the interview

13. Do you have any final comments or thoughts on this matter you would like to share?

APPENDIX C.
QUESTIONS USED IN THIS PARTICULAR STUDY
(Extracted from the interview protocol)

Introductory information on the respondent's background

- Name of organization
- Type of industry / generally what type of product(s) or service(s)
- Name of respondent
- Gender
- Age
- Name of function / position in the organization / main task-responsibility
- Experience in this specific position,
- Total experience in any managerial position
- Approximately, how many direct reports (=people that directly report to the manager in the formal hierarchy of the organization)

Contingency factors

3. How often do you lead your employees in an entrepreneurial way (regularly or occasionally)? Could you give a rough percentage?
6. How important is social intelligence – empathy, social awareness and skills – for leading employees in an entrepreneurial way?
7. How has your past experience influenced you in leading your employees in an entrepreneurial way? Has your opinion changed over time on this matter and if so why/ when?
9. How would you describe your leadership in general?

Outcomes

10. What is in your opinion the effect of leading your employees in an entrepreneurial way on employee commitment? Please explain
11. What is in your opinion the effect of leading your employees in an entrepreneurial way on economic performance of the firm?
12. What is in your opinion the effect of leading your employees in an entrepreneurial way on the social performance of the firm? E.g. employee wellbeing (people) or environmental sustainability (profit)?

APPENDIX D.
DETAILED CODING PROCESS BOOK

Question	Unitization	Categorization	Coding	Cohen's Kappa
Gender	Words	1= Male 2= Female	-	-
Age	Numbers	Scale	-	-
Function	Words	1 = Owner 2 = CEO 3 = Director 4 = Manager 5 = HoD (Head of Department) 6 = Team leader 7 = Accountant	<p>Owner: Owner - Owner and CEO - Owner and Director - Owner and HoD - Co- Owner</p> <p>CEO: CEO - CEO and Co-founder - CEO and Founder - CEO and Managing director - Co- CEO</p> <p>Director: Director – CMO - CMO and Co-founder - CMO and Team manager – COO - Financial Director - ICT Director - Managing Director - Managing Director and Founder - Co- Director</p> <p>Manager: Manager - Allowance manager - Branch manager - Community manager - Designing manager - Fleet manager - Floor manager - Hotel manager - Junior manager - Managing partner - Marketing manager -Project manager -Sales manager -Team manager</p> <p>HoD: HoD Customer operations -HoD Economics, services and purchase - HoD Internal communication - HoD Media and communication - HoD Permits - Deputy head</p> <p>Team leader: Team leader – Leader - Nurse</p> <p>Accountant: Accountant</p>	-
Type of Industry	Words	1 = Service market 2 = Product market	<p>Service market: Consultancy – Government - Education – Architecture – Logistics - Online department store - Self-publishing book platform - Online learning platform - Venture capital - Financial services - PR agency - Service provider - Sport association – Hospital - Public services - Children association – Insurance – Dentistry – Healthcare - E-commerce – Accountants – Installation - Call center - Horeca services - Web design – Physiotherapy – Events - Gardener - Energy industry - App provider - Property and Housing - IT consultancy - Storage / real estate</p> <p>Product market: Car industry - Food sector - Metal industry - Graphic industry - Paper processing – Gaming – IT – Pharmacy – Horeca - Compound feed - Cooling systems - Window decoration - Soft-hardware technology - Clothing & accessories – Clothing - Consumer products – Jewelry - Piping industry - Textile production -Farming – Construction -Virtual reality</p>	-
Experience in this specific position?	Numbers	Scale	-	-
Total experience in managerial position?	Numbers	Scale	-	-
How many direct reports?	Numbers	Scale	Condition: When an estimate is made, the average is taken. Although, the average is rounded up.	-
How often do you lead your employees in an entrepreneurial way (regularly or occasionally)? Could you give a rough percentage?	Numbers Words Phrases	<p>– Scale (when possible)</p> <p>– Codes used to divide the answers with no percentage into the categories:</p> <p>1 = Always 2 = Regularly (often) 3 = Regularly 4 = Occasionally 5 = Rarely or Never</p>	<p>Always: Always - Always provide leadership in an entrepreneurial way - Although few exceptions, always leading in an entrepreneurial way - Permanent</p> <p>Regularly (often): Every day - In all circumstances – Often -Pretty much -That behavior is normal for me - Very often</p> <p>Regularly: Every week - Regularly - Regularly, but not always - 2/3 times a week</p> <p>Occasionally: Carefully - Now and then - Not daily - Not that much - Not that often – Occasionally -Very Occasionally</p> <p>Rarely/Never: Almost not at all - Little – Never</p>	0.883*
<p><i>Weighted percentages</i> Always: 100%</p>				

Regularly (often) : 90% | 65% | 85% | 55% | 80% | 75% | 80% | 90% | 90% | 70% |

Total: $780 / 10 = 78 \approx 80\%$

Regularly: 90% | 75% | 85% | 80% | 70% | 20% | 10% | 60% |

Total: $492 / 8 = 61,25 \approx 60\%$

Occasionally: 35% | 25% | 30% | 40% | 20% | 20% | 30% | 40% | 27,5% | 5% | 32,5% |

Total: $305 / 11 = 27,73 \approx 30\%$

Rarely or Never: 1% | 25% |

Total: $26 / 2 = 13 \approx 15\%$

*Divided interviews with no percentage given per category. Respondents numbers are given.

Always: R012 | R026 | R039 | R040 | R052 | R056 | R095 |

Regularly (often): R007 | R011 | R019 | R033 | R035 | R044 | R053 | R054 | R081 | R083 |

Regularly: R013 | R021 | R023 | R025 | R034 | R038 | R055 | R065 | R074 | R079 |

Occasionally: R010 | R020 | R042 | R058 | R076 | R077 | R089 | R096

Rarely or Never: R032 | R036 | R045 | R091 |

Answers that not could be weighted: **R022**

Conditions:

1. When an estimation is made by the respondent, the average is taken. (Example: 20-30 = 25%)
2. Answers given in the amount of days, have been calculated to a percentage of a week work of 5 working days. (Example: 1,5 of 5 days = 30%)
3. Answers like 50/50, has been granted as 50% EL.
4. Percentages have been developed for respondents who did not gave any percentage to this particular question. These percentages have been developed as follows:
 - First, the answers with no percentage have been divided into a 5-point Likert scale, consisting of Always – Regularly (often) – Regularly – Occasionally – Rarely or Never.
 - Second, the given percentages given with the according codes were divided with the 5-point Likert scale.
 - Third, for each category a weighted percentage has been calculated. The percentages have been rounded. (Example: Rarely or Never (1% + 25% / 2 = 13% \approx 15%)
 - Fourth, the interviews with no percentage, have been divided to the different categories, and the corresponding percentage is granted.
 - Fifth, Always is granted as 100%, and Never is granted as 0%. Although, we assume that no leader never leads their employees in an entrepreneurial way. Therefore, rarely and never are taken together in the same category.

<p>How important is social intelligence - empathy, social awareness and skills - for leading employees in an entrepreneurial way?</p>	<p>Words - Phrases</p>	<p>– 5-point Likert scale:</p> <p>1 = Very important 2 = Important 3 = Neutral 4 = Less important 5 = Not important</p>	<p>Very important: Participants who see social intelligence as something that is fundamental.</p> <p>Important: Participants who see social intelligence as something important, but not so much fundamental.</p> <p>Neutral: Participants who mention advantages and disadvantages of social intelligence, and therefore do not make a clear choice.</p> <p>Less important: Participants who see social intelligence as something that is less important</p> <p>Not important: Participants who see social intelligence as not considered important.</p> <hr/> <p>Very important: Essential - Extremely important - Foundation - Hugely important - Indispensable - Large - Most important - One of the most important things - Really important - SI comes back in everything - Super important - That's everything - Very important</p> <p>Important: Certainly important - Fairly important – Important - Important (Just as important as the clarity of the output) - Important (Just as important as technical competencies) - Important (Impossible to make a comparison, if SI delivers value)</p> <p>Neutral: Opposition in answer</p> <p>Less important: Not so important</p> <p>Not important: Not important</p>	<p>0.799*</p>
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<p>How has your past experience influenced you in leading your employees in an entrepreneurial way?</p>	<p>Words Phrases</p>	<p>– 5-point Likert scale: 1 = Strongly agree 2 = Agree 3 = Neutral 4 = Disagree 5 = Strongly disagree</p>	<p>Strongly agree: Participant who share the opinion that their past experience influenced strongly the way in leading their employees in an entrepreneurial way. Agree: Participant who share the opinion that their past experience influenced the way in leading their employees in an entrepreneurial way. Neutral: Participant who do not share strong negative or positive opinion if past experience influenced the way in leading their employees in an entrepreneurial way. Disagree: Participant who share the opinion that their past experience did not influenced the way in leading their employees in an entrepreneurial way. Strongly disagree: Participant who share the opinion that their past experience did totally not influenced the way in leading their employees in an entrepreneurial way.</p>	<p>0.956*</p>
<p>Strongly agree: Absolutely - Constantly changes - Definitely - Different situations, lead to more entrepreneurial thinking and leadership - Experience is just very important - Greatly influenced - It has changed a lot - It speaks for itself - Much through the years - Yes, of course, I think so - Yes, that is growing, it is a rhetorical question - <i>Strongly agree*:</i> R011 R012 R017 R035 R041 R055 R057 R074 R088 R086</p> <p>Agree: Influences of previous leaders - It has influenced me - It has not changed very much - Something changed -Time has learned -Yes -Yes, little - <i>Agree*:</i> R009 R014 R016 R020 R024 R026 R033 R044 R046 R048 R077</p> <p>Neutral: Hard to answer, not conscious in a certain way. Although, 100% sure that you grow in a role through experience - I have not changed that much, maybe a little bit more oriented on goals rather than the development process - Never adjusted great, learned from situations - Not working long enough to give an answer. However, I have the feeling that a different work environment wants it</p> <p>Disagree: Attitude has not changed – Disagree - From the beginning I had this attitude of leadership - I would not say that - Not in an Entrepreneurial way - That has not changed</p> <p>Strongly disagree: Not at all - Totally disagree</p>				

Conditions:

1. Different codes belonging to the categories are used. Although, some respondents do not state explicitly whether they strongly agree or agree with the question, whether their past experience influenced their leading of employees in an entrepreneurial way. Nevertheless, these answers have been scaled. This has been done on the basis of the number of examples that have been given, so that it appears that their leadership has changed through experience. The category 'agree' contains the respondents with only one example. On the other hand, the category 'strongly agree' contains all the respondents with two or more examples. See therefore the codes with *, including the respondents' numbers.
2. Respondents who noticed that their leadership style did not has changed, and so experience did not influence their way of leading employees in an entrepreneurial way, where categorized as 'disagree'.

<p>How would you describe your leadership in general?</p>	<p>Words Phrases</p>	<p>– 3-point Likert scale: 1 = Transactional leadership 2 = Both, transactional and transformational characteristics 3 = Transformational leadership</p>	<p>Transactional leadership: Participants that showed transactional leadership characteristics based on Bass (1985), by self-report. Transactional/transformational leadership: Participants that showed transactional as well as transformational leadership characteristics based on Bass (1985), by self-report. Transformational leadership: Participants that showed transformational leadership characteristics based on Bass (1985), by self-report.</p>	<p>0.861*</p>
<p>Transactional: 1- Contingent reward: Contrast exchange of rewards for effort 1- Contingent reward: Rewards for good performance 1- Contingent reward: Recognize accomplishments 2- Management by Exception (Active): Watches and searches for deviations from rules and standards 2- Management by Exception (Active): Takes corrective actions</p>				

2- Management by Exception (Passive): Intervenes only if standards are not met
 3- Laissez-faire: Abdicates responsibilities
 3- Laissez-faire: Avoids making decisions

Extra codes (Transactional):
 Authoritarian/Delegating leadership style -
 Confrontational, by challenging and rewarding -
 Determined the path - Pay for performance -
 Result- oriented -Task- oriented - Quality, planning and budget focus

Transformational:

1- Charisma: Provide vision and sense of mission
 1- Charisma: Instills pride
 1- Charisma: Gains respect
 2- Inspiration: Communicates high expectations
 2- Inspiration: Uses symbols to focus efforts
 2- Inspiration: Expresses important purposes in simple ways
 3- Intellectual stimulation: Promotes intelligence
 3- Intellectual stimulation: Rationality
 3- Intellectual stimulation: Careful problem solving
 4- Individualized consideration: Gives personal attention
 4- Individualized consideration: Treats each person individually
 4- Individualized consideration: Coaches
 4- Individualized consideration: Advises

Extra codes (Transformational): Gives responsibility - Individual- oriented - People-oriented - Personal development - Sharing knowledge and responsibility - Social cohesion - Transparency and openness

Conditions:

1. Characteristics of transactional and transformational leadership, are evaluated by the factors derived from Bass (1985).
2. Thereby, a scale evaluation is used. Which means that when the respondent showed different transactional leadership characteristics, it is evaluated as a transactional leader. There have been no distinctions made between the amount of showed characteristics. So, respondents with one characteristic of transactional leadership are valued the same as a respondent with three characteristics. This because, in several cases the same characteristics repeated, and by definition shown in the literature, there are different ways of being a transactional or transformational leader.
3. Respondents who showed transactional and transformational leadership characteristics are seen as leaders that are both transactional and transformational and use these competences when the situation occurs.
4. When the respondent did not answer the question in full, the other interview questions, excluding the 'social intelligence' question, were analyzed to get a better picture of the leadership style. The 'social intelligence' questions were excluded, because this will give a distorted picture when there will be given a socially desirable answer.
5. An important distinction between transactional and transformational is, that transactional leadership seems to be consistent with economic theories, while its core is pay for performance. On the other hand, transformational leadership involves motivation and inspiration so that employees exceed the basic requirements of a job.

The effect of leading your employees in an entrepreneurial way on employee commitment?	Words Phrases	– 3-point Likert scale:	1 = Leads to a positive (higher) effect on employee commitment 2 = The effect on employee commitment depends on characteristics 3 = Leads to a negative (lower) effect on employee commitment	Positive: Participants who experience a positive effect on employee commitment, by leading employees in an entrepreneurial way. Depends: Participant who believe that the effect is determined by the characteristics of employees. Negative: Participant who experience a negative effect on employee commitment, by leading employees in an entrepreneurial way.	0.856*
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Positive: Absolute - A great influence - A positive influence - In any case - It totally rises - Much commitment - More commitment - Positive in the long term - Positive influence on commitment - Substantial contribution - Strongly motivated -That is the only way - That works out to 100% -Would lead to high commitment

Depends: Acts generally - Depending on multiple factors - Depending on the characters of employees - Depending on the employees, not only the entrepreneurial leadership style - Does not change in all work groups, that depends - It comes naturally, and is dependable on the situation - The effect depends on the structure of the company

Negative: Negative effect

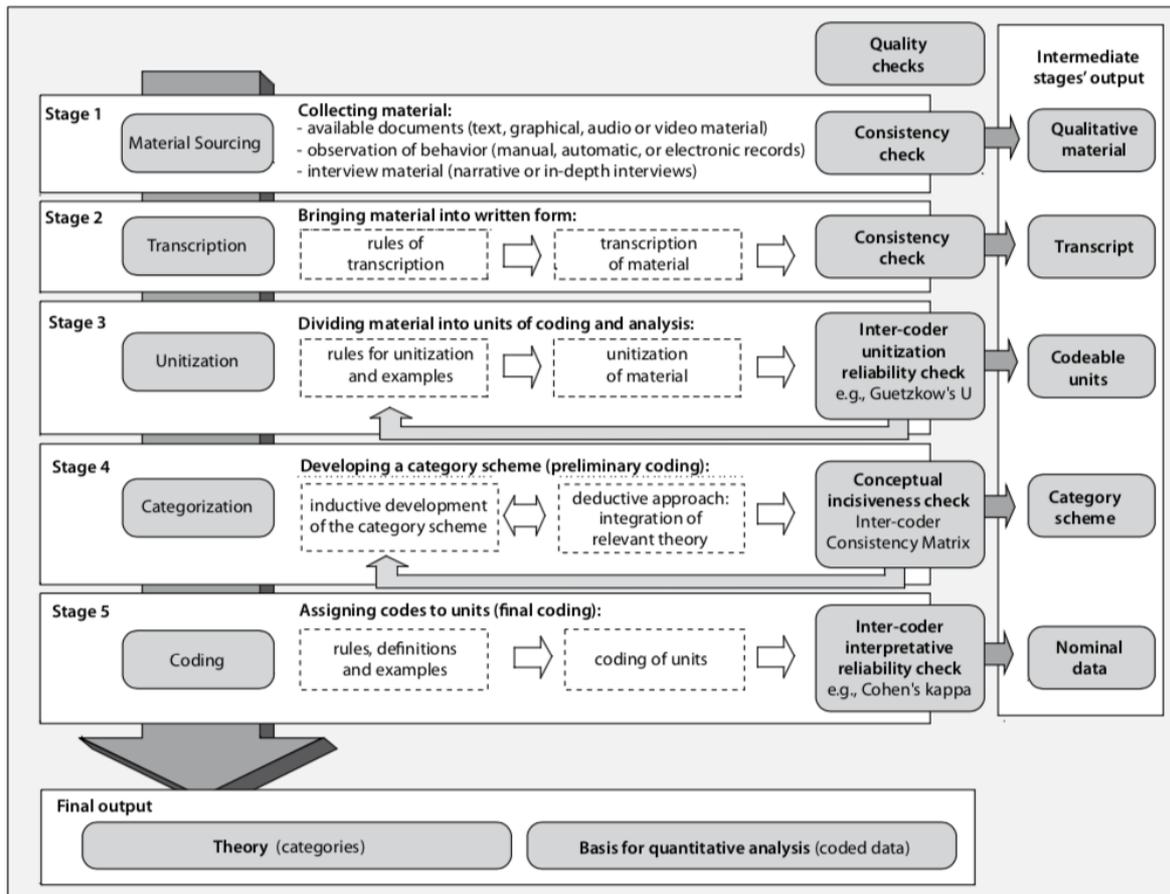
Conditions:

1. *The effect on employee commitment depends on characteristics*, includes both individual characteristics of employees and contextual characteristics of the organization and environment. Respondents categorized to this category, did not indicate that entrepreneurial leadership had a positive or negative impact on employees' commitment, but replied that it depends on different characteristics.
2. Missing values included the respondents who did not answer the question, or no clear statements was made whether entrepreneurial leadership has an effect on employee commitment.

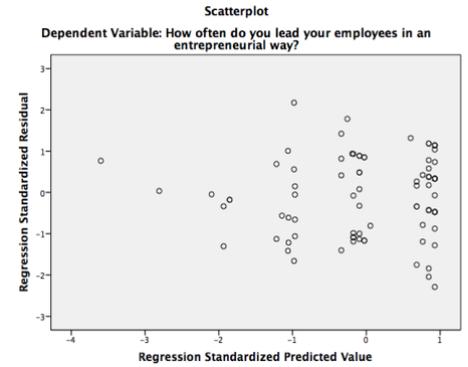
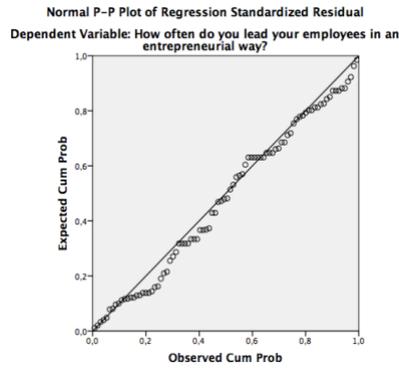
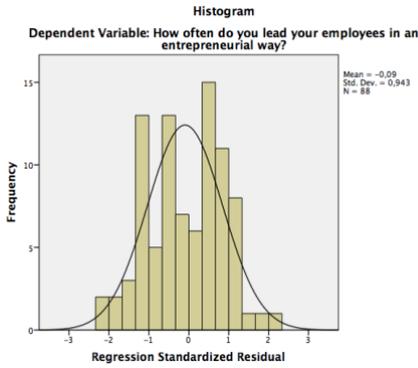
The effect of leading your employees in an entrepreneurial way on economic firm performance?	Words Phrases	– 3- point Likert scale:		Positive: Participants who experience a positive effect on the economic performance, by leading employees in an entrepreneurial way.	0.727*
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	<p>1 = Leads to positive (higher) economic firm performances 2 = The effect on firm performance depends on side factors 3 = Leads to negative (lower) economic firm performances</p>	<p>Depends: Participant who believe that the effect is determined by side factors. Negative: Participant who experience a negative effect on the economic performance, by leading employees in an entrepreneurial way.</p> <hr/> <p>Positive: Big influence – Clearly - Generally good - Higher performances - Important for economic performances - In any case - It could only be positive - That increases - That works through - Thus, better economic performances - Positive</p> <p>Depends: Depending on customer needs - Depending on employee characteristics - Depending on global effects - Depending on good and bad choices - Depending on the industry - Depends on different factors - Little influence on economic performances - Not only dependable on entrepreneurial leadership, but by most other factors.</p> <p>Negative: Negative effect</p>
<p>Conditions: 1. <i>The effect on firm performance depends on side factors</i>, includes answers that did not took a statement whether it had a positive or a negative effect. In contrast, the respondents made clear that the firm performance is dependable on various side factors, such as the market, global trends, customer needs, and employee characteristics. Although some of the respondents, state that leading employees in an entrepreneurial way would contribute to the firm performance, they were more convinced that this was just a part of different overarching factors. 2. Missing values includes respondents who did not answer the questions, did not made a clear statement, or could not answer the question for the following reasons: no comparison material, did not answer about the leadership style, not measurable when it comes to the image, or companies with no commercial purpose.</p>		
<p>The effect of leading your employees in an entrepreneurial way on the social performance of the firm?</p>	<p>Words – 3- point Likert scale: Phrases</p> <p>1 = Leads to positive (higher) social performances of the firm 2 = The effect on firm performance depends on side factors 3 = Leads to negative (lower) social performances of the firm</p>	<p>Positive: Participants who experience a positive effect on the social performance of the firm, by leading employees in an entrepreneurial way. 0.693* Depends: Participant who believe that the effect is determined by side factors. Negative: Participant who experience a negative effect on the social performance of the firm, by leading employees in an entrepreneurial way.</p> <hr/> <p>Positive: Better cooperation - Employees are satisfied - Eventually yes – Good -Good wellbeing - I think so -Important in general, and positive effect – Positive - Positive effect - Very positive effect - Wellbeing of the employees increases - Added value - Economic influence on the company - Eventually yes - Has natural effect - Positive accompanied</p> <p>Depends: Characteristics of employees determine whether it has effect - Difficult to say, arrives at the employees - Human characteristics - Business environment determined - Branch dependent - Depending on a good foundation that stimulates - Depending on developments and trends - Depending on how you want to propagate yourself as a company - Depending on the type of tasks you perform with your company -Depending whether you pay attention to it</p> <p>Negative: No influence from entrepreneurial leadership on social performance - Negative effect</p>
<p>Conditions: 1. Within this question there has been focused on two different factors, namely the <i>wellbeing</i> of people and <i>environmental stability</i> which represents the profit of the company. To keep a distinction between these two factors which are focusing on something totally different, there has been chosen to create a value for both these factors. Which means, that from each answer a score will be evaluated (if the respondent mentioned these factors) for the factor wellbeing and environmental stability. 2. If there were answers like ‘in general’, both the factor wellbeing as well as environmental stability are valued the same score as mentioned by the respondent. 3. The category ‘negative’, represents beside the answers who makes clear that leading employees in an entrepreneurial way will have a negative effect on the social performance of the firm, also the answers that state that an entrepreneurial leading style does not influence the social performances of the firm. This, because we assume that if respondents should see the benefits of this leading style on the performances, they would mention it and not state that there would be no influence on it. 4. Missing values includes respondents who did not answer the questions, did not made a clear statement, or could not answer the question.</p>		

APPENDIX E.
BLUEPRINT FIVE-STAGES GUIDELINE FOR QUALITATIVE ANALYSIS PROCESS



APPENDIX F. ASSUMPTIONS MULTIPLE LINEAR REGRESSION



Levene's Test of Equality of Error Variances^a

Dependent Variable: How often do you lead your employees in an entrepreneurial way?

F	df1	df2	Sig.
1,422	22	65	,138

Tests the null hypothesis that the error variance of the dependent variable is equal across groups.

a. Design: Intercept + Rec_Social_intel + Rec_Past_exp + TAL + TAL_TFL + TFL + Rec_Social_intel * Rec_Past_exp + Rec_Social_intel * TAL + Rec_Social_intel * TAL_TFL + Rec_Social_intel * TFL + Rec_Past_exp * TAL + Rec_Past_exp * TAL_TFL + Rec_Past_exp * TFL + TAL * TAL_TFL + TAL * TFL + TAL_TFL * TFL + Rec_Social_intel * Rec_Past_exp * TAL + Rec_Social_intel * Rec_Past_exp * TAL_TFL + Rec_Social_intel * Rec_Past_exp * TFL + Rec_Social_intel * TAL * TAL_TFL + Rec_Social_intel * TAL * TFL + Rec_Social_intel * TAL_TFL * TFL + Rec_Past_exp * TAL * TAL_TFL + Rec_Past_exp * TAL * TFL + Rec_Past_exp * TAL_TFL * TFL + TAL * TAL_TFL * TFL + Rec_Social_intel * Rec_Past_exp * TAL * TAL_TFL + Rec_Social_intel * Rec_Past_exp * TAL * TFL + Rec_Social_intel * Rec_Past_exp * TAL_TFL * TFL + Rec_Social_intel * TAL * TAL_TFL * TFL + Rec_Past_exp * TAL * TAL_TFL * TFL + Rec_Social_intel * Rec_Past_exp * TAL * TAL_TFL * TFL

VIF and Tolerance for the independent variables

	SI	PE	TAL	TFL
Tolerance	.804	.987	.676	.800
VIF	1.245	1.013	1.479	1.250

a. Dependent Variable: Share of entrepreneurial leadership in total leadership behavior?

Note: (1) * p<0.05, **p<0.01. (2) SI: social intelligence, PE: past experience, TAL: transactional leadership style, TFL: transformational leadership style.

APPENDIX G.
MODEL FITTING INFORMATION ON ORDINAL LOGISTIC REGRESSION

Model Fitting Information				
EP:				
Model	-2 Log Likelihood	Chi-Square	df	Sig.
Intercept Only	47,252			
Final	42,929	4,323	1	,038
SP:				
Model	-2 Log Likelihood	Chi-Square	df	Sig.
Intercept Only	46,063			
Final	44,044	2,019	5	,155
ECP:				
Model	-2 Log Likelihood	Chi-Square	df	Sig.
Intercept Only	67,258			
Final	57,894	9,364	5	,002

Link function: Logit.

a. Independent Variable: Share of entrepreneurial leadership in total leadership behavior?

Note: (1) EP: economic performance, SP: social performance, ECP: employee commitment performance.