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Master of Science in Economics and Business Administration

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Master's Thesis

**ARE SUSTAINABLE LEADERS DIFFERENT? – A COMPARISON BETWEEN DUTCH B  
CORPS, ISO 14001 CERTIFIED FIRMS AND OTHER FIRMS**

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## ABSTRACT

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Sustainability has become a hot topic in society and daily life. Social businesses arise while established firms put efforts into becoming greener and taking better care of their social responsibilities. This research investigates Dutch business leaders in terms of their personality traits and leadership styles and compares the results of sustainable and traditional business leaders. The research compares leaders of three types of business organizations: B Corps (sustainable business), ISO 14001 certified firms (environmentally conscious traditional business) and firms that are similar in terms of their core business activity, the number of employees and the age of their leader but are neither B Corp nor ISO 14001 certified (traditional business). The core of the research is based on two surveys; the first on leaders' personality traits and the second on leaders' leadership styles.

There is a lack of empirical (quantitative comparative) research comparing leaders of social/sustainable firms and traditional firms. Related studies suggest that there are no significant differences across different types of entrepreneurs; other scholars do propose such differences. The novelty of this study lies in the holistic comparison of businesses leaders whose firms are distinguished by sustainability certifications.

This study found that B Corp leaders are significantly more agreeable than ISO 14001 leaders, while no evidence was found for other significant differences relating the Big Five traits. Concerning leadership styles, B Corp leaders demonstrate higher levels of idealized influence, inspirational motivation, intellectual stimulation (all transformational leadership styles) and contingent reward (transactional leadership style) than their counterparts from other firms.

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Moi moi,

Kees van Luit,

Helsinki, 29 August 2018

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# 1. INTRODUCTION

The goal of this master's thesis is to identify differences and similarities between business leaders in terms of their personality traits and leadership styles, whereas businesses leaders will be distinguished by sustainability certifications of the firms they lead. First, I review the concept of sustainability applied to different types of businesses and organizations. Second, I analyze the main research topics and theories, personality traits and leadership styles.

This chapter introduces the study. First, it describes the background of the study in order to put the present research into perspective. Chapter 1.2 zooms in at the research objectives and related questions. Like every research, this research has its limitations, the topic of chapter 1.3. Finally, chapter 1.4 looks at the research method and data analysis.



Figure 1. Structure of chapter 1

## 1.1 Research background

Sustainability has become a hot topic in society and daily life. The growing pressure under natural environmental and societal challenges has grown and sustainable development has become a main goal for society. This also affects businesses and organizations. Social businesses, primarily established to solve a social problem, arise while established firms put efforts into becoming greener and taking better care of their social responsibilities. This research focuses on two different types of businesses: sustainable and traditional businesses. Sustainable businesses are ventures that aim to integrate social, environmental and economic value. (Smith, 2016; Hockerts & Wüstenhagen, 2010)

An upcoming type of sustainable business is the B Corp; a business “that meets the highest standards of verified social and environmental performance, public transparency, and legal accountability to balance profit and purpose” (B Corporations, 2018a). The B Corp movement started in the USA in 2006 and to date more than 2,600 companies from 60 countries are certified. B Corps encompass both start-ups and already existing firms. They have in common a dedication to do business in a sustainable way. As the B Corp certification is voluntary, it is not legally binding (B Corporations, 2018a). Two main motivations to become a B Corp are:



First, small businesses want to prove their genuine intentions of looking beyond economic interests; and second the realization that the traditional way of doing business has led to economic, social and environmental problems, which the B Corp movement attempts to tackle by their new approach of doing responsible business (Kim, Karlesky, Myers & Schifeling, 2016). The Netherlands, the country investigated in this research, accounts for 61 of the B Corps (August 2018), furthermore showing a steady grow over the last couple of years, indicating that the concept gains popularity in the country. The Dutch B Corps form the first research group.

Second, the study investigates traditional business; firms that do not primarily exist to solve a social or environmental problem or explicitly create social and environmental value. However, they may still put effort into becoming more sustainable, for instance by obtaining an ISO (International Organization for Standardization) 14001 certification; a group of standards that provides companies and organizations with guidelines to manage their environmental systems (ISO, 2018). In 2015 there were more than 2,400 Dutch firms certified with at least the 2004 version of ISO 14001 (ISO, 2015). These firms, considered traditional businesses, form the second research group.

Third, the last research group consists of Dutch firms that are neither B Corp nor ISO 14001 certified. So, this group is the second traditional business research group for this study and the third research group in total.

Certifications enable one to draw a hard line between different firms in an era where virtually every firm seems to market itself as being sustainable. So far, little research has been conducted specifically on B Corps, while the existing research rather takes a holistic approach to the phenomenon (Stubbs, 2017a, 2017b; Kim et al., 2016). On the other hand, vast research exists on social business, of which B Corps are a sequel (Cohen & Katz, 2016; Haigh & Hoffman, 2012; Thompson, Alvy & Lees, 2000). This research contributes to ongoing discussions on social and sustainable business and to nascent discussions on B Corps in particular, by comparing B Corps with two forms of traditional business.

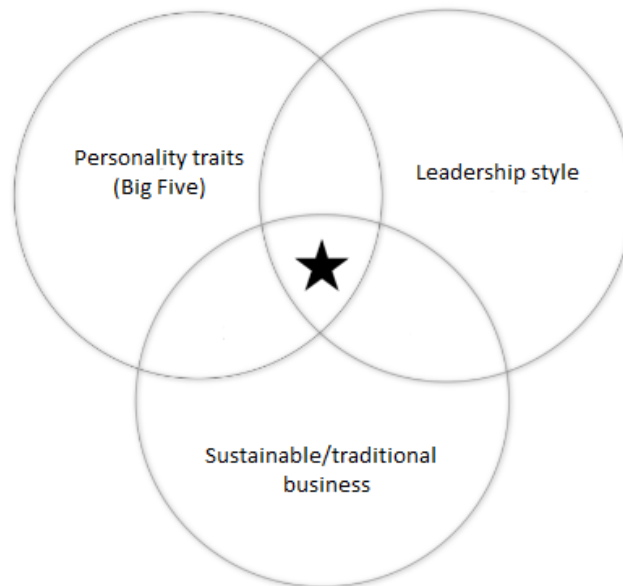
Comparing the research groups can be undertaken in various ways. One such way is to relate it to a recurrent topic within business and entrepreneurship academic literature: leadership. Two main strands of leadership research include the personality of a leader and his or her leadership style (Stephan & Drencheva, 2017; Peterson, Walumbwa, Byron & Myrowite, 2008). In order to understand the people that lead Dutch businesses, this study attempts to identify the personality traits and leadership styles, whereas the three aforementioned

research groups are to be compared. It allows to differentiate between sustainable and traditional business leaders, regarding both who they are and the way they work. In this research a leader refers to the person who leads a firm, in most cases the CEO. However, in large firms a leader may be referred to as an individual in charge of a certain department.

Concerning **personality traits**, the majority of researchers (e.g. Stephan & Drencheva, 2017; Thompson et al., 2000) agree that there are five overarching dimensions that together encompass all human personalities, referred to as the *Big Five traits*. For the scope of this study, the Big Five traits will be used to identify the personalities of both social business leaders and traditional businesses leaders. (Digman, 1990)

**Leadership styles** are often understood in terms of transactional and transformational leadership. In transactional leadership theory, transactions between a leader, or manager, and an employee characterize effective leadership (Bass, 1990). In contrast, “transformational leadership occurs when leaders broaden and elevate the interests of their employees to look beyond their self-interest for the good of the group” (Bass, 1990). The broadening of the interests of their employees, as a key stakeholder of the business, seems typical for sustainable business, and therefore it can be hypothesized that sustainable business leaders are generally more transformational than their counterparts running a traditional business.

This thesis positions itself on the intersection of the concepts of personality traits (Big Five traits), leadership styles and sustainable versus traditional business, as shown in figure 2. Existing research typically looks at the relationship between two of the concepts. For instance, Bono and Judge (2004) investigated the relationship between transactional and transformational leadership and personality traits. The type of leadership in sustainable businesses has also been the topic of various research (e.g. Kurucz et al., 2017). The third combination is rarer as research on sustainable business often takes a specific, entrepreneurial perspective. When it comes to traits, other methods than the Big Five are frequently used. The studies furthermore tend to compare data on sustainable entrepreneurs with secondary data. Finally, the personality traits of B Corps leaders have not specifically been investigated.



*Figure 2. Positioning of the research*

## **1.2 Research objectives and questions**

It remains unclear if business leaders differ based on whether they lead a social or a traditional business. Leaders can be identified in terms of who they are (personality traits) and how they lead (leadership styles). This study investigates both, for sustainable business (B Corp) leaders and traditional business (ISO 14001 and other) leaders. It is limited to leaders of Dutch firms, in order to mitigate cultural differences. Hence, the main research question this study tries to answer is:

**What are the main differences and similarities in personality traits and leadership styles of sustainable business leaders compared to traditional business leaders in the Netherlands?**

Two related sub questions are:

1. What are the personality traits of sustainable business leaders and traditional business leaders in the Netherlands?
2. What are the leadership styles of sustainable business leaders and traditional business leaders in the Netherlands?

Comparing the three research groups is only possible if these are as similar as possible in terms other than sustainability certifications. Therefore, the firms selected for the research are similar in terms of their core business activity, the number of employees and the age of the leader.

### **1.3 Research delimitations**

The present research has a strict scope. Firstly, the study distinguishes between sustainable business (represented by B Corps) and traditional business (represented by ISO 14001 and other firms). The main differences between sustainable and traditional business are:

- Sustainable business is guided by the integration of social, environmental and economic value creation;
- Sustainable business typically exists for a social or environmental purpose, to be realized through a for-profit business approach, whereas such purposes are of secondary importance to traditional business.

However, in real life the distinction between sustainable and traditional business is not often so black and white. Moreover, for this research the business types are operationalized in terms of B Corps, ISO 14001 firms and other firms. There is more to sustainable and traditional business than just these three groups. Hence, conclusions based on the distinction between sustainable and traditional business can only be drawn carefully.

Secondly, both the B Corps and the sample of traditional businesses differ by nature. The firms operate in different industries and have different sizes, among others. For small and medium sized companies, the concept of social entrepreneurship is often relevant. On the contrary, leaders in large businesses are likely to be rather managers than entrepreneurs. Control variables are used to limit the differences across the research groups.

Thirdly, the organizational context is not taken into consideration. For example, respondents working in a flourishing company may give different answers than people working in a company that is not far from bankruptcy. The current research does not take external factors into consideration other than very basic characteristics of the firms and their leaders.

Lastly, research on leadership tends to oversimplify the concept of leadership. There is much more complexity involved beyond personality traits and leadership styles. It is not sure to what extent this has the potential to harm this study, but it is important to consider the place of traits and styles within the full picture of corporate leadership.

### **1.4 Research method and data analysis**

The research first identifies the most important concepts and theories regarding business sustainability, leadership and personality. This theoretical foundation provides the

understanding what variables to investigate and how to do this. The most important data collection methods are two surveys, based on literature on psychology, personality and leadership. The first is a prior scale-survey developed by Donnellan, Oswald, Baird & Lucas (2006) and referred to as Mini-IPIP Scales. The main goal of this survey is to identify the leaders' personality traits. The backbone of the second survey consists of the MLQ Form 6-S leadership test developed by Vinger & Cilliers (2006). The goal of this survey is to identify leadership styles. Both surveys are supplemented with questions regarding the firm's core activity, its number of employees and the age of its leader. Data about sustainability certifications is obtained from the websites of the firms and online databases on beforehand.

The obtained data will be quantitative and therefore analyzed as such using the data statistics program SAS. Most important are not the absolute numbers but rather how these differ across the research groups. Finally, the findings result in a discussion and finally conclusions, answering the main research question.

The next step of this thesis is to develop a literature review. This results in a research methodology, the topic of chapter 3. Chapter 4 shows the findings, after which chapter 5 reflects on these with the final research results including the conclusions. Figure 3 sums up the structure of the the thesis, including the chapter numbers.



*Figure 3. Structure of the thesis*

## 2. LITERATURE REVIEW

This chapter provides the theoretical basis of the research. It first explains the main dimensions of sustainable business, and explores the concept of B Corps. Next, it investigates leadership, personality and how these interact with each other. Third, the chapter looks at the personality and leadership within the context of sustainable business. The end of the chapter provides a summary of the literature review as well as a visualized theoretical framework of the study. Figure 4 showcases the structure of the chapter.



Figure 4. Structure of chapter 2

### 2.1 Sustainable business and B Corps

The following section describes sustainability and sustainable development, after which it makes the link to the business environment. It explains the case for social entrepreneurship and B Corps; examples of how sustainability for businesses could look like. For larger firms, the term corporate sustainability is commonly used. This research talks about business sustainability, as a more general term that includes sustainability for all kind of organizations and companies.

#### 2.1.1 Sustainability and sustainable development

Nowadays, the word sustainability is popularly used in developed societies. The word itself is defined as “the ability to be maintained at a certain rate or level” (Oxford English Dictionary, 2018a). However, next to the dictionary definition there exists a multitude of definitions of and relating to sustainability (Dommerholt, 2011, p. 7). For instance, a more specific definition of sustainability is given by Ameer and Othman (2012, p. 61): “Sustainability is concerned with the impact of present actions on the ecosystems, societies, and environments of the future.” This definition emphasizes that the actions are present, but the results, which often have a negative connotation, come later. It demonstrates long-term thinking, which, in the business world, relates to long-term, corporate strategies. Moreover, it implies ethics and responsible decision-making. For these reasons, the definition of sustainability by Ameer and Othman will be the working definition of sustainability for this research.

Related to sustainability, one can talk about sustainable development, which can be defined as “development that meets the needs of the present without compromising the ability of the future generations to meet their own needs” (WCED, 1987). This definition also explicitly distinguishes between the present and future, implying the need for responsible behavior in current times.

### 2.1.2 Sustainability dimensions

Often, the environmental component of sustainability is emphasized. For instance, the planetary boundaries theory by Rockström et al. (2009) indicates the playing field for humanity in terms of environmental sustainability. It entails nine so-called planetary boundaries, which, if transgressed, are likely to cause dramatic effects on the planet, and therefore humanity. The boundaries range from ocean acidification and biodiversity loss to chemical pollution and atmospheric aerosol loading, among others. (Rockström et al., 2009) Keeping in mind the boundaries and the possible catastrophic consequences if these are neglected, an enormous responsibility is put on humanity, as well as on businesses in particular (Whiteman et al., 2013).

In response to the planetary boundaries theory, Raworth (2017) added social dimensions to the already existing environmental ones, referred to as doughnut economics. She argues that, besides the planetary environmental limits humanity is pushing, there must be a social foundation for everyone, in order for humanity to develop sustainably. Specifically, she argues that every person must have access to healthcare, water, food, energy, education, among others. As depicted in figure 5, the safe and just operating space for humanity exists between the social foundation and ecological ceiling. (Raworth, 2017)

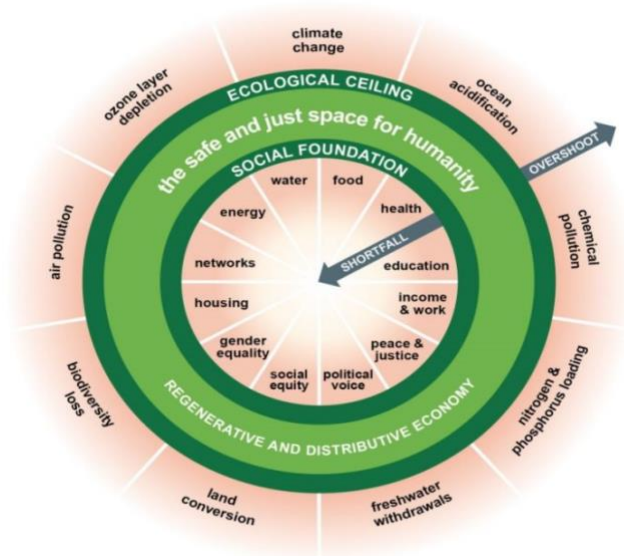


Figure 5. Doughnut economics (picture from Raworth, 2017, p. 4)

### 2.1.3 Sustainability and organizations/businesses

Related, Elkington (1997) argues that firms do not only have a financial responsibility, but their responsibilities also include their actions regarding environmental and social issues. The thought that sustainable firms have to balance environmental (also referred to as planet or ecological), social (people) and economic (profit) sustainability, is better known as the triple bottom line, which is visualized in figure 6. Eventually, businesses that are sustainable, thus environmentally, socially and economically sustainable, have a competitive advantage over their competitors. (Elkington, 1997)

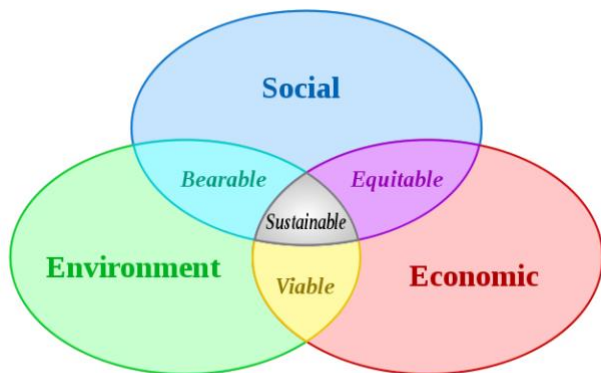


Figure 6. Triple bottom line (picture from Tokyo Weekender, 2009)

It can be argued that businesses have caused environmental degradation to a large extent. On the positive side, entrepreneurship can be a solution to current problems. (York & Venkataraman, 2010) Elaborating on triple bottom line thinking, many scholars, like Epstein (2008, p. 32), argue that sustainability has to be integrated in a company's corporate strategy.

Sustainable business has also frequently been connected to stakeholder theory as it suggests that a company operates in a whole ecosystem of stakeholders and a successful company manages to satisfy all of them (Freeman, 1984). This brings into question how the traditional thinking of increasing profit and shareholders' value maximization can be combined with environmental and social sustainability (Friedman, 1970). Or, is shareholders' value maximization still the main goal for business in the first place? It is clear that firms should not only perform well from an environmental and social point of view to be sustainable, but there must also be a solid economic situation. Firstly, because the environmental and social deeds a firm does, will not be continued when it goes bankrupt. Secondly, no other firms are likely to follow the example to become more environmentally and socially responsible if it sees that such firms have financial problems. Chouinard (2005, p. 421), founder of outdoor clothing manufacturer Patagonia, Inc., adequately said: "If we wish to lead corporate America by



example, we have to be profitable. No company will respect us, no matter how much money we give away or how much publicity we receive for being one of the ‘100 Best Companies’, if we are not profitable.”

Epstein and Roy (2003) put forward nine principles of business sustainability, or sustainability for firms:

1. ethical standards are established and followed;
2. there is good governance;
3. there is transparency;
4. there is sought for business relationships with fair business practices (e.g. fair trade);
5. there are financial returns, also for the providers of capital;
6. there is community involvement and local economic development;
7. products and services are valuable;
8. there are good employment practices;
9. the environment is protected.

Porter and Kramer (2011) propose the idea of businesses creating shared value (CSV), in an attempt to “reinvent capitalism and unleash a wave of innovation and growth”. They aim to combine economic and societal growth, so not only the business itself benefits from its business practices. Firms can create shared value through three distinct strategies: by reconceiving products and markets; by redefining productivity in value chains; and by creating and enabling a local environment. Figure 7 displays the strategies and examples on how to execute these.

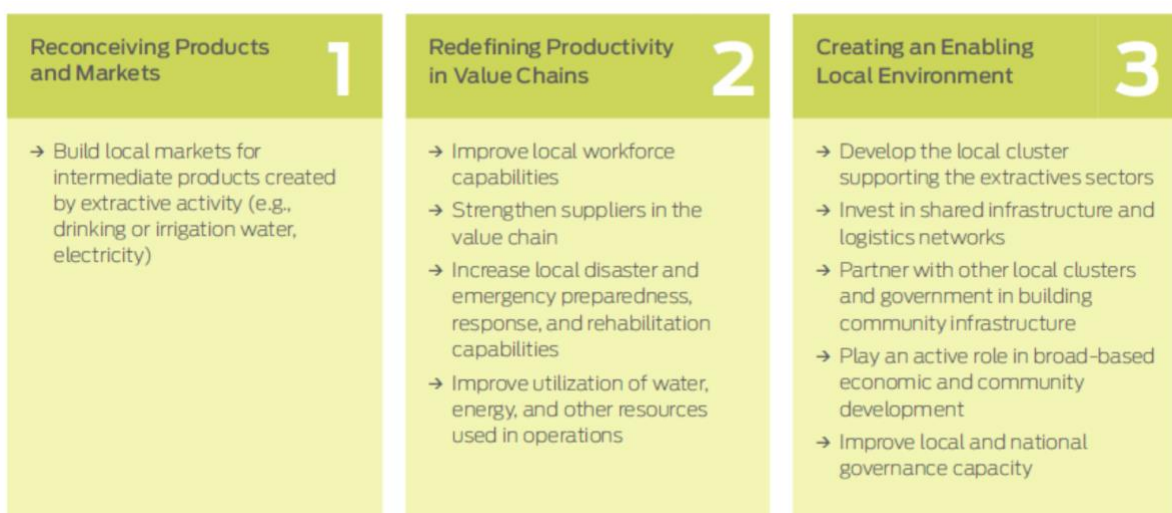


Figure 7. Three strategies to create shared value (picture from FSG, 2014)

It is clear that there is a case for business sustainability, in one way or another. The Corporate Sustainability Model, depicted in figure 8, shows how corporate sustainability works, in terms of inputs, processes, outputs and outcomes. Business sustainability is likely to follow a similar pathway. (Epstein, 2008, p. 165)

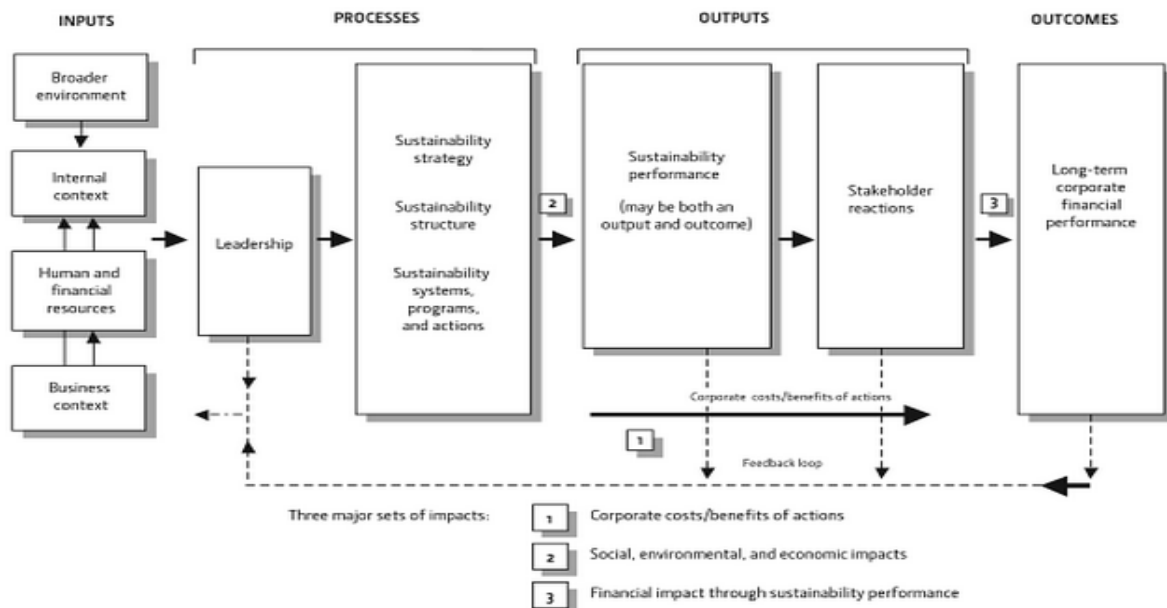


Figure 8. The Corporate Sustainability Model (picture from Epstein, 2008, p. 165)

The model is primarily developed to measure sustainability performances, but apart from that it provides an overview of what business sustainability entails. Moreover, it points out the role of leadership within sustainable organizations. It starts with the inputs: the broader environment deals with regulations, local versus global standards and geography, among others. The internal context includes conducting a life-cycle assessment, supply chain management, corporate codes of conduct and related issues. Next, human and financial resources for a large part decide what the possibilities are to invest in sustainable practices, like employee training. Lastly, the business environment refers to how the business relates to the business environment, often in terms of competitive power, market share and number of customer channels, among others. (Epstein, 2008, pp. 165-168)

The inputs give the situation a leader has to deal with. Based on the inputs a leader can establish a sustainability strategy, structures and systems, programs and actions. Consequently, the execution of decisions made by the leader causes certain performance and stakeholder reactions. This leads to stakeholder reactions, which, in turn, influence the long-term financial performance. (Epstein, 2008, pp. 163-177) Although the circumstances a firm is involved in are out of the scope of this research, it is important to understand the full picture.

Research shows that businesses with superior sustainability practices, like actively reducing greenhouse gas emissions or implementing sustainability standards, also perform better from a financial point of view, compared to similar businesses that invest less in sustainability practices (Ameer & Othman, 2012). The exact reason for this remains unveiled and it is not sure to what extent the sustainability practices contribute to the superior corporate financial results.

Both large (also referred to as Green Goliaths) and small businesses (Green Davids) engage in sustainable entrepreneurship. Commonly, the small businesses cause disruptive innovations. Large businesses are likely to adopt and scale successful innovations. In this way, sustainability at large is most likely to be reached through the combination of both large and small businesses seeking to increase their sustainability. (Hockerts & Wüstenhagen, 2010)

Instead of corporate or business sustainability, similar terms like corporate social responsibility (CSR), corporate citizenship, corporate accountability or social responsibility are commonly used. All of these have similar meanings. To be consistent, the term business sustainability will be used further on.

#### **2.1.4 B Corps**

Heavily discussed topics within the field of business sustainability are social entrepreneurship and hybrid organizations. Social entrepreneurship refers to “an innovative, social value creating activity that can occur within or across the nonprofit, business, or government sectors” (Austin, Stevenson & Wei-Skillern, 2006). Hybrid organizations try to solve a social or environmental problem through a for-profit business approach, which thus overlaps with the concept of social business (Haigh & Hoffman, 2012). In turn, a social entrepreneur can be described as “an individual, group, network, organization, or alliance of organizations that seeks sustainable, large-scale change through pattern-breaking ideas in what and/or how governments, nonprofits, and businesses do to address significant social problems” (Light, 2005). In practical life, sustainable entrepreneurship often overlaps with sustainable leadership, as entrepreneurs could also be the leaders in their own businesses.

Firms have the opportunity to choose for specific legal forms or to obtain sustainability related certifications in order to underline their sustainable intentions and practices and so to become a recognized social enterprise. Some of the most common certifications include the Benefit Corporations in the United States, L3C Statute (Low Profit Limited Liability Company, the CIC regulations (Community Interest Corporations) in the United Kingdom and the Social Purpose

Company in Belgium (Stubbs, 2017a). Certified B Corporations (B Corps) are among the best-known models in this field. They introduce themselves as: “B Corp is to business what Fair Trade certification is to coffee or USDA Organic certification is to milk” (B Corporations, 2018a). Due to its presence globally and in the Netherlands, B Corps will be investigated further.

In order to put B Corps in perspective, these are compared with Benefit Corporations, which also root in a corporate responsibility towards sustainability. Although there are similarities, the concepts are different and should not be confused. (Hiller, 2013) Table 1 compares Benefit Corporations with B Corps.

	<b>Benefit Corporations</b>	<b>B Corps</b>
Definition	“A Benefit Corporation is legally a for-profit, socially obligated, corporate form of business, with all of the traditional corporate characteristics but with required societal responsibilities.” (Hiller, 2013)	“B Corps are for-profit companies certified by the nonprofit B Lab to meet rigorous standards of social and environmental performance, accountability, and transparency.” (B Corporations, 2018a)
Type	Legal form	Voluntary certification
Location	United States	No country restrictions (to date present in approximately 60 countries)
Number of companies	Approximately 5,300	Approximately 2,600

*Table 1. Comparison of Benefit Corporations and B Corps*

The legal aspect of Benefit Corporations increases the difficulty to scale the concept to other countries than the United States, the only country where Benefit Corporations exist. B Corps do not face this limitation, as businesses with this certification are members “of a voluntary organization subject to an assessment and ratings standard that supports corporate sustainability in several key areas of business endeavors”. (Hiller, 2013) As B Corps are increasingly present in Europe, the next section further investigates B Corps.

In essence, every business can become a B Corp, regardless of the size, industry or age. Becoming a B Corp enables a business to publicly claim to be a responsible business interested in both shareholder and stakeholder value (Kim et al., 2016). In order to obtain the certification, companies have to conduct an assessment while several documents have to be provided. (B Corporations, 2018b) Additionally, a fee ranging from 500 to 50,000 US Dollars (or equivalent currencies) has to be paid, depending on the revenues of the business (Benefit Corporation, 2018). For the assessment a minimum of 80 points out of approximately 200 has to be scored. The associated report exists of five categories: environment, workers, customers, community, and governance. In turn, these categories consist of multiple sub categories. (B Corporations, 2018c) As an example, figure 9 shows the assessment scores for Dutch chocolate maker Tony's Chocolonely (B Corporations, 2018d).

<b>B Impact Report</b>		
<b>Certified since: December 2013</b>		
Summary:	Company Score	Median Score*
<b>Environment</b>	<b>26</b>	<b>7</b>
<b>Workers</b>	<b>29</b>	<b>18</b>
<b>Customers</b>	<b>N/A</b>	<b>N/A</b>
<b>Community</b>	<b>47</b>	<b>17</b>
<b>Governance</b>	<b>11</b>	<b>6</b>
<b>Overall B Score</b>	<b>113</b>	<b>55</b>

80 out of 200 is eligible for certification  
 \*Of all businesses that have completed the **B Impact Assessment**  
 \*Median scores will not add up to overall

Figure 9. B Impact Report of Tony's Chocolonely (picture from B Corporations, 2018d)

The assessments are conducted by the overarching nonprofit organization B Lab and reconducted every couple of years in order to guarantee a stable performance.

In practice, most B Corps are small- and medium sized businesses, while few large, public listed companies are certified. Moreover, it is unclear to what extent the model is scalable, partly due to the limited adoption of B Corps certifications among large businesses. If such

businesses will not embrace the model, the latter may “remain a niche of small privately-owned companies”. (Stubbs, 2017a) On the contrary, scholars argue that hybrid organizations, which are both for-profit and have a strong sustainable purpose, are likely to grow (Haigh & Hoffman, 2012) and will become mainstream (Stubbs, 2017b).

To date, little research has been conducted specifically on B Corps. Existing literature encompasses the financial (Chen & Kelly, 2015) performances of B Corps and, more typically, it tries to understand and conceptualize B Corps (Stubbs, 2017a, 2017b; Hiller, 2013; Nicholas & Sacco, 2016; Kim et al, 2016), as it is a relatively new phenomenon. Moreover, previous studies take a corporate perspective rather than zooming in at specific components. On the other hand, extensive and more specific research has been conducted on related topics, like the influence of sustainability orientation on entrepreneurial intentions (Kuckertz & Wagner, 2010) or the profile of the social entrepreneur (Sastre-Castillo, Peris-Ortiz & Danvila-Del Valle, 2015).

## **2.2 Personality and leadership**

One way to approach sustainable business is to focus on the person who leads the business (e.g. Sastre-Castillo et al., 2015). It is relevant to understand who he or she is in terms of personality traits, but also to understand the style he or she uses in order to lead.

Epstein’s (2008) model showed the importance of leadership for business sustainability. In turn, leadership is -at least partly- rooted in personality. Therefore, the following section zooms in at the personality of leaders and how this can be measured.

### **2.2.1 Personality traits, attributes and competencies**

Individuals can be identified in terms of personality traits, attributes and competencies. Firstly, trait theories are “theories that consider personal qualities and characteristics that differentiate leaders from nonleaders”, by focusing on personal qualities and characteristics (Robbins et al., 2010, p. 317). Secondly, attributes differ from traits in the way that attributes are not as much ingrained in one’s personality, but these are rather a result of what is learned over time. One is likely to be born with the potential to develop a certain attribute, but it has to be developed. Thus, attributes rather relate to people’s skill components, attitudes, values and dispositions. (Hager & Holland, 2006) Thirdly, a competency can be defined as “an individual’s demonstrated knowledge, skills, or abilities” (Ulrich, Brockbank, Yeung & Lake, 1995)

Based on aforementioned definitions of traits, attributes and competencies, figure 10 can be drawn.

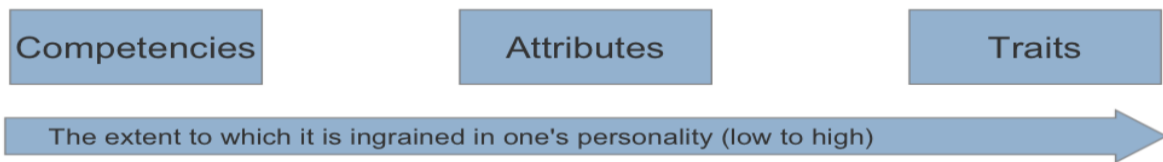


Figure 10. Competencies, attributes and traits in perspective

Although the distinction is not always clear, the figure attempts to distinguish between traits, attributes and competencies based on the extent to which these are ingrained in one's personality, as opposed to the extent to which these are external factors that can be learned. As the figure depicts, traits are most closely related to personalities. Hence, this research considers a trait as a personal quality or characteristic that is largely ingrained in one's personality, based on the definition by Robbins et al. (2010).

### 2.2.2 Leaders' personality traits

Within leadership theory individual personality traits form the basis of many studies. Not incidentally, researchers attempt to understand the relationship between personalities and an independent variable, often in a psychological context. On the intersection with business, researchers commonly take an entrepreneurial perspective. For instance, Baum & Locke (2004) explore the relationship of entrepreneurial traits with subsequent venture growth. In order to profile an individual, researchers tend to use socio-demographics (Light, 2005), Big Five Traits (Herrmann & Nadkarni, 2014) or a combination of both (Nga & Shamuganathan, 2010).

Research on leadership traits has significantly evolved over time, resulting in the currently widely used model of five overarching dimensions that together encompass all human personalities: *The Big Five*. These dimensions (also called OCEAN-dimensions) are:

1. Openness to experience: the extent to which a person is interested in novelty.
2. Conscientiousness: the extent to which a person is reliable in terms of carefulness, relating to taking responsibility and being organized, among others.
3. Extraversion: the comfort a person has with relationships, in which can be distinguished between introverts and extroverts.
4. Agreeableness: the extent to which a person tends to help others in contrast with solely caring for his or her own interests.
5. Neuroticism (or emotional stability): a person's ability to cope with stress.

(Digman, 1990; Robbins et al., 2010)

Figure 11 shows how different types of personalities score either high or low for the different dimensions. For instance, a curious and independent person with a wide range of interests will score high on the openness dimension.

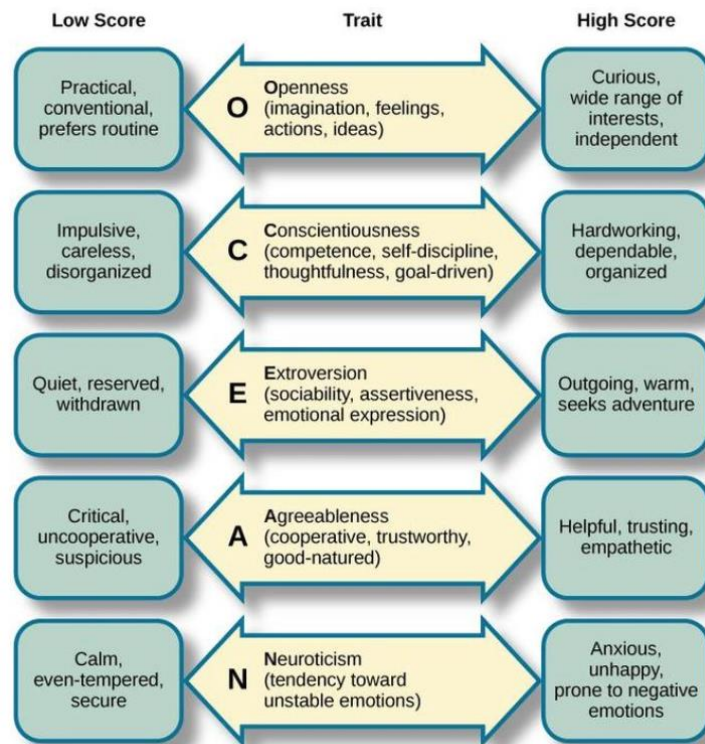


Figure 11. Big Five traits and corresponding scores (picture from Lumen Learning, 2018)

All five trait dimensions represent underlying traits. Hence, the next step is to operationalize the Big Five traits into measurable variables. The question what variables to use still is the topic of ongoing debates, which already started several decades ago. For instance, McCrae and Costa came up with the NEO Inventory, an adjective- (variable) rating instrument. Later, they reshaped their survey, resulting in a list of eighty adjectives. In turn, these are put into statements, for example whether a person is rather calm or worrying. The statement scores can be measured and lead to personality trait scores, in case of the example for the Neuroticism dimension. (McCrae & Costa, 1987; Costa & McCrae, 1992)

More recently, Thompson (2008) developed a list of mini-markers in order to classify an individual in terms of personality traits. In turn, this work was based on Saucier's (1994) big-five mini-markers. Table 2 sums up Thompson's mini-markers. The mini-markers could all be ranked on a one-to-five Likert-scale, after which scores per personality trait dimension can be calculated.



1. shy	11. unimaginative	21. jealous	31. systematic
2. talkative	12. artistic	22. unenvious	32. organized
3. energetic	13. intelligent	23. moody	33. kind
4. quiet	14. philosophical	24. unanxious	34. sympathetic
5. extraverted	15. deep	25. efficient	35. harsh
6. outgoing	16. uncreative	26. disorganized	36. cooperative
7. reserved	17. envious	27. careless	37. unkind
8. untalkative	18. emotional	28. untidy	38. warm
9. creative	19. anxious	29. neat	39. rude
10. intellectual	20. unworried	30. inefficient	40. inconsiderate

Table 2. Personality traits mini-markers (table from Thompson, 2008)

A main disadvantage of aforementioned ways to measure personality traits is the extensiveness of the associated rating instruments. As a reaction to this, Donnellan, Oswald, Baird and Lucas (2006) came up with the MINI-IPIP Scales: a survey that measures the Big Five traits based on twenty statements. Even though the survey is significantly shorter than previous variants, it turns out to be a reliable tool to accurately measure personality traits. On the practical side, the compactness of the survey allows researchers to increase their response rates. Table 3 shows the twenty statements.

20-Item Mini-IPIP

Item	Factor	Text	Original Item Number
1	E	Am the life of the party.	1
2	A	Sympathize with others' feelings	17
3	C	Get chores done right away.	23
4	N	Have frequent mood swings.	39
5	I	Have a vivid imagination.	15
6	E	Don't talk a lot. (R)	6
7	A	Am not interested in other people's problems. (R)	22
8	C	Often forget to put things back in their proper place. (R)	28
9	N	Am relaxed most of the time. (R)	9
10	I	Am not interested in abstract ideas. (R)	20
11	E	Talk to a lot of different people at parties.	31
12	A	Feel others' emotions.	42
13	C	Like order.	33
14	N	Get upset easily.	29
15	I	Have difficulty understanding abstract ideas. (R)	10
16	E	Keep in the background. (R)	16
17	A	Am not really interested in others. (R)	32
18	C	Make a mess of things. (R)	18
19	N	Seldom feel blue. (R)	19
20	I	Do not have a good imagination. (R)	30

Note. E = Extraversion; A = Agreeableness; C = Conscientiousness; N = Neuroticism; I = Intellect/Imagination; (R) = Reverse Scored Item.

Table 3. MINI-IPIP (table from Donnellan, Oswald, Baird & Lucas, 2006, pp. 203)

For each statement a respondent is asked to score him- or herself compared to other people. Subsequently, an individual's score per personality trait can be derived from the answers to the statements. Appendix 1 includes the complete survey.

Within the vast amount of research dedicated to trait theory there also exist criticism, regularly when related to leadership effectiveness. Some consider the lack of including external factors into measuring an individual's effectiveness to be a main weakness. They argue that situational factors have a greater influence on leadership effectiveness than personality traits. (Yukl & Van Fleet, 1992; Hughes, Ginnett & Curphy, 1996) Further, Hughes et al. (1996) put forward that it is hardly possible to discover relationships between traits and effective leadership as labeling and operationalizing traits is difficult. Lastly, although many researchers mean that all traits could be categorized into five broad dimensions, others propose a sixth category: honesty (Ashton & Lee, 2001). In the five categories model, honesty is covered in Agreeableness and either Conscientiousness or Neuroticism, but less explicitly (Hilbig & Zettler, 2009).

**This research uses the Big Five traits framework** as the basis to identify leaders' personality traits, because in despite of the criticism most scholars agree that "a five-factor model of personality can be used to describe the most salient aspects of personality" (Goldberg, 1990). Moreover, models including five dimensions are tested, improved and validated frequently (McCrae & Costa, 1987; Digman, 1990; Thompson, 2008). Finally, "evidence indicates that the Big Five are heritable and stable over time" (Judge, Ilies, Bono & Gerhardt, 2002).

### **2.2.3 Leadership and management**

Prior to discussing leadership styles, the distinction between leadership and management has to be made, as these are easily confused. According to the Oxford English Dictionary (2018b, 2018b) leadership is "the action of leading a group of people or an organization" while management is "the process of dealing with or controlling things or people". Among scholars, it is argued that management is about coping with complexity (Kotter, 1990a). Generally, in the organizational context management refers to designing and monitoring organizational plans and structures. On the contrary, leadership is about dealing with changes. A leader provides a certain direction to the organization by establishing a vision, coordinating its execution, and inspiring. (Kotter, 1990b)

In contrast with Kotter's view on leadership and management, House and Aditya (1997) take the view that managers are responsible for implementing the organizational vision and subsequent coordination and operational concerns, based on strategic decisions made by leaders.

The aforementioned views on leadership are not in tune with each other, which can be understood by considering three commonly used organizational levels: strategic, tactical and

operational. The strategic level refers to overall organizational strategies; the tactical level to strategies for individual organizational functions or business units and the operational level to the way an organization makes sure the strategic and tactical goals are met; often in terms of means, resources and people. (Johnson, Whittington, Scholes, Angwin & Regnér, 2014). House and Aditya (1997) argue that leadership typically belongs to the strategic level of an organization, whereas Kotter also observes leadership on the tactical and operational organizational level.

Other scholars often do not explicitly distinguish between management and leadership, implying that leadership and management are no standalone topics, but managers could be excellent leaders while leaders will have to manage, too. Therefore, this research sees leadership as “the ability to influence a group towards to achievement of a vision or set of goals” (Robbins, Judge & Campbell, 2010, p. 316). This definition includes parts from all organizational levels. Moreover, it stresses the interpersonal skills and competencies, in comparison with the idea that leadership is just based on a position or title. This idea is referred to as non-sanctioned leadership. Although, according to the definition by Robbins et al., leadership as such is not linked to a position or title, people in leading positions remain obvious subjects for research on leadership. (Robbins et al., 2010)

In scholarly discussions on what makes a person a good leader, traits, attributes and competencies play a profound role. For instance, Alexander and Andersen (1997) conducted research on how the gender of leaders influences how others perceive them. Others looked at the role of charisma in leadership (Avolio & Bass, 1998). Further, leadership traits are specifically linked to certain fast changing business types, like high-technology startups (Peterson, Walumba, Byron & Myrowitz, 2008).

This research focuses on leadership, although in practice it is commonly inseparable from management. Therefore, this research reviews and applies the literature of leadership styles. (Kotter, 1990b).

#### **2.2.4 Leadership styles**

Beyond personality traits, another approach to identify leadership is to look at leadership styles. A leadership style could be considered as “the manner and approach of providing direction, implementing plans, and motivating people. As seen by the employees, it includes the total pattern of explicit and implicit actions performed by their leader.” (Newstrom & Davis, 1993) Goleman (2000) identifies six leadership styles:

1. Coercive: a leader demands immediate compliance and expects people to strictly follow his or her orders.
2. Authoritative: a leader communicates an overall vision and goals but gives people freedom to achieve these.
3. Affiliative: a leader aims at creating harmony and emotional bonds with and among people.
4. Democratic: a leader lets people participate in decision-making and is open to new ideas.
5. Pacesetter: a leader is highly motivated and expects excellent performances from other people, too.
6. Coaching: a leader focuses on people's personal development rather than the focus is always on work-related tasks.

The coercive and pacesetter leadership styles have a negative connotation as these may lead to a negative organizational environment. On the other hand, authoritative, affiliative, pacesetter and coaching styles are generally considered positive. (Goleman, 2000)

Others distinguish between transactional and transformational leadership (Burns, 1978; Bass, 1985, 1990). In transactional leadership theory, transactions between a leader, or manager, and an employee characterize effective leadership. Such transactions entail rewards and penalties from the leader's side and performance or underperformance from the side of the employee. If an employee does a great job, he or she deserves to be rewarded by the leader, and vice versa. Through this, employees are stimulated to perform well as good performance is recognized. Transactional leadership implies the risks that leaders act passively and only come into action when there is a problem, undermining the motivation of the employees. (Bass, 1990)

The rigidity of transactional leadership leaves space for another leadership style: transformational leadership. As Bass (1990) defines, "transformational leadership occurs when leaders broaden and elevate the interests of their employees to look beyond their self-interest for the good of the group." The leader is considered inspirational due to his or her high goal-setting combined with clear communication and personal attention for employees. Transformational leaders are often perceived charismatic. Lastly, transactional and transformational leadership are not mutually exclusive but could appear simultaneously. (Bass, 1990) (Robbins et al., 2010)

Bass (1985) later conceptualized transactional and transformational leadership in his *Multifactor Leadership Theory*, resulting in seven dimensional areas. The first four areas relate to transformational leadership; the fifth and sixth to transactional leadership and the seventh to non-leadership. Bass' dimensional areas of leadership are:

1. Idealized influence “measures whether you hold subordinates’ trust, maintain their faith and respect, show dedication to them, appeal to their hopes and dreams, and act as their role model” (Northouse, 2004, p. 197).
2. Inspirational motivation “assesses the degree to which you provide a vision, use appropriate symbols and images to help others focus on their work, and try to make others feel their work is significant” (Northouse, 2004, p. 197).
3. Intellectual stimulation “measures the amount you encourage others to be creative in looking at old problems in new ways, create an environment that is tolerant of extreme positions, and nurture subordinates to question their own values and beliefs and those of the the organization” (Northouse, 2004, p. 197).
4. Individualized consideration “shows the degree to which you show interest in others’ well-being, assign projects individually, and pay attention to those who seem less involved in the group” (Northouse, 2004, p. 197).
5. Contingent reward “shows the degree to which you tell others what to do in order to be rewarded, emphasize what you expect from them, and recognize their accomplishments” (Northouse, 2004, p. 197).
6. Management-by-exception “assesses whether you tell others the job requirements, are content with performance standards, and are a believer in *if it ain’t broke, don’t fix it*” (Northouse, 2004, p. 197).
7. Laissez-faire “measures whether you require little of others, are content to let things ride, and let others do their own thing” (Northouse, 2004, p. 197).

The *Multifactor Leadership Questionnaire* (MLQ) is the primary instrument to measure the seven leadership factors. The model has been used frequently and is understood to be well validated. It has been tested and improved continuously, resulting in MLQ Form 6-S, among others. This form consists of twenty-one statements pertaining to transactional, transformational and laissez-faire leadership styles. (Vinger & Cilliers, 2006; Tejada, Scandura & Pillai, 2001) Due to its compact though reliable nature, MLQ Form 6-S has been included in this research’ second main survey, to be found in appendices 3 and 4, in English and Dutch respectively.

## 2.3 Personality and leadership in sustainable business

The previous subsections described business sustainability, personality and leadership styles. The following outlines key literature about the relationship between leadership and sustainable business.

Closely connected to the sphere of corporate sustainability, scholars have discussed relational leadership (Kurucz, Colbert, Lüdeke-Freund, Upward & Willard, 2017); ethical leadership (Brown, Trevino & Harrison, 2005); responsible leadership (Maak & Pless, 2006a, 2006b) and sustainable leadership (Hargreaves & Fink, 2006). All of these include dimensions of sustainability whereas the focus differs. The concept of sustainable leadership can be considered the most holistic and it therefore deserves special attention.

In their explanation of sustainable leadership, Hargreaves and Fink (2006) first put the role of a leader in perspective. They argue that a shift towards more corporate sustainability largely depends on leadership, but leadership as such is often not sustainable due to various reasons. If leaders are successful, their successors have a difficult job to lead in a similarly effective manner. Moreover, social entrepreneurs often lack the skills needed when an organization becomes larger, including the ability to find a suitable successor (Leadbeater, 1997). Further, successful leaders who leave a company tend to bring other skilled people from the company along with them. Therefore, sustainable leadership is not about attracting charismatic leaders from elsewhere, but a company should rather grow its own leadership within the company. (Hargreaves & Fink, 2006) "Sustainable leadership matters, spread and lasts. It is a shared responsibility that does not unduly deplete human or financial resources, and that cares for and avoids exerting damage on the surrounding educational community and environment (Hargreaves & Fink, 2003, p. 3)."

Wilson and Holton (2003) propose six core competencies for CSR managers:

1. understand society;
2. build partnerships;
3. question business as usual;
4. build and maintain relationships with stakeholders;
5. have a strategic view;
6. harness diversity.

More recently, Hind, Wilson and Lenssen (2007) identified nine skills and seven attitudes that constitute responsible business behavior. Table 4 shows these skills and attitudes, which most closely relate to competencies.

<b>Skills</b>	<b>Attitudes</b>
Well founded and balanced judgements	Honesty and integrity
Critical thinking	Long-term perspective
Team player	Open-mindedness
Creativity, innovation and original thinking	Appreciating and embracing diversity
Communicating with credibility	Conviction and courage
Business acumen	The drive to contest resistance
Listening skills	The capacity to think outside the box
Managing stakeholder network relationships	
Emotional intelligence	

*Table 4. Skills and attitudes that constitute responsible business behavior (table from Hind et al., 2007, p. 15)*

The skills and attitudes in the table imply that sustainable leaders must be able to look beyond the boundaries of their own business. Further, they have to seek for innovative solutions, aimed at long-term sustainability. Based on this, sustainable leaders are likely to score high on the Openness to Experience dimension. Further, relatively high scores on Extraversion and Conscientiousness may be expected.

Knight and Paterson (2016) investigated what competencies are important for leaders in the sphere of corporate sustainability. Among others, it resulted in the *Behavioral Competency Framework for Sustainability Leaders*, which can be used to classify leaders in terms of sustainability competencies. Figure 12 depicts the framework, which distinguishes between five categories and twenty-two behaviors. People who demonstrate behavior as depicted in the framework, score higher for the relating category, eventually making them more effective leaders.

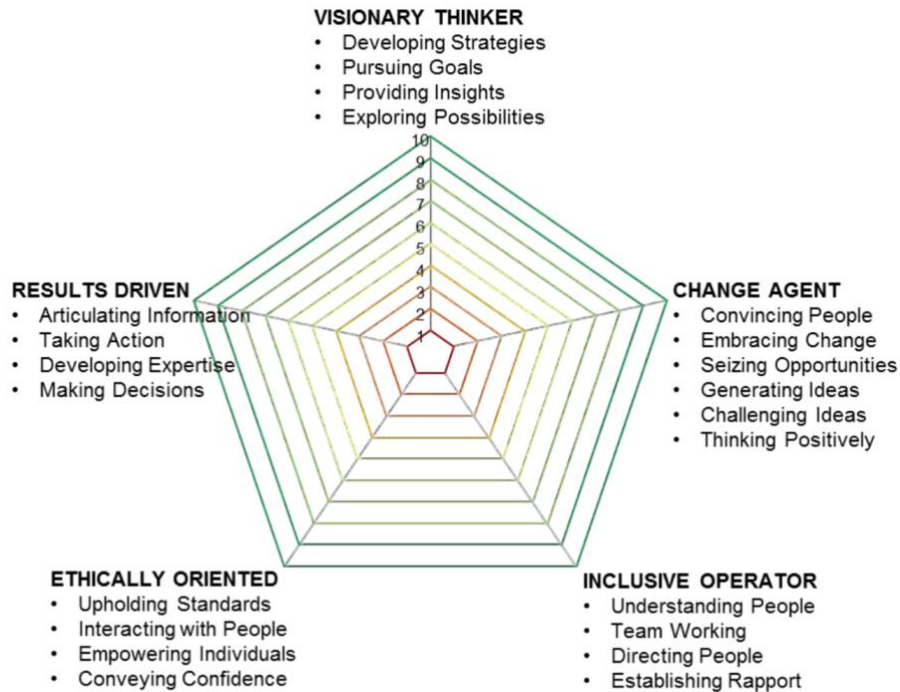


Figure 12. Behavioral Competency Framework for Sustainability Leaders (picture from Knight & Paterson, 2016, pp. 58)

Furthermore, they identified ten Wave® critical behavioral competencies, which are, in sequence of perceived importance: developing expertise; impressing people; establishing rapport; articulating information; interacting with people; valuing individuals; exploring possibilities; generating ideas; challenging ideas; and understanding people. (Knight & Paterson, 2016)

Next, there is increasing scholarly attention to the relationship between personality traits and business sustainability (Irengün & Arikboga, 2015; Thompson, Alvy & Lees, 2000). However, many studies investigate social entrepreneurship rather than sustainable leadership. The concept is similar and therefore relevant to look at, but the differences should not be ignored. The first main differences include the difference between leadership and entrepreneurship, though in practice this may come down to the same person, whose personality will be unaffected by a position. Secondly, the term social entrepreneurship implies an exclusive focus on the social dimension of sustainability. On the other hand, in practice it does not exclude economic and environmental sustainability. This research uses the more generic word sustainable business, as this considers the integration of social, environmental and economic values into a business' core thinking.



Furthermore important, even though studies investigate the person behind social entrepreneurship, the Big Five personality traits are rarely used. The entrepreneurs are rather described in terms of visions, attitudes and behaviors. Socio-demographics are also regularly used to describe social entrepreneurs (Light, 2005). In one of the studies that does include the Big Five traits, business leaders' personalities are linked to leadership effectiveness. Leaders with higher scores for certain dimensions are generally considered as more effective leaders compared to their peers with low scores. According to Derue, Nahrgang, Wellman and Humphrey (2011), a leader's traits are indirectly related to leadership effectiveness. Figure 13 shows their model.

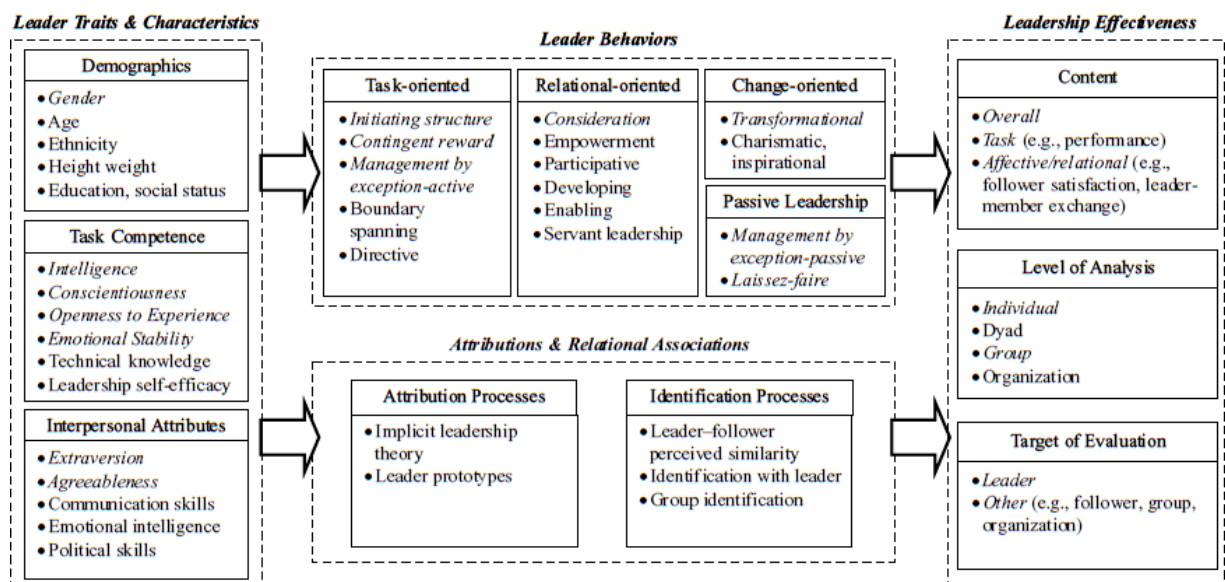


Figure 13. Integrated model of leader traits, behaviors and effectiveness (picture from Derue et al., 2011, p. 10)

In the model three traits -Conscientiousness, Openness to Experience and Emotional Stability- are represented in category Task Competence, while Extraversion and Agreeableness are considered Interpersonal Attributes. Although the traits are here referred to as competencies and attributes, they are typically referred to as traits. It shows the difficulty to draw hard lines between the three. The Big Five, as well as demographics and other task competencies and interpersonal attributes, together influence the leader behaviors and attributions and related associations. In turn, these influence the leadership effectiveness. Apparently, the Big Five do have influence on the leader effectiveness, albeit indirectly. (Derue et al., 2011)

Thompson, Alvy & Lees (2000) argue that sustainable entrepreneurs possess similar traits as other entrepreneurs: "They are ambitious and driven. They have been able to clarify and

communicate an inspiring mission; around this they have recruited and inspired paid staff, users and partners - as well as an army of volunteers. They have known where they could acquire resources.” In their meta-analysis, Stephan & Drencheva (2017) did not find significant differences between different types of entrepreneurs, either. Next, social entrepreneurs are considered charismatic leaders, pragmatic visionaries and alliance makers (Cohen & Katz, 2016). In despite of the similarities, there is no single type of social entrepreneur (Barendsen & Gardner, 2004).

Other research indicates that effective sustainability leaders do not differ from other effective leaders, except for their “additional capacity and mindset to include a wider expanse of stakeholders and a different mindset as to the purpose of organizations” (Quinn & Dalton, 2009). Barendsen and Gardner (2004) are more specific about the personality of social entrepreneurs. They put forward that social entrepreneurs are like volunteers; seeking for social change, but act more like businessmen. They are altruistically motivated to promote an economic system that is morally responsible, through social entrepreneurial activities (Yiu, Wan, Ng, Chen & Su, 2014). Their businesses are typically rooted in strong beliefs, which were formed early. In general, social entrepreneurs are confident and persistent, they know what they want, they are energetic and able to inspire people to join. (Barendsen & Gardner, 2004)

Hence, social entrepreneurs are likely to score high on Extraversion. Others agree that individuals with socio-entrepreneurial intentions would score high on Extraversion, as well as on Openness to Experience, Conscientiousness and Agreeableness, but low on Neuroticism (Tran & Von Korflesch, 2016).

On the contrary, Nga and Shamuganathan (2010) make the case that social entrepreneurs do differ from others. Generally, social entrepreneurs have a great ability to “engage, enable and enact transformational change efficiently in the face of scarce resources, risks and diverse contexts” (Thompson, 2002). Nga & Shamuganathan (2010) also argue that Openness to Experience has a positive influence on a business’ social vision, innovation and financial returns. These, as well as sustainability and innovation, are also positively influenced by Agreeableness. In contradiction with others, Irengün and Arikboga (2015) argue that individuals that score high on Openness to Experience are not likely to be engaged in long-term social entrepreneurial activities. This could be explained by the idea that such people are creative and rather impulsive, which withholds them from engaging in long-term commitments.

Marshall (2011) describes the main similarities and differences between social for-profit and other entrepreneurs. His framework, see figure 14, shows that both types of entrepreneurs possess the general entrepreneurial attributes. A major difference is the explicit commitment to social issues that social entrepreneurs have. Nevertheless, they rely on market-based approaches. Depending on the degree of internationalization more difference may exist. Ultimately, social entrepreneurs “seek to resolve a social issue through social mission driven market-based entrepreneurship” (Marshall, 2010).

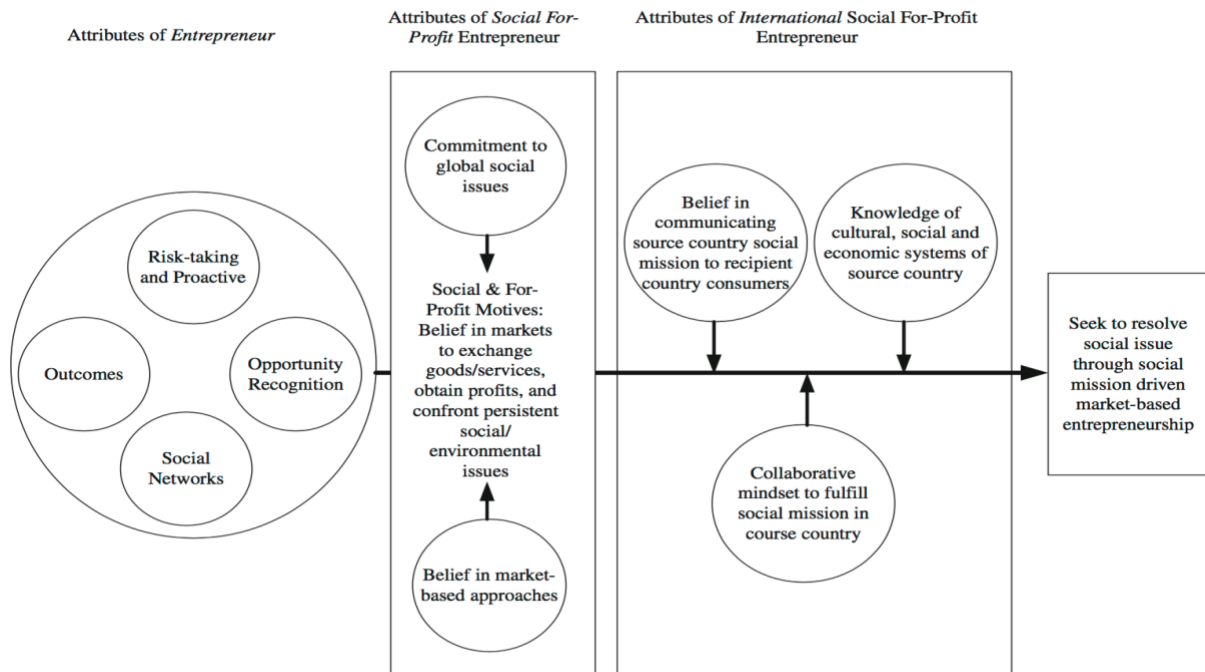


Figure 14. Model of international for-profit social entrepreneurs (picture from Marshall, 2011, p. 186)

Based on the aforementioned comparisons between business leaders, including the work by Tran & Von Korfflesch (2016), five hypotheses are formulated for this research.

- H1.** B Corp leaders are more open to experience than traditional business leaders.
- H2.** B Corp leaders are more conscientious than traditional business leaders.
- H3.** B Corp leaders are more extrovert than traditional business leaders.
- H4.** B Corp are more agreeable than traditional business leaders.
- H5.** B Corp leaders are less neurotic than traditional business leaders.

Whether similar to other entrepreneurship and leadership or not, the research on the personality traits of sustainable leaders remains important due to several reasons. First, the

existing research is limited and mainly focuses on social entrepreneurship, which may differ from leadership. Second, in most cases entrepreneurs are assessed in terms other than the Big Five traits. Third, previous studies do not compare the personalities, in terms of the Big Five traits, of sustainable leaders with traditional leaders within the same research. For the comparison secondary data about the comparison group is used. Research specifically focused on the difference between sustainable business and other leaders can contribute to the understanding of both type of leaders.

Further, research often elaborates on the cultural component. For instance, transformational leadership is said to be more effective in societies where the level of sustainability is low (Muradlidharan & Pathak, 2018). More holistic research was conducted by Metcalf and Benn (2013), who consider leadership styles related to corporate sustainability implementation. They argue that organizations are complex and adaptive systems, meaning that leaders must be able to deal with and think through complexity as well as they must possess emotional intelligence to solve problems and to stimulate effective team work. Thompson & Lees (2002) also conducted research on leadership styles and argue that social entrepreneurs tend to have a transformational approach, arguably more than other business leaders. This research looks at seven leadership styles, of which four are transformational, two are transactional and one is a non-leadership style. Based on the work of Thompson & Lees (2002), the following seven hypotheses will be tested in this research:

**H6.** B Corp leaders display a higher degree of idealized influence than traditional business leaders.

**H7.** B Corps leaders display a higher degree of inspirational motivation than traditional business leaders.

**H8.** B Corps leaders display a higher degree of intellectual stimulation than traditional business leaders.

**H9.** B Corps leaders display a higher degree of individual consideration than traditional business leaders.

**H10.** B Corps leaders display a lower degree of contingent reward than traditional business leaders.

**H11.** B Corps leaders display a lower degree of management-by-exception than traditional business leaders.

**H12.** B Corps leaders display a lower degree of laissez-faire leadership than traditional business leaders.

Thus, various academic studies touch upon the relationship between a leader's personality and style and the nature of the business. However, there lacks a holistic investigation of the topics. Existing research does moreover often not agree, for example on whether sustainable business leaders are fundamentally different than traditional business leaders. An approach to enhance understanding is to conduct holistic research that integrates leadership personality and styles and assesses this for both groups of business.

Previous research forms the basis of the structure of this research. Suggestions of other studies pertaining to leaders' personality traits and leadership styles (incl. Thompson & Lees, 2002; Tran & Von Korflesch, 2016) are hypothesized and will thus be investigated. This research connects dots between previous research and adds to the discussion on sustainable versus traditional business.

## **2.4 Conclusions**

In order to conclude the literature review, this part sums up the main findings of the chapter. Finally, a theoretical framework is developed and explained.

### **2.4.1 Summary**

“Sustainability is concerned with the impact of present actions on the ecosystems, societies, and environments of the future (Ameer & Othman, 2012).” It implies that current generations have the responsibility to act responsibly in order for future generations to be able to meet their needs. For businesses, acting responsibly means simultaneously caring for the natural, social and economic environment. This refers to corporate sustainability.

Firms can have different approaches to business sustainability, also depending on their size, industry and maturity. A currently hot topic in the field of business sustainability is social entrepreneurship; “an innovative, social value creating activity that can occur within or across the nonprofit, business, or government sectors” (Austin, Stevenson & Wei-Skillern, 2006). Related, businesses can underline their sustainability efforts, for instance through obtaining sustainability certifications. This could also be seen as a way for companies to distinguish themselves as virtually business claims to be sustainable.

B Corps, typically relatively young and small businesses, do have a sustainability certification. “B Corps are for-profit companies certified by the nonprofit B Lab to meet rigorous standards of social and environmental performance, accountability, and transparency (B Corporations, 2018a).” Businesses have to do an assessment, divided into five categories (environment,

workers, customers, community and governance), in order to obtain the voluntary certification. To date, B Corps are present in around fifty countries).

Leadership could be defined as “the ability to influence a group towards to achievement of a vision or set of goals” (Robbins et al., 2010). It plays a vital role in corporate sustainability. After all, ambitious and visionary people have to take the lead. In scholarly discussions on what makes a person a good leader, traits, attributes and competencies often play a profound role. Generally, traits refer to what is ingrained in one’s personality. Attributes are less ingrained and can be developed over a longer time, while competencies are external factors that are typically learned.

One of the most validated ways to measure a personality is the Big Five trait model. It consists of five trait dimensions that together form one’s personality. The traits dimensions, which include underlying traits, are:

1. Openness to experience: the extent to which a person is interested in novelty.
2. Conscientiousness: the extent to which a person is reliable in terms of carefulness, relating to taking responsibility and being organized, among others.
3. Extraversion: the comfort a person has with relationships, in which can be distinguished between introverts and extroverts.
4. Agreeableness: the extent to which a person tends to help others in contrast with solely caring for his or her own interests.
5. Neuroticism (or emotional stability): a person’s ability to cope with stress.

Different ways to operationalize and measure the model have been developed. Donnellan, Oswald, Baird and Lucas’ (2006) have developed a survey, based on twenty statements, which measures one’s personality based on the Big Five traits. The compactness of this survey allows researchers to increase their response rates.

Previous research indicated that extraversion is most strongly related to leadership appearance, followed by Conscientiousness and Openness to Innovation. Neuroticism has a negative connotation and negatively correlates with leadership appearance. Agreeableness is the weakest predictor of whether a person is likely to become a leader. When it comes to leadership effectiveness, Extraversion is the major predictor, followed by Neuroticism, Openness to Experience, Agreeableness, and finally Conscientiousness. Unlike the other trait dimensions, Neuroticism negatively impacts leadership effectiveness.

Leadership in a corporate sustainability context has also been topic for academic research, mostly from an entrepreneurial perspective. Sustainable entrepreneurs are said to have a clear ambition and vision, which they strongly believe in. They try to reach their goals through market-based approaches. In terms of the Big Five traits, most scholars seem to agree that there are no significant differences, while others doubt it. For B Corps, there is no existing research on leadership personality.

A leadership style is “the manner and approach of providing direction, implementing plans, and motivating people” (Newstrom & Davis, 1993). Leadership styles are commonly categorized into transactional and transformational leadership. In transactional leadership theory, transactions between a leader, or manager, and an employee characterize effective leadership. Such transactions entail rewards and penalties from the leader’s side and performance or underperformance from the side of the employee. Transformational leaders look beyond their self-interest and care for the interests of their employees. They are rather charismatic and inspirational. (Bass, 1990)

The Multifactor Leadership Theory measures transactional and transformational leadership along seven dimensions. The seventh dimension represents the absence of both transactional and transformational leadership. (Bass, 1990) The dimensions are:

1. Idealized influence (transformational leadership style)
2. Inspirational motivation (transformational leadership style)
3. Intellectual stimulation (transformational leadership style)
4. Individualized consideration (transformational leadership style)
5. Contingent reward (transactional leadership style)
6. Management-by-exception (transactional leadership style)
7. Laissez-faire (non-leadership style)

The Multifactor Leadership Theory will be used as the basis of the second survey of this study.

#### **2.4.2 Theoretical framework**

Zooming in at the current research, the main objective is to compare sustainable business leaders with traditional business leaders through looking at personality traits and leadership styles. Figure 15 portrays how the most important concepts and variables of this research interact. The leadership styles are categorized in terms of transformational leadership (TF), transactional leadership (TA) and non-leadership (NL). Further, the framework differentiates between social business (SB) and traditional business (TB).

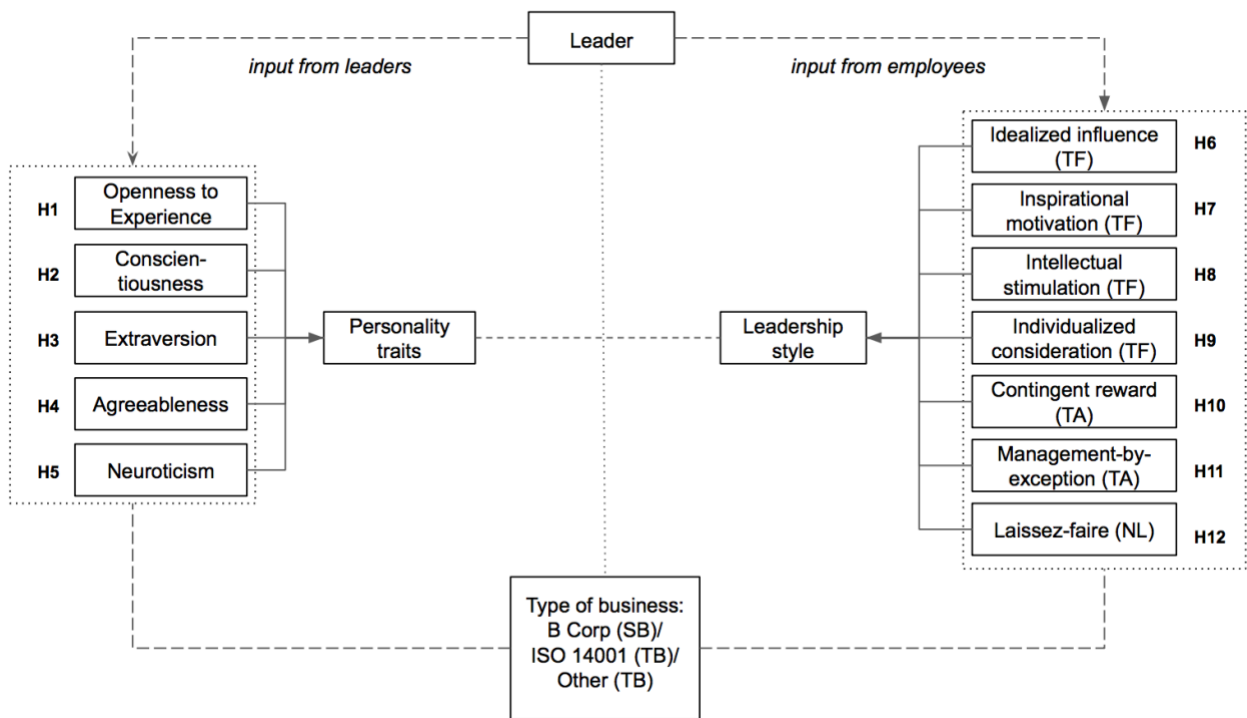


Figure 15. Theoretical framework of the research

The first step to undertake is to identify the personality traits and leadership styles from the business leaders. The survey on personality traits will be answered by the leaders themselves. The survey on leadership styles is to be fulfilled by others; in this case employees.

Each variable is linked to a hypothesis, as shown in the figure. The figure distinguishes between sustainable and traditional business. Traditional business is furthermore divided into environmentally conscious traditional business (ISO 14001) and other traditional business. The plus or minus relates to the B Corps, and thus to sustainable business leaders. A plus means that B Corp leaders score higher for a certain variable than traditional business leaders. For instance, H1 proposes that B Corp leaders are more open to experience than traditional business leaders.



### 3. METHODOLOGY

This chapter explains the methodology of the study. First, the chapter looks at the chosen research approach and method. Next follows an explanation of how the case companies are selected and how the data is collected. Chapter 3.3 describes the process of data analysis. Finally, the last part of the chapter discusses the implications of the research methodology on the reliability and validity of the research. Figure 16 sums up the structure of the chapter.



Figure 16. Structure of chapter 3

#### 3.1 Research approach and method

The study has a descriptive nature. It attempts to identify the differences and similarities of business leaders, especially between sustainable and traditional business leaders. It does not particularly study why potential differences exist, although the discussion will touch upon it.

The core of the study is based on two surveys; the first on leaders' personality traits and the second on their leadership styles. Using surveys enables one to collect data faster and on a bigger scale compared to qualitative research. This study compares three research groups and two main topics for both. Surveys deal well with this magnitude of data needed in order to find reliable results. Validated scales measurements were applied.

The two surveys root in academic literature, in which the surveys are developed and being tested and validated. The surveys are supplemented with introductory questions, which relate to the control variables used to classify the responses and to isolate the variables pertaining to personality traits and leadership styles. The responses to the surveys enable to compare the leaders of the three research groups.

#### 3.2 Data collection

As mentioned earlier, the core of the research itself is built upon two surveys:

1. A survey on personality traits to be fulfilled by business leaders
2. A survey on leadership styles to be fulfilled by employees

Both surveys root in academic literature and are repeatedly tested and validated. As the respondents of the surveys remain anonymous it cannot be assured that the businesses represented will be exactly the same for both groups. Therefore, possible relationships between leaders' personality traits and leadership styles cannot be tested. The surveys are administered in Dutch using Google Forms, but for reporting matters translated and analyzed in(to) English. Due to the easy structure and language of both surveys the translations are highly unlikely to affect the reliability and validity of the research. Appendices 1-4 contain both surveys in English and Dutch.

### 3.2.1 Survey 1

The first survey consists of two main parts. The aim of the first part is to get to know the respondent better in order to be able to classify them and to eventually draw more insightful conclusions. The first part of the survey includes questions about:

- the leader's age (control variable 1)
- the core business activity (control variable 2)
- the number of employees (control variable 3)
- whether the respondent is (co-)founder of the business
- whether the business is a B Corp
- whether the business is ISO 14001 certified

The second part includes the actual Big Five traits personality test. The traits have been operationalized in terms of twenty statements: the independent variables. (Donnellan et al., 2003).

**Openness to experience** refers to the extent to which a person is interested in novelty. Based on the work by Donnellan et al. (2003) the variable was measured based on four survey statements (with corresponding survey statement number):

5. I have a vivid imagination
10. I am not interested in abstract ideas (reversed)
15. I have difficulty understanding (reversed)
20. I do not have a good imagination (reversed)

**Conscientiousness** refers to the extent to which a person is reliable in terms of carefulness. The four corresponding items and survey questions, as identified by Donnellan et al. (2003), are:

3. I get chores done right away.
8. I often forget to put things back in their proper place. (reversed)
13. I like order.
18. I make a mess of things. (reversed)

**Extroversion** deals with the comfort has with relationships. Four survey items relate to this variable (Donnellan et al., 2003):

1. I am the life of the party.
6. I don't talk a lot. (reversed)
11. I talk a lot to different people at parties.
16. I keep in the background. (reversed)

**Agreeableness** measures the extent to which a person tends to help others in contrast with solely caring for his or her own interests. Connellan et al.'s (2003) related items are:

2. I sympathize with others' feelings.
7. I am not interested in other people's problems. (reversed)
12. I feel others' emotions.
17. I am not really interested in others. (reversed)

**Neuroticism** refers to a person's ability to cope with stress, while a high score on this variable means a low ability. Donnellan and his colleagues (2003) identified the following four items:

4. I have frequent mood swings.
9. I am relaxed most of the time. (reversed)
14. I get upset easily.
19. I seldom feel blue. (reversed)

### 3.2.2 Survey 2

The second survey follows a similar pattern as the first. The first part asks for:

- the leader's age (control variable 1)
- the core business activity (control variable 2)
- the number of employees (contro variable 3)
- whether the business is a B Corp
- whether the business is ISO 14001 certified

The second part explores leadership styles, based on the MLQ Form 6-S leadership test by Vinger & Cilliers (2006). It looks at seven different types of leadership styles, the dependent variables, which are either transactional, transformational or non-leadership (laissez-faire). For each type there are three statements incorporated in the survey, which makes it a total of 21 statements: the independent variables. Operationalization of the variables works as following: (Vinger & Cilliers, 2006)

**Idealized influence** “measures whether you hold subordinates’ trust, maintain their faith and respect, show dedication to them, appeal to their hopes and dreams, and act as their role model” (Northouse, 2004, p. 197). The related survey items are:

1. He/she (the leader) makes others feel good to be around him/her.
8. Others have complete faith in him/her.
15. Others are proud to be associated with him/her.

**Inspirational motivation** “assesses the degree to which you provide a vision, use appropriate symbols and images to help others focus on their work, and try to make others feel their work is significant” (Northouse, 2004, p. 197). It relates to three items:

2. He/she expresses with a few simple words what we could and should do.
9. He/she provides appealing images about what we can do.
16. He/she helps others to find meaning in their work.

**Intellectual stimulation** “measures the amount you encourage others to be creative in looking at old problems in new ways, create an environment that is tolerant of extreme positions, and nurture subordinates to question their own values and beliefs and those of the the organization” (Northouse, 2004, p. 197). It refers to:

3. He/she enables others to think about old problems in new ways.
10. He/she provides others with new ways of looking at puzzling things.
17. He/she gets others to rethink ideas that they had never questioned before.

**Individual consideration** “shows the degree to which you show interest in others’ well-being, assign projects individually, and pay attention to those who seem less involved in the group” (Northouse, 2004, p. 197). It is represented by:

4. He/she helps others to develop themselves.

11. He/she lets others know how he/she thinks they are doing.
18. He/she gives personal attention to others who seem rejected.

**Contingent reward** “shows the degree to which you tell others what to do in order to be rewarded, emphasize what you expect from them, and recognize their accomplishments” (Northouse, 2004, p. 197). It refers to:

5. He/she tells others what to do if they want to be rewarded for their work.
12. He/she provides recognition/rewards when others reach their goals.
19. He/she calls attention to what others can get for what they accomplish.

**Management-by-exception** “assesses whether you tell others the job requirements, are content with performance standards, and are a believer in *if it ain't broke, don't fix it*” (Northouse, 2004, p. 197). It relates to three survey statements:

6. He/she is satisfied when others meet agreed-upon standards.
13. As long as things are working, he/she does not try to change anything.
20. He/she tells others the standards they have to know to carry out their work.

**Laissez-faire** “measures whether you require little of others, are content to let things ride, and let others do their own thing” (Northouse, 2004, p. 197). In the survey, it is represented by the following three items:

7. He/she is content to let others continue working in the same way as always.
14. Whatever others want him/her to do is OK with him/her.
21. He/she asks no more of others than what is absolutely essential.

### 3.2.3 Respondents selection

After developing the surveys, a crucial question of the research was how to select respondents. A total of three research groups is to be compared, whereas one can differentiate between sustainable and traditional business:

1. Sustainable business: B Corps
2. Traditional business (environmentally conscious): ISO 14001 certified companies
3. Traditional business: Other companies (neither B Corp nor ISO 14001 certified)

Apart from the sustainability certifications the businesses are attempted to be as similar as possible in terms of three control variables:

1. The age of the leader
2. The core business activity
3. The number of employees

In order to ensure this, all (back then) 55 Dutch B Corps were invited to participate in the research first. The data came from the B Corporation website. So, the other groups are as much as possible mirrored to the B Corp respondents and therefore not necessarily generalizable representations of their respective groups. Sample bias is tried to minimize by using the three aforementioned control variables. The ISO 14001 certified companies come from the SCCM database, which includes all Dutch ISO 14001 certified companies. In 2015 there were at least 2,400 Dutch companies ISO 14001 certified (ISO, 2015). It has to be noticed that a significant number of ISO 14001 certified companies deals with natural products, even if providing services. This might be one of the reasons why some of these companies were interested in obtaining the certification.

Lastly, the sample group for the third research group, businesses that are neither B Corp nor ISO 14001 certified, was most difficult to select. Most companies were selected from the MKB-Bedrijvengids, an online database with many Dutch SMEs. Searching for key words led to respond businesses relatively similar to B Corps in terms of their core business activity. Next, among these companies, those with similar numbers of employees and leaders ages were eventually selected to invite to participate in the research. A smaller number of invitations, 12 per survey, came from other people known to work in relevant businesses. The companies invited to participate in the survey are, per key word, listed below. The numbers below reflect on the number of companies invited to participate in the research. As all companies are asked to reply twice, by the leader and an employee, the total number of invitations is doubled.

<b>Key word</b>	<b>Number of survey invitations</b>
Adviesbureau (consultancy firm)	46
Productie (production)	20
Management consulting	15
Consultancy	10
Organisatieadvies (consulting for organizations)	10
Social impact	7

Crowdfunding	2
Other	12
Total	122

*Table 5. Survey invitations for 'other' businesses*

It is not known who the exact respondents were, which means that the distribution per key word may differ in the actual responses. Table 6 shows the response rates per research group and per survey. The first number shows the rates for the first survey, the second number for the second survey and the third number shows the sum of the first two. It shows decent response rates for the B Corps, but low rates especially for the ISO 14001 group.

	<b>Survey invitations</b>	<b>Responses</b>	<b>Response rate</b>
<b>B Corps</b>	55 / 55 / 110	17 / 20 / 37	30,9% / 36,7% / 33,6%
<b>ISO 14001</b>	150 / 150 / 300	16 / 13 / 29	10,7% / 8,7% / 9,7%
<b>Other</b>	122 / 122 / 244	18 / 22 / 40	14,8% / 18,0% / 16,4%
<b>Total</b>	327 / 327 / 654	51 / 55 / 106	15,6% / 16,8% / 16,2%

*Table 6. Survey response rates*

### **3.3 Data analysis**

The developers of both surveys not only described the questions to ask but also how to analyze the data. A first precondition of the survey items is that all are equally important and thus equally contribute to the variable scores. The surveys follow a similar pattern of analyzing the data. (Donnellan et al., 2003) (Vinger & Cilliers, 2006)

The first survey uses a five-point Likert scale to measure the variables, representing a scale from very inaccurate to very accurate. The answer 'very accurate' corresponds with 5 points, while 'very inaccurate' corresponds with 1 point. Chapter 3.2 mentioned that some of the statements are reversed. As a result, such statements had to be analyzed in the opposite way, where 'very inaccurate' represents 5 points and vice versa.

The second survey also uses a five-point Likert scale to measure the variables, albeit on a 0-4 scale. The answer options range from never (0 points) to frequently/if not always (4 points). The survey did not include any reversed questions.

The average of the survey item scores count as the total variable score per variable for both surveys. Further, the results are categorized by research group.

The data analysis is conducted with statistics software program SAS. The descriptive statistics part makes use of frequency tables, bar charts, pie charts and Chi-square tests to test the distributions of the variables. The variables related to personality traits and leadership styles are first analyzed with summary statistics. Next, One-Way ANOVA tests are applied, first testing the equality of variances across the groups. Then, tests of equal means are applied to figure out if the variables show similar results across the groups. In case of differences these are further investigated. Further, SAS is used to test standard deviations, F Values and statistical significances in terms of P Values.

### 3.4 Reliability and validity

The quantitative nature of the research requires to assess the reliability of the variable scales, based on the responses. Table 7 displays these for the variables of survey 1 in terms of Cronbach's alpha. This indicates whether the variable can be further used in the research.

Variable	Cronbach's alpha	Interpretation
Openness to Experience ( <b>OPE</b> )	0.620	Questionable, carefulness required
Conscientiousness ( <b>CON</b> )	0.734	Decent
Extroversion ( <b>EXT</b> )	0.820	Good
Agreeableness ( <b>AGR</b> )	0.728	Decent
Neuroticism ( <b>NEU</b> )	0.626	Questionable, carefulness required

*Table 7. Survey 1 variables scale reliability*

The table shows that all five variables are sufficiently reliable to continue the research on personality traits as planned. The reliability of OPE and NEU is nor high nor necessarily unacceptable. Therefore, conclusions based on these variables require special carefulness. Table 8 shows the reliability of the variables in terms of Cronbach's alpha for survey 2.



Variable	Cronbach's alpha	Interpretation	Consequence
Idealized influence ( <b>II</b> )	0.679	Questionable, carefulness required	Variable used
Inspirational motivation ( <b>IM</b> )	0.521	Unacceptable, but 0.721 after removing survey item 2	Survey item 2 dropped, variable used
Intellectual stimulation ( <b>IS</b> )	0.831	Good	Variable used
Individual consideration ( <b>IC</b> )	0.354	Unacceptable	Variable dropped
Contingent reward ( <b>CR</b> )	0.484	Unacceptable, but 0.663 after removing survey item 19	Survey item 19 dropped, variable used
Management-by-exception ( <b>ME</b> )	0.520	Unacceptable	Variable dropped
Laissez-faire ( <b>LF</b> )	0.443	Unacceptable	Variable dropped

*Table 8. Survey 2 variables scale reliability*

Unfortunately, not all variables can be maintained for the rest of the research. Although theory suggested that the survey was sufficiently reliable, this turns out not to be accurate for some variables in this research. The variables IC, ME and LF were unreliable and had consequently to be withdrawn from the research. This may be a negative consequence of the deliberate choice to keep the survey as compact as possible. Still, both transactional and transformational leadership remain represented in the research. For IM and CR one of the three question items had to be dropped in order to improve the scale reliability.

Other factors that may affect the reliability of this study include possible low response rates, non-response bias and a possible Halo-effect. Low response rates will negatively impact the reliability of the research and make it more difficult to generalize conclusions. Low response rates further increase the risk of non-response bias. The questions asked in the surveys are personal and therefore some potential respondents may not be willing to cooperate. It is not known to what extent this is a risk for the research. The anonymous aspect of the surveys at least lowers of non-response bias.

Next, respondents may have a general attitude towards the topic, but the randomized sequence of the survey question minimized a possible Halo-effect. On the other hand, it is not unlikely that respondents, especially leaders, answer questions about themselves more positively than the real situation is. Or rather, they answer to the statements in a way that they

wish to see themselves. In order to mitigate this risk, the survey introduction explicitly mentioned that there are no good nor bad answers. Moreover, the results should not be seen as individual numbers but should always be related to the results of the other variables and especially research groups.

Concerning the validity of the research, there was a tradeoff to be made about the size of the surveys. On the one hand, longer surveys provide more information and more insightful results. However, there is chosen for compact surveys in order to increase the response rate. Internal validity of the research is perceived relatively high, as both surveys are continuously tested, validated and improved. Literature on the surveys shows similar results for more extensive versions of both, which implies that the surveys used here do measure what these are supposed to measure. The compactness of the surveys furthermore affects the construct validity of the research. Respectively four and three survey items represent the variables in the surveys. However, scholars have tried many possible combinations of which few variables to use without compromising the construct validity. Therefore, the construct validity is perceived to be sufficient. (Donnellan et al., 2003) (Vinger & Cilliers, 2006)

## 4. FINDINGS

This chapter sums up the findings of the research. First, it looks into the descriptive statistics, after which it shows the findings per survey and per variable. Figure 17 shows the structure.



Figure 17. Structure of chapter 4

### 4.1 Descriptive statistics

When the data collection started there were 55 Dutch B Corps, of which 17 and 21 are represented in the first and second survey respectively, as can be found in tables 9 and 10. One response from the latter survey has been declared invalid, as it stated that the related company is both a B Corp and ISO 14001 certified. In combination with the number of employees, this turned out not to be possible. Hence, this complete response is not further considered.

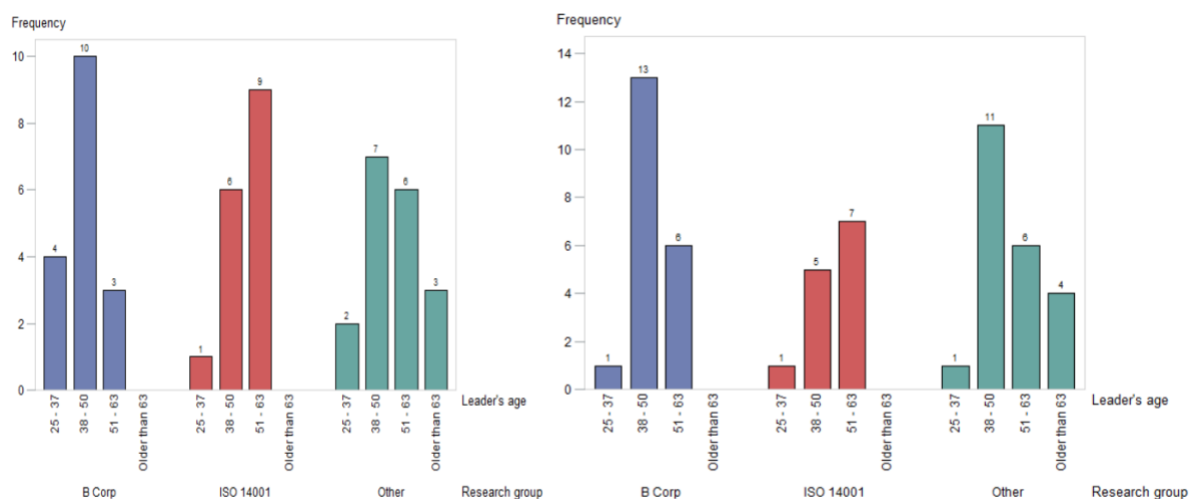
Research group	Number of responses	Percentage	Main characteristics
B Corps	17	33.33	Most commonly: <ul style="list-style-type: none"> <li>- leader is 38-50 years old</li> <li>- leader is also (co-)founder</li> <li>- 16-50 employees</li> <li>- company provides services</li> </ul>
ISO 14001	16	31.37	Most commonly: <ul style="list-style-type: none"> <li>- leader is 51-63 years old</li> <li>- leader is not (co-)founder</li> <li>- 51-250 employees</li> <li>- company provides services</li> </ul>
Other	18	35.29	Most commonly: <ul style="list-style-type: none"> <li>- leader is 38-50 years old</li> <li>- leader is also (co-)founder</li> <li>- 16-50 employees</li> <li>- company provides services</li> </ul>

Table 9. Survey 1 respondents per research group

Research group	Number of responses	Percentage
B Corp	20	36.36
ISO 14001	13	23.64
Other	22	40.00

Table 10. Survey 2 respondents per research group

In order to explore common and uncommon grounds between the respondents of both groups, these can be compared in terms of the leaders' age; the number of employees; and the core business activities. Finally, the first survey on leadership personalities included a question whether the leader is founder or co-founder of the business.



Figures 18 and 19. The leaders' age per research group for survey 1 (18) and 2 (19)

Figures 18 and 19 show that the represented B Corp leaders have in common that in more than half of the cases their age is between 38 and 50 years old. Survey 1 is more represented by younger leaders among the rest of the responses, compared to survey 2. Research group 3, the other companies, show a relatively similar pattern, with the bulk of respondents concentrated around the 38-50 years old group. The ISO 14001 leaders are mostly somewhat older, which may have to do with the nature of the businesses. Such companies are likely to be older and not anymore in hands of a young entrepreneur who started the business. Figure 20 underlines this assumption. The question whether the leader has founded or co-founded the business, has only be asked in survey 1.

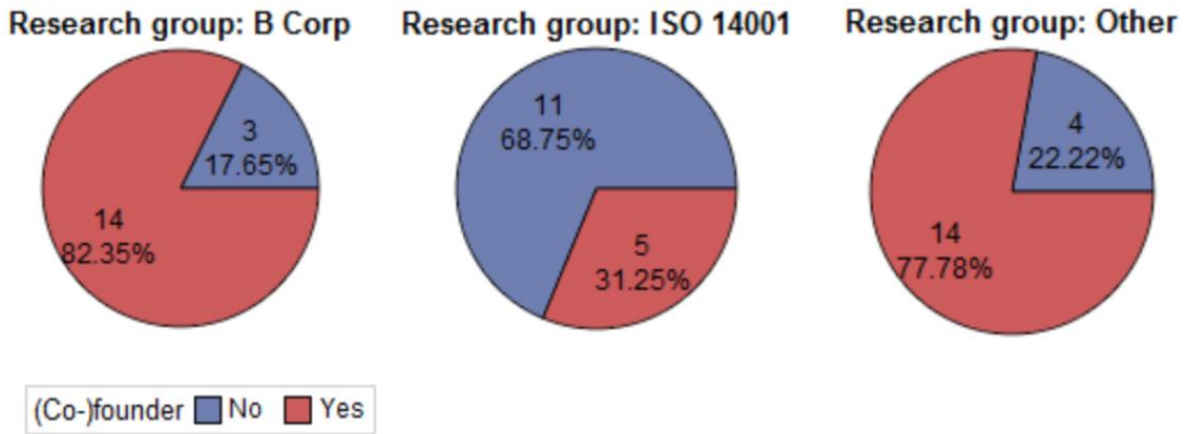
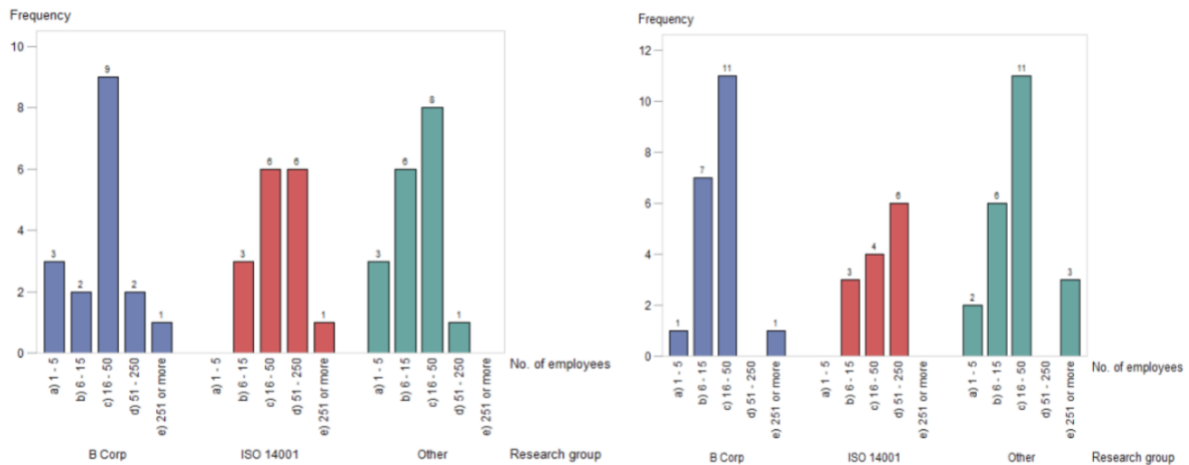


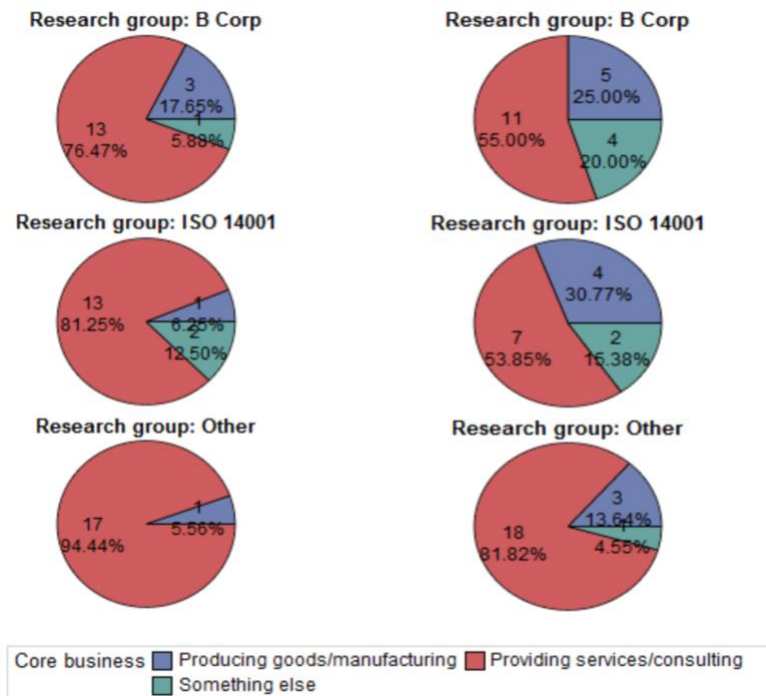
Figure 20. (Co-)founders per research group

The second control variable is the number of employees. Figures 21 and 22 show the results for the first and second survey, respectively.



Figures 21 and 22. The number of employees per research group for survey 1 (21) and 2 (22)

Like the first control variable, it turned out to be most difficult to match the ISO 14001 group with the other groups. B Corps typically exist of 16 to 50 employees, while the last the businesses of the third research group (others) are similarly sized. However, many ISO 14001 companies were larger and typically had 51-250 employees.



Figures 23 and 24. Core business activity per research group for survey 1 (23) and 2 (24)

In terms of the core business activities the different research groups are similar for survey 1. Most respondents indicate that providing services is the core activity of their business. It is noticeable that the B Corp and ISO 14001 businesses of survey 2 are less doing so.

In order to test whether the distributions for the control variables are significantly different, Chi-square tests have been conducted. The significances for the variable leader's age are 0.188 and 0.167 for both surveys respectively. Regarding the number of employees, Chi-square tests show significances of 0.167 and 0.014. The third control variable, the core business activity, shows higher significances for both surveys. For the first survey the significance is 0.378 and for the second survey it is 0.308. The tests of independence show that the distributions per research group significantly differ for the control variable 'number of employees' for the second survey. The other five tests show no such differences, which indicates similar distributions of the control variables. This is what was strived for as the control variables must be as similar as possible for the research groups apart from the sustainability certifications. In this case, differences in the outcomes do only to a minor extend depend on the control variables.

## 4.2 Findings per variable

This section provides a comprehensive description of the surveys and zooms it at the variables. It looks looks at the mean, standard deviation, F Value and significance (P Value).

#### 4.2.1 Personality traits

Table 11 summarizes the results of the first survey, based on One-Way ANOVA tests. A correlation matrix which relates the variables to each other can be found in appendix 5.

	Number	Mean	Standard deviation	F Value	Significance level (P)
<b>Openness to Experience (OPE)</b>	<b>50</b>	<b>3.805</b>	<b>0.581</b>	<b>1.88</b>	<b>0.164</b>
B Corps	16	3.934	0.487		
ISO 14001	16	3.578	0.657		
Other	18	3.889	0.557		
<b>Conscientiousness (CON)</b>	<b>50</b>	<b>3.960</b>	<b>0.574</b>	<b>1.80</b>	<b>0.177</b>
B Corps	16	3.797	0.678		
ISO 14001	16	3.969	0.598		
Other	18	4.097	0.430		
<b>Extroversion (EXT)</b>	<b>50</b>	<b>3.635</b>	<b>0.724</b>	<b>0.63</b>	<b>0.535</b>
B Corps	16	3.641	0.846		
ISO 14001	16	3.484	0.642		
Other	18	3.764	0.689		
<b>Agreeableness (AGR)</b>	<b>50</b>	<b>3.965</b>	<b>0.513</b>	<b>3.39</b>	<b>0.042</b>
B Corps	16	4.203 <sup>1</sup>	0.458		
ISO 14001	16	3.797 <sup>1</sup>	0.620		
Other	18	3.903	0.385		
<b>Neuroticism (NEU)</b>	<b>50</b>	<b>2.140</b>	<b>0.580</b>	<b>0.09</b>	<b>0.916</b>
B Corps	16	2.094	0.645		
ISO 14001	16	2.203	0.600		
Other	18	2.125	0.530		

<sup>1</sup> Significant differences at the 0.05 level between B Corps and ISO 14001

Table 11. Personality traits variable results per research group

The table shows high average scores for OPE for all types of firms, and since the differences are not statistically significant, there is no support for Hypothesis 1. The same goes for CON, where B Corps score lowest, but the differences are not significant, either. Therefore, Hypothesis 2 cannot be accepted. The average scores for EXT are clearly lower than for the first two variables. Further, no statistically significant differences across the types of firms are found while the F Value is relatively low. Hence, there is no support for Hypothesis 3. B Corps score higher on AGR than the other types of firms. Moreover, the F Value is relatively high and the differences between B Corps and ISO 14001 firms are statistically significant. Therefore, Hypothesis 4 can be partly accepted, as there is no evidence for statistically significant differences between B Corps and other firms (third research group). Finally, the average scores for NEU are significantly lower than for the other variables. There are minor differences across groups, which are not statistically significant. Hypothesis 5 can therefore not be accepted. Table 12 sums up the results of the hypotheses regarding personality traits.

	<b>Hypothesis</b>	<b>Result</b>
H1	B Corp leaders are <u>more open to experience</u> than traditional business leaders.	No significant differences found across groups: Not accepted
H2	B Corp leaders are <u>more conscientious</u> than traditional business leaders.	No significant differences found across groups: Not accepted
H3	B Corp leaders are <u>more extrovert</u> than traditional business leaders.	No significant differences found across groups: Not accepted
H4	B Corp leaders are <u>more agreeable</u> than traditional business leaders.	B Corp score significantly higher than ISO 14001 leaders: Partially accepted
H5	B Corp leaders are <u>more agreeable</u> than traditional business leaders.	No significant differences found across groups: Not accepted

*Table 12. Personality traits hypothesis testing results*



#### 4.2.2 Leadership styles

Table 13 summarizes the results for the remaining four variables of the second survey. These still include results regarding both transactional and transformational leadership. One-Way ANOVA tests have been applied to compose the table. A correlation matrix for the leadership styles variables can be found in appendix 6.

	Number	Mean	Standard deviation	F Value	Significance level (P)
<b>Idealized influence (II)</b>	<b>55</b>	<b>2.872</b>	<b>0.630</b>	<b>4.50</b>	<b>0.016</b>
B Corps	20	3.183 <sup>1</sup>	0.350		
ISO 14001	13	2.615 <sup>1</sup>	0.575		
Other	22	2.742	0.755		
<b>Inspirational motivation (IM)</b>	<b>55</b>	<b>2.709</b>	<b>0.809</b>	<b>7.43</b>	<b>0.001</b>
B Corps	20	3.300 <sup>1,2</sup>	0.593		
ISO 14001	13	2.308 <sup>1</sup>	0.751		
Other	22	2.409 <sup>2</sup>	0.718		
<b>Intellectual stimulation (IS)</b>	<b>55</b>	<b>2.679</b>	<b>0.831</b>	<b>7.17</b>	<b>0.002</b>
B Corps	20	3.183 <sup>1,2</sup>	0.671		
ISO 14001	13	2.333 <sup>1</sup>	0.694		
Other	22	2.424 <sup>2</sup>	0.843		
<b>Contingent reward (CR)</b>	<b>55</b>	<b>2.491</b>	<b>0.605</b>	<b>3.59</b>	<b>0.035</b>
B Corps	20	2.600 <sup>2</sup>	0.641		
ISO 14001	13	2.346	0.625		
Other	22	2.477 <sup>2</sup>	0.567		

<sup>1</sup> Significant differences at the 0.05 level between B Corps and ISO 14001

<sup>2</sup> Significant differences at the 0.05 level between B Corps and other

*Table 13. Leadership styles variable results per research group*

The results show relevant differences across the groups. B Corps score highest for II, followed by other firms (third research group) and ISO 14001 firms. The differences between B Corps and ISO 14001 firms are statistically significant. No such statistically significant differences are found between other groups. Hypothesis 6 can be partly accepted. IM shows mediocre

average scores, but high differences across the types of firms. B Corps score significantly higher than traditional businesses and the differences are statistically significant. Therefore, there is enough support to accept Hypothesis 7. IS shows a similar pattern, with B Corps scoring highest on average, followed by other and ISO 14001 firms. The results are statistically significant and thus Hypothesis 8 is accepted. CR, the only tested transactional leadership style, shows the lowest average scores among the variables and a highest score for B Corps. The difference with other firms is statistically significant. This is opposite to what Hypothesis 10 suggests and therefore this hypothesis is rejected.

For Hypotheses 9, 11 and 12, respectively regarding Individual Consideration, Management-by-Exception and Laissez-Faire, no evidence was found as the related data was not sufficiently reliable. Table 14 sums up the results for the hypotheses regarding leadership styles.

H6	B Corps leaders display a <u>higher degree of idealized influence</u> than traditional business leaders.	B Corp score significantly higher than ISO 14001 leaders: Partially accepted
H7	B Corps leaders display a <u>higher degree of inspirational motivation</u> than traditional business leaders.	B Corp score significantly higher than ISO 14001 and other leaders: Accepted
H8	B Corps leaders display a <u>higher degree of intellectual stimulation</u> than traditional business leaders.	B Corp score significantly higher than ISO 14001 and other leaders: Accepted
H9	B Corps leaders display a <u>higher degree of individual consideration</u> than traditional business leaders.	Data not sufficiently reliable to analyze: Not accepted
H10	B Corps leaders display a <u>lower degree of contingent reward</u> than traditional business leaders.	B Corp score significantly higher than other leaders: Rejected

H11	B Corps leaders display a <u>lower degree of management-by-exception</u> than traditional business leaders.	Data not sufficiently reliable to analyze: Not accepted
H12	B Corps leaders display a <u>lower degree of laissez-faire leadership</u> than traditional business leaders.	Data not sufficiently reliable to analyze: Not accepted

Table 14. Leadership styles hypothesis testing results

Based on the hypothesis testing, the theoretical framework is updated and shown in figure 25. The hypothesis colored in red are either rejected or no significant correlation has been found. Orange indicates that the hypothesis is partially accepted, as B Corps did score significantly higher than one of the traditional business groups, but not both. Lastly, green indicates that the hypothesis has been accepted.

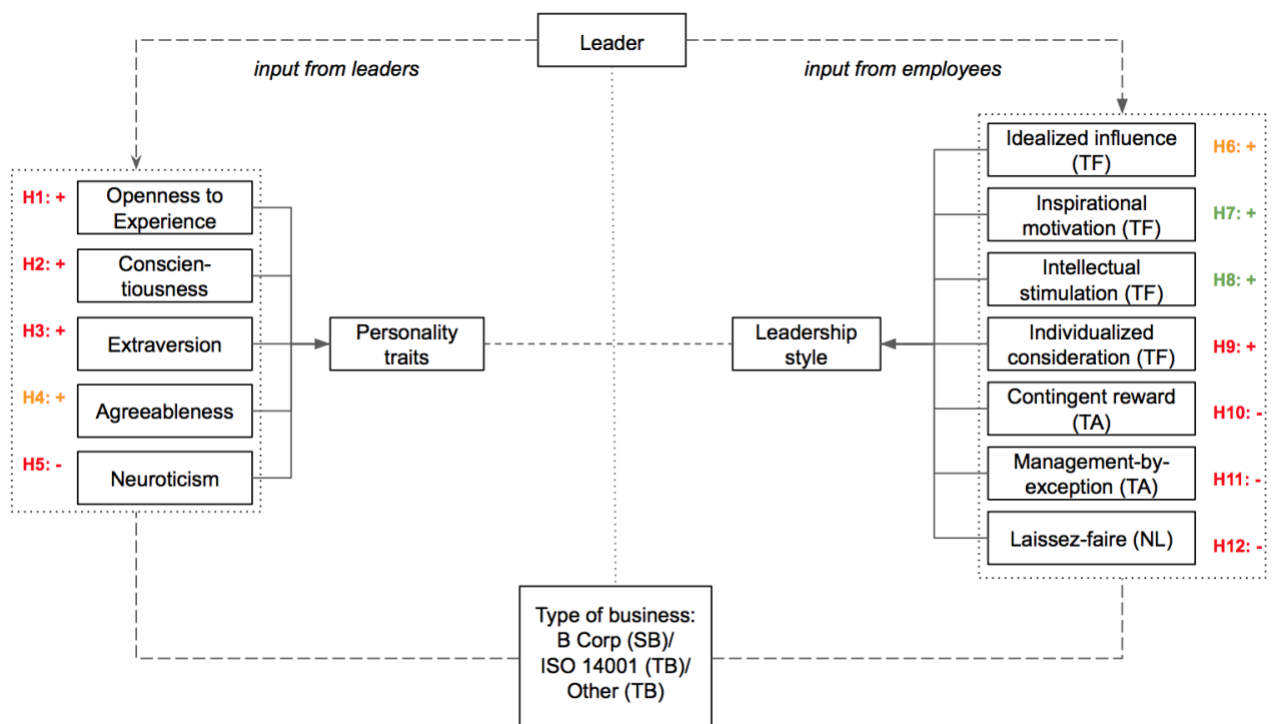


Figure 25. Theoretical framework after hypothesis testing

## 5. RESULTS

This chapter first provides the main conclusions of the research, after which it discusses these. Then, it explains the theoretical and practical contributions of the research. Finally, it zooms in at the research limitations and it provides directions for future research. Figure 26 shows the structure of the chapter.

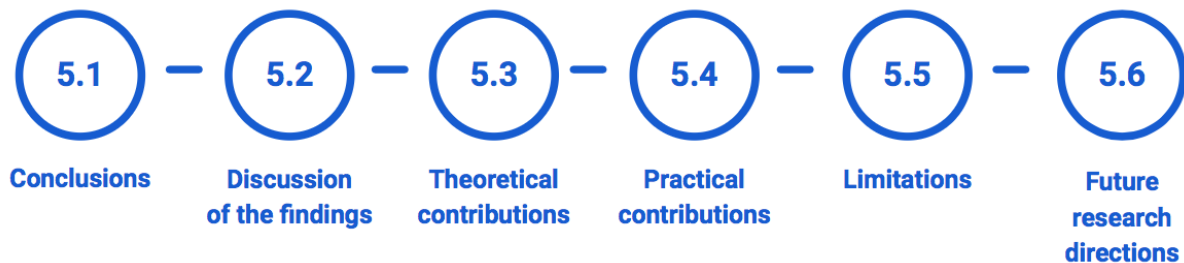


Figure 26. Structure of chapter 5

### 5.1 Conclusions

The study investigated potential differences between sustainable and traditional business leaders in terms of their personalit traits and leadership styles. The related research question was:

**What are the main differences and similarities in personality traits and leadership styles of sustainable business leaders compared to traditional business leaders in the Netherlands?**

The results indicate that differences between sustainable business (B Corp) leaders and traditional business (ISO 14001 and other firms) leaders do exist for some, but not all variables. Most differences were found regarding leadership styles.

Concerning personality traits, Dutch business leaders possess a high degree of Agreeableness, followed by Conscientiousness, Openness to Experience, Extroversion and finally Neuroticism. Dutch B Corp leaders are significantly more Agreeable than Dutch ISO 14001 leaders. There was no proof for other statistical significances.

Concerning leadership styles, Dutch business leaders tend to have an Idealized Influence leadership style, followed by Inspirational Motivation, Intellectual Stimulation (all transformation leadership styles) and finally Contingent Reward (transactional leadership style). For the other three leadership style no reliable results were found. Moreover, Dutch B

Corps demonstrate significantly more transformational leadership than ISO 14001 leaders. This goes for Idealized Influence, Inspirational Motivation and Intellectual Stimulation. Dutch B Corps furthermore score significantly higher on Inspirational Motivation and Intellectual Stimulation, as well as the transactional Contingent Reward leadership style, than other leaders.

## 5.2 Discussion of the findings

The research investigated a possible link between the type of business (sustainable versus traditional business) and the respective leader's personality traits and leadership style. The following part discusses the findings per variable. All variables follow the same structure, whereas a variable briefly relates back to what theory suggests being the outcome, what the findings of this study are and some final remarks. Most of the theory deals with social entrepreneurship and not particularly with B Corps.

**Openness to experience** is a trait common for people with socio-entrepreneurial intentions (Tran & Von Korflesch, 2016). Nga & Shanmuganathan (2010) suggest differences between different types of entrepreneurs, whereas social entrepreneurs are very open to experience. Stephan & Drencheva (2017) could not identify significant differences between groups categorized by sustainability parameters, while Irengün and Arikboga (2015) argue that individuals that score high on openness to experience are not likely to be engaged in long-term social entrepreneurial activities. This study shows a slightly higher average score for B Corps on OPE, as compared to 'other' and ISO 14001. However, the differences are not statistically significant, which is in line with Stephan & Drencheva (2017).

**Conscientiousness** is considered the least predictive Big Five trait for leadership effectiveness (Judge et al., 2002). A relative high score for sustainable entrepreneurs, and thus B Corps leaders, could still be expected (Hind et al., 2007; Tran & Von Korflesch, 2016). Others argue that there is no significant difference based on whether a business is sustainable or traditional (Stephan & Drencheva, 2017; Bass, 1985) This research suggests that the opposite to the assumption that B Corp leaders are more conscientiousness. A larger-scaled research may show slightly different results, as the results found here are minor and not statistically significant.

Social entrepreneurs are typically considered charismatic leaders, pragmatic visionaries and alliance makers (Cohen & Katz, 2016), which leads to think that B Corp leaders score higher on **extroversion**. Again, Stephan & Drencheva (2017) did not find a significant correlation between sustainable and traditional business for this trait. The present research has found

minor differences, which are not significant. It may suggest that other factors than the type of business a leader is involved in have a higher impact on this trait.

Caring for others rather than solely caring for one's own interest is what is **agreeableness** is about (Robbins et al., 2010). Hence, a high level of corporate sustainability, particularly social sustainability, is likely to correspond with a high score on AGR. Although this conclusion seems to be legit at first hand, statistical significance is often not found (Stephan & Drencheva, 2017). However, this research has found a significant correlation between B Corp and ISO 14001 leaders, in such way that B Corp leaders score significantly higher than ISO 14001 leaders (4.203 versus 3.797 respectively). This could possibly be explained by the idea that sustainable leaders typically have a strong social business purpose, which includes caring about people. Caring about people is what apparently comes back in their leadership style.

Theory suggests that it is highly questionable whether the degree of **neuroticism** differs across different types of entrepreneurs. In most cases such relationship is not found (Stephan & Drencheva, 2017). On the other hand, one can argue that high levels of corporate sustainability go along with high levels of social sustainability, including a comfortable and flexible working environment, which does not closely relate to NEU. This research has not found any statistical evidence for significant differences across the groups when it comes to NEU, in line with what previous research suggests.

Concerning leadership styles, social entrepreneurs tend to have a transformational approach, arguably more than other business leaders (Thompson, 2002). This includes **idealized influence**. Indeed, the B Corp leaders score significantly higher for this variable as compared to their ISO 14001 counterparts (3.183 and 2.615 respectively). However, no evidence was found that B Corps differ from the 'other' research group. It shows that the distinction between sustainable and traditional business is not just black and white. As Idealized Influence is about, trust, faith, respect and being a role model, it seems no surprise that B Corp leaders score high on it. For instance, a business leader may be easier perceived a role model when he or she runs a business with the primary purpose to solve social and/or environmental problems.

Theory remains undecided whether **inspirational motivation** differs across groups. Like for II, a possible difference seems to be likely such that B Corp leaders score higher on IM than other leaders. (Thompson, 2002) This also derives from the idea that social entrepreneurs strive for a social mission which they intrinsically want to achieve, and for which they want to motivate and empower others. This research indicates significant differences across all groups, indeed ranking B Corps by far highest. Sustainable business leaders, often founders

of the business they work for, know the very fundamentals of why the business exist and are likely to share this with their subordinates. The answer to this why-question typically lies in achieving social or environmental goals, which people may be more likely to work hard for than when it only comes down to increasing profits of a product they do not really believe in.

For **intellectual stimulation** goes the same as for IM. Previous research does not have strong suggestions whether IS differs across groups. Therefore, it is relevant to investigate potential statistically significant differences. The results of this research show statistically significant differences across the groups, whereas B Corps score highest (3.183), while the 'other' and ISO 14001 leaders score much lower: 2.424 and 2.333 respectively. This opts that sustainable and traditional business leaders do lead differently. One of the reasons can be that sustainable business leaders by definition think differently, as compared to traditional business leaders. Sustainable business leaders strive to achieve social, environmental and economic goals, which requires to think more creatively than when the foremost goal is to pursue economic gains. Consequently, their creative mindset may stimulate subordinates to think outside of their own boundaries.

Interestingly, although B Corps indeed score highest on some variables, ISO 14001 (environmentally conscious traditional business) leaders often score lowest. One reason for this could be that ISO 14001 companies typically work with natural resources and that there is a higher pressure to obtain environmental sustainability certifications in their industries. If so, the motivation to obtain the certification is less intrinsic, which may explain the high differences in scores with sustainable business leaders.

**Contingent reward** is the only transactional leadership style for which sufficient and reliable data was collected. Transactional leadership, including contingent reward, could arguably be seen as a more conservative, old fashioned way of leadership. (Bass, 1990) Therefore, it might be more likely that B Corp leaders score relatively low for CR. Surprisingly, B Corp leaders score highest on this variable. The median scores do not highly differ across the groups even though the scores of B Corp leaders do statistically significantly differ from the 'other' group. Interestingly, B Corp leaders score higher on both the transformational leadership style and the only investigated transactional style. Further research should prove whether this is an incident in terms that B Corp leaders do not score higher on all transactional leadership styles, or a trend.

### **5.3 Theoretical contributions**

The current study contributes to nascent discussions on sustainable business (B Corps), as well as on ongoing discussions on leadership and social entrepreneurship. B Corp leaders turn out to score significantly higher for the Agreeableness trait, which Derue et al. (2011) describe as an interpersonal attribute. No significant differences were found for what they consider task competencies. This could possibly be explained by a paradigm in which interpersonal attributes become increasingly important.

Further, the research found that sustainable business leaders do differ from traditional business leaders in terms of their leadership styles. B Corp leaders score highest on Inspirational Motivation, followed by Idealized Influence and Intellectual Stimulation (all transformational leadership styles) and finally Contingent Reward (transactional leadership). Traditional business leaders score relatively highest on Idealized Influence and score relatively higher on Contingent Reward. In absolute terms, B Corp leaders score higher on the three investigated transformational leadership styles. However, the same goes for the transactional style Contingent Reward, which suggests that sustainable leaders are not just transformational leaders but also display rather traditional leadership styles. In contrary, the results do not suggest huge differences across the groups for this leadership style. Moreover, it is the only style tested for transactional leadership, which makes it difficult to generalize. For the other three leadership styles; Individual Consideration, Management-by-Exception and Laissez-Faire; no reliable results were found.

To conclude, the research particularly suggests differences in leadership styles across groups, while personalities as such do not much differ, except for the agreeableness trait. So, working on the theory of sustainable leadership this research hopefully kicks off a more intensive discussion, in which differences and similarities and the reasons for these are more deeply investigated.

### **5.4 Practical contributions**

Although the research has a strong theoretical component, several practical lessons could be learned, too. Probably the biggest practical takeaway is the enhanced understanding of who are in charge of different types of organizations and the similarities and differences that go along with the type of business (sustainable versus traditional). HR managers may better understand what it takes to be a leader in terms of personality traits.



Assuming that leadership styles can be learned to a large extent, business schools can learn from the conclusions on leadership styles and tailor their programs more towards leadership styles that the current business environment demands, in which business sustainability plays an increasingly profound role, demands. This research suggests that sustainable business leaders do display more transformational leadership than their traditional business counterparts.

Idealized Influence is about trust, faith, respect and being a role model. Such rather ethical codes can be taught to students and others before they enter business life, for example by discussing real ethical business dilemmas, so they will not be surprised when confronted with these later on in their careers.

Inspirational Motivation relates to providing a vision and stimulating others. This can partly be learned through seeing examples in business studies. If students can identify themselves with role models who inspire and motivate them, they are more likely to adopt features of these leaders.

Intellectual Stimulation looks at creativity and how to stimulate others do perform well. Rather than focusing on existing business models and classical business framework thinking, students can be encouraged to come up with creative solutions that better fit today's business environment.

## **5.5 Limitations**

As always in research, the present study has certain limitations, some of which only appeared during the course of the research. The main limitations of this study include:

- the number of responses (limited sample)
- the tradeoff between the reliability and scope of the research
- the tradeoff between a compact survey and validity
- the anonymous nature of the surveys
- the use of control variables

The number of responses forms a first limitation. For the B Corp research group, the response rate was decent, but for the other groups significantly more effort was needed to obtain a sufficient number of responses. A longer survey would probably have led to more struggles regarding the number of responses. Nonetheless, a low number of responses makes it more

difficult to generalize the results. There might also be non-respondent bias to some extent, meaning that some important and highly representative firms from the sample group may not have participated in the survey.

A second obvious limitation is concerned with the tradeoff between the reliability and the scope of the research. It turned out that the reliability, in terms of Cronbach's alpha, was low for some of the variables of the second survey. As this survey was based on an existing model consisting of seven variables, either the scope of the research had to change, or the conclusions had to be based on unreliable results. The least dissatisfying option was to drop some variables, while some individual research questions were dropped in order to increase the reliability of the dependent variables. Therefore, the first limitation is the lack of reliable results for three of the variables of the second survey, which consequently had to be left out of rest of the research.

Thirdly, a compact survey typically goes along with a lower validity as compared to a survey with more questions about the same variables. This turned out to become highly relevant when some variables for the second survey had to be dropped. In case more questions per variable were asked, the construct validity would probably have been higher.

The non-response bias and response rate are attempted to improve through letting the respondents answer anonymously. The questions were rather personal, but when answering anonymously respondents were likely to feel more comfortable to participate. On the contrary, it was not possible to see who exactly responded. The control variables did not provide enough information to understand this, either. Moreover, the firms represented in the first survey are not exactly the same as those in the second survey. Therefore, it was not possible to discover relationships between personality traits and leadership styles.

A final major limitation has to do with the use of control variables. These enable to find a comparable basis and to isolate other variables in order to measure these. However, one has to be careful whether the differences in the answering of the variables could be explained just by the differences in control variables. In other words, in an ideal situation are the responses of the surveys different because the respondents work in a sustainable or traditional business. This would make it easier to draw conclusion for the current study. However, there are more factors involved. What these factors exactly are and how these influence the way respondents answer, is one of the directions for future research, as described below.

## 5.6 Future research directions

The research on leadership traits and styles is not new. However, this research should be seen as an initial step in the debate on how B Corps, and especially their leaders, relate to more traditional business. The first insights are important, but future research is needed in order to establish and better understand the position of B Corps, and sustainable business at large, within the continuously changing business environment. Main future research directions include:

- repeating the current research on a large scale;
- investigating the underlying reasons why certain differences across groups exist, also beyond sustainability certifications;
- conducting similar research but take firm performance into consideration;
- conducting similar research for different countries and compare the results;
- further investigating the relationship between transactional leadership and the type of business (sustainable versus traditional)

The first direction for future research is to conduct a similar research on a larger scale. The methods used in this research proved to be merely working well, but the choices that had to be made prevailed a higher response rate over collecting more data, and so being able to come up with more insightful conclusions. As some of the variables for the second survey had to be dropped, the variables ought to be represented by more survey questions, which limits the impact of dropping questions on the rest of the research. Hence, a higher validity can be reached.

The second but nevertheless crucial further research direction roots in the reasons why leaders from different types of firms are different from each other. This research attempts to minimize differences between respondents other than the type of the firm. Even though the research groups are attempted to be isolated, which strengthens the comparable basis, it is not sure what exactly makes respondents reply the way they do. Further research should enhance understanding of the control variables and not take these for granted. For instance, a crowdfunding platform, a financial institution and a waste handling company all provide services, albeit it in very different ways. Moreover, it is not sure to what extent ISO 14001 firms are intrinsically motivated to become certified as such and to what extent outside pressure and the competitive environment makes them obtain the certificate. All such questions are relevant and finding answers makes interpreting the results easier and more comprehensive.

Third, the relevance of the research will increase when also taking firm performance into consideration. Financial results are most obvious to look at and besides these are highly relevant from an economic sustainability point of view. This enables one to look beyond just a leader's personality traits and leadership style. Having identified these, it is a logical next step to see how a firm performs and thus to put value on personality traits and leadership styles. Next to financial key performance indicators one can look at social and environmental aspects even if these are more likely to be best taken care of by B Corps.

Fourth, the current study focuses on just one country in order to have a better comparable basis and to avoid cross-country, particularly cultural differences. However, including other countries can put the current research in perspective, in two ways. First, a study across various countries can explain possible cultural reasons for the conclusions of the current research. Second, a study similar to the present one can be undertaken in countries, which are known to perform worse from a corporate sustainability perspective. The differences between the research group might be bigger, as firms in the Netherlands arguably have standard and corresponding minimum requirements concerning corporate sustainability. Therefore, the differences between the most and least sustainable firms are probably smaller.

Finally, the research showed that B Corp leaders score higher on the transformational leadership styles. However, they also scored higher on the single transactional leadership style that was tested. As only one transactional leadership style could be tested, no generalizations can be made if B Corp leaders do indeed display higher levels of transactional leadership styles than traditional business leaders. Further research can investigate this.

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# APPENDICES

## Appendix 1. Survey on the Big Five personality traits - for leaders (English)

Dear respondent,

Thank you for participating in this survey on corporate leaders' personality traits. The aim of this survey is to gain more insight in the people who are leading companies, using 20 easy-to-answer statements. The survey only takes about **3 minutes** to fulfill. The answers will be used for my thesis in order to finish the Master's program in Strategy, Innovation & Sustainability (MSc.) at the Lappeenranta University of Technology, Finland. The data will be processed and reported **anonymously**.

If you have any further questions and/or comments, please let me know. My email address is [cornelis.van.luit@student.lut.fi](mailto:cornelis.van.luit@student.lut.fi).

Once again, many thanks for participating!

Kees van Luit

### QUESTIONS:

Please answer the following introductory questions before moving on to the statements.

1. What is your age?  
[A] Younger than 25  
[B] 25-37  
[C] 38-50  
[D] 51-63  
[E] Older than 63  
[F] I do not wish this answer to this question
2. Are you (co-)founder of your business?  
[YES]  
[NO]
3. Which of the following best describes the core activity of your business?  
[A] Providing services/consulting  
[B] Producing goods/manufacturing  
[C] Something else
4. How many people work at your company?  
[A] 1-5  
[B] 6-15  
[C] 16-50  
[D] 51-250  
[E] 251 or more

5. Is your company certified as a B Corporation (or B Corp; certification by B Lab on corporate social responsibility grounds)?

[YES]

[NO]

6. Is your company certified with ISO 14001 (environmental standard)?

[YES]

[NO]

### STATEMENTS<sup>1</sup>:

Instructions: Below you will find general statements describing people's behaviors. Please use the rating scale below to describe how accurately each statement describes you, knowing there are no good nor bad answers. Describe yourself as you generally are now, not as you wish to be in the future. Describe yourself as you honestly see yourself, in relation to other people you know of the same sex as you are, and roughly the same age. Please read each statement carefully and put a number from 1 to 5 next to it to indicate how accurately the statement describes you.

1 = Very inaccurate

2 = Moderately inaccurate

3 = Neither inaccurate nor accurate

4 = Moderately accurate

5 = Very accurate

1. \_\_\_\_\_ Am the life of the party
2. \_\_\_\_\_ Sympathize with others' feelings
3. \_\_\_\_\_ Get chores done right away
4. \_\_\_\_\_ Have frequent mood swings
5. \_\_\_\_\_ Have a vivid imagination
6. \_\_\_\_\_ Don't talk a lot
7. \_\_\_\_\_ Am not interested in other people's problems
8. \_\_\_\_\_ Often forget to put things back in their proper place
9. \_\_\_\_\_ Am relaxed most of the time
10. \_\_\_\_\_ Am not interested in abstract ideas
11. \_\_\_\_\_ Talk to a lot of different people at parties
12. \_\_\_\_\_ Feel others' emotions
13. \_\_\_\_\_ Like order
14. \_\_\_\_\_ Get upset easily
15. \_\_\_\_\_ Have difficulty understanding abstract ideas
16. \_\_\_\_\_ Keep in the background
17. \_\_\_\_\_ Am not really interested in others
18. \_\_\_\_\_ Make a mess of things
19. \_\_\_\_\_ Seldom feel blue
20. \_\_\_\_\_ Do not have a good imagination

You have now answered all questions. Thank you very much! If you have any questions and/or comments to me, please send an email to [cornelis.van.luit@student.lut.fi](mailto:cornelis.van.luit@student.lut.fi).

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<sup>1</sup> Description from Michigan State University (n.d.)

## Appendix 2. Survey on the Big Five personality traits - for leaders (Dutch)

Beste respondent,

Hartelijk dank voor uw deelname aan deze vragenlijst over persoonlijke eigenschappen van leiders in het bedrijfsleven. Het doel van deze vragenlijst is het opdoen van inzichten over de mensen die bedrijven leiden, gebaseerd op 20 gemakkelijk te beantwoorden statements. Het beantwoorden van deze vragenlijst duurt slechts ongeveer **3 minuten**. De antwoorden worden gebruikt voor mijn scriptie, de laatste stap in mijn master's studie Strategie, Innovatie & Duurzaamheid (Strategy, Innovation & Sustainability) aan de Lappeenranta University of Technology, Finland. Uw antwoorden worden **anoniem** geanalyseerd en gerapporteerd.

Als u vragen of opmerkingen heeft, twijfel dan vooral niet het me te laten weten. Mijn e-mailadres is [cornelis.van.luit@student.lut.fi](mailto:cornelis.van.luit@student.lut.fi).

Nogmaals hartelijk dank voor uw hulp!

Kees van Luit

### VRAGEN:

Beantwoord alstublieft de volgende introductievragen voordat u begint met de statements.

1. Wat is uw leeftijd?  
[A] Jonger dan 25  
[B] 25-37  
[C] 38-50  
[D] 51-63  
[E] Ouder dan 63  
[F] Ik geef liever geen antwoord op deze vraag
2. Bent u (mede)oprichter van uw bedrijf?  
[JA]  
[NEE]
3. Wat beschrijft de core activiteit van uw bedrijf het beste?  
[A] Dienstverlening/consultancy  
[B] Productie/verwerking van goederen  
[C] Iets anders
4. Hoeveel mensen werken er bij uw bedrijf?  
[A] 1-5  
[B] 6-15  
[C] 16-50  
[D] 51-250  
[E] 251 of meer
5. Is uw bedrijf gecertificeerd als B Corporation (of B Corp; een certificaat uitgegeven door B Lab op grond van maatschappelijk verantwoord ondernemen)?

[JA]  
[NEE]

6. Is uw bedrijf gecertificeerd met ISO 14001 (standaard aangaande het milieu)?

[JA]  
[NEE]

Instructies:

Hieronder vindt u algemene statements die menselijk gedrag beschrijven. Geef alstublieft aan in hoeverre de statements op u van toepassing zijn. Doe dit zo eerlijk mogelijk op basis van hoe u normaal gesproken bent en in de wetenschap dat er geen goede of foute antwoorden zijn. Het gaat om hoe u uzelf op dit moment ziet en niet zoals u graag zou willen zijn. Vergelijk uzelf met andere mensen die u kent van hetzelfde geslacht en ongeveer dezelfde leeftijd om tot uw antwoorden te komen. Lees elk statement aandachtig en geef dan een score op een schaal van 1 tot en met 5, afhankelijk van hoe goed het statement u beschrijft.

- 1 = zeer inaccuraat
- 2 = redelijk inaccuraat
- 3 = noch inaccuraat, noch accuraat
- 4 = redelijk accuraat
- 5 = zeer accuraat

1. \_\_\_\_\_ Is het middelpunt van een feestje (E)
2. \_\_\_\_\_ Sympathiseert met andermans gevoelens (A)
3. \_\_\_\_\_ Krijgt klusjes gelijk gedaan (C)
4. \_\_\_\_\_ Heeft regelmatig stemmingswisselingen (N)
5. \_\_\_\_\_ Heeft een levendig voorstellingsvermogen (O)
6. \_\_\_\_\_ Praat niet veel (E)
7. \_\_\_\_\_ Is niet geïnteresseerd in andermans problemen (A)
8. \_\_\_\_\_ Vergeet vaak dingen op de goede plaats terug te zetten (C)
9. \_\_\_\_\_ Is meestal relaxt (N)
10. \_\_\_\_\_ Is niet geïnteresseerd in abstracte ideeën (O)
11. \_\_\_\_\_ Praat met veel verschillende mensen op feestjes (E)
12. \_\_\_\_\_ Voel emoties van anderen (A)
13. \_\_\_\_\_ Houdt van orde (C)
14. \_\_\_\_\_ Is snel verontwaardigd (N)
15. \_\_\_\_\_ Heeft moeite met het begrijpen van abstracte ideeën (O)
16. \_\_\_\_\_ Blijft op de achtergrond (E)
17. \_\_\_\_\_ Is niet echt geïnteresseerd in anderen (A)
18. \_\_\_\_\_ Maakt een potje van dingen (C)
19. \_\_\_\_\_ Voelt zich zelden somber (N)
20. \_\_\_\_\_ Heeft geen goede verbeeldingskracht (O)

U heeft alle vragen beantwoord. Hartelijk dank voor uw deelname. Als u naar aanleiding van de vragen vragen en/of opmerkingen heeft, stuurt u me dan een e-mail via [cornelis.van.luit@student.lut.fi](mailto:cornelis.van.luit@student.lut.fi).



### Appendix 3. Survey on leadership styles - for employees (English)

Dear respondent,

Thank you for participating in this survey on corporate leaders' leadership style. The aim of this survey is to gain more insight in the people who are leading companies, using 21 easy-to-answer statements. The survey only takes about **3 minutes** to fulfill. The answers will be used for my thesis in order to finish the Master's program in Strategy, Innovation & Sustainability (MSc.) at the Lappeenranta University of Technology, Finland. The data will be processed and reported **anonymously**.

If you have any further questions and/or comments, please let me know. My email address is [cornelis.van.luit@student.lut.fi](mailto:cornelis.van.luit@student.lut.fi).

Once again, many thanks for participating!

Kees van Luit

#### QUESTIONS:

Please answer the following introductory questions before moving on to the statements.

In this survey the company's leader refers to the person who leads your company, in most cases the CEO. However, if you work at a large company and you do not know your CEO personally, you may refer to the person in charge of your department.

1. What is your company leader's age?  
[A] Younger than 25  
[B] 25-37  
[C] 38-50  
[D] 51-63  
[E] Older than 63  
[F] I do not know / I do not wish this answer to this question
2. Which of the following best describes the core activity of your business?  
[A] Providing services/consulting  
[B] Producing goods/manufacturing  
[C] Other
3. How many people work at your company?  
[A] 1-5  
[B] 6-15  
[C] 16-50  
[D] 51-250  
[E] 251 or more
4. Is your company certified as a B Corporation (or B Corp; certification by B Lab on corporate social responsibility grounds)?  
[YES]

[NO]

5. Is your company certified with ISO 14001 (environmental standard)?

[YES]

[NO]

### STATEMENTS<sup>2</sup>:

The twenty-one statements below refer to your leader's leadership style. Please indicate how frequently each statement fits your leader. The word 'others' refers to you as well as to other employees, clients, or group members of the leader. Please answer the statements honestly.

0 = Not at all

1 = Once in a while

2 = Sometimes

3 = Fairly often

4 = Frequently, if not always

Attention! Several statements include negations.

1. \_\_\_\_\_ He/she (the leader) makes others feel good to be around him/her.
2. \_\_\_\_\_ He/she expresses with a few simple words what we could and should do.
3. \_\_\_\_\_ He/she enables others to think about old problems in new ways.
4. \_\_\_\_\_ He/she helps others to develop themselves.
5. \_\_\_\_\_ He/she tells others what to do if they want to be rewarded for their work.
6. \_\_\_\_\_ He/she is satisfied when others meet agreed-upon standards.
7. \_\_\_\_\_ He/she is content to let others continue working in the same way as always.
8. \_\_\_\_\_ Others have complete faith in him/her.
9. \_\_\_\_\_ He/she provides appealing images about what we can do.
10. \_\_\_\_\_ He/she provides others with new ways of looking at puzzling things.
11. \_\_\_\_\_ He/she lets others know how he/she thinks they are doing.
12. \_\_\_\_\_ He/she provides recognition/rewards when others reach their goals.
13. \_\_\_\_\_ As long as things are working, he/she does not try to change anything.
14. \_\_\_\_\_ Whatever others want him/her to do is OK with him/her.
15. \_\_\_\_\_ Others are proud to be associated with him/her.
16. \_\_\_\_\_ He/she helps others to find meaning in their work.
17. \_\_\_\_\_ He/she gets others to rethink ideas that they had never questioned before.
18. \_\_\_\_\_ He/she gives personal attention to others who seem rejected.
19. \_\_\_\_\_ He/she calls attention to what others can get for what they accomplish.
20. \_\_\_\_\_ He/she tells others the standards they have to know to carry out their work.
21. \_\_\_\_\_ He/she asks no more of others than what is absolutely essential.

You have now answered all questions. Thank you very much! If you have any questions and/or comments to me, please send an email to [cornelis.van.luit@student.lut.fi](mailto:cornelis.van.luit@student.lut.fi).

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<sup>2</sup> Description (edited) from [http://alrestivo.com/Downloads\\_files/Multifactor%20Leadership%20Questionnaire.pdf](http://alrestivo.com/Downloads_files/Multifactor%20Leadership%20Questionnaire.pdf).

#### Appendix 4. Survey on leadership styles - for employees (Dutch)

Beste respondent,

Hartelijk dank voor uw deelname aan deze vragenlijst over leiderschapsstijlen van leiders in het bedrijfsleven. Het doel van deze vragenlijst is het opdoen van inzichten over de mensen die bedrijven leiden, gebaseerd op 21 gemakkelijk te beantwoorden statements. Het beantwoorden van deze vragenlijst duurt slechts een **minuut of 3**. De antwoorden worden gebruikt voor mijn scriptie, de laatste stap in mijn master's studie Strategie, Innovatie & Duurzaamheid (Strategy, Innovation & Sustainability) aan de Lappeenranta University of Technology, Finland. Uw antwoorden worden **anoniem** geanalyseerd en gerapporteerd.

Als u vragen of opmerkingen heeft, twijfel dan vooral niet het me te laten weten. Mijn e-mailadres is [cornelis.van.luit@student.lut.fi](mailto:cornelis.van.luit@student.lut.fi).

Nogmaals hartelijk dank voor uw hulp!

Kees van Luit

#### VRAGEN:

Beantwoord alstublieft de volgende introductievragen voordat u begint met de statements.

In deze vragenlijst wordt met leider de persoon die uw bedrijf leidt bedoeld, wat in de meeste gevallen neerkomt op de CEO. Indien u werkt bij een groot bedrijf en daardoor uw CEO niet persoonlijk kent, mag u refereren aan de persoon die verantwoordelijk is voor uw afdeling.

1. Wat is de leeftijd van uw bedrijfsleider?  
[A] Jonger dan 25  
[B] 25-37  
[C] 38-50  
[D] 51-63  
[E] Ouder dan 63  
[F] Ik weet het niet / ik geef liever geen antwoord op deze vraag
2. Wat beschrijft de core activiteit van uw bedrijf het beste?  
[A] Dienstverlening/consultancy  
[B] Productie/verwerking van goederen  
[C] iets anders
3. Hoeveel mensen werken er bij uw bedrijf?  
[A] 1-5  
[B] 6-15  
[C] 16-50  
[D] 51-250  
[E] 251 of meer
4. Is uw bedrijf gecertificeerd als B Corporation (of B Corp; een certificaat uitgegeven door B Lab op grond van maatschappelijk verantwoord ondernemen)?

[JA]  
[NEE]

5. Is uw bedrijf gecertificeerd met ISO 14001 (standaard aangaande het milieu)?

[JA]  
[NEE]

Instructies:

De onderstaande 21 statements beschrijven de leiderschapsstijl van uw leider. Geef alstublieft aan in hoeverre de statements op uw leider van toepassing zijn. Het woord 'anderen' refereert aan u, maar ook aan andere werknemers, cliënten of groepsleden van de leider. Wees alstublieft eerlijk in uw beantwoording.

- 0 = Helemaal niet  
1 = Heel af en toe  
2 = Soms  
3 = Vrij vaak  
4 = Regelmatig, zo niet altijd

Let op! Sommige statements bevatten ontkenningen.

1. \_\_\_\_\_ Hij/zij (de leider) laat anderen zich goed voelen om bij hem/haar te zijn.
2. \_\_\_\_\_ Hij/zij drukt in een aantal simpele woorden uit wat we kunnen en moeten doen.
3. \_\_\_\_\_ Hij/zij stelt anderen in staat om oude problemen op nieuwe manieren te bekijken.
4. \_\_\_\_\_ Hij/zij helpt anderen om zichzelf te ontwikkelen.
5. \_\_\_\_\_ Hij/zij vertelt anderen wat ze moeten doen om beloond te worden voor hun werk.
6. \_\_\_\_\_ Hij/zij is tevreden wanneer anderen overeengekomen afspraken nakomen.
7. \_\_\_\_\_ Hij/zij houdt ervan om anderen te laten werken zoals ze altijd doen.
8. \_\_\_\_\_ Anderen vertrouwen hem/haar compleet.
9. \_\_\_\_\_ Hij/zij laat op een aansprekende manier zien wat we kunnen doen.
10. \_\_\_\_\_ Hij/zij helpt anderen anders tegen ingewikkelde dingen aan te kijken.
11. \_\_\_\_\_ Hij/zij laat anderen weten hoe hij vindt dat ze presteren.
12. \_\_\_\_\_ Hij/zij erkent/beloont het wanneer anderen hun doelstellingen behalen.
13. \_\_\_\_\_ Zolang dingen werken, zal hij/zij deze niet proberen te veranderen.
14. \_\_\_\_\_ Hij/zij gaat akkoord met wat anderen hem/haar willen laten doen.
15. \_\_\_\_\_ Anderen zijn er trots op om met hem/haar geassocieerd te worden.
16. \_\_\_\_\_ Hij/zij helpt anderen om betekenis in hun werk te vinden.
17. \_\_\_\_\_ Hij/zij laat anderen opnieuw nadenken over ideeën waaraan ze nooit hebben getwijfeld.
18. \_\_\_\_\_ Hij/zij geeft persoonlijke aandacht aan een ander die lijkt afgewezen.
19. \_\_\_\_\_ Hij/zij vestigt de aandacht op wat anderen kunnen opsteken van wat ze bereiken.
20. \_\_\_\_\_ Hij/zij vertelt anderen de normen die ze moeten weten om hun werk uit te voeren.
21. \_\_\_\_\_ Hij/zij vraagt niet meer van anderen dan wat absoluut noodzakelijk is.

U heeft alle vragen beantwoord. Hartelijk dank voor uw deelname. Als u naar aanleiding van de vragen vragen en/of opmerkingen heeft, stuurt u me dan een e-mail via [cornelis.van.luit@student.lut.fi](mailto:cornelis.van.luit@student.lut.fi).

**Appendix 5. Personality traits correlation matrix (survey 1)**

	<b>OPE</b>	<b>CON</b>	<b>EXT</b>	<b>AGR</b>	<b>NEU</b>
Openness to Experience ( <b>OPE</b> )	1				
Conscientiousness ( <b>CON</b> )	-0.215	1			
Extroversion ( <b>EXT</b> )	0.000	-0.291*	1		
Agreeableness ( <b>AGR</b> )	0.602**	-0.182	0.078	1	
Neuroticism ( <b>NEU</b> )	-0.125	-0.224	0.288*	-0.232	1

\*. Correlation is significant at the 0.05 level (2-tailed)

\*\* . Correlation is significant at the 0.01 level (2-tailed)

**Appendix 6. Leadership styles correlation matrix (survey 2)**

	<b>II</b>	<b>IM</b>	<b>IS</b>	<b>CR</b>
Idealized influence ( <b>II</b> )	1			
Inspirational motivation ( <b>IM</b> )	0.511*	1		
Intellectual stimulation ( <b>IS</b> )	0.511*	0.745*	1	
Contingent reward ( <b>CR</b> )	0.039	-0.051	- 0.101	1

\*. Correlation is significant at the 0.01 level (2-tailed)