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Master Thesis
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Lead the right way. *The impact of leadership styles, emotional intelligence and collectivism on job satisfaction.*

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Abstract

The current study aimed to extend existing literature on leadership theories by empirically examining the main effects of transactional, transformational and laissez-faire leadership on the employee's job satisfaction from an emotional intelligence angle and cultural-based employee perspective. Furthermore, the objective of this study was to extend the empirical usage of the CVSCALE and to provide newly acquired knowledge on the possible moderating effects of emotional intelligence and individual-level collectivism in order to facilitate academics and managers with more knowledge regarding job satisfaction through an effective manager-employee relationship. Overall, the study provided support for the positive impact of transformational leadership on the job satisfaction of employees. No support was found for the impact of the transactional and laissez-faire type of leadership on job satisfaction. Furthermore, the study found no support for the moderating effects of both emotional intelligence and collectivism. Thus, indicating that the relationship between the leadership style and job satisfaction are independent of the employee's emotional intelligence and collectivistic tendencies warranting further research regarding these concepts.

Keywords – transactional, transformational, laissez-faire leadership, emotional intelligence, collectivism, job satisfaction.

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Chapter One Introduction

1.1 Problem background

Up to this day, one of the most common workplace complaints pertains to the employees' dissatisfaction with their manager. This accounts for almost two thirds of the employees in the Netherlands based on national surveys (Monsterboard, 2016; Nationale Vacaturebank, 2018). These numbers indicate that there are still too many employees who are dissatisfied with their boss and employee relationship. And this, in turn, leads to negative effects on the company and staff such as high employee turnover, low morale, no synergy and poor financial results (Aziri, 2011). A major factor relating to these dissatisfaction-related problems lies in the ineffective leadership of the manager (Beard & Mcginn, 2018; Cotae, 2010; Mihalcea, 2014). Leadership is defined as the behaviour of an individual in directing the activities of a group towards a shared goal through communication and interpersonal influence (Cotae, 2013), and is therefore heavily influencing the productivity and cohesiveness of the leader-subordinate relationship.

In order to positively affect the above relationship, different types of leadership styles can be used as a method to motivate people, provide direction and implement plans (Cotae, 2010, 2013). Common leadership styles in the business field are transactional leadership, transformational leadership and laissez-faire-leadership. They are all purposefully oriented towards improving the firm's performance, but differ in the executional process (Cotae, 2010, 2013). For instance, transactional leadership is based on a punishment and reward mechanism to motivate employees. Subordinates who perform well receive a reward, while others who perform poorly will receive punishment in some way (Cotae, 2010). On the contrary, focus of transformational leaders lies in being a source of vision and inspiration for subordinates and bringing change in an organization (Cotae, 2010). Subsequently, laissez-faire leadership is known as inactive leadership in which leaders follow a hands-off method (Chaudhry & Javed, 2012).

As mentioned earlier, the leadership style affects the leader-subordinate relationship in terms of task achievement and effective communication and interaction which are considered major sources of job satisfaction (Aziri, 2011; Cotae, 2010). Therefore, the leadership style directly influences the employee's job satisfaction which refers to the (negative or positive) attitude of an employee towards his or her job that is highly influenced by the work process and environment (Rad & Yarmohammadian, 2006). However, little empirical research has

been done with regard to the specific effects of the aforementioned types on the employee's job satisfaction (Connelly & Gooty, 2015; Cotae, 2010;2013). In particular, involving culturally diverse employees based on Hofstede's cultural dimensions (i.e. masculinity vs femininity, power distance, uncertainty avoidance, collectivism vs individualism, short-term orientation vs long-term orientation, and indulgence vs restraint) (Hofstede, 1984). This is due to the fact that Hofstede's dimensions have mostly been used for empirical country-level data research and not for the individual-level (Yoo et al., 2011). However, one of the main critiques is that the intercultural variation will be ignored when applying the dimensions to the country-level (Lu, 2012). Therefore, it would be interesting to apply one of the dimensions, in this case collectivism (preference for a tightly-knit society), in order to capture the individual-level effects of this cultural dimension.

In addition, in order to acquire a more substantial holistic view of the employees' job satisfaction, it would be interesting to approach it from a perspective other than the classical and widely explored job satisfaction theories (i.e. Maslow's needs hierarchy theory, Herzberg's motivator-hygiene theory, job characteristics model, and dispositional theory) (Arvey et al., 1991; Kaur, 2013; Pardee, 1990), or trait theories (i.e. openness, extraversion, agreeableness) (Lin et al., 2014). Since the leader-subordinate relationship is considered to be an emotional process and a process of social interaction (Humphrey, 2002), it would be interesting to explore job satisfaction from an emotion-based perspective, such as emotional intelligence (EI) based abilities. Especially since the relevance and functionality of emotional intelligence seems to be underappreciated and underrecognized relative to cognitive based abilities in the field of business (Benjamin, 2019; Webb, 2009). Emotional intelligence has been defined as a "form of social intelligence that involves the ability to monitor one's own and others' feelings and emotions, to discriminate among them and to use this information to guide one's thinking and actions" (Salovey & Mayer, 1993).

Based on the foregoing, the aim of this research is to extend current leadership theories by providing new theoretical and practical insights on transactional, transformational and laissez-faire leadership styles from an emotional-intelligence angle and a cultural - based employee perspective. Hence, contributing to a more effective manager-employee relationship and a healthier workplace environment by exploring the specific effects of the leadership styles on the employee's job satisfaction.

1.2 The problem statement

To what extent does the use of different types of leadership styles (transformational, transactional and laissez-faire) influence the job satisfaction of employees, and how does the employee's emotional intelligence and employee's collectivism moderate the relationship between the different types of leadership styles and the employee's job satisfaction?

1.3 Academic and managerial relevance

Academic relevance

Job satisfaction has been extensively researched from the perspective of classical theories such as Maslow's needs hierarchy theory (Arvey et al., 1991), Herzberg's motivator-hygiene theory (Pardee, 1990), dispositional theory (Kaur, 2013), and trait theories (Lin et al., 2014), but not from an emotional intelligence angle and a cultural perspective based on Hofstede's dimensions (Yoo et al., 2011). The main reason for the latter one is that Hofstede's dimensions are country-level based and not applied to individuals due to Hofstede's country-level based scales (Yoo et al., 2011). However, one of the main critiques is that the intercultural variation will be ignored when applying the dimensions to the country-level (Lu, 2012). In response to this, Yoo et al. (2011) have developed and validated the CVSCALE which measures Hofstede's dimensions at the individual level. This scale has been used for studying the effects of the cultural dimensions power distance and masculinity on job satisfaction (Caputo et al., 2018; Ma & Turel, 2019), but not for other cultural dimensions such as collectivism. Therefore, this study aims to extend current approaches of the concept job satisfaction by providing new theoretical insights from a cultural perspective based on Hofstede's cultural dimension collectivism.

In addition, the relevance and functionality of emotional intelligence seems to be underappreciated and underrecognized relative to cognitive based abilities in the field of business (Benjamin, 2019; Webb, 2009). However, Salovey & Mayer (1990) have been stressing the importance of bringing the concept to the business field since they argued that cognitive intelligence is not a guarantee for business success but emotional intelligence is. Several studies have even indicated that emotional intelligence may be strongly related to job satisfaction (Cavazotte et al., 2011; George, 2000; Palmer et al., 2001). For example, Jung & Yoon (2016) found that emotionally intelligent hospitality employees show higher levels of

job satisfaction, because they are better able to deal with customers through their emotions and thus feel more effective at their job. But exactly to what extent and how emotional intelligence accounts for job satisfaction in the context of leadership styles is unknown (George, 2000). In particular, the specific effects of the components of emotional intelligence (e.g. others' emotion appraisal, use of emotion, self-emotion appraisal and regulation of emotion) (Salovey & Mayer, 1990) seem to be unknown territory in this context. Therefore, this study responds to Salovey & Mayer's (1990) by empirically studying the functionality and impact of emotional intelligence in the workplace. Thus, providing newly acquired knowledge through empirical research in order to create a better holistic view of job satisfaction from a cultural and emotion-based perspective.

Managerial relevance

Leadership plays an important role in the success of any organization since the main purpose is to motivate, and direct a group of people through communication and interpersonal influence to act towards achieving a shared goal (Cotae, 2010; 2013). Thus, leadership can be considered as a valuable organizational tool to create a healthy and positive workplace environment where employees are productive, encouraged and content. In order to achieve this, one must have a good understanding of the leadership concept (e.g. methods, skills) and the impact it has on specific organizational aspects such as job satisfaction (Cotae, 2010). By including a non-cognitive and cultural aspect to this context a more complete and holistic view from the employee's perspective on effective leadership can be achieved, and thus contributing to this deeper level of understanding of the various leadership styles (transformational, transactional, and laissez-faire). In turn, the findings and insights of this thesis will help organizations, human resources department, management and anyone in a leadership position to expand or improve their firm-specific and competitive advantages by developing more successful and appropriate management strategies, and leadership training programs in order to improve the workplace environment.

1.4 Thesis structure

This thesis consists of six chapters in total. After this chapter, the thesis will continue with chapter 2, which covers the literature review relating to the concept of leadership and its different types (transformational, transactional and laissez-faire), job satisfaction, the concept of emotional intelligence and the cultural dimension collectivism. Furthermore, the relationship between the different types of leadership styles and job satisfaction will be

discussed thoroughly, followed by the concept of emotional intelligence and collectivism and their separate impacts on this relationship. Subsequently, chapter 3 entails the research method to be used, discussing the set-up, sample, procedure, variable operationalization, data analysis and research ethics. The results of the data analyses will be presented in chapter 4, followed by a discussion of the results in chapter 5. Lastly, chapter 6 provides the conclusion, managerial and theoretical implications, finishing with the limitations of this study and some suggestions for future research.

Chapter Two Literature review

2.1 Employee's job satisfaction

The employee's job satisfaction can be defined as the attitude of an employee towards his or her job that is highly influenced by the work process and environment (Rad & Yarmohammadian, 2006). Employees will express their level of job satisfaction through positive or negative attitudes towards their job (Aziri, 2011). Furthermore, the level of satisfaction among the employees is generally considered as a key factor for the success of an organization (Shahzadi et al., 2014). Important determinants of the level of job satisfaction are leaders since they have a great influence on the way their subordinates execute and complete their work (Bektas, 2017). Therefore, it can be assumed that the leadership style of a leader has a direct impact on the employee's job satisfaction, which will be discussed in the next section.

2.2 Leadership

Leadership plays a key role in the success of any organization since it is heavily influencing the productivity and cohesiveness of the manager-employee relationship, specifically in terms of task achievement, effective communication and interaction in order to create a healthy and positive workplace environment where employees are productive, encouraged and content (Cotae 2010, 2013).

The characteristic manner in which a leader exercises influence over the followers is known as leadership style (Yukl, 2002). Different types of leadership styles can be used as strategic tools to positively affect the manager-employee relationship (Cotae, 2010, 2013). Common leadership styles in the business field are transactional leadership, transformational leadership and laissez-faire-leadership. They are all purposefully oriented towards improving the firm's performance, but differ in the executional process (Cotae, 2010, 2013), as will be shown in the next sections.

2.3 Transactional leadership style

The transactional leadership is often termed as the traditional form of leadership. It follows the traditional structure of a typical leader-follower relationship in terms of a punishment and reward mechanism between followers and their leaders (Hsu et al., 2002). Overall, there are three dimensions that are attributed to this type of leadership which are described below (Cotae, 2010):

- **The contingent-reward approach** is based on both an active and positive exchange between the leader and the follower. In this case, followers are rewarded when they successfully complete previously agreed objectives or goals. For instance, subordinates who perform well gain benefits by receiving recognition, bonuses and merits, while the opposite holds true for others who perform poorly (i.e. termination and a cut in salary increments) (Cotae, 2010; Kraaft et al., 2003). Therefore, it is presumed that followers only achieve the negotiated level of performance, and the reward provided is dependent on the successful completion of the task (Kraaft et al., 2003).

- **The active management-by-exception** has the purpose of anticipating mistakes before they become more serious and complex, by continually monitoring the follower's performance (Brymer & Gray, 2006). In this scenario, the leader sets out clear and specific expectations, criteria and standards for assessment and monitoring at the start of the task. This way, corrective action can be applied more immediate as the leader attempts to determine any deviations by measuring performance against the expectations and criteria that has been set (Brymer & Gray, 2006).

- **The passive management-by-exception** occurs when the leader waits until the task is completed before determining whether a problem exists (Brymer & Gray, 2006). In this case, the leader intervenes after a mistake has been made or a problem has been identified. This method is similar to the inactive leadership aspect of the laissez-faire leadership (Brymer & Gray, 2006; Howell & Avolio, 1993). Therefore, this method will be excluded from this study.

The impact of the executional process of this leadership style on the employees will be discussed in the next section.

2.3.1. Transactional leadership style in the workplace

As already mentioned, the employee's job satisfaction is defined as a general attitude towards the job that is highly influenced by the leadership style of the leader (Rad & Yarmohammadian, 2006). In general, desired evaluative statements are used with regard to certain people, objects or situations when forming an attitude (Aziri, 2011). According to earlier studies (Abdalla, 2010; Al Khajeh, 2018), a distinct advantage of transactional

leadership is the task clarity which provides a clear understanding of the strategic goals. For example, according to Abdalla (2010) and Al Khajeh (2018), these leaders focus on setting clear articulated goals by clarifying the employee's role, task requirements, setting direction and emphasizing on efficiency and productivity, so that employees are aware of these expectations. In addition, the contingent reward system used by transactional leaders establishes a clear contract relationship, whereby consequences for achieving or failing to meet expectations or goals are openly discussed (Feng & Wang, 2018). This assurance and the openness clear-cut tasks helps employees to feel good about their job in the sense that they feel more secure about how to carry out their work (Hsu et al., 2002).

However, this positive effect will adversely affect satisfaction in the long-run according to several studies (Kraaft et al. 2003; Naidu & van der Walt, 2005; Saleem, 2015), since employees tend to only endure the transactional leadership style for a short period of time due to the reward and punishment characteristics associated with it. According to these studies, a general significant disadvantage of this leadership style is that negative emotions of employees are elicited from the lack of motivation to give anything beyond what is specified by their transactional leader. Thus, restricting them from growth and development opportunities in terms of working skills and capabilities. Furthermore, according to Rowold & Schlotz (2009) and Stordeur et al. (2001) this leadership style shows strong associations with chronic stress, a facet of burnout and emotional exhaustion. The close monitoring, specific criteria and expectations of the active management-by-exception put subordinates under extra pressure since they feel controlled and are not given any freedom to deviate from the desired standards. Thus, the overall impact of transactional leadership will be detrimental on the employee's attitude towards work. Based on the aforementioned study outcomes, transactional leadership style has a negative impact on the employee's job satisfaction.

H1: Transactional leadership has a negative effect on the job satisfaction of employees.

2.4 Transformational leadership style

The focus of transformational leaders lies in being a source of vision and inspiration for followers and bringing change in an organization (Cotae, 2010). It is often labelled as inspirational or charismatic leadership, and goes beyond the performance, punishment, and reward system of the transactional type (Howell & Avolio, 1993). The biggest difference between the transactional and transformational leadership style is that the latter one aims at optimizing the development of the individual and the group to perform beyond expectations,

while the transactional one is solely based on the exchange processes (e.g. rewards) between the leader and the subordinate in order to accomplish the restricted goals and expectations set by the transactional leader (Bass, 1985).

It is essentially leadership that directs and motivates followers to surpass their self-interests for a collective vision, purpose, goal and/or mission (Metcalf & Bean, 2012). And so, transformational leadership tends to create trust and admiration toward the leader on the part of followers, in order to get them inspired to do more than they were originally expected to do in the first place (Cotae, 2010). This leadership style consists of the following four dimensions (Bass & Avolio, 1990, 1993; Bass, 2008):

- **The idealized influence** reflects the degree followers want to emulate the leader due to recognition and trust. It indicates the extent of the leader to go beyond their self-interests for the greater good of the group to instil pride in followers for being associated with the leader, also known as charisma.
- **The inspirational motivation** regards the optimism, encouragement, enthusiasm and confidence the transformational leader instils in the followers with regard to visionary future goals.
- **The intellectual stimulation** focuses on stimulating and improving followers' (critical) thinking and creativity by encouraging them to view problems and find solutions from different perspectives.
- **The individualized consideration** refers to the degree to which the transformational leader helps and supports the follower's needs and competencies by offering a supportive environment to exploit these, for example assigning tasks that will enhance abilities and emphasizing on mutual understandings and two-way communications.

An overall outcome is that the transformational leader is able to optimize the development of the employee in a supportive way and build better group cohesion in the workplace through these dimensions (Bass & Avolio, 1985). For example, through the intellectual stimulation (e.g. stimulating to think critically) the employee's confidence will be enhanced in responding to challenges facing them at work (Bass, 1985). Furthermore, the individualized consideration (e.g. mutual understandings and two-way communication) enhances the participative decision-making process in which employees are given a sense of involvement and recognition (Bogler, 2001; Choi et al., 2016). In turn, these participative

behaviours are beneficial for employee satisfaction (Kim, 2002). Therefore, the following hypothesis is developed:

H2: The transformational leadership style has a positive effect on the job satisfaction of employees.

2.5 Laissez-faire leadership style

The laissez-faire leadership is typically considered as an inactive leadership style that follows a hands-off method (Bass, 2008). According to Bass & Avolio (1993), leadership is absent and intervention by the leaders is avoided. Laissez-faire leaders characterize themselves as leaders who avoid accepting responsibility, fail to follow up requests for assistance, are absent when needed, and resist expressing views on important matters. This leads to decisions that are often delayed. Moreover, feedback, involvement and rewards are absent, and there is no attempt to motivate subordinates or recognize and satisfy their needs (Skogstad et al., 2007).

The biggest criticism for this leadership style is that the lack of involvement, motivation and clear directions leave subordinates too much to themselves, and thus making them feel ignored and isolated (Loi et al., 2009; Skogstad et al., 2007). Also, subordinates may develop feelings of doubt and may become insecure without the continual reassurance and contact with their leader (Chaudhry & Javed, 2012). Therefore, the following is hypothesized:

H3: The laissez-faire leadership has a negative effect on the job satisfaction of employees.

2.6 Emotional intelligence (EI)

2.6.1. A brief history of emotional intelligence

In order to have a solid grasp on the concept of emotional intelligence (EI), one must trace back its roots to the social intelligence theory which was first identified by Thorndike in 1920. Thorndike defined social intelligence as "the ability to understand and manage men and women, boys and girls, to act wisely in human relations" (Thorndike, 1920). Following this train of thought, Gardner (1993) classified social intelligence as one of the seven intelligence domains in his theory of multiple intelligences. Gardner proposed that social intelligence consists of an individual's interpersonal and intrapersonal intelligence. Intrapersonal intelligence regards the intelligence to deal with oneself, and also refers to the ability to "symbolize complex and highly differentiated sets of feelings" (Gardner, 1993). In contrast,

interpersonal intelligence refers to the ability to "notice and make distinctions among other individuals and, in particular, among their moods, temperaments, motivations and intentions" (Gardner, 1993), and so relates to one's intelligence in dealing with others.

Based on the former work of Thorndike (1920) and Gardner (1993), Salovey & Mayer (1990) were among the first to propose the concept and formal definition of emotional intelligence in 1990. They were the first to develop a theoretical model of the concept by conceptualizing it with four distinct dimensions. Therefore this study follows their definition of the concept of emotional intelligence, which will be discussed in the next section.

2.6.2. Salovey & Mayer's emotional intelligence dimensions

Salovey & Mayer (1990) defined emotional intelligence as a "form of social intelligence that involves the ability to monitor one's own and others' feelings and emotions, to discriminate among them and to use this information to guide one's thinking and actions". They identified four distinct dimensions of the concept, namely, others' emotion appraisal, use of emotion, self-emotion appraisal, and regulation of emotion:

- **Self-emotion appraisal** relates to one's understanding of emotions in order to perceive them accurately. This involves understanding nonverbal signals such as facial expressions and body language.
- The **use of emotion** refers to one's ability to utilize individual emotional information for individual performance. In particular, emotions help prioritize our direction of attention and reaction since we tend to respond emotionally to situations, objects or individuals that garner our attention.
- **Others' emotion appraisal** is the ability to recognize, interpret and understand the meaning of emotions of individuals once perceived. For instance, if someone is expressing sad emotions, the observer must interpret the cause of this and what it could mean.
- **Regulation of emotion** refers to the ability to manage one's own emotions effectively, and demonstrating individual emotions through appropriate behavioural actions depending on given situations (e.g. responding to the emotions of others).

One final remark is that Salovey & Mayer (1990) argued that cognitive intelligence is not a guarantee for business success but emotional intelligence is, and thus stressing the importance of the concept in the business field, which will be discussed next.

2.6.3. Why does emotional intelligence matter?

Goleman (1995) argues that people's life experience is heavily influenced by how they feel and perceive which in turn can play an important role in determining their level of satisfaction. Therefore, he proposes that qualities such as understanding one's emotions, recognizing and empathizing with other's emotions, and regulating one's emotion are more important than rational qualities also knows as the IQ (Goleman, 1995). Relating it to the working environment, it is considered that mood and emotions provide significant variance in the overall job satisfaction (Fisher, 2000), in specific, positive emotions align with higher levels of job satisfaction and vice versa. Thus, it can be assumed that emotional intelligence impacts the level of job satisfaction. In particular, employees with higher levels of emotional intelligence align with higher levels of job satisfaction (Wong & Law, 2002). According to Wong & Law (2002), an explanation for this outcome is that these employees are better able to cope with (stressful) emotional stimuli from the working environment by successfully managing and adjusting their emotions to these situations in comparison to employees with less emotional intelligence.

Building further on the foregoing assumptions, Mayer & Salovey (1993) propose that emotionally intelligent individuals tend to be more flexible and adaptive in regulating their emotions to be consistent with the situational demands than those who are not. This assumption is strengthened by Jung & Yoon (2016), who found that hospitality employees are able to manage their own emotions and sense the emotions of others contemplate, and act in ways that encourage positive emotional experiences and discourage negative emotional experiences. Additionally, they also know how to appropriately govern their actions on the job. Furthermore, burnout and stress symptoms occur more commonly among employees who cannot cope with excessive emotional demands because of their limited emotional resources according to Gong et al. (2019) and Lee (2018). This is in line with Mayer & Salovey's (1993) theoretical proposition that emotionally intelligent people are able to regulate emotions and to process emotional information in a quick and accurate manner, and thus are able to choose more appropriate strategies to cope with frustration.

2.6.4. The effects of emotional intelligence

Relating the above findings to the effects of the transactional leadership style (i.e. high achievement, high productivity expectations, directions, the emphasis on pursuing clear goals, and punitive corrective actions) to the highly probable extra pressure and stress that employees face from the competitive environment created by the transactional leader (Rowold & Schlotz, 2009; Stordeur et al., 2001), emotional intelligence will be highly useful in alleviating these stressful conditions. More specifically, by perceiving, using, understanding, and managing emotions more quickly and accurately, negative emotions (i.e. stress and sense of despair) will be identified and reduced more easily (Jung & Yoon, 2016; Salovey & Mayer, 1990), so that the execution of the tasks and goal achievement will be more bearable and attainable from the employee's perspective. Hence, the following hypothesis can be developed:

H4: The negative effect of transactional leadership on job satisfaction will be stronger for employees with lower levels of emotional intelligence.

The same reasoning can be applied to the relationship between the transformational leadership style and the employee's job satisfaction. The intellectual stimulation of the transformational leader focuses on stimulating and encouraging employees to approach problems, and find solutions from different perspectives (Bass & Avolio, 1990, 1993; Bass, 2008). These problems could also involve difficulties with co-workers in terms of communication, disagreement and behaviour (Jungert et al., 2018). From this perspective, emotional intelligence would help employees to improve their understanding of the particular problematic situation in terms of perceiving and interpreting the emotions of the other accurately, which in turn helps them to respond properly to their co-worker (Bass, 2008). In this way, frustration-levels and stress-levels will be reduced since problems at work will be approached more effectively (Jung & Yoon, 2016). Therefore, emotional intelligence broadens and enhances the possibilities to view problems, and find solutions from different perspectives. Thus, strengthening the intellectual stimulation of employees. This leads to the following hypothesis:

H5: The positive effect of transformational leadership on job satisfaction will be stronger for employees with higher levels of emotional intelligence.

In the context of the laissez-faire leadership, stressful situations are caused due to the absence of intervention, delayed decisions, absence of feedback and lack of involvement of

the laissez-faire leader (Bass & Avolio, 1993). This leaves subordinates unsupported and too much to themselves which in turn may cause them to feel ignored, isolated, and become insecure and distressed (Chaudhry & Javed, 2012; Loi et al., 2009). Therefore, a high level of emotional intelligence will help alleviate stress levels in such a way that emotionally intelligent employees are able to identify and regulate these negative emotions more easily during the execution of tasks (Mayer & Salovey, 1993). Thus, in this way, emotional intelligence could be considered as a strategic tool to effectively cope with the negative emotional stimuli from the working environment caused by the laissez-faire leader. This is in line with earlier studies that found a significant connection between the high occurrence of burnouts and limited emotional resources (Gong et al., 2019; Jung & Yoon, 2016; Lee, 2018). Based on the foregoing, the following hypothesis can be adopted:

H6: The negative effect of laissez-faire leadership on job satisfaction will be stronger for employees with lower levels of emotional intelligence.

2.7 Collectivism

Based on Hofstede's work, the cultural dimension collectivism (versus individualism) refers to the level of preference for a tightly-knit framework in society in exchange for unquestioning loyalty (collectivism) relative to a loosely-knit social framework, in which individuals are expected to take care of only themselves and immediate families (individualism) (Hofstede, 1984). In other words, collectivism reflects the emphasis and importance of the group's interests at the expense of individual goals. Or rather, collectivistic individuals transcend their own self-interests and work towards group goals. In addition, the collectivist's definition of self is based on in-group memberships, as opposed to individualists who value the self-interests over those of the group (Triandis, 2001). Therefore, values with regard to interdependent relationships, group welfare, and group success are held highly by the collectivist.

2.7.1 Collectivism in the workplace

Applying the foregoing to the collectivistic employee, it can be assumed that they show more affinity towards working environments where group work, common goals, and cooperation are enhanced and encouraged (Jung et al., 2009; Pasa, 2000). This implies that the characteristics of the collectivistic employee should match the working environment in order to elicit positive reactions. Since it has already been established that the working environment is influenced by the leadership style, it can be assumed that the leadership style should match

the characteristics of the employee. This assumption is strengthened by the study of Devine et al. (1997) who showed that leaders who engage in behaviours that are consistent with their followers' individually held cultural values, also elicit more positive reactions from their followers than leaders who do not reflect their followers' individual value emphasis. Thus, in order to determine the effects of collectivism, the characteristics of the leadership style need to be assessed and matched to the characteristics of a collectivistic employee.

As already established transactional leaders are mainly focused on establishing clear contract relationships and exchange processes emphasizing individual achievement, they are therefore not able to transcend the self-interests and work towards group goals which are typical values of collectivistic employees. Thus, transactional leaders will not be able to recognize the needs of collectivistic employees. This assumption is strengthened by the fact that individualists value immediate gratification of needs, and have a strong focus on job accomplishment as opposed to collectivists (Jung et al., 2009). Therefore, the task clarity, provision of clear directions and expectations by the transactional leader will be more appreciated by individualistic employees than by collectivistic employees, since it will enable them to achieve their goals and rewards more effectively in terms of time and speed. Thus, collectivistic employees will show less favourable attitudes to the transactional leadership style, resulting in lower levels of job satisfaction than individualistic employees. This leads to the following hypothesis:

H7: The negative effect of transactional leadership on job satisfaction will be stronger for employees with higher levels of collectivism.

On the other hand, a distinct characteristic of the transformational leadership is that this type of leader directs and motivates followers to surpass their self-interests for a collective vision, purpose, goal and/or mission (Metcalf & Bean, 2012). For example, through the dimension idealized influence, a strong personal identification with the employee is built by setting the example, and so inspiring employees to make personal sacrifices in the interest of the group and to become highly committed to the leader's shared vision and mission (Bass, 1985; Shamir et al., 1993). The foregoing is in line with the collectivistic orientation and values relating to the transcendence of the self-interests towards group goals and not so much with the individualistic orientation of self- achievement. In this way, the transformational leader particularly motivates the collectivistic employees by enhancing group work and success through shared vision. Therefore, it is assumed that collectivistic employees show

more positive attitudes than individualistic employees towards their job due to the similar characteristics of transformational leadership. This leads to the following hypothesis:

H8: The positive effect of transformational leadership on job satisfaction will be stronger for employees with higher levels of collectivism.

The distinct characteristics of the laissez-faire leadership such as the lack of feedback, motivation, involvement and inspiration will not satisfy the collectivistic values such as cooperation, group interests, and quality of interpersonal relations. Therefore, the laissez-faire leader is not able to encourage group success, group welfare and the transcendence of the self-interests. Therefore, it is assumed that collectivistic employees will not appreciate the executional process of this particular leadership style. Furthermore, since the self-interests of the individualistic can still be pursued by the lack of group work or group involvement, it is assumed that this type of employees will be less affected than the collectivistic one by the laissez-faire leader. Hence, the following hypothesis is developed:

H9: The negative effect of laissez-faire leadership on job satisfaction of employees will be stronger for employees with higher levels of collectivism.

2.8 Conceptual framework

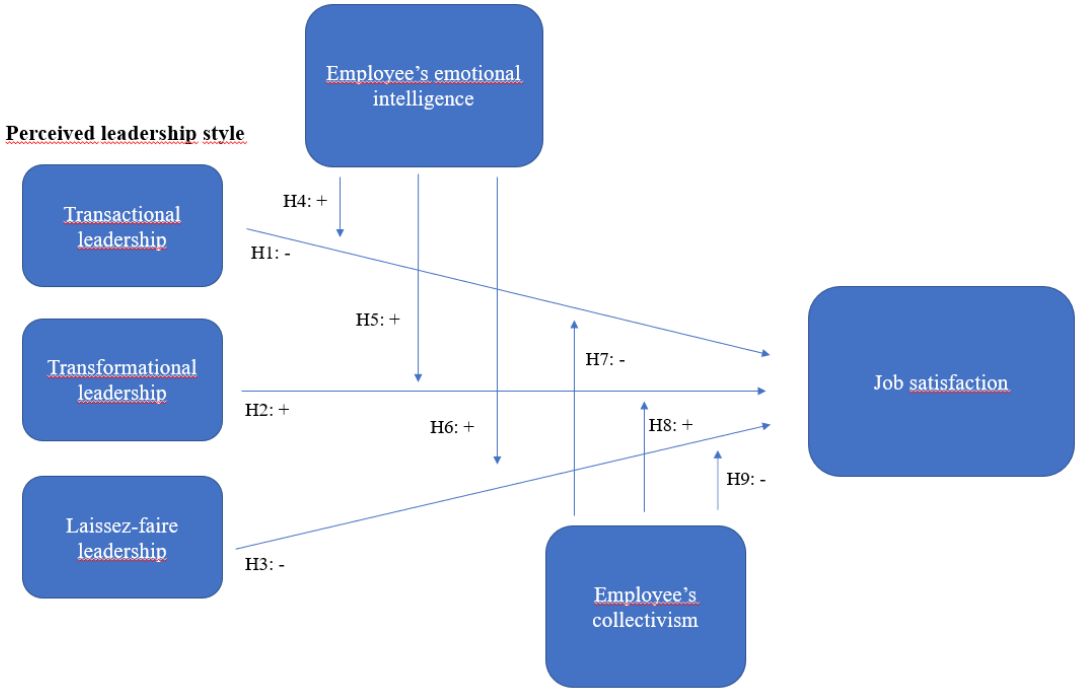


Fig. 1 Conceptual model

Chapter Three Methodology

3.1 Motivation and Research method

This research investigates the effects of the transformational, transactional, and laissez-faire leadership style on the employee's job satisfaction, in combination with the moderating effects of the employee's emotional intelligence and collectivism. This indicates a cause-and-effect relationship, and therefore this study is considered to be a causal one (Sekaran & Bougie, 2016). Since none of these constructs are going to be manipulated, an experimental design is not suitable. Furthermore, the measures used in this study are quantitative of nature, therefore qualitative methods such as a field experiment are inappropriate to use (Sekaran & Bougie, 2016). Since the data has to be collected in a limited time frame and on a substantial scale through structured questions from a sample that is widely geographically dispersed, an online survey is considered to be the best suitable method to be used in this study (Sekaran & Bougie, 2016).

3.2 Data collection and sample

The population of interest would be all employees (nonmanagerial, low-level management, and middle management) with a manager working at companies in the Netherlands. Since the survey will be conducted among Dutch employees, all items were translated from English to Dutch based on the back translation method in order to ensure vocabulary equivalence (i.e. the words used have the same meaning) (Sekaran & Bougie, 2016). The sample of employees is based on the personal network of the researcher and was approached by email with an included link of the online questionnaire. These recipients were instructed to distribute it further to employees with a manager (excluding top management) and thus making use of the snowball sampling technique (Sekaran & Bougie, 2016). This study required a sampling size consisting of a minimum of 100 and maximum of 500 respondents in order to obtain significant results (Hair et al., 2014). A sample size that is too large (over 500) would become problematic due to Type II errors (non-rejections of the findings).

3.3 Variable operationalization

3.3.1 Dependent variable

The dependent variable is the employee's job satisfaction (JS) and was measured by five items on an interval scale (7-point Likert scale) used by several studies (Cammann et al. 1983; Jung & Yoon, 2015; Ko, 2012; Spector, 1985).

Table 1. Variable operationalization of the dependent variable with references.

Construct	Operationalization	Reference
Job satisfaction (JS)	Five statements with a 7-point likert scale (ranging from 1=strongly disagree to 7=strongly agree): *JS1: I like the people I work with.* *JS2: My job is enjoyable.* *JS3: I like doing the things I do at work.* *JS4: In general, I like working here.* *JS5: All in all, I am satisfied with my job.*	-Cammann et al. (1983) -Jung & Yoon, (2015) -Ko (2012) -Spector (1985)

3.3.2. Independent variables

The independent variables are the three different types of leadership styles: transactional, transformational, and laissez-faire leadership style and were surveyed by 33 items of the Multifactor Leadership Questionnaire (MLQ) on an interval scale (7-point Likert scale). The MLQ was constructed by Bass & Avolio (1990) and is the most often applied instrument to measure these three types of leadership styles.

The moderating variables are the employee's emotional intelligence (EI) and the employee's collectivism (C). To measure the employees' EI, this study applied the Emotional Intelligence Scale (EIS) consisting of 16 items developed by Wong & Law (2002) based on the dimensional theoretization of Mayer & Salovey (1997). All items were measured with an interval scale (7-point Likert scale). Subsequently, collectivism was measured with an interval scale (7-point Likert scale) according to the cultural dimension collectivism (versus individualism) of Hofstede. The measure is based on six items of the CVSCALE used by Yoo & Shin (2015), and Yoo et al. (2011). The CVSCALE has been validated, and the items of Hofstede's cultural dimensions have been adapted from the country-level to the individual-level by Yoo et al. (2011). An overview of all constructs with dimensions and items are displayed in tables 2 and 3 on the next pages.

Table 2. Variable operationalization of the predictor variables with references.

Construct	Operationalization	Reference
Transactional leadership	Eight statements with a 7-point Likert scale (ranging from 1=strongly disagree to 7-strongly agree): **Dimension: Contingent rewarding (CR)** *CR1: Provides me with assistance in exchange for my efforts.* *CR2: Discusses in specific terms who is responsible for achieving performance targets.* *CR3: Makes clear what one can expect to receive when performance goals are achieved.* *CR4: Expresses satisfaction when I meet expectations.* **Dimension: Management by exception-active (MA)** *MA1:Focuses attention on irregularities, mistakes, exceptions and deviations from standards.* *MA2: Concentrates his/her full attention on dealing with mistakes, complaints and failures.* *MA3: Keeps track of all mistakes.* *MA4: Directs my attention toward failures to meet standards.*	-Bass & Avolio (1990)
Transformational leadership	Twenty-one statements with a 7-point Likert scale (ranging from 1= strongly disagree to 7=strongly agree): **Dimension: Idealized influence (IF)** *IF1: Instils pride in me for being associated with him/her.* *IF2: Goes beyond self-interest for the good of the group.* *IF3: Acts in ways that build my respect.* *IF4: Displays a sense of power and confidence.* *IF5: Provides complete trust.* *IF6: Talks about his/her most important values and beliefs.* *IF7: Specifies the importance of having a strong sense of purpose.* *IF8: Considers the moral and ethical consequences of decisions.* *IF9: Emphasizes the importance of having a collective sense of mission.* **Dimension: Inspirational motivation (IM)** *IM1: Talks optimistically about the future.* *IM2: Talks enthusiastically about what needs to be accomplished.* *IM3: Articulates a compelling vision of the future.* *IM4: Expresses confidence that goals will be achieved.* **Dimension: Individualized consideration (IC)** *IC1: Spends time teaching and coaching.* *IC2: Treats me as an individual rather than just a member of the group.* *IC3: Considers me as having different needs, abilities, and aspirations from others.* *IC4: Helps me to develop my strengths.* **Dimension: Intellectual stimulation (IS)** *IS1: Re-examines critical assumptions to question whether they are appropriate.* *IS2: Seeks differing perspectives when solving problems.* *IS3: Gets me to look at problems from many different angles.* *IS4: Suggest new ways of looking at how to complete assignment.*	-Bass & Avolio (1990)
Laissez-faire leadership	Four statements with a 7-point Likert scale (ranging from 1=strongly disagree to 7=strongly agree): *LF1: Avoids getting involved in important decisions.* *LF2: Is absent at times when (s)he is needed.* *LF3: Avoids decisions.* *LF4: Does not bother me when I do not bother him/her.*	-Bass & Avolio (1990)

Table 3. Variable operationalization of the moderating variables with references.

Construct	Operationalization	Reference
Emotional Intelligence:	Sixteen statements with a 7-point Likert scale (ranging from 1=strongly disagree to 7=strongly agree): **<u>Dimension: Others' emotion appraisal (OEA)</u>** *OEA1: I Always know my friends' emotions from their behaviors.* *OEA2: I am a good observer of others' emotions.* *OEA3: I am sensitive to the feelings and emotions of others.* *OEA4: I have a good understanding of the emotions of people around me.* **<u>Dimension: Use of emotion (UOE)</u>** *UOE1: I always set goals for myself and then try my best to achieve them.* *UOE2: I always tell myself I am a competent person.* *UOE3: I am a self-motivated person.* *UOE4: I always encourage myself to try my best.* **<u>Dimension: Self-emotion appraisal (SEA)</u>** *SEA1: I have a good sense of why I have certain feelings most of the time.* *SEA2: I have a good understanding of my own emotions.* *SEA3: I really understand what I feel.* *SEA4: I always know whether I am happy or not.* **<u>Dimension: Regulation of emotion (ROE)</u>** *ROE1: I am able to control my temper and handle difficulties rationally.* *ROE2: I am quite capable of controlling my own emotions.* *ROE3: I can always calm down quickly when I am very angry.* *ROE4: I have good control of my own emotions.*	-Mayer & Salovey (1997) -Wong & Law (2002)
Collectivism (versus individualism):	Six statements with a 7-point Likert scale (ranging from 1= strongly disagree to 7=strongly agree): *C1: Group welfare is more important than individual rewards.* *C2: Group success is more important than individual success.* *C3: Being accepted by members of your work group is very important.* *C4: Employees should only pursue their goals after considering the welfare of the group.* *C5: Managers should encourage group loyalty even if individual goals suffer.* *C6: Individuals may be expected to give up their goals in order to benefit group success.*	-Yoo et al. (2011)

3.3.4. Control variables

In line with previous research, the employee's age, gender, job tenure and job status were included as control variables, because these variables can influence the effectiveness of the leadership style. For example, an individual's age has consequences for their affective state and emotional functioning (Scheibe & Zacher, 2013). While gender could affect the

employee's attitude towards the leadership style due to typical gender preferences such as the achievement- and success driven focus of men and a preference for collaboration of women (Cooksey et al., 2011). In addition, according to Hulin & Smith (1965) and Sarker et al. (2003) job tenure (years in service of the company) could have an impact on job satisfaction. For example, job satisfaction is correlated with the length of an individual's service since increasing work experience led employees to adjust their ambitions and expectations to a more realistic and attainable level of their job and thus resulting in increasing levels of job satisfaction. In order to prevent this interfering effect on job satisfaction, job tenure was included as a control variable.

Furthermore, the level of education could interfere with the effects of emotional intelligence due to the cognitive aspects (e.g. IQ) of these constructs (Mustafa & Lines, 2014) and is therefore included as a control variable. The organizational characteristics such as profit or non-profit organizations could impact the choice of leadership style. For instance, the transcendence of the self-interest towards group goals of transformational leadership styles aligns with the intangible goals (e.g. serving those in need) of non-profit organizations, and is therefore more effective to use in this organizational context in comparison to transactional leadership (Emhan, 2012), while aspects of the transactional leadership style with regard to goal achievement and the reward system may be more effective in profit organizations to attain profits (Emhan, 2012). Therefore, the organizational context in terms of profit or non-profit is included as a control variable in this study. Lastly, job status is merely used to filter out possible respondents of the highest level of management (top management) as this group could consist of C-suite executives who do not have a manager (e.g. CEO).

Table 4. Variable operationalization of control variables with references.

Construct	**Operationalization**	**Reference**
Age of employee	Ratio scale for age (in years): • *Under 20* • *20-35* • *36-50* • *51-65* • *Over 65*	-Sekaran & Bougie (2016) -Scheibe & Zacher (2013)
Gender of employee	Nominal scale for gender: *male/female*	-Sekaran & Bougie (2016)
Job tenure of employee	Ordinal scale for number of years worked in the organization: • Less than 1 • 1-2 • 3-5 • 6-10 • Over 10	-Hulin & Smith (1965) -Sekaran & Bougie (2016) -Sarker et al. (2003)

Construct	Operationalization	Reference
Level of education	Ordinal scale for *highest completed level of education (based on the Dutch education system):* • *Elementary school* • *High school (VMBO, HAVO, VWO etc)* • *LBO* • *MBO* • *HBO* • *WO (University)*	-Sekaran & Bougie (2016) -Mustafa & Lines (2014)
Organizational context	Nominal scale for organizational context: *profit/non-profit*	-Sekaran & Bougie (2016)
Job status	Nominal scale for job status: • *Nonmanagerial* • *First-level supervisor* • *Middle-management* • *Top management*	-Sekaran & Bougie (2016) -Mustafa & Lines (2014)

3.4 Validity and Reliability

The measures used in this study are considered to be reliable when the Cronbach's alpha's at least has a value of > 0.7 (Sekaran & Bougie, 2016). In this way, the internal consistency reliability of the measures and stability are ensured. The CVSCALE was found to be highly reliable since the Cronbach's alpha of the items for the construct collectivism was 0.89 (Yoo et al., 2011). The CVSCALE has been validated by Yoo & Shin (2017), Yoo et al. (2011) and Mustafa & Lines (2014) who have used the measure in their studies. This also applied for the construct Job satisfaction with Cronbach's alpha value of > 0.7 (Jung & Yoon, 2015).

The Multifactor Leadership Questionnaire (MLQ) is found to be reliable and is validated by several studies, and has been used extensively in leadership studies (Bass & Avolio, 1990; 2000). Also the emotional intelligence scale used in this study was validated and found to be reliable by several studies that have used this measure (Gong et al., 2019; Jung & Yoon, 2015; Lee, 2017; Wong & Law, 2002). However, since this study involved a new and different context in relation to prior studies, reliability tests based on the Cronbach's alpha were conducted.

3.5 Data analysis

After having collected the data from the questionnaires, the following steps were taken using the software program SPSS: missing values analysis, necessary data transformation and descriptive analysis (measures of central tendency and dispersion) of the control variables in order to check for unusual patterns (Hair et al., 2014). Thereafter, an explanatory factor analysis with the necessary pre-check of the assumptions for this statistical technique was

used in order to aggregate the items used into the variables and assess the validity of the construct measurements (Hair et al., 2014). The reason for choosing an exploratory one instead of a confirmatory one is due to the fact that the existing variables and scales were translated to Dutch and used in a different research setting than previous studies and thus creating a new measurement instrument for the current study.

Next, the proposed hypotheses of this study were tested with a multiple regression analysis, since there were three metrically scaled independent variables and one metrically scaled dependent variable (Sekaran & Bougie, 2016). Accordingly, the assumptions of multiple regression (multicollinearity, linearity, constant variance of the error terms, independence of the error terms and the normality of the error term distribution) were also assessed during the regression analysis (Hair et al., 2014). All of the above with the necessary steps will be elaborated in the next chapter.

3.6 Research ethics

Since this study conducted an online survey, the two most important ethical issues to adhere to were confidentiality and informed consent with regard to the respondents (Buchanan & Hvizdak, 2009; Sekaran & Bougie, 2016). In order to respect each respondent's autonomy, an introduction page and an instruction page (Appendix 1.1 and 1.2) were shown prior to the start of the survey so that the respondent was fully informed about the aims of the survey, privacy statement, some definitions of the terminology used and the assurance with regard to the anonymity of their identity and answers (Buchanan & Hvizdak, 2009). Also, in order to respect the respondent's informed consent, the respondent is given the choice to participate in this research by choosing one of the two options (*I have read and understood the above text. I agree to participate in this study* or *I do not agree to participate in this study*) on the introduction page (Appendix 1). Lastly, the respondent was assured of the fact that all gathered data was used for the purpose of this study only (Sekaran & Bougie, 2016).

Chapter Four Results

In order to conduct factor analysis and thereafter multiple regression, the primary data was first recoded and filtered by job status and no consent. Thereafter a missing value analysis was conducted since partial responses were recorded which could affect the consecutive descriptive analysis. A legenda of the names and labels used in SPSS can be found in Appendix 2.

4.1 Missing value analysis

During the data collection, the missing data was prevented as much as possible by giving the respondent the choice to participate in this study prior to the start of the survey. Also, missing data was further prevented during the survey in order to counteract partial responses by using the force response option of Qualtrics which required the respondent to answer the question before being able to continue to the next question. In total, 109 valid responses were recorded, of which 1 respondent did not agree to participate in this study (Appendix 3.1) Next, 3 respondents were recorded for working at top management level (Appendix 3.2). These respondents were deleted leaving the sample with 105 respondents. After filtering the data, partial completion was still recorded, warranting further examination of the missing values.

Based on the missing value analysis (Appendix 3.3), the item variables ranging from JS1 to ROE4 exhibited percentages between 1.0% and 4.8% (between 1 and 5 respondents). As these are all under the limit of 10%, listwise deletion is considered to be a suitable and frequent method for handling the missing data (Hair et al., 2014). Also, deletion of these cases would not result in a substantial reduction of the sample size which would still amount to 100 respondents. Prior to listwise deletion, it was checked first if the data was missing completely at random (MCAR). Otherwise, it could bias the data findings if the missing data may not be random (Hair et al., 2014). The Missing Completely at Random test (Appendix 3.4) showed no patterns since the significance value was not less than $p \leq 0.05$) with a value of p=0.101. This non-significance indicated that the data was missing completely at random (Hair et al., 2014) and listwise deletion was carried out leaving the final sample with 100 respondents.

4.2 Descriptive statistics control variables

After the missing value analysis and listwise deletion, the univariate descriptive statistics of the control variables (age, gender, job tenure, education and organizational context) of the final sample (appendix) were evaluated including the following elements: normality

(skewness and kurtosis), measures of central tendency (mode and median), and measures of dispersion (Interquartile range).

4.2.1 Normality

The skewness and kurtosis (> |3|) of the control variables were checked to examine the distribution for irregularities (Hair et al., 2014). Table 5 displays the SPSS output of the descriptives. Based on the output, all control variables do not show any unusual patterns since they fall between the limit of > |3|. It is noteworthy to mention that control variable *organizational context* is relatively positively skewed with 1.523 while *education* is a bit negatively skewed (skewness -1.170). Also, *gender* is distributed quite flat (kurtosis -1.980) and e*ducation* is distributed quite peaked (kurtosis 2.426).

Table 5. Descriptive statistics of control variables

	Mean	Median	Mode	Std. Deviation	Skewness	Kurtosis	Minimum	Maximum
gender	1,44	1,00	1	,499	,245	-1,980	1	2
age	2,91	3,00	3	,780	,290	-,919	2	5
education	4,68	5,00	5	,875	-1,170	2,426	2	6
organizational context	1,20	1,00	1	,402	1,523	,325	1	2
job tenure	3,50	3,00	3	1,202	-,196	-1,050	1	5

a. N=100, (missing = 0)

4.2.2 Frequencies control variables

From the frequency tables, it was found that 56.3% of the respondents were male and 44% female; most of the respondents (42%) were between 36-50 years old, just 1% was over 65 years old and no one was under 20 years old (0%); more than half of the respondents (54%) fell in the education level higher professional education (HBO) while none of the respondents (0%) fell in the categories elementary school and LBO; 80% of the respondents worked in the profit sector and 20% in the non-profit sector; the most common job tenure of employees was between 3-5 years (28%) and more than 10 years (28%), while only 4% worked less than a year at the current company. Based on the non-existent or low frequencies of the age categories under 20 years old (0%) and the sole 1 respondent (1%) of the category over 65 years old, these categories were considered too small to constitute as separate categories. Therefore, the category of age under 20 years old was merged with the category respondents aged between 20-35 years old and the category of age over 65 years old was merged with the category between 51-65 years old (Appendix 4.1). For the same reason, educational category elementary school was merged with category high school and educational category LBO was

merged with category MBO. Also, category less than 1 year for job tenure was merged with category between 1-2 year(s) (Appendix 4.1).

4.2.3 Measures of central tendency and measure of dispersion of control variables

The most frequently occurring groups (mode) of the respondents for the control variables (*gender, age_regrouped, education_regrouped, organizational context, job tenure_regrouped)* are male, age group between 36-50 years old, education level Higher professional education (HBO), working in the profit sector, and working over 10 years at the same company (Appendix 4.2) which are in line with the previous mentioned frequencies in the section above.

Next, the interquartile range (IQR) was checked for the ordinal scaled control variables *age_regrouped, Job tenure_regrouped* and *education_regrouped* (Appendix 4.2). None of the measures of dispersion can be interpreted for gender and organizational context since these are nominal variables (Field, 2017). The IQR of age, job tenure and education, calculated by Q3 (quartile 75) - Q1 (quartile 25) (Field, 2017), shows small values of 1 (2.00 - 1.00 for Age), 2 (5.00 – 3.00 for Job tenure) and 0 (3.00 – 3.00 for job tenure) meaning that the answers of the respondents are not widely dispersed since the midst 50% of observations are located between these two scores (Field, 2017).

4.3 Factor analysis

After assessing that no unusual particularities in the data set existed, the next step was to conduct an exploratory factor analysis before proceeding with testing the hypotheses. The dimensional structure of the constructs have to be re-analyzed in order to distinguish and interpret the valid and reliable dimensions for each construct. Hence, separate factor analyses were carried out using a principle component analysis for job satisfaction, collectivism, emotional intelligence and the three leadership styles (transactional, transformational and laissez faire). In this way, the underlying dimensional structure could be examined and items could be aggregated into the corresponding variables.

In general, the following procedure with the corresponding rules of thumb was carried out for all separate factor analyses:

- In order to validate the factorability of the data, the Bartlett's test and Kaiser-Meyer-Olkin test (KMO) were carried out first. Hereby, the accepted rules of thumb were that Bartlett's significance level should be smaller than $\alpha=0.05$ and that the KMO value should be at least above 0.5 (Hair et al., 2014).

- In addition, the correlation matrix was checked in order to detect possible problems of multicollinearity which indicates that the independent variables are highly correlated with each other. In this case the correlation coefficient should not be higher than 0.8 (Hair et al., 2014).
- Next, an orthogonal (varimax) rotation was carried out for all constructs consisting of more than 1 dimension since it was assumed that these dimensions were distinct and cover different aspects which are not correlated. Subsequently, the number of factors were determined based on the a priori rule since existing theories showed good insights in the expected factors.
- The communalities of the items were checked which regards the extent to which an item correlates with all other items. All communalities need to be above 0.4, where higher communalities are generally considered better since variables with low communalities (0-0.4) may have problems to load significantly on any factor (Hair et al., 2014). In addition, no significant cross-loadings (variables that significantly load on two or more factors) should be present in the definitive factor solution. Therefore, all major cross-loaders with a difference smaller than 0.2 between the primary loading and secondary loading will be deleted (Hair et al., 2014).
- The factor loadings were checked which indicates the correlation between the variable and factor. The minimum significant level of the factor loading should be around 0.5 but above 0.7 is considered to be desirable (Hair et al., 2014).
- Lastly, a reliability analysis was conducted in order to determine the Cronbach's alpha for the set of items belonging to each factor. The Cronbach's alpha should exhibit a value above 0.7 in order to be deemed reliable (Hair et al., 2014). Based on conducting these steps, an optimal factor structure will exist with variables having high loadings on only one single factor.

Notably, no reverse coding was needed for the items since each item was stated positively. The following sections discuss the highlights of the separate factor analyses for each of the constructs. The step-by-step processes can be found in the corresponding appendices.

4.3.1 Factor analysis: job satisfaction

The construct job satisfaction consists of five items: JS1, JS2, JS3, JS4 and JS5.. The factorability of the data was assured since the KMO (0.801) was sufficiently above the threshold value of 0.5 and the Bartlett's test was significant with $p < 0.05$ (Appendix 5.1). Looking at the correlation matrix, the output showed acceptable correlation coefficients below

0.8 with the highest correlation of 0.746 between items JS3 and JS5 (Appendix 5.1). Next, the component correlation matrix showed that only one component was extracted and therefore no rotation could be carried out (Appendix 5.2). This extraction was also evident from the total variance explained table output (Appendix 5.1). Continuing with the communalities, only item JS1 showed a value of 0.387 which was slightly below the threshold of 0.4 and thus a possible candidate for deletion since it may have trouble loading significantly on the factor (Appendix 5.2). This was not evident from the component matrix output which showed significant and even desirable loadings above 0.7, item JS1 was the only one with a loading (0.622) below 0.7 but still significant since it was well above 0.5 (Appendix 5.5). To have more clarity in this matter, the reliability analysis showed that the current factor structure was already high with a Cronbach's alpha of 0.835 but based on the item-total statistics table, this would improve from 0.835 to 0.872 if item JS1 would be deleted (Appendix 5.3). Based on the low communality of item JS1 and the reliability analysis, it was decided to delete this item and run the factor analysis again.

After deletion of item JS1 (Appendix 5.4), the factorability of the data was still assured with KMO (0.823) and a significant Bartlett's test ($p < 0.05$). Furthermore, no irregularities could be detected from the correlation matrix (correlation coefficients were below 0.8), communalities (between 0.660-0.883) and factor loadings (above desired 0.7). The reliability of the new factor structure increased to a Cronbach's alpha of 0.872 and this could not be improved when deleting another item (Appendix 5.5). Thus, it was concluded that all four items ,JS2 to JS5, measure the concept of job satisfaction well and these were all positively loading together on the construct with JS3 having the highest loading of 0.896.

4.3.2 Factor analysis: transactional leadership

The construct transactional leadership consists of two dimensions: contingent rewarding (CR) and management by exception-active (MA). Therefore, 2 factors were determined a priori for orthogonal rotation. Each dimension consists of four items: CR1, CR2, CR3 and CR4 for contingent rewarding and MA1, MA2, MA3 and MA4 for management by exception-active.

The requirements of the factorability of the data were acceptable with KMO (0.791) and a significant Bartlett's test with $p < 0.05$ (Appendix 6.1). All correlation coefficients were below the threshold of 0.8 (Appendix 6.1). The communalities of all items exhibited values between 0.551 and 0.761 which are well above the minimum value of 0.4 (Appendix 6.2). However, cross-loadings were shown in the rotated component matrix for the items MA2 and MA3 which are possible candidates for deletion. When examining these more closely, the difference between the primary and secondary loading for both items was bigger than 0.2 with

a difference of 0.320 for item MA2 (0.731 minus 0.411) and 0.446 for item MA3 (0.798 minus 0.352) (Appendix 6.2).Thus, no major cross-loadings were detected and no further deletion of an item was carried out. This decision was strengthened by the fact that the Cronbach's alpha was relatively high with 0.815 and would not improve but decrease to 0.768 if item MA2 would be deleted (Appendix 6.3).

Thus, it can be concluded that all eight items measure the concept of the transactional leadership well. The four items CR1 to CR4 are positively loading together on the factor contingent rewarding (CR) with item CR2 being the highest loader (0.838) and the four items MA1 to MA4 are positively loading together on the factor management by exception-active (MA) with the highest loading of MA4 (0.862). Thus, all eight items can be aggregated into the independent variable transactional leadership.

4.3.3 Factor analysis: transformational leadership

The construct transformational leadership consists of four dimensions: idealized influence (IF), Inspirational motivation (IM), Individualized consideration (IC) and Intellectual stimulation (IS) with a total of twenty-one items. Each dimension consisted of several items: IF1 to IF9 for idealized influence (IF), IM1 to IM4 for inspirational motivation (IM), IC1 to IC4 for individualized consideration (IC) and IS1 to IS4 for intellectual stimulation (IS).

This factor analysis was done several times since several violations of the rules of thumb were shown. Therefore, all of the output regarding the KMO and Bartlett's test, correlation matrices, total variance, communalities, rotated component matrices and reliability tests are put together based on the steps takes during the process in the corresponding Appendices (7.1-7.8).

During the first factor analysis, the factorability of the data was assured with KMO=0.901 and a significant Bartlett's test $p < 0.05$ (Appendix 7.2). Furthermore, the correlation matrix showed no values above the threshold of 0.8 (Appendix 7.3). Next, the communalities were acceptable with values between 0.519 and 0.842 (Appendix 7.5). However, several violations were shown after the orthogonal rotation (Appendix 7.6). Firstly, item IF1 was the only one with a loading (0.482) lower than the threshold of 0.5. Secondly, 4 major cross-loadings were detected (difference between primary and secondary loading < 0.2) for items IS3 with 0.059 (0.618 minus 0.559), IM3 with 0.015 (0.555 minus 0.540), IC3 with 0.153 (0.617 minus 0.464) and IF3 with 0.110 (0.605 minus 0.495). Since careful processing needed to be done, item IF1 with the lowest loading and item IM3 with the strongest cross-loading were deleted first for further analysis.

After the deletion of items IF1 and IM3 (Table 2 in Appendices 7.2-7.7), no violations were detected regarding the factorability of the data (KMO=0.902, Bartlett's test $p < 0.05$), correlations (below 0.8) and communalities (between 0.586-0.856). However, there were still 3 major cross-loadings left with significant differences < 0.2, namely items IC4 with 0.138 (0.574 minus 0.436), IF4 with 0.151 (0.656 minus 0.505) and IF3 with 0.098 (0.609 minus 0.511). For careful consideration, the item with the strongest loading was deleted (IF3).

After deletion of item IF3 (Table 3 in Appendices 7.2-7.7), again no violations were detected regarding the factorability of the data (KMO=0.898, Bartlett's test $p < 0.05$), correlations (below 0.8) and communalities above 0.5. Still, 2 major cross-loadings were left namely items IC4 with a difference of 0.162 (0.615 minus 0.453) and IF4 with a difference of 0.106 (0.618 minus 0.512). Therefore, item IF4 which had the strongest cross-loading was deleted.

After deletion of item IF4 (Appendices Table 4 in 7.2-7.7), all values were considered acceptable (KMO=0.892, significant Bartlett's test $p < 0.05$, correlations between items below 0.8, communalities above 0.4) but only item IC4 still showed a major cross-loading with a significant difference of 0.183 (0.634 minus 0.451). Thus, this item was deleted.

After deletion of item IC4 (Table 5 in Appendices 7.2-7.7), again no violations were detected relating to the factorability of the data (KMO=0.883, significant Bartlett's test $p < 0.05$), correlations below 0.8 and communalities above 0.4 ranging between 0.561 and 0.854. However, the rotated component matrix still showed an undesirable structure since item IC1 was not loading together with items IC2 and IC3 on one factor and item IF5 was not loading together with IF2, IF6, IF7, IF8 and IF9 on one factor. Instead item IC1 was loading significantly with 0.624 on factor 1 and item IF5 was loading significantly high with 0.804 on factor 4. Therefore, these items were deleted for further analysis.

After the deletion of items IC1 and IF5 (Table 6 in Appendices 7.2-7.7), the rotated component matrix finally showed a clean factor structure with no major cross-loadings and all items were loading together on the factor they were supposed to. The factorability of the data was still assured with KMO=0.883 and a significant Bartlett's test $p < 0.05$. The correlation matrix showed no correlations between items above 0.8. Furthermore, the communalities were in an acceptable range of 0.589 and 0.858 and all factor loadings were acceptable between 0.579 and 0.899. Lastly, the reliability analysis showed a relatively high Cronbach's alpha of 0.928 which could not significantly improve if another item would be deleted.

Thus, it was concluded that the remaining 14 items measured the concept of transformational leadership well and these could be aggregated into the independent variable transformational leadership. In specific:

- All 5 items IF2, IF6, IF7, IF8 and IF9 were all positively loading on the factor idealized influence (IF) with IF6 having the highest loading of 0.808.
- All 3 items IM1, IM2 and IM4 were all positively loading on the factor inspirational motivation (IM) with IM1 having the highest loading of 0.848.
- The 2 items IC2 and IC3 were positively loading together on the factor individualized consideration (IC) with IC2 having the highest loading of 0.899.
- All 3 items IS1, IS2 and IS4 were all positively loading on the factor intellectual stimulation (IS) with IS2 having the highest loading of 0.882.
- Thus, all 14 items above can be aggregated into the independent variable transformational leadership.

4.3.4 Factor analysis: laissez-faire leadership

The construct of laissez-faire leadership consists of 4 items: LF1, LF2, LF3 and LF4. Thus one factor was expected. Based on the output, the KMO and Bartlett's test indicated that the data was appropriate for factor analysis with scores of 0.713 and $p < 0.05$ respectively (Appendix 8.1). Also, no values higher than 0.8 were showed for the correlation coefficients indicating no problems of multicollinearity. The communalities of all items were acceptable (ranging between 0.484-0.745) being higher than 0.4 and all factor loadings were considerably high for all items which were around and above the desirable value of 0.7 (Appendix 8.2). Notably, item LF2 showed the highest loading (0.862) and item LF1 the lowest one with 0.696. Lastly, the reliability was assured with a Cronbach's alpha of 0.778 which is sufficiently above the threshold value of 0.7. In addition, the Cronbach's alpha didn't increase when one item was deleted (Appendix 8.3). Therefore, it can be concluded that all four items measure the concept of the laissez faire leadership well and can be aggregated into this independent variable.

4.3.5 Factor analysis: emotional intelligence

The construct emotional intelligence consists of four dimensions: others' emotion appraisal (OEA), use of emotion (UOE), self-emotion appraisal (SEA) and regulation of emotion (ROE) with a total of sixteen items. So the expectation was the existence of four factors (OEA, UEO, SEA and ROE). Each factor consisted of four items: OEA1, OEA2, OEA3 and OEA4 for others' emotion appraisal, UOE1, UOE2, UOE3 and UOE4 for use of emotion, SEA1, SEA2, SEA3 and SEA4 for self-emotion appraisal and ROE1, ROE2, ROE3 and ROE4 for regulation of emotion.

The KMO and Bartlett's test assured the factorability of the data with acceptable values of 0.799 and $p < 0.05$ respectively (Appendix 9.1). The correlation matrix showed no unusual high correlations above the threshold of 0.8, the highest correlation was shown between items SEA1 and SEA2 with correlation coefficient 0.769 (Appendix 9.1). The communalities for all items were sufficiently high above the minimum level of 0.4 with 0.419 being the lowest for item SEA4 but the rotated component matrix showed a few irregularities (Appendix 9.2). Firstly, item SEA4 was the only one which showed a factor loading (0.465) below the significant threshold value of 0.5. Secondly, one major cross-loading was detected for item OEA3 (0.157) with a difference smaller than the threshold of 0.2 between the primary (0.582) and secondary loading (0.425). Based on the rules of thumb, these two items (SEA4 and OEA3) were deleted and factor analysis was conducted again.

After the deletion of items SEA4 and OEA3, the output (Appendix 9.4) showed no irregularities or violations regarding the factorability of the data (KMO=0.793, Bartlett's test $p < 0.05$), correlations (below 0.8 between items) and the communalities (between 0.522-0.880). However, there was still 1 major cross-loader left namely item UOE2 with a difference of 0.164 (0.576 minus 0.412) between the primary and secondary loading which was smaller than the threshold of 0.2. Thus, item UOE2 was a possible candidate for deletion. The reliability analysis acknowledged this since the reliability could be slightly improved from Cronbach's alpha 0.861 to 0.862 (Appendix 9.5). Therefore, item UOE2 was also deleted and factor analysis was run again.

After deletion of item UOE2, the factor analysis (Appendix 9.6) showed no irregularities or violations of the rules of thumb regarding the factorability of the data (KMO=0.804, Bartlett's test $p < 0.05$), communalities (between 0.563-0.882) and factor loadings (between 0.666-0.906). The reliability analysis was deemed relatively high with a Cronbach's alpha of 0.861 (Appendix 9.7). Therefore, it was concluded that the residual 13 items measure the concept of emotional intelligence well and can be aggregated into this independent variable. In specific:

- All 3 items OEA1, OEA2 and OEA4 were all positively loading on one factor with OEA2 having the highest loading of 0.833.
- All 3 items UOE1, UOE3 and UOE4 were all positively loading on one factor with item UOE4 having the highest loading of 0.831.

- All 3 items SEA1, SEA2 and SEA3 were all positively loading on one with item SEA2 having the highest loading of 0.870.
- All 4 items ROE1, ROE2, ROE3 and ROE4 were all positively loading on one factor with item ROE1 having the highest loading of 0.906.

4.3.6 Factor analysis: collectivism

The construct collectivism consists of 6 items: C1, C2, C3, C4, C5 and C6. Thus, only 1 factor was expected. The data was deemed factorable, since the KMO was above 0.5 with 0.758 and the Bartlett's test was significant with $p < 0.05$ (Appendix 10.1). The correlation matrix showed relatively good values below 0.8 with items C5 and C6 showing the highest correlation coefficient of 0.748 (Appendix 10.1). The communalities were all above 0.4 except for item C3 which showed a low communality of 0.326 (Appendix 10.2). Thus this item may have trouble loading significantly on one factor. However, this was not evident from the component matrix which showed positive and significant factor loadings for all items ranging between 0.594- 0.836 with items C3 having the lowest value and C5 having the highest value (Appendix 10.2). In addition, based on the reliability analysis, the Cronbach's alpha showed a relatively high value of 0.842 which would slightly improve to 0.844 if item C3 was deleted (Appendix 10.3). Based on the low communality below the threshold and the reliability analysis, it was decided to delete item C3 and run the analysis again.

After deletion of item C3, the output (Appendix 10.4) showed that the factorability of the data was still assured (KMO= 0.740, Bartlett's test $p < 0.05$). All communalities were acceptable with values (between 0.564-0.731) above 0.4. Furthermore, the factor loadings were relatively high (between 0.751-0.855) above the desirable 0.7 with item C5 having the highest loading of 0.855. Subsequently, the reliability analysis showed a reliability of Cronbach's alpha= 0.844 and this could not be further improved (Appendix 10.5). Therefore, it was concluded that the 5 items (C1, C2, C4, C5 and C6) measure the concept of collectivism well and can be aggregated into this construct. An overview of the factor loadings and reliability coefficients is shown in Table 6 and Table 7.

Table 6 Factor loadings

Transactional leadership	CR1	CR2	CR3	CR4	MA1	MA2	MA3	MA4						
	0.66	0.84	0.66	0.79	0.73	0.74	0.79	0.86						
Transformational leadership	IF2	IF6	IF7	IF8	IF9	IM1	IM2	IM4	IC2	IC3	IS1	IS2	IS3	IS4
	0.58	0.81	0.74	0.76	0.77	0.85	0.77	0.84	0.90	0.66	0.66	0.88	0.73	0.84
Laissez faire leadership	LF1	LF2	LF3	LF4										
	0.70	0.86	0.78	0.78										
Emotional Intelligence	OEA1	OEA2	OEA4	UOE1	UOE3	UOE4	SEA1	SEA2	SEA3	ROE1	ROE2	ROE3	ROE4	
	0.82	0.83	0.77	0.73	0.82	0.83	0.73	0.87	0.86	0.91	0.89	0.67	0.88	
Collectivism	C1	C2	C4	C5	C6									
	0.77	0.76	0.75	0.86	0.80									
Job satisfaction	JS2	JS3	JS4	JS5										
	0.81	0.90	0.82	0.96										

Table 7 Reliability Coefficients

Variable	Cronbach's alpha
Transactional leadership	0.82
Transformational leadership	0.93
Laissez faire leadership	0.78
Emotional Intelligence	0.86
Collectivism	0.84
Job satisfaction	0.87

4.4 Multiple regression analysis

After having concluded that the multi-item measures were reliable, the items were aggregated into the corresponding variables (Appendix 11.7). Higher scores for the leadership styles, emotional intelligence and collectivism indicated more endorsement of the construct. Thereafter, a descriptive statistics analysis, multicollinearity test and assumptions testing were conducted for these variables in order to check for any irregularities prior to conducting multiple regression which are described separately in the next sections.

4.4.1 Descriptive statistics of IV's and DV

The normality (skewness and kurtosis), measures of central tendency (mode, median and mean) and measure of dispersion (variance and standard deviation) of the independent variables (transactional, transformational and laissez-faire leadership, emotional intelligence and collectivism) and the dependent variable (job satisfaction) were examined (Table 8).

As mentioned earlier, the normality of the data for all variables is based on the skewness > |3| and kurtosis > |3|. The skewness for all variables was within an acceptable range of -2.060 and 1.569. The kurtosis for all variables were acceptable (between -0.348 and 0.638) except for LF and JS which exhibited high kurtosis values of 3.621 and 9.155 respectively and were above the limit of > |3|. These high values indicate possible violations for the assumption of multiple regression which will be discussed in the next section.

Furthermore, the mean of JS and EI are quite high and slightly above the median with 24.11 and 70.30 respectively indicating that respondents are quite satisfied with their job and perceived transformational leadership more strongly than the other two leadership styles. Whereas LF showed a lower mean value of 8.98 indicating that this construct was not perceived as much by the respondents.

Table 8 Descriptive statistics of IV's and DV

	Mean	Median	Mode	Std. Deviation	Variance	Skewness	Kurtosis	Minimum	Maximum
JS	24,1100	24,0000	24,00	2,36513	5,594	-2,060	9,155	12,00	28,00
TActL	35,6300	35,0000	31,00	8,69884	75,670	,071	-,492	15,00	56,00
TFormL	66,4900	69,0000	76,00	11,59545	134,454	-,539	-,412	36,00	91,00
LF	8,9800	8,0000	8,00	4,06010	16,484	1,569	3,621	4,00	26,00
EI	70,3000	73,0000	78,00	8,84148	78,172	-,857	,638	42,00	87,00
C	24,1000	25,0000	22,00	5,90925	34,919	-,525	-,348	10,00	35,00

N=100, missing=0

4.4.2 Bivariate analysis

Before proceeding with the assumptions, the multicollinearity was examined for all IV's since in the case of multiple regression the basic notion is that the IV's should highly correlate with the DV but not so much with each other. In order to interpret the multicollinearity, the VIF measure should be higher than 0,10 but lower than the threshold of VIF < 10 (Hair et al., 2005). VIFs between 1 and 5 indicate the presence of moderate correlation, but it is considered not severe enough for corrective measures. Prior to this analysis, the interaction terms were created for the metric moderating variables (EI and C) by multiplying the mean-centered moderator with mean-centered IV (Appendix 11.7). Overall, the collinearity statistics showed a moderate correlation of values between 1.145 and 2.335 but was definitely acceptable within the threshold of the 0.10-10 range (Appendix 11.1). Therefore, it was concluded that multicollinearity was not a problem and the data was suitable for the assumptions testing.

4.4.3 Assumptions of multiple regression

In order to progress with multiple regression, the appropriateness of the data was checked first according to five distinct assumptions of this statistical technique (Hair et al., 2005) which are described below.

1. The sample size should be sufficient with a minimum ratio was 5:1 for the number of respondents in relation to the number of variables. This study used 100 valid responses and 6 variables, thus this sample was deemed sufficient since it exceeds the minimum amount.
2. Assumption of independence of error terms means that the distribution of errors is random and thus not correlated to the errors in prior observations. In general, this assumption is only a concern when a longitudinal dataset is present and observations were collected from the same entity over time. Since this study collected cross-sectional data from the same entity only once, the independence assumption could be assumed to be met. However, a Durbin Watson

test was conducted just to be sure which tested the data for the presence of a specific type of serial correlation. In this study, the following rule of thumb was followed where the Durbin Watson test reports a test statistic, with a value from 0 to 4:

- 2 is no autocorrelation.
- 0 to <2 is positive autocorrelation (common in time series data).
- >2 to 4 is negative autocorrelation (less common in time series data).

3. Assumption of linearity prescribes the existence of a linear relationship between the dependent variable and independent variables for each group of the dichotomous moderator variable.

4. Assumption of homoskedasticity refers to presence of a constant range of the error terms of the independent variables. So, the residuals need to display the same variance across all values of the independent variables.

5. Assumption of normality regards the requirement that the errors are normally distributed and are not skewed.

In order to check assumptions 3 to 5, the general method of creating a scatterplot based on the standardized residuals and standardized predicted values was created. Based on the output (Appendix 11.2), the assumption of independence of error terms was not violated as was already expected. The Durbin-Watson statistic showed a value of 2.045 which fell in the acceptable range of 1.5 -2.5 and thus showing no autocorrelation. Next, the assumption of linearity seemed not to be violated since the residuals were centered around 0 in the scatterplot (Appendix 11.4) and the residuals seemed to follow to the normality line in the Normal P-P plot except for a slight deviation at the beginning but nothing too severe (Appendix 11.3). Also, the assumption of homoskedasticity seemed to be met as well since the residuals showed a random pattern in the scatter plot and no clear consistent pattern was displayed such as a triangle (Appendix 11.4). Lastly, the assumption of normality seemed not to be violated since the histogram showed that the errors were distributed reasonably well (Appendix 11.5). Therefore, it was concluded that all assumptions were met and multiple regression analysis could be conducted in the next section.

4.4.4 Hypothesis testing

Prior to running the analysis, all control variables (age, gender, job tenure, education and organizational context) were transformed into dummy variables in order to be considered suitable for multiple regression (Appendix 11.7). Thereafter, several regressions were conducted ranging from model 1 to 4 (Table 9). The first model only included the (dummy)

control variables taking into account the reference categories for each one. In model 2 the predictor (independent) variables were added in order to examine the explanatory power of the model. Hereafter, all interaction effects of emotional intelligence were added in model 4. Lastly, all interaction effects of collectivism were added in the model 5.

Table 9 Results of multiple regression analysis

Independent variables		Model 1		Model 2		Model 3		Model 4	
		Coeff.	SE	Coeff.	SE	Coeff.	SE	Coeff.	SE
Controls									
Gender:	Male	-0.396	-0.083	-0.314	-0066	-0.338	-0.071	-0.463	-0.098
Age:	Age_2	0.642	0.135	0.342	0.072	0.286	0.060	0.217	0.045
	Age_3	0.853	0.155	0.631	0.114	0.594	0.108	0.299	0.054
Job Tenure:	Job_Tenure2	1.588	0.303*	1.146	0.219	0.917	0.175	0.848	0.162
	Job_Tenure3	1.261	0.218	1.061	0.184	0.860	0.149	0.994	0.172
	Job_Tenure4	2.313	0.441*	1.403	0.269	1.193	0.228	1.302	0.249
Education:	HBO	0.517	0.083	0.306	0.049	0.361	0.058	0.113	0.018
	WO	1.445	0.200	0.585	0.081	0.831	0.115	0.587	0.081
Organizational Context:	Profit	0.578	0.098	0.585	0.042	0.256	0.043	0.343	0.058
Main effects									
Transactional leadership:	TActL			-0.018	-0.067				
Transformational Leadership:	TFormL			0.086	0.422***				
Laissez-faire Leadership:	LF			-0.005	-0.009				
Interaction effects									
Emotional Intelligence: EI									
TactL * EI						0.005	0.183		
TformL * EI						-0.04	-0.216		
LF * EI						- 0.002	-0.025		
Collectivism: C									
TactL * C								0.005	0.922
TformL * C								0.001	0.235
LF * C								0.005	0.446
R^2		0.175		0.302		0.328		0.342	
Adjusted R^2		0.092		0.206		0.208		0.195	
Sig. F change		0.036		0.002		0.371		0.641	

Dependent variable: Job satisfaction (JS). N=100. *p < 0.05; **p < 0.01; ***p < 0.001 (two-tailed).

After having conducted the regression analysis, the significance and the adjusted R-squared of the four models were examined first in order to compare the goodness-of-fit for the regression models that contained differing numbers of predictor variables. From the model summary table (Appendix 11.6), it can be seen that the F change from model 1 to model 2 was the only one that was significant (p 0,002 < alpha 0,05). Thereafter, model 3 and model 4 do not show any significant F changes, thus the adjusted R^2 can only be interpreted for model 2. This value increased from adjusted R2 0.92 to 0.206 in model 2. This means that the leadership styles significantly add to the predictability capacity of the model. In this case, the model explains 20.6% of the observed variation. Thus, indicating that the multiple regression analysis explains more variance than each of the variables separately.

Based on the results (Table 9), Model 1 showed the effects of the control variables and indicated that only Job_Tenure 2 and Job_Tenure 4 explain a significant ($p<0.05$) portion of the variance of job satisfaction. Next, Model 2 showed the effects of the various leadership styles. The negative effect of the transactional leadership on job satisfaction was not significant with $p=0.544$ which is not lower than the significance level $p< 0.05$. Therefore, **H1 is rejected**. Whereas, the positive relationship between transformational leadership and job satisfaction was found to be strongly significant with $p< 0.000$ and $b = 0.422$ (standardized beta coefficient). Thus, **H2 is confirmed**. Next, the negative effect of the laissez-faire leadership was not confirmed with a non-significance level of $p=0.290$ and **H3 is rejected**.

Since the significance of models 3 and 4 were found to be non-significant, the moderating effects of emotional intelligence and collectivism were not confirmed, as was also evident from the separate significance levels. In specific, in model 3, the potential moderating effects of emotional intelligence on the relationship between each leadership style and job satisfaction were examined which indicated non-significance levels of $p=0.145$, $p=0.094$ and $p=0.809$ respectively. Therefore, **H4 is rejected** which predicted that the negative effect of transactional leadership on job satisfaction would be stronger for employees with lower levels of emotional intelligence. Also, **H5 is rejected** which predicted a positive moderation and **H6 is rejected** which predicted a negative moderation.

In the last model, the potential moderating effects of collectivism were examined. H7 predicted that the negative effect of transactional leadership on job satisfaction would be stronger for employees showing higher levels of collectivism. This effect was not confirmed with a non-significance level of $p=0.359$. Thus, **H7 is rejected**. In addition, the positive moderation on the positive effect of transformational leadership predicted in H8 and the

negative moderation on the negative effect of laissez-faire leadership in H9 were also not confirmed with non-significance levels of p=0.815 and p=0.657 respectively. Therefore, **H8 and H9 are rejected.**

Main effects	H1: rejected	**H2: confirmed**	H3: rejected
Moderating effects: Emotional intelligence	H4: rejected	H5: rejected	H6:rejected
Moderating effects: Collectivism	H7: rejected	H8: rejected	H9: rejected

4.4.5 Robustness check: PROCESS macro SPSS for moderation analyses

During the multiple regression analysis the moderating variables (EI and C) were not split into groups (e.g. low and high) due to their continuous nature as this would mean losing relevant information. When splitting groups it would assume that all units in each group are homogenous while this may not be the case since they lie on a spectrum. Since the moderators were treated as continuous variables, the regression analysis was not able to distinguish possible moderating effects between groups. Therefore, the PROCESS, which is an observed variable OLS and logistic regression path analysis modelling tool developed by Andrew F. Hayes (Hayes, 2018), was used as a robustness check for the interaction effects since it is able to reveal possible moderating effects and its starting points between different levels or groups.

Overall, similar results were shown when using the PROCESS tool. As can be seen from Table 10 and Appendix 12.1, no interaction effects for emotional intelligence were found since they were all insignificant with values p=0.1532 (TActL * EI), p= 0.5606 (TFormL * EI) and p=0.5456 (LF * EI) regardless of different levels. This also holds true for collectivism since no significant interaction effects were found with values p=0.5064 (TActL * C), p=0.9519 (TFormL * C) and p=0.9622 (LF * C). These significance levels were all above the threshold level of p= 0.05.

Table 10 Test(s) of highest order unconditional interaction(s)

Interaction	R2-change	F	df1	df2	p
TActL*EI	0.0183	2.0729	1.0000	96.0000	0.1532
TFormL*EI	0.0026	0.3410	1.0000	96.0000	0.5606
LF*EI	0.0033	0.3670	1.0000	96.0000	0.5456
TActL*C	0.0045	0.4448	1.0000	96.0000	0.5064
TFormL*C	0.0000	0.0037	1.0000	96.0000	0.9519
LF*C	0.0000	0.0023	1.0000	96.0000	0.9622

Chapter Five Discussion

This study represents a theory-driven empirical examination on how different leadership styles impact job satisfaction and whether this relationship is moderated by the employee's emotional intelligence and collectivistic tendencies. The findings of the main effects confirm the significant positive relationship between transformational leadership and job satisfaction. This suggests that the type of leadership style is an important antecedent of the employee's job satisfaction. This is in line with earlier studies that claimed that leadership has a direct effect on the employees' (positive or negative) attitudes towards work (Bektas, 2017; Cotae, 2010; 2013; Mihalcea, 2014). In addition, for transactional and laissez-faire leadership, the regression coefficients showed negative signs which would confirm the negative relationship between each of these leadership styles and job satisfaction; however, these main effects could not reach the significance levels and thus no conclusive interpretation can be made.

Nevertheless, this study could identify the specific components of transformational leadership that play an important role in the productivity and cohesiveness of the manager-employee relationship in terms of effective communication, interaction and task achievement. For example, based on the high factor loadings of factor analysis, for the dimension Individualized consideration (IC) which is the degree to which the leader helps and supports the follower's needs and competencies, employees showed very positive attitudes towards work when being treated as an individual with different needs, abilities and aspirations rather than just a member of the group by their manager. The positive attitudes stem from the fact that employees are given a sense recognition in this way, which is in line with earlier studies (Bogler, 2001; Choi et al., 2016). Interestingly, for the same dimension the teaching and coaching elements in order to help employees develop their strengths were found non-conclusive. This implies that satisfactory levels are already positively affected by personally recognizing employees alone by treating them non-uniformly.

Also, favourable attitudes were shown for the dimension Inspirational motivation (IM) when the manager talked in an optimistic, enthusiastic and confident way regarding future goals. This serves as effective communication tools for employees to be contagiously motivated and encouraged in executing tasks and is in line with Bektas (2017). In addition, for intellectual stimulation (IS) employees showed appreciative attitudes when their manager stimulated them to seek different perspectives, new ways and angles when solving problems and finding solutions. This boosts the employee's confidence in handling challenging

situations at work and thus enhances job satisfaction levels which is in line with Bass (1985). An interesting observation is that the element of instilling pride in followers by the leader seemed to be non-important for the employees. This study found that when it comes to building a strong personal identification (idealized influence) with the employee, employees were especially pleased when the leader shared his or her most important values and beliefs. This suggests that personal identification doesn't go as far as to instilling feelings of pride but that the employee already shows favourable attitudes towards work when the leader displays openness in values, beliefs, collective sense of mission, sense of purpose and morals. This seems to be in line with earlier studies (Bass, 1985; Shamir et al., 1993) stating that employees get inspired and committed to the leader's shared vision and mission through the strong personal identification.

Continuing with the interaction effects, this study found no statistical significant support for the moderating effects by emotional intelligence. This suggests that there is no evidence that emotional intelligence moderates the relationship between each of the three leadership styles and job satisfaction. These findings are not consistent with the theoretization of Mayer & Salovey (1993) who theorized that emotional intelligence affects job satisfaction levels due to the flexibility and adaptiveness it enables in regulating emotions to be consistent with the situational demands. This was further supported by the empirical findings of several studies showing that emotionally intelligent employees exhibited higher job satisfaction levels since they were better able to cope with (stressful) emotional stimuli from the working environment and govern positive emotional experiences due to their ability to apply response-focused emotion regulation (Jung & Yoon, 2016; Wong & Law, 2002), while burnout, stress symptoms and negative emotional experiences and thus lower satisfaction levels were found for less emotionally intelligent employees because of their limited emotional resources (Gong et al., 2019; Lee, 2017). However, the current study did not find empirical support for these prior findings and theoretization since hypotheses 4,5 and 6 were not confirmed.

The most plausible explanation could stem from the small sample size of the current study relative to prior studies. A small sample size could reduce the power of a study relating to its ability to detect a significant effect when there is one to be detected (Hair et al., 2014). Therefore, possible significant moderating effects of emotional intelligence could exist when the sample size would be larger than 100 respondents as was the case in previous studies with samples sizes between 167 and 366 valid responses (Gong et al., 2019; Jung & Yoon, 2016; Lee, 2017; Wong & Law, 2002).

Furthermore, the sample composition of the previous studies comprised employees working in one specific type of industry or having a specific occupation while the current study's sample consisted of employees working in various industry sectors and not necessarily having one specific type occupation. For instance, Jung & Yoon (2015) collected 366 valid responses from employees working in the hospitality industry, Lee (2017) obtained a sample consisting of 167 employees working in the public service industry, the sample of Wong & Law (2002) comprised 189 university students and Gong et al. (2019) collected data from 347 participants with a specific type of occupation (salespeople, human resources directors, middle school mathematics and teachers). It could be argued that the effects of emotional intelligence in the previous studies were more evident relative to the current one because of a more homogeneous sample in terms of employees with similar occupation, working environment (e.g. working procedures) and job tasks and thus excluding any interfering effects with regard to these similarities on job satisfaction. Thus, possible significant moderating effects could be detected if the sample of the current study was more targeted towards a certain type of industry or a specific type of occupation.

Also, contrary to what was expected, the moderating effects of collectivism were statistically insignificant. This suggests that the relationship between the leadership styles and job satisfaction does not depend on the collectivistic tendencies of the employee. This study proposed that the characteristics of the collectivistic employee should match the leadership style in order to have higher job satisfaction levels. This proposition was also in line with Devine et al. (1997) who constructed that leaders who engage in behaviours that are consistent with their followers' individually held cultural values, also elicit more positive reactions from their followers than leaders who do not reflect their followers' individual value emphasis. Thus, it was hypothesized that the focus on exchange processes, contract relationships and individual achievement of transactional leadership and the lack of (group) involvement of the laissez-faire leader would not match the characteristics of the collectivistic employee such as working towards group goals, group success and transcendence of self-interests. And so, the negative effects of these leadership styles would be stronger for the collectivistic type of employee (H7 and H9), while the focus on collective vision, mission, goal and purpose of the transformational leader would definitely appeal to the collectivistic employee and thus implying a stronger positive effect on job satisfaction (H8). Again, these hypotheses were statistically not confirmed.

As previously mentioned, an explanation could stem from the inability to detect possible significant moderating effects due to the small sample size. Another aspect that could

be taken into consideration is that both collectivistic and individualistic employees appreciate combined elements of each type of leadership style and do not have strong preference for one specific leadership style, and thus blurring the effects of each leadership style on job satisfaction. For example, the clear directions and articulated goals of the transactional leader may be appreciated by employees (Abdalla, 2010; Al Khajeh, 2018) regardless of their collectivistic tendencies. In addition, the focus on role clarity and the open communication about the consequences when achieving or failing goals may be appreciated by some employees as this gives them a clear foundation and secure feeling on how to carry out their work (Feng & Wang, 2018) regardless of their collectivism. This suggests that an employee could be collectivistic and show equal favourable attitudes towards both transactional and transformational leadership styles. Again, a larger sample size would provide more clarity in this matter.

In addition, an interesting finding relates to the cultural context when measuring collectivism at the individual level. When using Hofstede's cultural dimension collectivism at country-level, an overall finding was that the Netherlands scored very low on collectivism and thus very high on individualism (Hofstede et al., 2010). This indicates that the Netherlands has a high preference for a loosely-knit society and employer-employee relationships are contract-based, focused on exchange processes and individual achievement (Hofstede et al., 2010). However, this study found that when measuring collectivism at the individual level, employees were moderately collectivistic with an average score of 4.8 (on a 7-point Likert scale). This finding further strengthens and confirms the main critique of the ignorance of intercultural variation when measuring culture at country-level (Lu, 2012). This means that understanding and distinguishing between individual and societal level differences to assess the impact of cultural tendencies such as collectivism is essential to advance existing knowledge on the respective roles in organisational culture.

Lastly, the control variable job tenure showed an interesting and significant result even though it was not the focus in this study. Job tenure seems to positively affect job satisfaction, particularly when employees work between 3-5 years and over 10 years at the same company. This finding seems to be in line with Hulin & Smith (1965) and Sarker et al. (2003) who found that job satisfaction is positively influenced by the length of an individual's service. An explanation was that job longevity affected the gap between the employees' expectations and actual work environment returns, which means that employees who work longer at the same company are able to adjust their expectations and ambitions to a more realistic and attainable level of their job and so resulting in increasing levels of job satisfaction.

Chapter Six Conclusion

The aim of this study was to extend existing literature on leadership (e.g. Cotae, 2010, 2013) by empirically examining the main effects of transactional, transformational and laissez-faire leadership on the employee's job satisfaction from an emotional-intelligence angle and cultural employee perspective. Furthermore, the objective of this study was to extend the empirical usage of the CVSCALE and to provide newly acquired knowledge on the possible moderating effects of emotional intelligence and individual-level collectivism in order to facilitate academics and managers with more knowledge regarding job satisfaction through an effective manager-employee relationship. This study tried to get a good grasp on the foregoing by answering the following problem statement as presented in the introduction:

To what extent does the use of different types of leadership styles (transformational, transactional and laissez-faire) influence the job satisfaction of employees, and how does the employee's emotional intelligence and employee's collectivism moderate the relationship between the different types of leadership styles and the employee's job satisfaction?

The findings involve a threefold answer; firstly, the results of this study demonstrate that transformational leadership has an overall positive impact on the employee's job satisfaction and no significant effects were found for the transactional and laissez-faire type of leadership. Secondly, no significant moderating effects were found for emotional intelligence. And thirdly, no significant moderating effects were found for collectivism. These findings indicate that the type of leadership plays an important role, in particular transformational leadership, in shaping the attitudes of employees towards work and that this relationship is independent of the employee's emotional intelligence and collectivistic tendencies. Consequently, these findings impact the managerial and theoretical implications which will be discussed in the next section.

6.1 Theoretical implications

The most important finding of this study is that emotional intelligence and individual-level collectivism do not moderate the relationship between the transactional, transformational and laissez-faire leadership style based on the current sample and conceptual model. Instead, the findings show that the type of leadership style does play a key role in shaping the employee's attitude towards work regardless of their emotional intelligence and collectivistic tendencies, in specific, the main effect of transformational leadership was found to be positive for the

employees' job satisfaction. Thus, the theoretical foundation for the functionality and impact of emotional intelligence and collectivism in the workplace are not identified in this study and remain open for future research which will be discussed in the limitations and future research section.

6.2 Managerial implications

The research findings indicate that the leadership style has an important impact on the job satisfaction, regardless of the employee's level of both emotional intelligence and collectivism, which warrants that managers have to be aware and understand if their leadership style is positively or negatively affecting their employees. In general, the transformational type of leadership was associated with appreciative attitudes. Therefore, managers should focus on the inspirational and charismatic elements of this leadership style.

For example, managers should communicate their most important values and beliefs which instils trust and recognition in order to build a strong personal identification with the employee. Next, when motivating employees with regard to future goals, managers should express optimism and confidence that goals will be achieved which serves as contagious encouragement and enthusiasm tools. Also, managers will create a supportive working environment when they treat the employee not uniformly but acknowledge them as a specific individual with different needs, abilities and aspirations. In this way, employees are given a sense of recognition which positively affects their attitude. Lastly, managers are advised to encourage and inspire employees by suggesting different perspectives or new ways when solving problems, finding solutions or completing tasks, which stimulates their critical thinking and creativity and ultimately improves the employee's confidence levels in responding to challenges facing them at work.

Based on the foregoing, management strategies should be developed by focussing on the aforementioned transformational elements in order to create more effective manager-employee relationships. Similarly, organizations should invest in leadership training programs for managers that encompass how to use these transformational utilities to create a healthy workplace environment.

6.3 Limitations and future research

Two significant limitations were the limited access to companies in the Netherlands and the relatively small sample size of 100 respondents which impedes the generalizability of the findings and conclusions to the target population. Although, the current sample size was considered to be adequate, a larger sample size would increase the statistical power of the

significant results and thus the reliability and accuracy of the findings. Therefore, a sample size larger than 100 respondents is recommended for future research. Furthermore, due to the limited access of the researcher, a portion of the sample comprised respondents of the researcher's personal network who may not represent the whole target population correctly and therefore present a sampling bias. Thus, the generalization of the results might be limited and readers need to exercise caution when interpreting the findings of this study.

A third limitation regards the self-reporting bias of followers through the self-reported information from the online questionnaires. The respondents rated all variables ranging from leadership behaviours, emotional intelligence, collectivistic-individualistic orientation, and job satisfaction, giving cause for concerns about the possible impact of common source variance since only the perspective from the followers was included. A method that allows responses of both leaders and followers regarding leadership behaviour would be helpful to mitigate the self-reporting bias. In this way, if the leader and follower share similarities in their responses regarding the leadership style, more confidence in the reported findings would be established. Alternatively, if time and budget allows, a measure designed to detect defensive response or socially acceptable patterns such as the MMPI-2 (Minnesota Multiphasic Personality Inventory-2) measure could be used with the self-reported questionnaires of the EI and leadership style measures. In this way, the MMPI-2 scale assesses the respondents' answers for lying, faking and defensiveness so these could then be discarded.

Continuing with some suggestions for future research, the options are endless but the most important point this study wants to convey is that, with regard to the novelty of this study, the current conceptual model can be used as a foundation or inspiration to explore other possibilities of emotional intelligence and individual-level culture in the workplace. A suggestion is to use this conceptual model to determine the effects of other individual-level cultural dimensions such as uncertainty avoidance and long-term orientation in order to examine whether only some individual-level cultural dimension play a key role in job satisfaction levels or if culture at the individual level does not wholly impact job satisfaction at all. In addition, it would be beneficial for future studies if the research setting could be specified more precisely than the current one. Another limitation of this study due to limited time and access, was the inability to specify the employees enough in terms of specific company details (e.g. industry sector, company name). This would have been helpful to generate more conclusive and generalized observations about a specific target group.

Therefore, if broad company access allows, future studies should conduct a case study which enables an in-depth analysis of a specific unit or organization (Sekaran & Bougie, 2016).

A suggestion for future case studies is to broaden the emotional intelligence angle in the workplace by including the manager's perspective in order to investigate a possible correlation between a manager's level of emotional intelligence and effective leadership behaviour. For example, an emotionally intelligent manager could exert transformational leadership more effectively than a manager who displays lower levels of emotional intelligence or vice versa. Also, by focussing on a specific type of industry sector, a more refined and thoroughly developed understanding can be established about the specific effects of each leadership style on job satisfaction. For instance, transformational leadership was more effective to use than transactional leadership in the retail sector since this sector required managers who could intellectually stimulate employees to solve challenging problems in a creative and inspiring manner for smooth store operations (Oino & Asghar, 2018). On the contrary, both transformational and transactional leadership were equally effective in the banking sector since the creativity and participative involvement of the transformational leader, and the directive nature and arrangement of constructive transactions (contingent reward system) of the transactional leader were equally appreciated by employees to meet targets (Alabduljader, 2012). Thus, future research should conduct a case study in order to examine the problem statement empirically from various angles and perspectives using multiple methods of data collections such as interviews and questionnaires (Sekaran & Bougie, 2016).

References

Abdalla, H. G. (2010). *The influence of transformational and transactional leadership on employee performance and organizational commitment - A case study in the UAE public sector* (Doctoral dissertation, The British University in Dubai (BUiD).

Al Khajeh, E. H. (2018). Impact of leadership styles on organizational performance. *Journal of Human Resources Management Research*, *2018*, 1-10.

Alabduljader, S. A. (2012). The Transactional and Transformational Leadership in the Kuwaiti Commercial Banks Sector: Which One Is More Applied? *International Journal of Business and Social Science*, *3*(19).

Antoniou, A-S.G., Davidson, M.J., & Cooper, C.L. (2003). Occupational stress, job satisfaction and health state in male and female junior hospital doctors in Greece. *Journal of Managerial psychology*, *18*(6), 592- 621.

Arvey, R. D., Carter, G. W., & Buerkley, D. K. (1991). Job satisfaction: Dispositional and situational influences. *International review of industrial and organizational psychology*, *6*, 359-383.

Avolio, B. J., Walumbwa, F. O., & Weber, T. J. (2009). Leadership: Current theories, research, and future directions. Annual review of psychology, 60, 421-449.

Aziri, B. (2011). Job satisfaction: a literature review. *Management Research & Practice*, *3*(4).

Bass, B. M. (1985). *Leadership and Performance beyond expectations.* New York: Free Press.

Bass, B. M. (2008). Bass and Stogdill's handbook of leadership: Theory, research and managerial applications (Vol. 4). *New York: Free Press.*

Bass, B. M., & Avolio, B. J. (1990). *Transformational leadership development: Manual for the multifactor leadership questionnaire*. Consulting Psychologists Press.

Bass, B. M., & Avolio, B. J. (1993). Transformational leadership: A response to critiques. In M. M. Chemmers & R. Ayman (Eds.), *Leadership theory and research: Perspectives and directions* (pp. 49-88). San Diego, CA: Academic Press.

Bass, B., & Avolio, B. (2000). *MLQ: Multifactor leadership questionnaire, 2nd edition, technical report*. Redwood City, CA: Mind Garden.

Beard, A., & McGinn, D. (2018) Ineffective leaders. *Harvard Business Review*. Retrieved from https://hbr.org/podcast/2018/09/ineffective-leaders.

Benjamin, B. (2019). *How to develop emotional intelligence in your business.* Retrieved from https://www.business.com/articles/develop-emotional-intelligence/

Bogler, R. (2001). The influence of leadership style on teacher job satisfaction. *Educational administration quarterly*, *37*(5), 662-683.

Brymer, E., & Gray, T. (2006). Effective leadership: Transformational or transactional?. *Journal of Outdoor and Environmental Education*, *10*(2), 13-19.

Buchanan, E. A., & Hvizdak, E. E. (2009). Online survey tools: Ethical and methodological concerns of human research ethics committees. *Journal of Empirical Research on Human Research Ethics*, *4*(2), 37-48.

Cammann, C., Fichman, M., Jenkins, D. and Klesh, J. (1983), "Assessing the attitudes and perceptions of organizational member", in *Assessing Organizational Change: A Guide to Methods, Measures, and Practices*, Wiley, New York, NY.

Caputo, A., Ayoko, O. B., & Amoo, N. (2018). The moderating role of cultural intelligence in the relationship between cultural orientations and conflict management styles. *Journal of Business Research*, *89*, 10-20.

Carrillo, E., Freeman, L. L., Morand, D., Ocampo, R., Afegbua-Sabbatt, R., & Clayton, R. (2018). EXAMINING THE IMPACT OF EMOTIONAL INTELLIGENCE ON WORKPLACE STRESS. *International Journal of Management and Human Resources*, *6*(1), 64-83.

Cavazotte, F., Moreno, V., & Hickmann, M. (2012). Effects of leader intelligence, personality and emotional intelligence on transformational leadership and managerial performance. *The Leadership Quarterly*, *23*(3), 443–455

Chaudhry, A. Q., & Javed, H. (2012). Impact of transactional and laissez faire leadership style on motivation. *International Journal of Business and Social Science*, *3*(7).

Choi, S. L., Goh, C. F., Adam, M. B. H., & Tan, O. K. (2016). Transformational leadership, empowerment, and job satisfaction: the mediating role of employee empowerment. *Human resources for health*, *14*(1), 73.

Connelly, S., & Gooty, J. (2015). Leading with emotion: An overview of the special issue on leadership and emotions. *The Leadership Quarterly*, *26*, 485–488.

Cotae, F. F. (2010). Looking at the Link between Leadership, Organizational Learning and the Internationalization Sigmoid. *Global Management Journal*, *2*(1).

Cotae, F. F. (2013). Internationalization and leadership. *International Journal of Information and Education Technology*, *3*(3), 343.

Devine, A. M., Naidu, G. M., & Kleimenhagen, A. K. (1997). PREDICTORS OF SALES MANAGER PERFORMANCE: AN EMPIRICAL STUDY. *Journal of Marketing Management (10711988)*, *7*(1).

Emhan, A. (2012). Relationship among managerial support, job satisfaction and organizational commitment: A comparative study of nonprofit, for-profit and public sectors in Turkey. *International Journal of Business, Humanities and Technology*, *2*(5), 179-190.

Feng, X., & Wang, X. (2018). Transactional leadership and dynamic capabilities: the mediating effect of regulatory focus. *Management Decision*.

Fisher, C. D. (2000). Mood and emotions while working: missing pieces of job satisfaction?. Journal of Organizational Behavior: *The International Journal of Industrial, Occupational and Organizational Psychology and Behavior, 21*(2), 185-202.

Gardner, H. (1993) Multiple intelligences: the theory in practice. *New York: Basic Books.*

George, J.M. (2000). Emotions and leadership: The role of EI. *Human Relations, 53*(12), 1027–1041.

Goleman, D. (1995). Emotional intelligence: why it can matter more than IQ. *New York: Bantam Books.*

Gong, Z., Chen, Y., & Wang, Y. (2019). The Influence of Emotional Intelligence on Job Burnout and Job Performance: Mediating Effect of Psychological Capital. *Frontiers in Psychology, 10.*

Greenleaf, R.K. (1977). Servant leadership: A journey into the nature of legitimate power & greatness. Mahwah, NJ: Paulist Press.

Hair, J., Black, W., Babin, B. & Anderson, R. (2014). Multivariate data analysis. Pearson Education Limited.

Hayes, A. F. (2018). Introduction to mediation, moderation, and conditional process analysis second edition: A regression-based approach. *New York, NY: Ebook The Guilford Press*.

Hofstede, G. (1984). Cultural dimensions in management and planning. *Asia Pacific journal of management, 1*(2), 81-99.

Hofstede, G., Hofstede, G. J. & Minkov, M. (2010). Cultures and Organizations: Software of the Mind (Rev. 3rd ed.). *New York: McGraw-Hill.*

Howell, J. M., & Avolio, B. J. (1993). Transformational leadership, transactional leadership, locus of control, and support for innovation: Key predictors of consolidated-business-unit performance. *Journal of Applied Psychology, 78*(6), 891-902.

Hsu, C., Bell, R. C., & Cheng, K. (2002). Transformational leadership and organizational effectiveness in recreational sports/ fitness programs. *The Sport Journal, 5(2),* 1-5.

Huang, X., Chan, S. C., Lam, W., & Nan, X. (2010). The joint effect of leader–member exchange and emotional intelligence on burnout and work performance in call centers in China. *The International Journal of Human Resource Management, 21*(7), 1124-1144.

Hulin, C. L., & Smith, P. C. (1965). A linear model of job satisfaction. *Journal of Applied psychology*, *49*(3), 209.

Humphrey, R. H. (2002). The many faces of emotional leadership. *The leadership quarterly*, *13*(5), 493-504.

Jung, H. S., & Yoon, H. H. (2016). Why is employees' emotional intelligence important?. *International Journal of Contemporary Hospitality Management*.

Jung, D., Yammarino, F. J., & Lee, J. K. (2009). Moderating role of subordinates' attitudes on transformational leadership and effectiveness: A multi-cultural and multi-level perspective. *The Leadership Quarterly*, *20*(4), 586-603.

Jungert, T., Van den Broeck, A., Schreurs, B., & Osterman, U. (2018). How colleagues can support each other's needs and motivation: An intervention on employee work motivation. *Applied Psychology*, *67*(1), 3-29.

Kaur, A. (2013). Maslow's need hierarchy theory: Applications and criticisms. *Global Journal of Management and Business Studies, 3*(10), 1061-1064.

Kim, S. (2002). Participative management and job satisfaction: Lessons for management leadership. *Public Administration Review, 62*, 231–241.

Ko, W.H. (2012), "The relationships among professional competence, job satisfaction and career development confidence for chefs in Taiwan", *Tourism Management*, Vol. 31 No. 3, pp. 1004-1011.

Kraaft, P., Engelbrecht, A. S., & Theron, C. C. (2003). The influence of transformational and transactional leadership on dyadic trust relationships through perceptions of fairness. *Paper presented at the Proceedings of the Society for Industrial and Organisational Psychology 6th Annual Conference.* Sandton Convention Centre, South Africa.

Leather, P., Beale, D., & Sullivan, L. (2003). Noise, psychosocial stress and their interaction in the workplace. *Journal of Environmental Psychology, 23*(2), 213-222.

Lee, H. J. (2018). How emotional intelligence relates to job satisfaction and burnout in public service jobs. *International Review of Administrative Sciences, 84(*4), 729-745.

Lin, S., Lamond, D., Yang, C. L., & Hwang, M. (2014). Personality traits and simultaneous reciprocal influences between job performance and job satisfaction. *Chinese Management Studies.*

Loi, R., Mao, Y., & Ngo, H. Y. (2009). Linking leader-member exchange and employee work outcomes: The mediating role of organizational social and economic exchange. *Management and Organization Review*, *5*(3), 401-422.

Lu, L. T. (2012). Etic or emic? Measuring culture in international business research. *International Business Research*, *5*(5), 109.

Ma, Y., & Turel, O. (2019). Information technology use for work and technostress: effects of power distance and masculinity culture dimensions. *Cognition, Technology & Work, 21*(1), 145-157.

Mayer, J. D., & Salovey, P. (1993). *The intelligence of emotional intelligence.*
Metcalf, L., & Bean, S. (2012). Leadership for sustainability: an evolution of leadership ability,‖ *Journal of Business Ethics*, vol. 1, no. 12, pp. 369-384, 2012.

Mihalcea, A. (2014). Leadership, personality, job satisfaction and job performance. *Procedia-Social and Behavioral Sciences*, *127*, 443-447.

Monsterboard. (2016). *Werkende Nederlander ontevreden over manager.* Retrieved from http://newsroom.monsterboard.nl/121661-werkende-nederlander-ontevreden-over-manager

Muchiri, M. K., Cooksey, R. W., Di Milia, L. V., & Walumbwa, F. O. (2011). Gender and managerial level differences in perceptions of effective leadership. Leadership & Organization Development Journal.

Mustafa, G., & Lines, R. (2014). Influence of leadership on job satisfaction: The moderating effects of follower individual-level masculinity–femininity values. *Journal of leadership studies*, *7*(4), 23-39.

Nationale vacaturebank. (2018). *Resultaten Happy Check 2018: Waar zijn werknemers tevreden over en waar liggen kansen?*. Retrieved from https://www.nationalevacaturebank.nl/werkgever/Informatie/Arbeidsmarkt-ontwikkelingen/Resultaten-Happy-Check-2018-Waar-zijn-werknemers-tevreden-over-en-waar-liggen-kansen?utm_referrer=https%3A%2F%2Fwww.google.com%2F

Oino, I., & Asghar, S. (2018). Leadership Styles and Job Satisfaction. Market Forces, *Journal of Management, Business and Economics*, *13*(1).

Palmer, B., Walls, M., Burgess, M., & Stough, C. (2001). Emotional intelligence and effective leadership. *Journal of Leadership and Organization Development*, *22*(1), 5–10.

Pardee, R. L. (1990). Motivation Theories of Maslow, Herzberg, McGregor & McClelland. *A Literature Review of Selected Theories Dealing with Job Satisfaction and Motivation.*

Pasa, S. F. (2000). Leadership influence in a high power distance and collectivist culture. *Leadership & Organization Development Journal. 21*/8, 414-426.

Rad, A. M. M., & Yarmohammadian, M. H. (2006). A study of relationship between managers' leadership style and employees' job satisfaction. *Leadership in Health Services*.

Rowold, J., & Schlotz, W. (2009). Transformational and transactional leadership and followers' chronic stress. *Leadership Review*, *9*(1), 35-48.

Salovey, P., & Mayer, J. D. (1990). Emotional intelligence. *Imagination, Cognition and Personality*, *9* (3), 185-211.

Sarker, S. J., Crossman, A., & Chinmeteepituck, P. (2003). The relationship of age and length of service with job satisfaction: An examination of hotel employees in Thailand. *Journal of Managerial Psychology, 17*(7/8), 745–758.

Sekaran, U., & Bougie, R. (2016). *Research methods for business.* West sussex: John Wiley & Sons.

Shahzadi, I., Javed, A., Pirzada, S. S., Nasreen, S., & Khanam, F. (2014). Impact of employee motivation on employee performance. *European Journal of Business and Management, 6*(23), 159-166.

Shamir B, House RJ, Arthur MB. (1993). The motivational effects of charismatic leadership: a self-concept based theory. *Organizational Science, 4*, 577-594.

Skogstad, A., Einarsen, S., Torsheim, T., Aasland, M. S., & Hetland, H. (2007). The destructiveness of laissez-faire leadership behavior. *Journal of occupational health psychology*, *12*(1), 80.

Spector, P.E. (1985), "Measurement of human service staff satisfaction: development of the job satisfaction survey", *American Journal of Community Psychology,* Vol. 13 No. 6, pp. 693-713.

Stordeur, S., D'hoore, W., & Vandenberghe, C. (2001). Leadership, organizational stress, and emotional exhaustion among hospital nursing staff. *Journal of advanced nursing*, *35*(4), 533-542.

Thorndike, E. L. (1920). Intelligence and its use. *Harper's Magazine, 740,* 227-235.

Triandis, H. C. (2001). Individualism-collectivism and personality. *Journal of personality*, *69*(6), 907-924.

Walter, F., & Scheibe, S. (2013). A literature review and emotion-based model of age and leadership: New directions for the trait approach. *The leadership Quarterly, 24*: 882-901.

Webb, K. S. (2009). Why emotional intelligence should matter to management: A survey of the literature. *SAM Advanced Management Journal*, *74*(2), 32.

Wong, C.S. and Law, K.S. (2002), "The effects of leader and follower emotional intelligence on performance and attitude: an exploratory study", *The Leadership Quarterly, Vol. 13* No. 3, pp. 243-274.

Yoo, B., Donthu, N. and Lenartowicz, T. (2011), "Measuring Hofstede's five dimensions of cultural values at the individual level: development and validation of CVSCALE", *Journal of International Consumer Marketing, Vol. 23* Nos 3-4, pp. 193-210.

Yoo, B., & Shin, G. C. (2017). Invariant effect of individual cultural orientations: an application of CVSCALE. *International Marketing Review*.

Yukl, G. (2002). *Leadership in organizations* (5th ed.). Upper Saddle River, NJ: Prentice Hall.

Appendix 1 Survey

Appendix 1.1 Introduction page of survey

Beste respondent,

Mijn naam is Lindsay Wenas en ik ben een masterstudent aan de Radboud Universiteit Nijmegen met als afstudeerrichting International Business. Op dit moment ben ik hard aan het werk met mijn onderzoek om mijn studie af te ronden. Mijn onderzoek gaat over de medewerkerstevredenheid, en dan met name wat voor invloed leiderschap en emotionele intelligentie hebben op de werktevredenheid van medewerkers.

Voor dit onderzoek heb ik uw hulp nodig. Ik heb een vragenlijst gemaakt, en hoop dat u deze wil invullen. In deze vragenlijst vraag ik u naar uw mening en zijn er dus geen foute antwoorden. De informatie die u via deze vragenlijst verstrekt, helpt mijn onderzoek om de factoren van werktevredenheid beter te begrijpen. Het invullen van de vragenlijst duurt niet langer dan 10 minuten en u kunt er zeker van zijn dat alle gegevens die met deze vragenlijst worden verzameld, vertrouwelijk worden behandeld en anoniem worden verwerkt. De resultaten zullen niet terug te leiden zijn naar u en niemand kan achterhalen wat u persoonlijk hebt geantwoord. Als laatste zullen de antwoorden uitsluitend gebruikt worden voor dit onderzoek.

Tijdens de vragenlijst kunt u op elk moment stoppen, zonder dat dit gevolgen heeft. Ook kunt u het invullen van de vragenlijst altijd even stop zetten, om daarna op een later tijdstip verder te gaan.

Mocht u vragen of opmerkingen hebben over mijn onderzoek, dan kunt u mij mailen. Mijn e-mailadres is: Lindsay.Wenas@student.ru.nl

Hartelijk bedankt voor uw deelname. Ik waardeer uw hulp enorm bij het bevorderen van mijn onderzoek.
Lindsay Wenas
Master student International Business
Radboud University Nijmegen

Kies een van de volgende opties:

- ○ Ik heb bovenstaande tekst gelezen en begrepen. Ik stem in met deelname aan dit onderzoek.
- ○ Ik stem niet in met deelname aan dit onderzoek.

Appendix 1.2 Instruction page of survey

Voordat u begint aan de vragenlijst, leg ik u graag uit wat het doel van mijn onderzoek is. Ik wil u daarom vragen om dit goed door te lezen, zodat u weet wat ik bedoel in de vragenlijst.

Met dit onderzoek probeer ik een relatie vast te stellen tussen leiderschap, emotionele intelligentie en medewerkerstevredenheid.
-**Leiderschap** is het vermogen om leiding te geven. Hierbij wordt het gedrag van iemand in een leidinggevende positie bedoeld bij het (aan)sturen van de activiteiten van een medewerker of een groep personen, om daarmee tot (een nog betere) realisatie van de doelen te komen.
-**Emotionele intelligentie**, ook wel afgekort als **EQ**, betreft het vermogen om emoties te identificeren en de manier waarop je met emoties omgaat, zowel van jezelf als van anderen.
-De **medewerkerstevredenheid** verwijst naar de (positieve of negatieve) houding van een medewerker ten opzichte van zijn of haar baan die sterk wordt beïnvloed door het werkproces en de werkomgeving.

Als alles duidelijk is, kunt u op de knop 'Volgende' drukken om de vragenlijst te starten.

Appendix 2 Legenda

Variable name	Variable label	Description	Scale
ID	ID	Respondents' ID	Interval
Choice	Choice	Respondent's consent	Nominal
AGE_regrouped	Age (in years) with 3 groups	1= Under 20 or between 20-35. 2= Between 36-50 3= Between 51-67	Ordinal
GENDER	Gender	1=Male 2=Female	Nominal
JobTenure_regrouped	Job tenure (in years) with 4 groups	1=Less than 2 2= Between 3-5 3= Between 6-10 4= Over 10	Ordinal
JOB_STATUS	Job status	1=Nonmanagerial 2=First=level supervisor 3=Middle-management 4=Topmanagement	Nominal
EDUCATION_regrouped	Education with 4 groups	1=High school 2=MBO 3=HBO 4=WO	Ordinal
ORGANIZATIONAL_CONTEXT	Organizational context	1=Profit 2=Non-profit	Nominal
JS	Job satisfaction	Items: JS2,JS3, JS4, JS5.	Interval
TActL	Transactional leadership	Items: CR1, CR2, CR3, CR4, MA1, MA2, MA3,MA4.	Interval
TFormL	Transformational leadership	Items: IF2, IF6, IF7, IF8, IF9, IMI, IM2, IM4, IC2, IC3, IS1, IS2, IS3, IS4.	Interval
LF	Laissez-faire leadership	Items: LF1, LF2, LF, L4.	Interval
EI	Emotional intelligence	Items: OEA1, OEA2, OEA4, UOE1, UOE3, UOE4, SEA1, SEA2, SEA3, ROE1, ROE2, ROE3, ROE4.	Interval
C	Collectivism	Items: C1, C2, C4, C5, C6.	Interval
TActL_x_EI	Transactional leadership * Emotional intelligence	Intercaction effect	Interval
TFormL_x_EI	Transformational leadership * Emotional intelligence	Intercaction effect	Interval
LF_x_EI	Laissez-faire leadership * Emotional intelligence	Intercaction effect	Interval
TActL_x_C	Transactional leadership * Collectivism	Intercaction effect	Interval
LF_x_C	Laissez-faire leadership * Collectivism	Intercaction effect	Interval

Variable name	Variable label	Description	Scale
Male_D	Dummy variable Gender	0=Female 1=Male	Nominal
AGE_1	Dummy variable Age: reference category	0=Other 1=Under 20 or between 20-35	Nominal
AGE_2	Dummy variable Age	0=Other 1=Between 36-50	Nominal
AGE_3	Dummy variable Age	O=Other 1=Between 51-67	Nominal
Job_tenure1	Dummy variable Job tenure: reference category	0=Other 1=Less than 2	Nominal
Job_tenure2	Dummy variable Job tenure	0=Other 1=Between 3-5	Nominal
Job_tenure3	Dummy variable Job tenure	0-Other 1=Between 6-10	Nominal
Job_tenure4	Dummy variable Job tenure	0=Other 1=Over 10	
HighSchool	Dummy variable Education: reference category	0=Other 1=High school	Nominal
MBO	Dummy variable Education	0=Other 1=MBO	Nominal
HBO	Dummy variable Education	0=Other 1=HBO	Nominal
WO	Dummy variable Education	0=Other 1=WO	Nominal

Appendix 3 Missing value analysis

Appendix 3.1 Frequency table: Consent

Consent

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	I have read and understood the above text. I agree to participate in this study.	108	99,1	99,1	99,1
	I do not agree to participate in this study	1	,9	,9	100,0
	Total	109	100,0	100,0	

Appendix 3.2. Frequency table: job status-top management

Job status

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Nonmanagerial	79	72,5	73,1	73,1
	First-level supervisor	5	4,6	4,6	77,8
	Middle-management	21	19,3	19,4	97,2
	Top management	3	2,8	2,8	100,0
	Total	108	99,1	100,0	
Missing	System	1	,9		
Total		109	100,0		

Appendix 3.3 Frequency table: control variables and dimensional variables

Univariate Statistics

	N	Mean	Std. Deviation	Missing		No. of Extremes[a]	
				Count	Percent	Low	High
AGE	105	2,90	,779	0	,0	0	1
EDUCATION	105	4,69	,858	0	,0	5	0
JOB_TENURE	105	3,51	1,226	0	,0	0	0
JS1	105	5,68	1,052	0	,0	.	.
JS2	105	5,96	,820	0	,0	.	.
JS3	105	5,90	,649	0	,0	.	.
JS4	105	6,13	,589	0	,0	.	.
JS5	105	6,07	,763	0	,0	.	.
C1	105	5,30	1,264	0	,0	12	0
C2	105	5,26	1,279	0	,0	12	0
C3	105	5,58	1,072	0	,0	7	0
C4	105	5,02	1,635	0	,0	1	0
C5	105	4,45	1,617	0	,0	0	0
C6	105	3,96	1,658	0	,0	0	0
CR1	104	4,27	1,977	1	1,0	0	0
CR2	104	4,69	1,724	1	1,0	0	0
CR3	104	4,82	1,493	1	1,0	0	0
CR4	104	5,06	1,569	1	1,0	1	0
MA1	104	5,09	1,429	1	1,0	15	0
MA2	104	3,76	1,726	1	1,0	0	0
MA3	104	3,45	1,588	1	1,0	0	0
MA4	104	4,54	1,718	1	1,0	0	0
IF1	104	4,24	1,411	1	1,0	1	0
IF2	104	4,48	1,386	1	1,0	1	0
IF3	104	5,11	1,165	1	1,0	1	0
IF4	104	5,39	1,101	1	1,0	6	0
IF5	104	5,77	1,151	1	1,0	.	.
IF6	103	5,17	1,317	2	1,9	15	0
IF7	103	4,87	1,460	2	1,9	0	0
IF8	103	4,83	1,230	2	1,9	0	0
IF9	103	5,29	1,384	2	1,9	13	0
IM1	102	5,54	1,105	3	2,9	3	0
IM2	102	5,40	1,083	3	2,9	0	0
IM3	102	5,47	1,060	3	2,9	5	0
IM4	102	5,61	,903	3	2,9	2	0
IC1	102	4,13	1,938	3	2,9	0	0
IC2	102	5,33	1,261	3	2,9	12	0
IC3	102	5,29	1,271	3	2,9	9	0
IC4	102	4,88	1,537	3	2,9	2	0
IS1	102	4,39	1,457	3	2,9	0	0
IS2	102	5,26	1,202	3	2,9	0	0
IS3	102	4,75	1,382	3	2,9	0	0
IS4	102	5,07	1,269	3	2,9	0	0
LF1	101	2,19	1,369	4	3,8	0	16
LF2	101	2,03	1,204	4	3,8	0	12
LF3	101	2,08	1,111	4	3,8	.	.
LF4	101	2,70	1,520	4	3,8	0	1
OEA1	101	5,28	1,226	4	3,8	9	0
OEA2	101	5,20	1,233	4	3,8	13	0
OEA3	101	4,71	1,479	4	3,8	0	0
OEA4	101	5,41	,951	4	3,8	4	0
UOE1	100	5,38	1,332	5	4,8	12	0
UOE2	100	5,21	1,183	5	4,8	14	0
UOE3	100	5,57	1,103	5	4,8	9	0
UOE4	100	5,78	,905	5	4,8	.	.
SEA1	100	5,31	1,061	5	4,8	9	0
SEA2	100	5,46	,999	5	4,8	4	0
SEA3	100	5,21	1,085	5	4,8	7	0
SEA4	100	5,80	,791	5	4,8	2	0
ROE1	100	5,62	1,033	5	4,8	6	0
ROE2	100	5,56	,935	5	4,8	3	0
ROE3	100	4,99	1,396	5	4,8	0	0
ROE4	100	5,53	1,000	5	4,8	4	0
GENDER	105			0	,0		
ORGANIZATIONAL_CONTEXT	105			0	,0		
JOB_STATUS	105			0	,0		

a. Number of cases outside the range (Q1 - 1.5*IQR, Q3 + 1.5*IQR).

Appendix 3.4 Missing completely at random (MCAR) test

EM Means[a]	
AGE	2,90
EDUCATION	4,69
JOB_TENURE	3,51
JS1	5,68
JS2	5,96
JS3	5,90
JS4	6,13
JS5	6,07
C1	5,30
C2	5,26
C3	5,58
C4	5,02
C5	4,45
C6	3,96
CR1	4,26
CR2	4,69
CR3	4,81
CR4	5,06
MA1	5,08
MA2	3,76
MA3	3,45
MA4	4,53
IF1	4,24
IF2	4,48
IF3	5,10
IF4	5,39
IF5	5,77
IF6	5,18
IF7	4,88
IF8	4,84
IF9	5,29
IM1	5,54
IM2	5,41
IM3	5,47
IM4	5,61
IC1	4,17
IC2	5,34
IC3	5,30
IC4	4,90
IS1	4,39
IS2	5,26
IS3	4,78
IS4	5,09
LF1	2,21
LF2	2,02
LF3	2,05
LF4	2,71
OEA1	5,28
OEA2	5,19
OEA3	4,72
OEA4	5,41
UOE1	5,37
UOE2	5,21
UOE3	5,56
UOE4	5,77
SEA1	5,29
SEA2	5,46
SEA3	5,19
SEA4	5,80
ROE1	5,60
ROE2	5,54
ROE3	4,99
ROE4	5,52

Little's MCAR test: Chi-Square = 189,680, DF = 166, Sig. = ,101[a]

Appendix 3.5 Syntax SPSS missing value analysis

Listwise deletion

```
USE ALL.
COMPUTE
filter_$=(NMISS(GENDER,AGE,EDUCATION,ORGANIZATIONAL_CONTEXT,JOB_TENURE,JOB_STA
TUS,JS1,JS2,
JS3,JS4,JS5,C1,C2,C3,C4,C5,C6,CR1,CR2,CR3,CR4,MA1,MA2,MA3,MA4,IF1,IF2,IF3,IF4,IF5,IF6,IF7,IF8,I
F9,
IM1,IM2,IM3,IM4,IC1,IC2,IC3,IC4,IS1,IS2,IS3,IS4,LF1,LF2,LF3,LF4,OEA1,OEA2,OEA3,OEA4,UOE1,UOE
2,UOE3, UOE4,SEA1,SEA2,SEA3,SEA4,ROE1,ROE2,ROE3,ROE4)  <  1).
VARIABLE LABELS filter_$
'NMISS(GENDER,AGE,EDUCATION,ORGANIZATIONAL_CONTEXT,JOB_TENURE,'+
'JOB_STATUS,JS1,JS2,JS3,JS4,JS5,C1,C2,C3,C4,C5,C6,CR1,CR2,CR3,CR4,MA1,MA2,MA3,MA4,IF1,IF2,I
F3,'+     'IF4,IF5,IF6,IF7,IF8,IF9,IM1,IM2,IM3,IM4,IC1,IC2,IC3,IC4,IS1,IS2,IS3,IS4,LF1,LF2,LF3,LF4... '+
    '(FILTER)'.
VALUE LABELS filter_$ 0 'Not Selected' 1 'Selected'.
FORMATS filter_$ (f1.0).
FILTER BY filter_$.
EXECUTE.
FILTER OFF.
USE ALL.
SELECT IF
(NMISS(GENDER,AGE,EDUCATION,ORGANIZATIONAL_CONTEXT,JOB_TENURE,JOB_STATUS,JS1,
JS2,JS3,JS4,
JS5,C1,C2,C3,C4,C5,C6,CR1,CR2,CR3,CR4,MA1,MA2,MA3,MA4,IF1,IF2,IF3,IF4,IF5,IF6,IF7,IF8,IF9,IM1,
IM2,
IM3,IM4,IC1,IC2,IC3,IC4,IS1,IS2,IS3,IS4,LF1,LF2,LF3,LF4,OEA1,OEA2,OEA3,OEA4,UOE1,UOE2,UOE3,
UOE4, SEA1,SEA2,SEA3,SEA4,ROE1,ROE2,ROE3,ROE4)  <  1).
EXECUTE.
```

Appendix 4 Descriptive statistics of the final sample: control variables

Appendix 4.1 Frequency tables of control variables

gender

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Male	56	56,0	56,0	56,0
	Female	44	44,0	44,0	100,0
	Total	100	100,0	100,0	

age

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Between 20-35 years	34	34,0	34,0	34,0
	Between 36-50 years	42	42,0	42,0	76,0
	Between 51-65 years	23	23,0	23,0	99,0
	Above 65 years	1	1,0	1,0	100,0
	Total	100	100,0	100,0	

education

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	High school (VMBO, HAVO, VWO etc)	5	5,0	5,0	5,0
	MBO	29	29,0	29,0	34,0
	HBO	54	54,0	54,0	88,0
	WO	12	12,0	12,0	100,0
	Total	100	100,0	100,0	

organizational context

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Profit	80	80,0	80,0	80,0
	Non-profit	20	20,0	20,0	100,0
	Total	100	100,0	100,0	

job tenure

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Less than one year	4	4,0	4,0	4,0
	1-2 years	19	19,0	19,0	23,0
	3-5 years	28	28,0	28,0	51,0
	6-10 jaar	21	21,0	21,0	72,0
	More than 10 years	28	28,0	28,0	100,0
	Total	100	100,0	100,0	

Appendix 4.2 Descriptive statistics

Statistics

	N					Percentiles		
	Valid	Missing	Median	Mode	Range	25	50	75
gender	100	0	1,00	1	1	1,00	1,00	2,00
organizational context	100	0	1,00	1	1	1,00	1,00	1,00
Age_regrouped	100	0	2,0000	2,00	2,00	1,0000	2,0000	2,0000
Education_regrouped	100	0	3,0000	3,00	3,00	3,0000	3,0000	3,0000
JobTenure_regrouped	100	0	2,0000	2,00[a]	3,00	2,0000	2,0000	4,0000

a. Multiple modes exist. The smallest value is shown

Appendix 4.3 Syntax SPSS descriptive statistics

Frequencies

```
FREQUENCIES VARIABLES=GENDER AGE EDUCATION ORGANIZATIONAL_CONTEXT
JOB_TENURE
  /STATISTICS=STDDEV MINIMUM MAXIMUM MEAN MEDIAN MODE SKEWNESS SESKEW
KURTOSIS SEKURT
  /ORDER=ANALYSIS.
```

Transformation of age, education and job tenure

```
RECODE AGE (1=1) (2=1) (3=2) (4=3) (5=3) INTO Age_regrouped.
VARIABLE LABELS  Age_regrouped 'Age_regrouped'.
EXECUTE.
DATASET ACTIVATE DataSet6.

RECODE EDUCATION (1=1) (2=1) (3=2) (4=3) (5=3) (6=4) INTO Education_regrouped.
VARIABLE LABELS  Education_regrouped 'Education_regrouped'.
EXECUTE.
DATASET ACTIVATE DataSet6.

RECODE JOB_TENURE (1=1) (2=1) (3=2) (4=3) (5=4) INTO JobTenure_regrouped.
VARIABLE LABELS  JobTenure_regrouped 'JobTenure_regrouped'.
EXECUTE.
DATASET ACTIVATE DataSet6.
```

Appendix 5 Factor analysis (FA): job satisfaction

Appendix 5.1 KMO, Bartlett's test, correlation matrix and total variance.

KMO and Bartlett's Test

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		,803
Bartlett's Test of Sphericity	Approx. Chi-Square	248,281
	df	10
	Sig.	,000

Correlation Matrix[a]

	JS1	JS2	JS3	JS4	JS5
Correlation	1,000	,564	,385	,373	,329
	,564	1,000	,647	,504	,649
	,385	,647	1,000	,661	,746
	,373	,504	,661	1,000	,655
	,329	,649	,746	,655	1,000

a. Determinant = ,076

Total Variance Explained

	Initial Eigenvalues			Extraction Sums of Squared Loadings		
Component	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	3,238	64,761	64,761	3,238	64,761	64,761
2	,799	15,977	80,738			
3	,451	9,014	89,753			
4	,269	5,387	95,139			
5	,243	4,861	100,000			

Extraction Method: Principal Component Analysis.

Appendix 5.2 Communalities and factor loadings

Communalities

	Initial	Extraction
JS1	1,000	,387
JS2	1,000	,704
JS3	1,000	,763
JS4	1,000	,644
JS5	1,000	,740

Extraction Method: Principal Component Analysis.

Component Matrix[a]

	Component
	1
JS1	,622
JS2	,839
JS3	,873
JS4	,802
JS5	,860

Extraction Method: Principal Component Analysis.

a. 1 components extracted.

Rotated Component Matrix[a]

a. Only one component was extracted. The solution cannot be rotated.

Appendix 5.3 Reliability analysis

Reliability Statistics

Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
,835	,860	5

Item-Total Statistics

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Squared Multiple Correlation	Cronbach's Alpha if Item Deleted
JS1	24,11	5,594	,490	,342	,872
JS2	23,81	5,570	,749	,587	,769
JS3	23,88	6,288	,739	,643	,782
JS4	23,66	6,752	,653	,510	,807
JS5	23,70	5,970	,702	,646	,785

Appendix 5.4 Factor analysis after deletion of item JS1

KMO and Bartlett's Test

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		,823
Bartlett's Test of Sphericity	Approx. Chi-Square	208,587
	df	6
	Sig.	,000

Correlation Matrix[a]

	JS2	JS3	JS4	JS5
Correlation	1,000	,647	,504	,649
	,647	1,000	,661	,746
	,504	,661	1,000	,655
	,649	,746	,655	1,000

a. Determinant = ,116

Total Variance Explained

	Initial Eigenvalues			Extraction Sums of Squared Loadings		
Component	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	2,936	73,407	73,407	2,936	73,407	73,407
2	,496	12,408	85,815			
3	,313	7,835	93,650			
4	,254	6,350	100,000			

Extraction Method: Principal Component Analysis.

Communalities

	Initial	Extraction
JS2	1,000	,660
JS3	1,000	,803
JS4	1,000	,672
JS5	1,000	,801

Extraction Method: Principal Component Analysis.

Component Matrix[a]

	Component
	1
JS2	,813
JS3	,896
JS4	,820
JS5	,895

Extraction Method: Principal Component Analysis.

a. 1 components extracted.

Rotated Component Matrix[a]

a. Only one component was extracted. The solution cannot be rotated.

Appendix 5.5 Reliability analysis after deletion of item JS1

Reliability Statistics

Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
,872	,878	4

Item-Total Statistics

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Squared Multiple Correlation	Cronbach's Alpha if Item Deleted
JS2	18,13	3,044	,679	,481	,864
JS3	18,20	3,333	,797	,643	,812
JS4	17,98	3,737	,678	,496	,858
JS5	18,02	3,010	,793	,639	,808

Appendix 5.6 Syntax SPSS Factor analysis of job satisfaction

1. FA Job satisfaction

```
FACTOR
  /VARIABLES JS1 JS2 JS3 JS4 JS5
  /MISSING LISTWISE
  /ANALYSIS JS1 JS2 JS3 JS4 JS5
  /PRINT UNIVARIATE INITIAL CORRELATION SIG DET KMO EXTRACTION ROTATION FSCORE
  /PLOT EIGEN
  /CRITERIA MINEIGEN(1) ITERATE(25)
  /EXTRACTION PC
  /CRITERIA ITERATE(25)
  /ROTATION VARIMAX
  /METHOD=CORRELATION.
```

2. Reliability analysis job satisfaction

```
RELIABILITY
  /VARIABLES=JS1 JS2 JS3 JS4 JS5
  /SCALE('ALL VARIABLES') ALL
  /MODEL=ALPHA
  /STATISTICS=DESCRIPTIVE SCALE CORR
  /SUMMARY=TOTAL CORR.
```

3. FA job satisfaction after deletion of item JS1

```
FACTOR
  /VARIABLES JS2 JS3 JS4 JS5
  /MISSING LISTWISE
  /ANALYSIS JS2 JS3 JS4 JS5
  /PRINT UNIVARIATE INITIAL CORRELATION SIG DET KMO EXTRACTION ROTATION FSCORE
  /PLOT EIGEN
  /CRITERIA MINEIGEN(1) ITERATE(25)
  /EXTRACTION PC
  /CRITERIA ITERATE(25)
  /ROTATION VARIMAX
  /METHOD=CORRELATION.
```

4. Reliability analysis job satisfaction after deletion of item JS1

```
RELIABILITY
  /VARIABLES=JS2 JS3 JS4 JS5
  /SCALE('ALL VARIABLES') ALL
  /MODEL=ALPHA
  /STATISTICS=DESCRIPTIVE SCALE CORR
  /SUMMARY=TOTAL CORR.
```

Appendix 6 Factor analysis transactional leadership

Appendix 6.1 KMO, Bartlett's test, correlation matrix, total variance

KMO and Bartlett's Test

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		,791
Bartlett's Test of Sphericity	Approx. Chi-Square	311,340
	df	28
	Sig.	,000

Correlation Matrix[a]

	CR1	CR2	CR3	CR4	MA1	MA2	MA3	MA4
Correlation	1,000	,512	,252	,358	,138	,442	,428	,127
	,512	1,000	,555	,540	,220	,459	,416	,214
	,252	,555	1,000	,395	,310	,256	,247	,161
	,358	,540	,395	1,000	,069	,292	,268	,056
	,138	,220	,310	,069	1,000	,385	,447	,541
	,442	,459	,256	,292	,385	1,000	,770	,521
	,428	,416	,247	,268	,447	,770	1,000	,593
	,127	,214	,161	,056	,541	,521	,593	1,000

a. Determinant = ,038

Total Variance Explained

Component	Initial Eigenvalues			Extraction Sums of Squared Loadings			Rotation Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	3,566	44,578	44,578	3,566	44,578	44,578	2,578	32,225	32,225
2	1,517	18,963	63,542	1,517	18,963	63,542	2,505	31,317	63,542
3	,924	11,549	75,090						
4	,588	7,355	82,446						
5	,476	5,956	88,401						
6	,381	4,757	93,158						
7	,328	4,097	97,255						
8	,220	2,745	100,000						

Extraction Method: Principal Component Analysis.

Appendix 6.2 Communalities and factor loadings

Communalities

	Initial	Extraction
CR1	1,000	,486
CR2	1,000	,749
CR3	1,000	,463
CR4	1,000	,626
MA1	1,000	,551
MA2	1,000	,704
MA3	1,000	,761
MA4	1,000	,744

Extraction Method: Principal Component Analysis.

Rotated Component Matrix[a]

	Component	
	1	2
MA4	,862	
MA3	,798	,352
MA1	,740	
MA2	,731	,411
CR2		,838
CR4		,791
CR3		,664
CR1		,664

Extraction Method: Principal Component Analysis.
Rotation Method: Varimax with Kaiser Normalization.[a]

a. Rotation converged in 3 iterations.

Appendix 6.3 Reliability analysis transactional leadership

Reliability Statistics

Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
,815	,816	8

Item-Total Statistics

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Squared Multiple Correlation	Cronbach's Alpha if Item Deleted
CR1	31,39	57,351	,482	,357	,804
CR2	30,98	56,141	,637	,545	,778
CR3	30,82	62,876	,454	,370	,804
CR4	30,60	63,071	,421	,331	,809
MA1	30,48	64,010	,438	,366	,806
MA2	31,86	54,970	,691	,632	,769
MA3	32,18	56,594	,706	,668	,770
MA4	31,10	60,717	,452	,478	,806

Appendix 6.4 Syntax SPSS Factor analysis transactional leadership

1. Factor analysis

```
FACTOR
  /VARIABLES CR1 CR2 CR3 CR4 MA1 MA2 MA3 MA4
  /MISSING LISTWISE
  /ANALYSIS CR1 CR2 CR3 CR4 MA1 MA2 MA3 MA4
  /PRINT UNIVARIATE INITIAL CORRELATION SIG DET KMO EXTRACTION ROTATION FSCORE
  /FORMAT SORT BLANK(.30)
  /PLOT EIGEN
  /CRITERIA FACTORS(2) ITERATE(25)
  /EXTRACTION PC
  /CRITERIA ITERATE(25)
  /ROTATION VARIMAX
  /METHOD=CORRELATION.
```

2. Reliability analysis

```
 RELIABILITY
  /VARIABLES=CR1 CR2 CR3 CR4 MA1 MA2 MA3 MA4
  /SCALE('ALL VARIABLES') ALL
  /MODEL=ALPHA
  /STATISTICS=DESCRIPTIVE SCALE CORR
  /SUMMARY=TOTAL CORR.
```

Appendix 7 Factor analysis transformational leadership

Appendix 7.1 Process

1. Factor analysis with all items.
2. Factor analysis after deletion of items IF1 and IM3.
3. Factor analysis after deletion of item IF3.
4. Factor analysis after deletion of item IF4.
5. Factor analysis after deletion of item IC4.
6. Factor analysis after deletion of items IC1 and IF5.

Appendix 7.2 KMO and Bartlett's tests

1. Step 1 with all items.

KMO and Bartlett's Test

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		,901
Bartlett's Test of Sphericity[a]	Approx. Chi-Square	1657,758
	df	210
	Sig.	,000

a. Footnote

2. Step 2 after deletion of items IF1 and IM3.

KMO and Bartlett's Test

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		,902
Bartlett's Test of Sphericity	Approx. Chi-Square	1495,725
	df	171
	Sig.	,000

3. Step 3 after deletion of item IF3.

KMO and Bartlett's Test

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		,898
Bartlett's Test of Sphericity	Approx. Chi-Square	1368,747
	df	153
	Sig.	,000

4. Step 4 after deletion of item IF4.

KMO and Bartlett's Test

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		,892
Bartlett's Test of Sphericity	Approx. Chi-Square	1253,283
	df	136
	Sig.	,000

5. Step 5 after deletion of item IC4.

KMO and Bartlett's Test

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		,883
Bartlett's Test of Sphericity	Approx. Chi-Square	1113,087
	df	120
	Sig.	,000

6. Step 6 after deletion of items IC1 and IF5.

KMO and Bartlett's Test

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		,883
Bartlett's Test of Sphericity	Approx. Chi-Square	952,448
	df	91
	Sig.	,000

Appendix 7.3 Correlation matrices

1. Step 1 with all items.

Correlation Matrix[a]

	IF1	IF2	IF3	IF4	IF5	IF6	IF7	IF8	IF9	IM1	IM2	IM3	IM4	IC1	IC2	IC3	IC4	IS1	IS2	IS3	IS4
	1,000	,590	,620	,629	,511	,473	,455	,378	,472	,336	,295	,486	,347	,470	,262	,387	,464	,490	,490	,536	,449
	,590	1,000	,662	,718	,471	,496	,630	,581	,547	,408	,512	,303	,407	,687	,412	,526	,632	,497	,389	,621	,538
	,620	,662	1,000	,780	,684	,569	,516	,605	,526	,324	,339	,377	,424	,444	,390	,627	,589	,457	,563	,616	,572
	,629	,718	,780	1,000	,680	,473	,585	,506	,531	,397	,351	,458	,432	,516	,473	,621	,630	,412	,503	,587	,508
	,511	,471	,684	,680	1,000	,371	,288	,411	,380	,322	,150	,471	,346	,235	,540	,613	,513	,336	,496	,455	,476
	,473	,496	,569	,473	,371	1,000	,715	,637	,688	,449	,457	,311	,475	,506	,235	,522	,586	,480	,339	,589	,522
	,455	,630	,516	,585	,288	,715	1,000	,563	,660	,432	,539	,379	,479	,641	,307	,494	,630	,486	,351	,690	,554
	,378	,581	,605	,506	,411	,637	,563	1,000	,603	,411	,451	,273	,421	,396	,303	,510	,502	,402	,346	,520	,441
	,472	,547	,526	,531	,380	,688	,660	,603	1,000	,502	,446	,366	,554	,486	,326	,506	,612	,470	,293	,533	,449
	,336	,408	,324	,397	,322	,449	,432	,411	,502	1,000	,660	,446	,775	,383	,417	,384	,416	,362	,172	,472	,317
	,295	,512	,339	,351	,150	,457	,539	,451	,446	,660	1,000	,355	,671	,483	,299	,359	,371	,429	,301	,539	,483
	,486	,303	,377	,458	,471	,311	,379	,273	,366	,446	,355	1,000	,550	,330	,346	,286	,343	,474	,504	,411	,419
	,347	,407	,424	,432	,346	,475	,479	,421	,554	,775	,671	,550	1,000	,437	,447	,410	,496	,282	,256	,522	,442
	,470	,687	,444	,516	,235	,506	,641	,396	,486	,383	,483	,330	,437	1,000	,329	,478	,710	,474	,309	,557	,470
	,262	,412	,390	,473	,540	,235	,307	,303	,326	,417	,299	,346	,447	,329	1,000	,609	,474	,312	,241	,327	,306
	,387	,526	,627	,621	,613	,522	,494	,510	,506	,384	,359	,286	,410	,478	,609	1,000	,752	,457	,530	,594	,604
	,464	,632	,589	,630	,513	,586	,630	,502	,612	,416	,371	,343	,496	,710	,474	,752	1,000	,517	,478	,687	,642
	,490	,497	,457	,412	,336	,480	,486	,402	,470	,362	,429	,474	,282	,474	,312	,457	,517	1,000	,561	,600	,599
	,490	,389	,563	,503	,496	,339	,351	,346	,293	,172	,301	,504	,256	,309	,241	,530	,478	,561	1,000	,631	,732
	,536	,621	,616	,587	,455	,589	,690	,520	,533	,472	,539	,411	,522	,557	,327	,594	,687	,600	,631	1,000	,843
	,449	,538	,572	,508	,476	,522	,554	,441	,449	,317	,483	,419	,442	,470	,306	,604	,642	,599	,732	,843	1,000

a. Determinant = 1,27E-008

2. Step 2 after deletion of items IF1 and IM3

Correlation Matrix[a]

	IF2	IF3	IF4	IF5	IF6	IF7	IF8	IF9	IM1	IM2	IM4	IC1	IC2	IC3	IC4	IS1	IS2	IS3	IS4
Correlation	1,000	,662	,718	,471	,496	,630	,581	,547	,408	,512	,407	,687	,412	,526	,632	,497	,389	,621	,538
	,662	1,000	,780	,684	,569	,516	,605	,526	,324	,339	,424	,444	,390	,627	,589	,457	,563	,616	,572
	,718	,780	1,000	,680	,473	,585	,506	,531	,397	,351	,432	,516	,473	,621	,630	,412	,503	,587	,508
	,471	,684	,680	1,000	,371	,288	,411	,380	,322	,150	,346	,235	,540	,613	,513	,336	,496	,455	,476
	,496	,569	,473	,371	1,000	,715	,637	,688	,449	,457	,475	,506	,235	,522	,586	,480	,339	,589	,522
	,630	,516	,585	,288	,715	1,000	,563	,660	,432	,539	,479	,641	,307	,494	,630	,486	,351	,690	,554
	,581	,605	,506	,411	,637	,563	1,000	,603	,411	,451	,421	,396	,303	,510	,502	,402	,346	,520	,441
	,547	,526	,531	,380	,688	,660	,603	1,000	,502	,446	,554	,486	,326	,506	,612	,470	,293	,533	,449
	,408	,324	,397	,322	,449	,432	,411	,502	1,000	,660	,775	,383	,417	,384	,416	,362	,172	,472	,317
	,512	,339	,351	,150	,457	,539	,451	,446	,660	1,000	,671	,483	,299	,359	,371	,429	,301	,539	,483
	,407	,424	,432	,346	,475	,479	,421	,554	,775	,671	1,000	,437	,447	,410	,496	,282	,256	,522	,442
	,687	,444	,516	,235	,506	,641	,396	,486	,383	,483	,437	1,000	,329	,478	,710	,474	,309	,557	,470
	,412	,390	,473	,540	,235	,307	,303	,326	,417	,299	,447	,329	1,000	,609	,474	,312	,241	,327	,306
	,526	,627	,621	,613	,522	,494	,510	,506	,384	,359	,410	,478	,609	1,000	,752	,457	,530	,594	,604
	,632	,589	,630	,513	,586	,630	,502	,612	,416	,371	,496	,710	,474	,752	1,000	,517	,478	,687	,642
	,497	,457	,412	,336	,480	,486	,402	,470	,362	,429	,282	,474	,312	,457	,517	1,000	,561	,600	,599
	,389	,563	,503	,496	,339	,351	,346	,293	,172	,301	,256	,309	,241	,530	,478	,561	1,000	,631	,732
	,621	,616	,587	,455	,589	,690	,520	,533	,472	,539	,522	,557	,327	,594	,687	,600	,631	1,000	,843
	,538	,572	,508	,476	,522	,554	,441	,449	,317	,483	,442	,470	,306	,604	,642	,599	,732	,843	1,000

a. Determinant = 8,44E-008

3. Step 3 after deletion of item IF3.

Correlation Matrix[a]

	IF2	IF4	IF5	IF6	IF7	IF8	IF9	IM1	IM2	IM4	IC1	IC2	IC3	IC4	IS1	IS2	IS3	IS4
Correlation	1,000	,718	,471	,496	,630	,581	,547	,408	,512	,407	,687	,412	,526	,632	,497	,389	,621	,538
	,718	1,000	,680	,473	,585	,506	,531	,397	,351	,432	,516	,473	,621	,630	,412	,503	,587	,508
	,471	,680	1,000	,371	,288	,411	,380	,322	,150	,346	,235	,540	,613	,513	,336	,496	,455	,476
	,496	,473	,371	1,000	,715	,637	,688	,449	,457	,475	,506	,235	,522	,586	,480	,339	,589	,522
	,630	,585	,288	,715	1,000	,563	,660	,432	,539	,479	,641	,307	,494	,630	,486	,351	,690	,554
	,581	,506	,411	,637	,563	1,000	,603	,411	,451	,421	,396	,303	,510	,502	,402	,346	,520	,441
	,547	,531	,380	,688	,660	,603	1,000	,502	,446	,554	,486	,326	,506	,612	,470	,293	,533	,449
	,408	,397	,322	,449	,432	,411	,502	1,000	,660	,775	,383	,417	,384	,416	,362	,172	,472	,317
	,512	,351	,150	,457	,539	,451	,446	,660	1,000	,671	,483	,299	,359	,371	,429	,301	,539	,483
	,407	,432	,346	,475	,479	,421	,554	,775	,671	1,000	,437	,447	,410	,496	,282	,256	,522	,442
	,687	,516	,235	,506	,641	,396	,486	,383	,483	,437	1,000	,329	,478	,710	,474	,309	,557	,470
	,412	,473	,540	,235	,307	,303	,326	,417	,299	,447	,329	1,000	,609	,474	,312	,241	,327	,306
	,526	,621	,613	,522	,494	,510	,506	,384	,359	,410	,478	,609	1,000	,752	,457	,530	,594	,604
	,632	,630	,513	,586	,630	,502	,612	,416	,371	,496	,710	,474	,752	1,000	,517	,478	,687	,642
	,497	,412	,336	,480	,486	,402	,470	,362	,429	,282	,474	,312	,457	,517	1,000	,561	,600	,599
	,389	,503	,496	,339	,351	,346	,293	,172	,301	,256	,309	,241	,530	,478	,561	1,000	,631	,732
	,621	,587	,455	,589	,690	,520	,533	,472	,539	,522	,557	,327	,594	,687	,600	,631	1,000	,843
	,538	,508	,476	,522	,554	,441	,449	,317	,483	,442	,470	,306	,604	,642	,599	,732	,843	1,000

a. Determinant = 3,55E-007

4. Step 4 after deletion of items IF4.

Correlation Matrix[a]

	IF2	IF5	IF6	IF7	IF8	IF9	IM1	IM2	IM4	IC1	IC2	IC3	IC4	IS1	IS2	IS3	IS4
Correlation	1,000	,471	,496	,630	,581	,547	,408	,512	,407	,687	,412	,526	,632	,497	,389	,621	,538
	,471	1,000	,371	,288	,411	,380	,322	,150	,346	,235	,540	,613	,513	,336	,496	,455	,476
	,496	,371	1,000	,715	,637	,688	,449	,457	,475	,506	,235	,522	,586	,480	,339	,589	,522
	,630	,288	,715	1,000	,563	,660	,432	,539	,479	,641	,307	,494	,630	,486	,351	,690	,554
	,581	,411	,637	,563	1,000	,603	,411	,451	,421	,396	,303	,510	,502	,402	,346	,520	,441
	,547	,380	,688	,660	,603	1,000	,502	,446	,554	,486	,326	,506	,612	,470	,293	,533	,449
	,408	,322	,449	,432	,411	,502	1,000	,660	,775	,383	,417	,384	,416	,362	,172	,472	,317
	,512	,150	,457	,539	,451	,446	,660	1,000	,671	,483	,299	,359	,371	,429	,301	,539	,483
	,407	,346	,475	,479	,421	,554	,775	,671	1,000	,437	,447	,410	,496	,282	,256	,522	,442
	,687	,235	,506	,641	,396	,486	,383	,483	,437	1,000	,329	,478	,710	,474	,309	,557	,470
	,412	,540	,235	,307	,303	,326	,417	,299	,447	,329	1,000	,609	,474	,312	,241	,327	,306
	,526	,613	,522	,494	,510	,506	,384	,359	,410	,478	,609	1,000	,752	,457	,530	,594	,604
	,632	,513	,586	,630	,502	,612	,416	,371	,496	,710	,474	,752	1,000	,517	,478	,687	,642
	,497	,336	,480	,486	,402	,470	,362	,429	,282	,474	,312	,457	,517	1,000	,561	,600	,599
	,389	,496	,339	,351	,346	,293	,172	,301	,256	,309	,241	,530	,478	,561	1,000	,631	,732
	,621	,455	,589	,690	,520	,533	,472	,539	,522	,557	,327	,594	,687	,600	,631	1,000	,843
	,538	,476	,522	,554	,441	,449	,317	,483	,442	,470	,306	,604	,642	,599	,732	,843	1,000

a. Determinant = 1,31E-006

5. Step 5 after deletion of item IC4.

Correlation Matrix[a]

	IF2	IF5	IF6	IF7	IF8	IF9	IM1	IM2	IM4	IC1	IC2	IC3	IS1	IS2	IS3	IS4
Correlation	1,000	,471	,496	,630	,581	,547	,408	,512	,407	,687	,412	,526	,497	,389	,621	,538
	,471	1,000	,371	,288	,411	,380	,322	,150	,346	,235	,540	,613	,336	,496	,455	,476
	,496	,371	1,000	,715	,637	,688	,449	,457	,475	,506	,235	,522	,480	,339	,589	,522
	,630	,288	,715	1,000	,563	,660	,432	,539	,479	,641	,307	,494	,486	,351	,690	,554
	,581	,411	,637	,563	1,000	,603	,411	,451	,421	,396	,303	,510	,402	,346	,520	,441
	,547	,380	,688	,660	,603	1,000	,502	,446	,554	,486	,326	,506	,470	,293	,533	,449
	,408	,322	,449	,432	,411	,502	1,000	,660	,775	,383	,417	,384	,362	,172	,472	,317
	,512	,150	,457	,539	,451	,446	,660	1,000	,671	,483	,299	,359	,429	,301	,539	,483
	,407	,346	,475	,479	,421	,554	,775	,671	1,000	,437	,447	,410	,282	,256	,522	,442
	,687	,235	,506	,641	,396	,486	,383	,483	,437	1,000	,329	,478	,474	,309	,557	,470
	,412	,540	,235	,307	,303	,326	,417	,299	,447	,329	1,000	,609	,312	,241	,327	,306
	,526	,613	,522	,494	,510	,506	,384	,359	,410	,478	,609	1,000	,457	,530	,594	,604
	,497	,336	,480	,486	,402	,470	,362	,429	,282	,474	,312	,457	1,000	,561	,600	,599
	,389	,496	,339	,351	,346	,293	,172	,301	,256	,309	,241	,530	,561	1,000	,631	,732
	,621	,455	,589	,690	,520	,533	,472	,539	,522	,557	,327	,594	,600	,631	1,000	,843
	,538	,476	,522	,554	,441	,449	,317	,483	,442	,470	,306	,604	,599	,732	,843	1,000

a. Determinant = 6,20E-006

6. Step 6 after deletion of items IC1 and IF5.

Correlation Matrix[a]

	IF2	IF6	IF7	IF8	IF9	IM1	IM2	IM4	IC2	IC3	IS1	IS2	IS3	IS4
Correlation	1,000	,496	,630	,581	,547	,408	,512	,407	,412	,526	,497	,389	,621	,538
	,496	1,000	,715	,637	,688	,449	,457	,475	,235	,522	,480	,339	,589	,522
	,630	,715	1,000	,563	,660	,432	,539	,479	,307	,494	,486	,351	,690	,554
	,581	,637	,563	1,000	,603	,411	,451	,421	,303	,510	,402	,346	,520	,441
	,547	,688	,660	,603	1,000	,502	,446	,554	,326	,506	,470	,293	,533	,449
	,408	,449	,432	,411	,502	1,000	,660	,775	,417	,384	,362	,172	,472	,317
	,512	,457	,539	,451	,446	,660	1,000	,671	,299	,359	,429	,301	,539	,483
	,407	,475	,479	,421	,554	,775	,671	1,000	,447	,410	,282	,256	,522	,442
	,412	,235	,307	,303	,326	,417	,299	,447	1,000	,609	,312	,241	,327	,306
	,526	,522	,494	,510	,506	,384	,359	,410	,609	1,000	,457	,530	,594	,604
	,497	,480	,486	,402	,470	,362	,429	,282	,312	,457	1,000	,561	,600	,599
	,389	,339	,351	,346	,293	,172	,301	,256	,241	,530	,561	1,000	,631	,732
	,621	,589	,690	,520	,533	,472	,539	,522	,327	,594	,600	,631	1,000	,843
	,538	,522	,554	,441	,449	,317	,483	,442	,306	,604	,599	,732	,843	1,000

a. Determinant = 3,77E-005

Appendix 7.4 Total variance

1. Step 1 with all items.

Total Variance Explained

Component	Initial Eigenvalues			Extraction Sums of Squared Loadings			Rotation Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	10,676	50,839	50,839	10,676	50,839	50,839	5,313	25,301	25,301
2	1,728	8,228	59,067	1,728	8,228	59,067	3,469	16,517	41,819
3	1,341	6,387	65,454	1,341	6,387	65,454	3,393	16,158	57,976
4	1,217	5,797	71,251	1,217	5,797	71,251	2,788	13,275	71,251
5	,943	4,490	75,741						
6	,833	3,967	79,709						
7	,658	3,133	82,842						
8	,564	2,684	85,526						
9	,438	2,085	87,611						
10	,375	1,784	89,396						
11	,330	1,573	90,968						
12	,308	1,467	92,435						
13	,298	1,418	93,853						
14	,259	1,232	95,085						
15	,234	1,112	96,197						
16	,178	,845	97,042						
17	,152	,722	97,764						
18	,141	,671	98,436						
19	,133	,634	99,069						
20	,103	,490	99,560						
21	,092	,440	100,000						

Extraction Method: Principal Component Analysis.

2. Step 2 after deletion of items IF1 and IM3.

Total Variance Explained

Component	Initial Eigenvalues			Extraction Sums of Squared Loadings			Rotation Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	10,676	50,839	50,839	10,676	50,839	50,839	5,313	25,301	25,301
2	1,728	8,228	59,067	1,728	8,228	59,067	3,469	16,517	41,819
3	1,341	6,387	65,454	1,341	6,387	65,454	3,393	16,158	57,976
4	1,217	5,797	71,251	1,217	5,797	71,251	2,788	13,275	71,251
5	,943	4,490	75,741						
6	,833	3,967	79,709						
7	,658	3,133	82,842						
8	,564	2,684	85,526						
9	,438	2,085	87,611						
10	,375	1,784	89,396						
11	,330	1,573	90,968						
12	,308	1,467	92,435						
13	,298	1,418	93,853						
14	,259	1,232	95,085						
15	,234	1,112	96,197						
16	,178	,845	97,042						
17	,152	,722	97,764						
18	,141	,671	98,436						
19	,133	,634	99,069						
20	,103	,490	99,560						
21	,092	,440	100,000						

Extraction Method: Principal Component Analysis.

3. Step 3 after deletion of item IF3.

Total Variance Explained

Component	Initial Eigenvalues			Extraction Sums of Squared Loadings			Rotation Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	10,676	50,839	50,839	10,676	50,839	50,839	5,313	25,301	25,301
2	1,728	8,228	59,067	1,728	8,228	59,067	3,469	16,517	41,819
3	1,341	6,387	65,454	1,341	6,387	65,454	3,393	16,158	57,976
4	1,217	5,797	71,251	1,217	5,797	71,251	2,788	13,275	71,251
5	,943	4,490	75,741						
6	,833	3,967	79,709						
7	,658	3,133	82,842						
8	,564	2,684	85,526						
9	,438	2,085	87,611						
10	,375	1,784	89,396						
11	,330	1,573	90,968						
12	,308	1,467	92,435						
13	,298	1,418	93,853						
14	,259	1,232	95,085						
15	,234	1,112	96,197						
16	,178	,845	97,042						
17	,152	,722	97,764						
18	,141	,671	98,436						
19	,133	,634	99,069						
20	,103	,490	99,560						
21	,092	,440	100,000						

Extraction Method: Principal Component Analysis.

4. Step 4 after deletion of item IF4.

Total Variance Explained

Component	Initial Eigenvalues			Extraction Sums of Squared Loadings			Rotation Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	10,676	50,839	50,839	10,676	50,839	50,839	5,313	25,301	25,301
2	1,728	8,228	59,067	1,728	8,228	59,067	3,469	16,517	41,819
3	1,341	6,387	65,454	1,341	6,387	65,454	3,393	16,158	57,976
4	1,217	5,797	71,251	1,217	5,797	71,251	2,788	13,275	71,251
5	,943	4,490	75,741						
6	,833	3,967	79,709						
7	,658	3,133	82,842						
8	,564	2,684	85,526						
9	,438	2,085	87,611						
10	,375	1,784	89,396						
11	,330	1,573	90,968						
12	,308	1,467	92,435						
13	,298	1,418	93,853						
14	,259	1,232	95,085						
15	,234	1,112	96,197						
16	,178	,845	97,042						
17	,152	,722	97,764						
18	,141	,671	98,436						
19	,133	,634	99,069						
20	,103	,490	99,560						
21	,092	,440	100,000						

Extraction Method: Principal Component Analysis.

5. Step 5 after deletion of item IC4.

Total Variance Explained

Component	Initial Eigenvalues			Extraction Sums of Squared Loadings			Rotation Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	10,676	50,839	50,839	10,676	50,839	50,839	5,313	25,301	25,301
2	1,728	8,228	59,067	1,728	8,228	59,067	3,469	16,517	41,819
3	1,341	6,387	65,454	1,341	6,387	65,454	3,393	16,158	57,976
4	1,217	5,797	71,251	1,217	5,797	71,251	2,788	13,275	71,251
5	,943	4,490	75,741						
6	,833	3,967	79,709						
7	,658	3,133	82,842						
8	,564	2,684	85,526						
9	,438	2,085	87,611						
10	,375	1,784	89,396						
11	,330	1,573	90,968						
12	,308	1,467	92,435						
13	,298	1,418	93,853						
14	,259	1,232	95,085						
15	,234	1,112	96,197						
16	,178	,845	97,042						
17	,152	,722	97,764						
18	,141	,671	98,436						
19	,133	,634	99,069						
20	,103	,490	99,560						
21	,092	,440	100,000						

Extraction Method: Principal Component Analysis.

6. Step 6 after deletion of items IC1 and IF5.

Total Variance Explained

Component	Initial Eigenvalues			Extraction Sums of Squared Loadings			Rotation Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	10,676	50,839	50,839	10,676	50,839	50,839	5,313	25,301	25,301
2	1,728	8,228	59,067	1,728	8,228	59,067	3,469	16,517	41,819
3	1,341	6,387	65,454	1,341	6,387	65,454	3,393	16,158	57,976
4	1,217	5,797	71,251	1,217	5,797	71,251	2,788	13,275	71,251
5	,943	4,490	75,741						
6	,833	3,967	79,709						
7	,658	3,133	82,842						
8	,564	2,684	85,526						
9	,438	2,085	87,611						
10	,375	1,784	89,396						
11	,330	1,573	90,968						
12	,308	1,467	92,435						
13	,298	1,418	93,853						
14	,259	1,232	95,085						
15	,234	1,112	96,197						
16	,178	,845	97,042						
17	,152	,722	97,764						
18	,141	,671	98,436						
19	,133	,634	99,069						
20	,103	,490	99,560						
21	,092	,440	100,000						

Extraction Method: Principal Component Analysis.

Appendix 7.5 Communalities

1. Step 1 with all items.

Communalities

	Initial	Extraction
IF1	1,000	,519
IF2	1,000	,690
IF3	1,000	,754
IF4	1,000	,759
IF5	1,000	,823
IF6	1,000	,678
IF7	1,000	,755
IF8	1,000	,576
IF9	1,000	,654
IM1	1,000	,817
IM2	1,000	,735
IM3	1,000	,691
IM4	1,000	,842
IC1	1,000	,594
IC2	1,000	,666
IC3	1,000	,684
IC4	1,000	,711
IS1	1,000	,620
IS2	1,000	,829
IS3	1,000	,789
IS4	1,000	,778

Extraction Method: Principal Component Analysis.

2. Step 2 after deletion of items IF1 and IM3.

Communalities

	Initial	Extraction
IF2	1,000	,676
IF3	1,000	,754
IF4	1,000	,758
IF5	1,000	,805
IF6	1,000	,701
IF7	1,000	,774
IF8	1,000	,595
IF9	1,000	,687
IM1	1,000	,831
IM2	1,000	,777
IM4	1,000	,824
IC1	1,000	,586
IC2	1,000	,699
IC3	1,000	,713
IC4	1,000	,705
IS1	1,000	,603
IS2	1,000	,826
IS3	1,000	,822
IS4	1,000	,856

Extraction Method: Principal Component Analysis.

3. Step 3 after deletion of item IF3.

Communalities

	Initial	Extraction
IF2	1,000	,674
IF4	1,000	,727
IF5	1,000	,780
IF6	1,000	,692
IF7	1,000	,780
IF8	1,000	,567
IF9	1,000	,684
IM1	1,000	,839
IM2	1,000	,792
IM4	1,000	,837
IC1	1,000	,604
IC2	1,000	,727
IC3	1,000	,739
IC4	1,000	,741
IS1	1,000	,597
IS2	1,000	,830
IS3	1,000	,823
IS4	1,000	,858

Extraction Method: Principal Component Analysis.

4. Step 4 after deletion of item IF4.

Communalities

	Initial	Extraction
IF2	1,000	,642
IF5	1,000	,752
IF6	1,000	,703
IF7	1,000	,777
IF8	1,000	,576
IF9	1,000	,693
IM1	1,000	,840
IM2	1,000	,804
IM4	1,000	,838
IC1	1,000	,601
IC2	1,000	,762
IC3	1,000	,775
IC4	1,000	,761
IS1	1,000	,592
IS2	1,000	,830
IS3	1,000	,824
IS4	1,000	,857

Extraction Method: Principal Component Analysis.

5. Step 5 after deletion of item IC4.

Communalities

	Initial	Extraction
IF2	1,000	,639
IF5	1,000	,782
IF6	1,000	,731
IF7	1,000	,777
IF8	1,000	,637
IF9	1,000	,709
IM1	1,000	,833
IM2	1,000	,796
IM4	1,000	,838
IC1	1,000	,561
IC2	1,000	,757
IC3	1,000	,753
IS1	1,000	,595
IS2	1,000	,824
IS3	1,000	,823
IS4	1,000	,854

Extraction Method: Principal Component Analysis.

6. Step 6 after deletion of items IC1 and IF5.

Communalities

	Initial	Extraction
IF2	1,000	,604
IF6	1,000	,775
IF7	1,000	,747
IF8	1,000	,677
IF9	1,000	,738
IM1	1,000	,839
IM2	1,000	,770
IM4	1,000	,841
IC2	1,000	,903
IC3	1,000	,804
IS1	1,000	,589
IS2	1,000	,812
IS3	1,000	,827
IS4	1,000	,858

Extraction Method: Principal Component Analysis.

Appendix 7.6 Factor loadings

1. Step 1 with all items.

Rotated Component Matrix[a]

	Component			
	1	2	3	4
IF7	,781			
IF6	,751			
IC1	,690			
IF9	,689			,327
IF2	,683		,378	
IF8	,667			
IC4	,643	,308	,423	
IS2		,853		
IS4	,419	,737		
IS1	,380	,654		
IS3	,559	,618		
IM3		,555	,300	,540
IF1	,364	,482	,378	
IF5		,320	,835	
IC2			,712	,379
IF4	,466	,306	,660	
IC3	,464		,617	
IF3	,495	,376	,605	
IM1				,829
IM4	,300			,823
IM2	,443			,690

Extraction Method: Principal Component Analysis.
Rotation Method: Varimax with Kaiser Normalization.[a]

a. Rotation converged in 9 iterations.

2. Step 2 after deletion of items IF1 and IM3.

Rotated Component Matrix[a]

	Component			
	1	2	3	4
IF7	,785			
IF6	,762			
IF9	,724			,311
IF8	,677			
IC1	,660			
IF2	,657	,374		
IC4	,574	,436	,385	
IF5		,844		
IC2		,727		,405
IF4	,505	,656		
IC3	,358	,644	,372	
IF3	,511	,609	,347	
IS2		,329	,841	
IS4	,310		,816	
IS3	,464		,688	
IS1	,356		,653	
IM1				,845
IM4				,814
IM2	,347		,318	,745

Extraction Method: Principal Component Analysis.
Rotation Method: Varimax with Kaiser Normalization.[a]

a. Rotation converged in 7 iterations.

Rotated Component Matrix[a]

	Component			
	1	2	3	4
IF7	,797			
IF6	,755			
IF9	,727			,307
IC1	,696			
IF2	,671		,352	
IF8	,661			
IC4	,615	,371	,453	
IS2		,857		
IS4	,325	,817		
IS3	,475	,686		
IS1	,374	,643		
IF5			,817	
IC2			,776	,335
IC3	,393	,374	,653	
IF4	,512		,618	
IM1				,844
IM4				,821
IM2	,342	,306		,762

Extraction Method: Principal Component Analysis.
Rotation Method: Varimax with Kaiser Normalization.[a]

a. Rotation converged in 7 iterations.

Rotated Component Matrix[a]

	Component			
	1	2	3	4
IF7	,794			
IF6	,771			
IF9	,740			
IC1	,694			
IF8	,673			
IF2	,659	,300		
IC4	,634	,373		,451
IS2		,867		
IS4	,334	,816		
IS3	,478	,690	,300	
IS1	,385	,635		
IM1			,843	
IM4			,819	
IM2	,335	,304	,773	
IC2			,306	,804
IF5		,315		,786
IC3	,423	,375		,666

Extraction Method: Principal Component Analysis.
Rotation Method: Varimax with Kaiser Normalization.[a]

a. Rotation converged in 7 iterations.

5. Step 5 after deletion of item IC4.

Rotated Component Matrix[a]

	Component			
	1	2	3	4
IF6	,790			
IF7	,783	,306		
IF9	,751			
IF8	,716			
IF2	,640	,330		
IC1	,624	,303		
IS2		,863		
IS4	,310	,824		
IS3	,454	,703	,308	
IS1	,373	,644		
IM1			,838	
IM4			,825	
IM2	,334	,310	,766	
IF5		,311		,804
IC2			,324	,796
IC3	,396	,395		,651

Extraction Method: Principal Component Analysis.
Rotation Method: Varimax with Kaiser Normalization.[a]

a. Rotation converged in 7 iterations.

6. Step 6 after deletion of items IC1 and IF5.

Rotated Component Matrix[a]

	Component			
	1	2	3	4
IF6	,808			
IF9	,770		,303	
IF8	,756			
IF7	,744	,332		
IF2	,579	,371		
IS2		,882		
IS4		,844		
IS3	,425	,725	,330	
IS1	,338	,658		
IM1			,848	
IM4			,835	
IM2		,306	,771	
IC2				,899
IC3	,396	,451		,659

Extraction Method: Principal Component Analysis.
Rotation Method: Varimax with Kaiser Normalization.[a]

a. Rotation converged in 6 iterations.

Appendix 7.7 Reliability analysis

1. Step 1 with all items.

Reliability Statistics

Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
,949	,951	21

2. Step 2 after deletion of items IF1 and IM3.

Reliability Statistics

Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
,946	,948	19

3. Step 3 after deletion of item IF3.

Reliability Statistics

Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
,943	,944	18

4. Step 4 after deletion of item IF4.

Reliability Statistics

Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
,939	,940	17

5. Step 5 after deletion of item IC4.

Reliability Statistics

Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
,932	,934	16

6. Step 6 after deletion of items IC1 and IF5.

Reliability Statistics

Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
,928	,928	14

Item-Total Statistics

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Squared Multiple Correlation	Cronbach's Alpha if Item Deleted
IF2	66,81	136,923	,708	,571	,921
IF6	66,07	137,965	,714	,668	,921
IF7	66,40	134,303	,747	,693	,920
IF8	66,43	140,732	,664	,536	,922
IF9	65,97	136,898	,706	,629	,921
IM1	65,72	144,648	,596	,697	,925
IM2	65,85	143,624	,645	,611	,923
IM4	65,65	146,694	,643	,732	,924
IC2	65,89	146,301	,468	,504	,928
IC3	65,94	139,895	,699	,645	,921
IS1	66,87	137,710	,637	,537	,924
IS2	65,98	144,323	,550	,605	,926
IS3	66,49	134,454	,813	,812	,917
IS4	66,18	138,412	,739	,806	,920

Appendix 7.8 Syntax SPSS factor analysis transformational leadership

1.Factor analysis transformational leadership with all items.

```
FACTOR
  /VARIABLES IF1 IF2 IF3 IF4 IF5 IF6 IF7 IF8 IF9 IM1 IM2 IM3 IM4 IC1 IC2 IC3 IC4 IS1 IS2 IS3 IS4
  /MISSING LISTWISE
  /ANALYSIS IF1 IF2 IF3 IF4 IF5 IF6 IF7 IF8 IF9 IM1 IM2 IM3 IM4 IC1 IC2 IC3 IC4 IS1 IS2 IS3 IS4
  /PRINT UNIVARIATE INITIAL CORRELATION SIG DET KMO EXTRACTION ROTATION FSCORE
  /FORMAT SORT BLANK(.30)
  /PLOT EIGEN
  /CRITERIA FACTORS(4) ITERATE(25)
  /EXTRACTION PC
  /CRITERIA ITERATE(25)
  /ROTATION VARIMAX
  /METHOD=CORRELATION.
```

2. Factor analysis after deletion of items IF1 and IM3.

```
FACTOR
  /VARIABLES IF2 IF3 IF4 IF5 IF6 IF7 IF8 IF9 IM1 IM2 IM4 IC1 IC2 IC3 IC4 IS1 IS2 IS3 IS4
  /MISSING LISTWISE
  /ANALYSIS IF2 IF3 IF4 IF5 IF6 IF7 IF8 IF9 IM1 IM2 IM4 IC1 IC2 IC3 IC4 IS1 IS2 IS3 IS4
```

```
  /PRINT UNIVARIATE INITIAL CORRELATION SIG DET KMO EXTRACTION ROTATION FSCORE
  /FORMAT SORT BLANK(.30)
  /PLOT EIGEN
  /CRITERIA FACTORS(4) ITERATE(25)
  /EXTRACTION PC
  /CRITERIA ITERATE(25)
  /ROTATION VARIMAX
  /METHOD=CORRELATION.
```

3. Factor analysis after deletion of item IF3.

```
FACTOR
  /VARIABLES IF2 IF4 IF5 IF6 IF7 IF8 IF9 IM1 IM2 IM4 IC1 IC2 IC3 IC4 IS1 IS2 IS3 IS4
  /MISSING LISTWISE
  /ANALYSIS IF2 IF4 IF5 IF6 IF7 IF8 IF9 IM1 IM2 IM4 IC1 IC2 IC3 IC4 IS1 IS2 IS3 IS4
  /PRINT UNIVARIATE INITIAL CORRELATION SIG DET KMO EXTRACTION ROTATION FSCORE
  /FORMAT SORT BLANK(.30)
  /PLOT EIGEN
  /CRITERIA FACTORS(4) ITERATE(25)
  /EXTRACTION PC
  /CRITERIA ITERATE(25)
  /ROTATION VARIMAX
  /METHOD=CORRELATION.
```

4. Factor analysis after deletion of item IF4.

```
FACTOR
  /VARIABLES IF2 IF5 IF6 IF7 IF8 IF9 IM1 IM2 IM4 IC1 IC2 IC3 IC4 IS1 IS2 IS3 IS4
  /MISSING LISTWISE
  /ANALYSIS IF2 IF5 IF6 IF7 IF8 IF9 IM1 IM2 IM4 IC1 IC2 IC3 IC4 IS1 IS2 IS3 IS4
  /PRINT UNIVARIATE INITIAL CORRELATION SIG DET KMO EXTRACTION ROTATION FSCORE
  /FORMAT SORT BLANK(.30)
  /PLOT EIGEN
  /CRITERIA FACTORS(4) ITERATE(25)
  /EXTRACTION PC
  /CRITERIA ITERATE(25)
  /ROTATION VARIMAX
  /METHOD=CORRELATION.
```

5. Factor analysis after deletion of item IC4.

```
FACTOR
  /VARIABLES IF2 IF5 IF6 IF7 IF8 IF9 IM1 IM2 IM4 IC1 IC2 IC3 IS1 IS2 IS3 IS4
  /MISSING LISTWISE
  /ANALYSIS IF2 IF5 IF6 IF7 IF8 IF9 IM1 IM2 IM4 IC1 IC2 IC3 IS1 IS2 IS3 IS4
  /PRINT UNIVARIATE INITIAL CORRELATION SIG DET KMO EXTRACTION ROTATION FSCORE
  /FORMAT SORT BLANK(.30)
  /PLOT EIGEN
  /CRITERIA FACTORS(4) ITERATE(25)
  /EXTRACTION PC
  /CRITERIA ITERATE(25)
  /ROTATION VARIMAX
  /METHOD=CORRELATION.
```

6. Factor analysis after deletion of items IC1 and IF5.

```
FACTOR
  /VARIABLES IF2 IF6 IF7 IF8 IF9 IM1 IM2 IM4 IC2 IC3 IS1 IS2 IS3 IS4
  /MISSING LISTWISE
  /ANALYSIS IF2 IF6 IF7 IF8 IF9 IM1 IM2 IM4 IC2 IC3 IS1 IS2 IS3 IS4
  /PRINT UNIVARIATE INITIAL CORRELATION SIG DET KMO EXTRACTION ROTATION FSCORE
  /FORMAT SORT BLANK(.30)
  /PLOT EIGEN
  /CRITERIA FACTORS(4) ITERATE(25)
```

```
 /EXTRACTION PC
 /CRITERIA ITERATE(25)
 /ROTATION VARIMAX
 /METHOD=CORRELATION.
```

7. Reliability analysis.

```
RELIABILITY
 /VARIABLES=IF2 IF6 IF7 IF8 IF9 IM1 IM2 IM4 IC2 IC3 IS1 IS2 IS3 IS4
 /SCALE('ALL VARIABLES') ALL
 /MODEL=ALPHA
 /STATISTICS=DESCRIPTIVE SCALE CORR
 /SUMMARY=TOTAL CORR.
```

Appendix 8 Factor analysis laissez-faire leadership

Appendix 8.1 KMO, Bartlett's test, total variance explained

KMO and Bartlett's Test

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		,713
Bartlett's Test of Sphericity	Approx. Chi-Square	121,869
	df	6
	Sig.	,000

Correlation Matrix[a]

	LF1	LF2	LF3	LF4
Correlation	1,000	,419	,352	,470
	,419	1,000	,659	,563
	,352	,659	1,000	,393
	,470	,563	,393	1,000

a. Determinant = ,284

Total Variance Explained

	Initial Eigenvalues			Extraction Sums of Squared Loadings		
Component	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	2,439	60,967	60,967	2,439	60,967	60,967
2	,729	18,234	79,201			
3	,531	13,286	92,487			
4	,301	7,513	100,000			

Extraction Method: Principal Component Analysis.

Appendix 8.2 Communalities and factor loadings

Communalities

	Initial	Extraction
LF1	1,000	,484
LF2	1,000	,745
LF3	1,000	,605
LF4	1,000	,605

Extraction Method: Principal Component Analysis.

Component Matrix[a]

	Component
	1
LF2	,863
LF3	,778
LF4	,778
LF1	,696

Extraction Method: Principal Component Analysis.

a. 1 components extracted.

Rotated Component Matrix[a]

a. Only one component was extracted. The solution cannot be rotated.

Appendix 8.3 Reliability analysis laissez-faire leadership

Reliability Statistics

Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
,776	,784	4

Item-Total Statistics

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Squared Multiple Correlation	Cronbach's Alpha if Item Deleted
LF1	6,81	10,216	,506	,264	,761
LF2	6,95	9,785	,692	,550	,668
LF3	6,91	11,073	,564	,441	,734
LF4	6,27	8,785	,594	,383	,721

Appendix 8.4. Syntax SPSS factor analysis laissez-faire leadership

1. Factor analysis

```
FACTOR
  /VARIABLES LF1 LF2 LF3 LF4
  /MISSING LISTWISE
  /ANALYSIS LF1 LF2 LF3 LF4
  /PRINT UNIVARIATE INITIAL CORRELATION SIG DET KMO EXTRACTION ROTATION FSCORE
  /FORMAT SORT BLANK(.30)
  /PLOT EIGEN
  /CRITERIA FACTORS(1) ITERATE(25)
  /EXTRACTION PC
  /CRITERIA ITERATE(25)
  /ROTATION VARIMAX
  /METHOD=CORRELATION.
```

2. Reliability analysis

```
RELIABILITY
  /VARIABLES=LF1 LF2 LF3 LF4
  /SCALE('ALL VARIABLES') ALL
  /MODEL=ALPHA
  /STATISTICS=DESCRIPTIVE SCALE CORR
  /SUMMARY=TOTAL CORR.
```

Appendix 9 Factor analysis emotional intelligence

Appendix 9.1 KMO, Bartlett's test, correlation matrix and total variance explained

KMO and Bartlett's Test

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		,799
Bartlett's Test of Sphericity	Approx. Chi-Square	921,951
	df	120
	Sig.	,000

Correlation Matrix[a]

	OEA1	OEA2	OEA3	OEA4	UOE1	UOE2	UOE3	UOE4	SEA1	SEA2	SEA3	SEA4	ROE1	ROE2	ROE3	ROE4
OEA1	1,000	,640	,270	,580	,202	-,012	,302	,290	,415	,391	,366	,336	,137	,227	,237	,195
OEA2	,640	1,000	,323	,739	,370	,171	,374	,454	,529	,431	,352	,402	,115	,225	,322	,223
OEA3	,270	,323	1,000	,433	,102	-,344	,077	,230	,365	,274	,207	,036	-,323	-,318	-,074	-,140
OEA4	,580	,739	,433	1,000	,289	,092	,330	,393	,564	,585	,514	,343	,010	,108	,233	,093
UOE1	,202	,370	,102	,289	1,000	,250	,504	,481	,502	,384	,315	,351	,025	,071	,279	,196
UOE2	-,012	,171	-,344	,092	,250	1,000	,364	,176	,205	,140	,075	,186	,297	,367	,264	,247
UOE3	,302	,374	,077	,330	,504	,364	1,000	,693	,486	,474	,371	,456	,095	,060	,332	,135
UOE4	,290	,454	,230	,393	,481	,176	,693	1,000	,366	,314	,191	,389	-,058	,004	,142	-,004
SEA1	,415	,529	,365	,564	,502	,205	,486	,366	1,000	,769	,592	,279	,016	,108	,220	,158
SEA2	,391	,431	,274	,585	,384	,140	,474	,314	,769	1,000	,767	,386	,142	,132	,271	,239
SEA3	,366	,352	,207	,514	,315	,075	,371	,191	,592	,767	1,000	,496	,216	,191	,275	,306
SEA4	,336	,402	,036	,343	,351	,186	,456	,389	,279	,386	,496	1,000	,215	,180	,373	,238
ROE1	,137	,115	-,323	,010	,025	,297	,095	-,058	,016	,142	,216	,215	1,000	,808	,481	,706
ROE2	,227	,225	-,318	,108	,071	,367	,060	,004	,108	,132	,191	,180	,808	1,000	,437	,727
ROE3	,237	,322	-,074	,233	,279	,264	,332	,142	,220	,271	,275	,373	,481	,437	1,000	,576
ROE4	,195	,223	-,140	,093	,196	,247	,135	-,004	,158	,239	,306	,238	,706	,727	,576	1,000

a. Determinant = 4,863E-5

Total Variance Explained

Component	Initial Eigenvalues			Extraction Sums of Squared Loadings			Rotation Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	5,611	35,071	35,071	5,611	35,071	35,071	3,264	20,401	20,401
2	2,970	18,565	53,636	2,970	18,565	53,636	2,701	16,882	37,283
3	1,550	9,688	63,324	1,550	9,688	63,324	2,655	16,591	53,874
4	1,092	6,826	70,150	1,092	6,826	70,150	2,604	16,276	70,150
5	,855	5,346	75,496						
6	,759	4,742	80,238						
7	,593	3,705	83,943						
8	,542	3,385	87,327						
9	,473	2,958	90,286						
10	,365	2,279	92,565						
11	,273	1,707	94,272						
12	,249	1,553	95,825						
13	,213	1,329	97,154						
14	,176	1,101	98,256						
15	,165	1,029	99,285						
16	,114	,715	100,000						

Extraction Method: Principal Component Analysis.

Appendix 9.2 Communalities and factor loadings

Communalities

	Initial	Extraction
OEA1	1,000	,694
OEA2	1,000	,806
OEA3	1,000	,628
OEA4	1,000	,746
UOE1	1,000	,552
UOE2	1,000	,540
UOE3	1,000	,762
UOE4	1,000	,746
SEA1	1,000	,744
SEA2	1,000	,867
SEA3	1,000	,821
SEA4	1,000	,419
ROE1	1,000	,813
ROE2	1,000	,820
ROE3	1,000	,517
ROE4	1,000	,749

Extraction Method: Principal Component Analysis.

Rotated Component Matrix[a]

	Component			
	1	2	3	4
ROE2	,901			
ROE1	,899			
ROE4	,842			
ROE3	,628			
UOE3		,818		
UOE4		,770	,370	
UOE1		,667		,310
UOE2	,397	,578		
SEA4		,465		
OEA2		,334	,799	
OEA1			,787	
OEA4			,738	,401
OEA3	-,425		,582	,307
SEA2				,861
SEA3				,855
SEA1		,345	,323	,722

Extraction Method: Principal Component Analysis.
Rotation Method: Varimax with Kaiser Normalization.[a]

a. Rotation converged in 5 iterations.

Appendix 9.3 Reliability analysis emotional intelligence

Reliability Statistics

Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
,853	,864	16

Item-Total Statistics

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Squared Multiple Correlation	Cronbach's Alpha if Item Deleted
OEA1	80,75	87,220	,532	,499	,842
OEA2	80,82	84,109	,673	,697	,834
OEA3	81,31	95,166	,123	,486	,869
OEA4	80,60	88,667	,640	,702	,838
UOE1	80,64	86,839	,497	,435	,844
UOE2	80,81	93,590	,260	,412	,856
UOE3	80,45	87,604	,587	,677	,840
UOE4	80,24	91,800	,480	,624	,846
SEA1	80,71	86,592	,670	,731	,836
SEA2	80,56	87,360	,674	,766	,836
SEA3	80,81	87,509	,604	,684	,839
SEA4	80,22	92,093	,542	,449	,844
ROE1	80,40	93,737	,307	,727	,853
ROE2	80,46	93,423	,368	,774	,850
ROE3	81,03	86,272	,491	,459	,845
ROE4	80,49	91,485	,443	,676	,847

Appendix 9.4 Step 2 Factor analysis after deletion of items SEA4 and OEA3

KMO and Bartlett's Test

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		,793
Bartlett's Test of Sphericity	Approx. Chi-Square	810,747
	df	91
	Sig.	,000

Correlation Matrix[a]

	OEA1	OEA2	OEA4	UOE1	UOE2	UOE3	UOE4	SEA1	SEA2	SEA3	ROE1	ROE2	ROE3	ROE4
OEA1	1,000	,640	,580	,202	-,012	,302	,290	,415	,391	,366	,137	,227	,237	,195
OEA2	,640	1,000	,739	,370	,171	,374	,454	,529	,431	,352	,115	,225	,322	,223
OEA4	,580	,739	1,000	,289	,092	,330	,393	,564	,585	,514	,010	,108	,233	,093
UOE1	,202	,370	,289	1,000	,250	,504	,481	,502	,384	,315	,025	,071	,279	,196
UOE2	-,012	,171	,092	,250	1,000	,364	,176	,205	,140	,075	,297	,367	,264	,247
UOE3	,302	,374	,330	,504	,364	1,000	,693	,486	,474	,371	,095	,060	,332	,135
UOE4	,290	,454	,393	,481	,176	,693	1,000	,366	,314	,191	-,058	,004	,142	-,004
SEA1	,415	,529	,564	,502	,205	,486	,366	1,000	,769	,592	,016	,108	,220	,158
SEA2	,391	,431	,585	,384	,140	,474	,314	,769	1,000	,767	,142	,132	,271	,239
SEA3	,366	,352	,514	,315	,075	,371	,191	,592	,767	1,000	,216	,191	,275	,306
ROE1	,137	,115	,010	,025	,297	,095	-,058	,016	,142	,216	1,000	,808	,481	,706
ROE2	,227	,225	,108	,071	,367	,060	,004	,108	,132	,191	,808	1,000	,437	,727
ROE3	,237	,322	,233	,279	,264	,332	,142	,220	,271	,275	,481	,437	1,000	,576
ROE4	,195	,223	,093	,196	,247	,135	-,004	,158	,239	,306	,706	,727	,576	1,000

a. Determinant = ,000

Total Variance Explained

	Initial Eigenvalues			Extraction Sums of Squared Loadings			Rotation Sums of Squared Loadings		
Component	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	5,210	37,211	37,211	5,210	37,211	37,211	3,060	21,859	21,859
2	2,647	18,909	56,120	2,647	18,909	56,120	2,531	18,080	39,939
3	1,422	10,155	66,275	1,422	10,155	66,275	2,392	17,083	57,021
4	1,087	7,768	74,042	1,087	7,768	74,042	2,383	17,021	74,042
5	,753	5,377	79,419						
6	,613	4,379	83,798						
7	,557	3,982	87,780						
8	,418	2,988	90,767						
9	,333	2,376	93,143						
10	,261	1,867	95,010						
11	,215	1,534	96,544						
12	,192	1,369	97,914						
13	,167	1,195	99,108						
14	,125	,892	100,000						

Extraction Method: Principal Component Analysis.

Communalities

	Initial	Extraction
OEA1	1,000	,750
OEA2	1,000	,825
OEA4	1,000	,772
UOE1	1,000	,579
UOE2	1,000	,522
UOE3	1,000	,760
UOE4	1,000	,745
SEA1	1,000	,764
SEA2	1,000	,880
SEA3	1,000	,821
ROE1	1,000	,820
ROE2	1,000	,822
ROE3	1,000	,526
ROE4	1,000	,779

Extraction Method: Principal Component Analysis.

Rotated Component Matrix[a]

	Component			
	1	2	3	4
ROE1	,904			
ROE2	,897			
ROE4	,864			
ROE3	,640			
SEA2		,874		
SEA3		,864		
SEA1		,734	,313	,356
OEA1			,831	
OEA2			,829	
OEA4		,428	,752	
UOE3				,805
UOE4			,381	,765
UOE1		,319		,681
UOE2	,412			,576

Extraction Method: Principal Component Analysis.
Rotation Method: Varimax with Kaiser Normalization.[a]

a. Rotation converged in 5 iterations.

Appendix 9.5 Reliability analysis after deletion of items SEA4 and OEA3

Reliability Statistics

Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
,861	,864	14

Item-Total Statistics

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Squared Multiple Correlation	Cronbach's Alpha if Item Deleted
OEA1	70,24	74,305	,499	,496	,853
OEA2	70,31	71,529	,636	,689	,844
OEA4	70,09	75,840	,587	,683	,848
UOE1	70,13	73,427	,490	,423	,854
UOE2	70,30	78,172	,326	,346	,862
UOE3	69,94	74,097	,583	,671	,848
UOE4	69,73	78,421	,446	,606	,855
SEA1	70,20	73,657	,638	,697	,845
SEA2	70,05	74,230	,649	,765	,845
SEA3	70,30	74,475	,573	,634	,848
ROE1	69,89	78,543	,371	,726	,859
ROE2	69,95	78,250	,439	,758	,855
ROE3	70,52	72,232	,515	,443	,852
ROE4	69,98	76,888	,485	,664	,853

Appendix 9.6 Step 3 Factor analysis after deletion of item UOE2

KMO and Bartlett's Test

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		,804
Bartlett's Test of Sphericity	Approx. Chi-Square	773,746
	df	78
	Sig.	,000

KMO and Bartlett's Test

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		,804
Bartlett's Test of Sphericity	Approx. Chi-Square	773,746
	df	78
	Sig.	,000

Correlation Matrix[a]

	OEA1	OEA2	OEA4	UOE1	UOE3	UOE4	SEA1	SEA2	SEA3	ROE1	ROE2	ROE3	ROE4
Correlation	1,000	,640	,580	,202	,302	,290	,415	,391	,366	,137	,227	,237	,195
	,640	1,000	,739	,370	,374	,454	,529	,431	,352	,115	,225	,322	,223
	,580	,739	1,000	,289	,330	,393	,564	,585	,514	,010	,108	,233	,093
	,202	,370	,289	1,000	,504	,481	,502	,384	,315	,025	,071	,279	,196
	,302	,374	,330	,504	1,000	,693	,486	,474	,371	,095	,060	,332	,135
	,290	,454	,393	,481	,693	1,000	,366	,314	,191	-,058	,004	,142	-,004
	,415	,529	,564	,502	,486	,366	1,000	,769	,592	,016	,108	,220	,158
	,391	,431	,585	,384	,474	,314	,769	1,000	,767	,142	,132	,271	,239
	,366	,352	,514	,315	,371	,191	,592	,767	1,000	,216	,191	,275	,306
	,137	,115	,010	,025	,095	-,058	,016	,142	,216	1,000	,808	,481	,706
	,227	,225	,108	,071	,060	,004	,108	,132	,191	,808	1,000	,437	,727
	,237	,322	,233	,279	,332	,142	,220	,271	,275	,481	,437	1,000	,576
	,195	,223	,093	,196	,135	-,004	,158	,239	,306	,706	,727	,576	1,000

a. Determinant = ,000

Total Variance Explained

	Initial Eigenvalues			Extraction Sums of Squared Loadings			Rotation Sums of Squared Loadings		
Component	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	5,102	39,249	39,249	5,102	39,249	39,249	2,941	22,625	22,625
2	2,589	19,912	59,161	2,589	19,912	59,161	2,474	19,033	41,658
3	1,254	9,649	68,810	1,254	9,649	68,810	2,321	17,855	59,513
4	1,087	8,360	77,170	1,087	8,360	77,170	2,295	17,657	77,170
5	,619	4,758	81,928						
6	,567	4,361	86,289						
7	,430	3,306	89,595						
8	,356	2,735	92,329						
9	,271	2,088	94,417						
10	,224	1,725	96,142						
11	,194	1,491	97,634						
12	,179	1,374	99,007						
13	,129	,993	100,000						

Extraction Method: Principal Component Analysis.

Communalities

	Initial	Extraction
OEA1	1,000	,735
OEA2	1,000	,834
OEA4	1,000	,802
UOE1	1,000	,627
UOE3	1,000	,770
UOE4	1,000	,796
SEA1	1,000	,767
SEA2	1,000	,882
SEA3	1,000	,814
ROE1	1,000	,825
ROE2	1,000	,811
ROE3	1,000	,563
ROE4	1,000	,804

Extraction Method: Principal Component Analysis.

Rotated Component Matrix[a]

	Component			
	1	2	3	4
ROE1	,906			
ROE2	,886			
ROE4	,880			
ROE3	,666			
SEA2		,870		
SEA3		,856		
SEA1		,734	,323	,350
OEA2			,833	
OEA1			,821	
OEA4		,429	,770	
UOE4			,317	,831
UOE3				,821
UOE1				,727

Extraction Method: Principal Component Analysis.
Rotation Method: Varimax with Kaiser Normalization.[a]

a. Rotation converged in 5 iterations.

Appendix 9.7 Reliability analysis after deletion of item UOE2

Reliability Statistics

Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
,862	,865	13

Item-Total Statistics

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Squared Multiple Correlation	Cronbach's Alpha if Item Deleted
OEA1	65,03	66,050	,531	,461	,853
OEA2	65,10	63,808	,648	,687	,845
OEA4	64,88	67,824	,608	,682	,849
UOE1	64,92	65,994	,481	,418	,857
UOE3	64,73	66,825	,562	,626	,851
UOE4	64,52	70,575	,445	,595	,857
SEA1	64,99	65,949	,644	,696	,846
SEA2	64,84	66,338	,666	,765	,845
SEA3	65,09	66,446	,596	,629	,849
ROE1	64,68	71,048	,348	,726	,863
ROE2	64,74	70,841	,410	,735	,859
ROE3	65,31	64,883	,504	,443	,856
ROE4	64,77	69,250	,476	,661	,856

Appendix 9.8 Syntax SPSS factor analysis emotional intelligence

1. Factor analysis emotional intelligence

```
FACTOR
  /VARIABLES OEA1 OEA2 OEA3 OEA4 UOE1 UOE2 UOE3 UOE4 SEA1 SEA2 SEA3 SEA4 ROE1 ROE2
ROE3 ROE4
  /MISSING LISTWISE
  /ANALYSIS OEA1 OEA2 OEA3 OEA4 UOE1 UOE2 UOE3 UOE4 SEA1 SEA2 SEA3 SEA4 ROE1 ROE2
ROE3 ROE4
  /PRINT UNIVARIATE INITIAL CORRELATION SIG DET KMO EXTRACTION ROTATION FSCORE
  /FORMAT SORT BLANK(.30)
  /PLOT EIGEN
  /CRITERIA FACTORS(4) ITERATE(25)
  /EXTRACTION PC
  /CRITERIA ITERATE(25)
  /ROTATION VARIMAX
  /METHOD=CORRELATION.
```

2. Reliability analysis emotional intelligence

```
RELIABILITY
  /VARIABLES=OEA1 OEA2 OEA3 OEA4 UOE1 UOE2 UOE3 UOE4 SEA1 SEA2 SEA3 SEA4 ROE1 ROE2
ROE3 ROE4
  /SCALE('ALL VARIABLES') ALL
  /MODEL=ALPHA
  /STATISTICS=DESCRIPTIVE SCALE CORR
  /SUMMARY=TOTAL CORR.
```

3. Factor analysis after deletion of items SEA4 and OEA3

```
FACTOR
  /VARIABLES OEA1 OEA2 OEA4 UOE1 UOE2 UOE3 UOE4 SEA1 SEA2 SEA3 ROE1 ROE2 ROE3 ROE4
  /MISSING LISTWISE
  /ANALYSIS OEA1 OEA2 OEA4 UOE1 UOE2 UOE3 UOE4 SEA1 SEA2 SEA3 ROE1 ROE2 ROE3 ROE4
  /PRINT UNIVARIATE INITIAL CORRELATION SIG DET KMO EXTRACTION ROTATION FSCORE
  /FORMAT SORT BLANK(.30)
  /PLOT EIGEN
  /CRITERIA FACTORS(4) ITERATE(25)
  /EXTRACTION PC
  /CRITERIA ITERATE(25)
  /ROTATION VARIMAX
  /METHOD=CORRELATION.
```

4. Reliability analysis after deletion of items SEA4 and OEA3

```
RELIABILITY
  /VARIABLES=OEA1 OEA2 OEA4 UOE1 UOE2 UOE3 UOE4 SEA1 SEA2 SEA3 ROE1 ROE2 ROE3 ROE4
  /SCALE('ALL VARIABLES') ALL
  /MODEL=ALPHA
  /STATISTICS=DESCRIPTIVE SCALE CORR
  /SUMMARY=TOTAL CORR.
```

5. Factor analysis after deletion of item UOE2

```
 FACTOR
  /VARIABLES OEA1 OEA2 OEA4 UOE1 UOE3 UOE4 SEA1 SEA2 SEA3 ROE1 ROE2 ROE3 ROE4
  /MISSING LISTWISE
  /ANALYSIS OEA1 OEA2 OEA4 UOE1 UOE3 UOE4 SEA1 SEA2 SEA3 ROE1 ROE2 ROE3 ROE4
```

```
  /PRINT UNIVARIATE INITIAL CORRELATION SIG DET KMO EXTRACTION ROTATION FSCORE
  /FORMAT SORT BLANK(.30)
  /PLOT EIGEN
  /CRITERIA FACTORS(4) ITERATE(25)
  /EXTRACTION PC
  /CRITERIA ITERATE(25)
  /ROTATION VARIMAX
  /METHOD=CORRELATION.
```

6. Reliability analysis after deletion of item UOE2

```
RELIABILITY
  /VARIABLES=OEA1 OEA2 OEA4 UOE1 UOE3 UOE4 SEA1 SEA2 SEA3 ROE1 ROE2 ROE3 ROE4
  /SCALE('ALL VARIABLES') ALL
  /MODEL=ALPHA
  /STATISTICS=DESCRIPTIVE SCALE CORR
  /SUMMARY=TOTAL CORR.
```

Appendix 10 Factor analysis Collectivism

Appendix 10.1 KMO, Bartlett's test, correlation matrix and total variance.

KMO and Bartlett's Test

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		,758
Bartlett's Test of Sphericity	Approx. Chi-Square	260,478
	df	15
	Sig.	,000

Correlation Matrix[a]

	C1	C2	C3	C4	C5	C6
Correlation	1,000	,645	,299	,528	,473	,429
	,645	1,000	,507	,374	,491	,498
	,299	,507	1,000	,255	,356	,396
	,528	,374	,255	1,000	,621	,451
	,473	,491	,356	,621	1,000	,748
	,429	,498	,396	,451	,748	1,000

a. Determinant = ,067

Total Variance Explained

	Initial Eigenvalues			Extraction Sums of Squared Loadings		
Component	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	3,385	56,420	56,420	3,385	56,420	56,420
2	,869	14,489	70,910			
3	,732	12,203	83,112			
4	,521	8,691	91,803			
5	,280	4,669	96,472			
6	,212	3,528	100,000			

Extraction Method: Principal Component Analysis.

Appendix 10.2 Communalities and factor loadings

Communalities

	Initial	Extraction
C1	1,000	,569
C2	1,000	,611
C3	1,000	,353
C4	1,000	,520
C5	1,000	,699
C6	1,000	,634

Extraction Method: Principal Component Analysis.

Component Matrix[a]

	Component
	1
C5	,836
C6	,796
C2	,781
C1	,754
C4	,721
C3	,594

Extraction Method: Principal Component Analysis.

a. 1 components extracted.

Rotated Component Matrix[a]

a. Only one component was extracted. The solution cannot be rotated.

Appendix 10.3 Reliability analysis Collectivism

Reliability Statistics

Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
,842	,842	6

Item-Total Statistics

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Squared Multiple Correlation	Cronbach's Alpha if Item Deleted
C1	24,36	31,364	,624	,517	,816
C2	24,42	31,034	,647	,553	,812
C3	24,10	34,919	,453	,291	,844
C4	24,61	28,685	,593	,464	,823
C5	25,17	26,627	,750	,666	,787
C6	25,69	27,226	,682	,591	,803

Appendix 10.4 Factor analysis after deletion of item C3

KMO and Bartlett's Test

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		,740
Bartlett's Test of Sphericity	Approx. Chi-Square	228,260
	df	10
	Sig.	,000

Correlation Matrix[a]

	C1	C2	C4	C5	C6
Correlation	1,000	,645	,528	,473	,429
	,645	1,000	,374	,491	,498
	,528	,374	1,000	,621	,451
	,473	,491	,621	1,000	,748
	,429	,498	,451	,748	1,000

a. Determinant = ,094

Total Variance Explained

	Initial Eigenvalues			Extraction Sums of Squared Loadings		
Component	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	3,109	62,177	62,177	3,109	62,177	62,177
2	,762	15,238	77,415			
3	,613	12,261	89,676			
4	,302	6,043	95,719			
5	,214	4,281	100,000			

Extraction Method: Principal Component Analysis.

Communalities

	Initial	Extraction
C1	1,000	,600
C2	1,000	,574
C4	1,000	,564
C5	1,000	,731
C6	1,000	,640

Extraction Method: Principal Component Analysis.

Component Matrix[a]

	Component 1
C5	,855
C6	,800
C1	,774
C2	,758
C4	,751

Extraction Method: Principal Component Analysis.

a. 1 components extracted.

Rotated Component Matrix[a]

a. Only one component was extracted. The solution cannot be rotated.

Appendix 10.5 Reliability analysis after deletion of item C3

Reliability Statistics

Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
,844	,847	5

Item-Total Statistics

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Squared Multiple Correlation	Cronbach's Alpha if Item Deleted
C1	18,79	25,258	,631	,513	,820
C2	18,85	25,503	,606	,484	,825
C4	19,04	22,665	,610	,464	,825
C5	19,60	20,949	,762	,666	,779
C6	20,12	21,723	,673	,583	,807

Appendix 10.6 Syntax SPSS factor analysis Collectivism

1. Factor analysis Collectivism

```
FACTOR
  /VARIABLES C1 C2 C3 C4 C5 C6
  /MISSING LISTWISE
  /ANALYSIS C1 C2 C3 C4 C5 C6
  /PRINT UNIVARIATE INITIAL CORRELATION SIG DET KMO EXTRACTION ROTATION FSCORE
  /FORMAT SORT BLANK(.30)
  /PLOT EIGEN
  /CRITERIA FACTORS(1) ITERATE(25)
  /EXTRACTION PC
  /CRITERIA ITERATE(25)
  /ROTATION VARIMAX
  /METHOD=CORRELATION.
```

2. Reliability analysis Collectivism

```
RELIABILITY
  /VARIABLES=C1 C2 C3 C4 C5 C6
  /SCALE('ALL VARIABLES') ALL
  /MODEL=ALPHA
  /STATISTICS=DESCRIPTIVE SCALE CORR
  /SUMMARY=TOTAL CORR.
```

3. Factor analysis after deletion of item C3

```
FACTOR
  /VARIABLES C1 C2 C4 C5 C6
  /MISSING LISTWISE
  /ANALYSIS C1 C2 C4 C5 C6
  /PRINT UNIVARIATE INITIAL CORRELATION SIG DET KMO EXTRACTION ROTATION FSCORE
  /FORMAT SORT BLANK(.30)
  /PLOT EIGEN
  /CRITERIA FACTORS(1) ITERATE(25)
  /EXTRACTION PC
  /CRITERIA ITERATE(25)
  /ROTATION VARIMAX
  /METHOD=CORRELATION.
```

4. Reliability analysis after deletion of item C3

```
RELIABILITY
  /VARIABLES=C1 C2 C4 C5 C6
  /SCALE('ALL VARIABLES') ALL
  /MODEL=ALPHA
  /STATISTICS=DESCRIPTIVE SCALE CORR
  /SUMMARY=TOTAL CORR.
```

Appendix 11 Multiple regression analysis (MRA)

Appendix 11.1 Bivariate analysis

Coefficients[a]

Model		Collinearity Statistics	
		Tolerance	VIF
1	TActL	,757	1,322
	TFormL	,682	1,466
	LF	,771	1,297
	TactL_x_EI	,547	1,829
	TFormL_x_EI	,428	2,335
	LF_x_EI	,821	1,218
	TactL_x_C	,582	1,718
	TformL_x_C	,472	2,119
	LF_x_C	,873	1,145

a. Dependent Variable: JS

Appendix 11.2 Assumption of independence of error terms

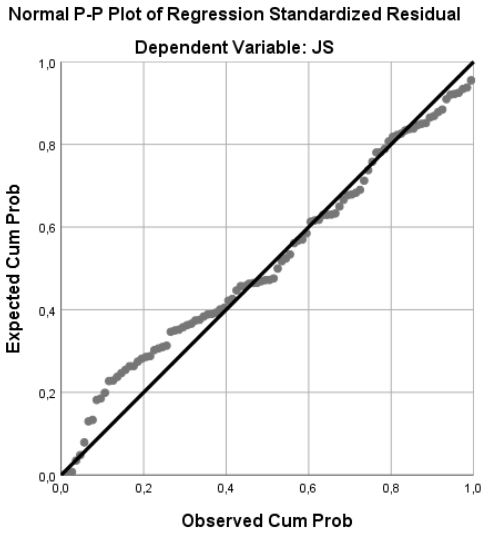
Model Summary[b]

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	,548[a]	,300	,230	2,07478	2,045

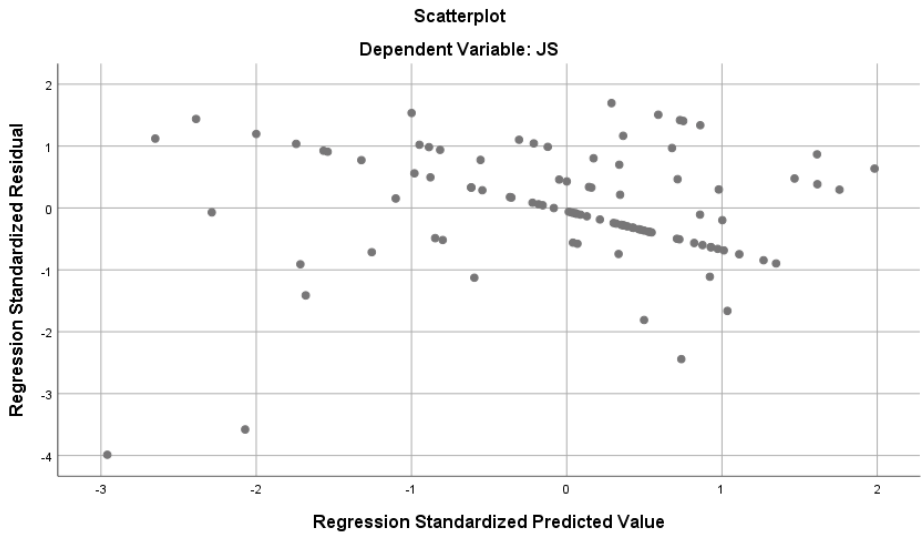
a. Predictors: (Constant), LF_x_C, TFormL, TactL_x_EI, LF_x_EI, TactL_x_C, LF, TActL, TformL_x_C, TFormL_x_EI

b. Dependent Variable: JS

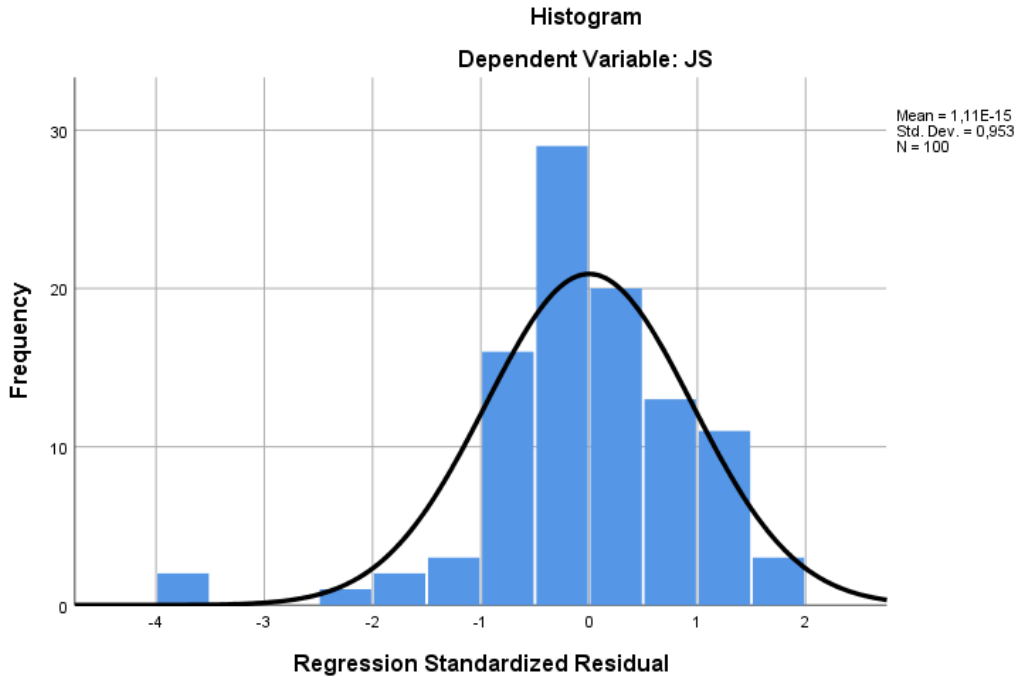
Appendix 11.3 Assumption of linearity



Appendix 11.4 Assumption of homoskedasticity



Appendix 11.5 Assumption of normality



Appendix 11.6 Model summary and ANOVA table

Model Summary[e]

		Model			
		1	2	3	4
R		,418[a]	,550[b]	,572[c]	,584[d]
R Square		,175	,302	,328	,342
Adjusted R Square		,092	,206	,208	,195
Std. Error of the Estimate		2,25330	2,10735	2,10522	2,12181
Change Statistics	R Square Change	,175	,127	,025	,014
	F Change	2,119	5,299	1,059	,564
	df1	9	3	3	3
	df2	90	87	84	81
	Sig. F Change	,036	,002	,371	,640
Durbin-Watson					2,262

a. Predictors: (Constant), Organizational context_Dummy, Gender_Dummy, Age_3 Dummy, Education dummy, Job_tenure Dummy, Job_tenure Dummy, Age_2 Dummy, Job_tenure Dummy, Education dummy

b. Predictors: (Constant), Organizational context_Dummy, Gender_Dummy, Age_3 Dummy, Education dummy, Job_tenure Dummy, Job_tenure Dummy, Age_2 Dummy, Job_tenure Dummy, Education dummy, TActL, LF, TFormL

c. Predictors: (Constant), Organizational context_Dummy, Gender_Dummy, Age_3 Dummy, Education dummy, Job_tenure Dummy, Job_tenure Dummy, Age_2 Dummy, Job_tenure Dummy, Education dummy, TActL, LF, TFormL, TactL_x_EI, LF_x_EI, TFormL_x_EI

d. Predictors: (Constant), Organizational context_Dummy, Gender_Dummy, Age_3 Dummy, Education dummy, Job_tenure Dummy, Job_tenure Dummy, Age_2 Dummy, Job_tenure Dummy, Education dummy, TActL, LF, TFormL, TactL_x_EI, LF_x_EI, TFormL_x_EI, LF_x_C, TactL_x_C, TformL_x_C

e. Dependent Variable: JS

ANOVA[a]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	96,829	9	10,759	2,119	,036[b]
	Residual	456,961	90	5,077		
	Total	553,790	99			
2	Regression	167,428	12	13,952	3,142	,001[c]
	Residual	386,362	87	4,441		
	Total	553,790	99			
3	Regression	181,507	15	12,100	2,730	,002[d]
	Residual	372,283	84	4,432		
	Total	553,790	99			
4	Regression	189,122	18	10,507	2,334	,005[e]
	Residual	364,668	81	4,502		
	Total	553,790	99			

a. Dependent Variable: JS

b. Predictors: (Constant), Organizational context_Dummy, Gender_Dummy, Age_3 Dummy, Education dummy, Job_tenure Dummy, Job_tenure Dummy, Age_2 Dummy, Job_tenure Dummy, Education dummy

c. Predictors: (Constant), Organizational context_Dummy, Gender_Dummy, Age_3 Dummy, Education dummy, Job_tenure Dummy, Job_tenure Dummy, Age_2 Dummy, Job_tenure Dummy, Education dummy, TActL, LF, TFormL

d. Predictors: (Constant), Organizational context_Dummy, Gender_Dummy, Age_3 Dummy, Education dummy, Job_tenure Dummy, Job_tenure Dummy, Age_2 Dummy, Job_tenure Dummy, Education dummy, TActL, LF, TFormL, TactL_x_EI, LF_x_EI, TFormL_x_EI

e. Predictors: (Constant), Organizational context_Dummy, Gender_Dummy, Age_3 Dummy, Education dummy, Job_tenure Dummy, Job_tenure Dummy, Age_2 Dummy, Job_tenure Dummy, Education dummy, TActL, LF, TFormL, TactL_x_EI, LF_x_EI, TFormL_x_EI, LF_x_C, TactL_x_C, TformL_x_C

Appendix 11.7 Syntax SPSS multiple regression analysis

1. Aggregating items into variables

```
COMPUTE JS=SUM(JS2,JS3,JS4,JS5).
EXECUTE.
COMPUTE TactL=SUM(CR1,CR2,CR3,CR4,MA1,MA2,MA3,MA4).
EXECUTE.
COMPUTE LF=SUM(LF1,LF2,LF3,LF4).
EXECUTE.
COMPUTE EI=SUM(OEA1,OEA2,OEA4,UOE1,UOE3,UOE4,SEA1,SEA2,SEA3,ROE1,ROE2,ROE3,ROE4).
EXECUTE.
COMPUTE C=SUM(C1,C2,C4,C5,C6).
EXECUTE.
COMPUTE TformL=SUM(IF2,IF6,IF7,IF8,IF9,IM1,IM2,IM4,IC2,IC3,IS1,IS2,IS4).
EXECUTE.
DESCRIPTIVES VARIABLES=JS TactL LF EI C TformL
  /STATISTICS=MEAN.
```

2. Descriptive statistics of IV's and DV

```
FREQUENCIES VARIABLES=JS TActL TFormL LF EI C
  /NTILES=4
  /STATISTICS=STDDEV VARIANCE MINIMUM MAXIMUM MEAN MEDIAN MODE SKEWNESS
SESKEW KURTOSIS SEKURT
  /HISTOGRAM NORMAL
  /ORDER=ANALYSIS.
```

3.Transformation interaction effects

```
COMPUTE TACTLxEI_mean=(TactL-35.600) * (EI - 70.3000).
EXECUTE.
COMPUTE TFORMLxEI_mean=(TformL - 66.4900) * (EI - 70.3000).
EXECUTE.
COMPUTE LFxEI_mean=(LF - 8.9800) * (EI - 70.3000).
EXECUTE.
COMPUTE TACTLxC_mean=(TactL - 35.6300) * (C - 24.1000).
EXECUTE.
COMPUTE TFORMLxC_mean=(TformL - 66.4900) * (C - 24.1000).
EXECUTE.
COMPUTE LFxC_mean=(LF - 8.9800) * (C - 24.1000).
EXECUTE.
```

4. Bivariate analysis -Multicollinearity

```
EGRESSION
  /MISSING LISTWISE
  /STATISTICS COLLIN TOL
  /CRITERIA=PIN(.05) POUT(.10)
  /NOORIGIN
  /DEPENDENT JS
  /METHOD=ENTER TActL TFormL LF TactL_x_EI TFormL_x_EI LF_x_EI TactL_x_C TformL_x_C
LF_x_C.
```

5. Assumptions of multiple regression

```
REGRESSION
  /MISSING LISTWISE
  /STATISTICS COEFF OUTS R ANOVA
  /CRITERIA=PIN(.05) POUT(.10)
  /NOORIGIN
  /DEPENDENT JS
  /METHOD=ENTER TActL TFormL LF TactL_x_EI TFormL_x_EI LF_x_EI TactL_x_C TformL_x_C
LF_x_C
```

```
 /PARTIALPLOT ALL
 /RESIDUALS DURBIN HISTOGRAM(ZRESID) NORMPROB(ZRESID)
 /SAVE ZPRED COOK ZRESID.
```

6. Recoding control variables into dummy variables

```
RECODE GENDER (1=1) (ELSE=0) INTO Male_D.
VARIABLE LABELS  Male_D 'Male_Dummy'.
EXECUTE.
RECODE ORGANIZATIONAL_CONTEXT (1=1) (ELSE=0) INTO Profit_D.
VARIABLE LABELS  Profit_D 'Profit_Dummy'.
EXECUTE.
RECODE AGE_regrouped (2=1) (ELSE=0) INTO Age_2.
VARIABLE LABELS  Age_2 'Age_2'.
EXECUTE.
RECODE AGE_regrouped (3=1) (ELSE=0) INTO Age_3.
VARIABLE LABELS  Age_3 'Age_3 Dummy'.
EXECUTE.
DATASET ACTIVATE DataSet1.

RECODE JobTenure_regrouped (1=1) (ELSE=0) INTO Job_tenure1.
VARIABLE LABELS  Job_tenure1 'Job_tenure Dummy'.
EXECUTE.
RECODE JobTenure_regrouped (2=1) (ELSE=0) INTO Job_tenure2.
VARIABLE LABELS  Job_tenure2 'Job_tenure Dummy'.
EXECUTE.
RECODE JobTenure_regrouped (3=1) (ELSE=0) INTO Job_tenure3.
VARIABLE LABELS  Job_tenure3 'Job_tenure Dummy'.
EXECUTE.
RECODE JobTenure_regrouped (4=1) (ELSE=0) INTO Job_tenure4.
VARIABLE LABELS  Job_tenure4 'Job_tenure Dummy'.
EXECUTE.
RECODE EDUCATION_regrouped (1=1) (ELSE=0) INTO HighSchool.
VARIABLE LABELS  HighSchool 'Education dummy'.
EXECUTE.
RECODE EDUCATION_regrouped (2=1) (ELSE=0) INTO MBO.
VARIABLE LABELS  MBO 'Education dummy'.
EXECUTE.
RECODE EDUCATION_regrouped (3=1) (ELSE=0) INTO HBO.
VARIABLE LABELS  HBO 'Education dummy'.
EXECUTE.
RECODE EDUCATION_regrouped (4=1) (ELSE=0) INTO WO.
VARIABLE LABELS  WO 'Education dummy'.
```

7. Multiple regression analysis

```
REGRESSION
 /DESCRIPTIVES MEAN STDDEV CORR SIG N
 /MISSING LISTWISE
 /STATISTICS COEFF OUTS R ANOVA CHANGE
 /CRITERIA=PIN(.05) POUT(.10)
 /NOORIGIN
 /DEPENDENT JS
 /METHOD=ENTER Male_D Age_2 Age_3 Job_tenure2 Job_tenure3 Job_tenure4 MBO HBO WO Profit_D
 /METHOD=ENTER TActL TFormL LF
 /METHOD=ENTER TactL_x_EI TFormL_x_EI LF_x_EI
 /METHOD=ENTER TactL_x_C TformL_x_C LF_x_C
 /RESIDUALS DURBIN
 /SAVE COOK.
```

Appendix 12 Robustness check: PROCESS modelling tool

Appendix 12.1 Output PROCESS

1. Output interaction effect Transactional leadership * Emotional Intelligence.

```
Run MATRIX procedure:

***************** PROCESS Procedure for SPSS Version 3.5 *****************

          Written by Andrew F. Hayes, Ph.D.       www.afhayes.com
    Documentation available in Hayes (2018). www.guilford.com/p/hayes3

**************************************************************************
Model  : 1
    Y  : JS
    X  : TActL
    W  : EI

Sample
Size:  100

**************************************************************************
OUTCOME VARIABLE:
 JS

Model Summary
          R       R-sq        MSE          F        df1        df2
p
      ,3932      ,1546     4,8768     5,8518     3,0000    96,0000
,0010

Model
              coeff         se          t          p       LLCI       ULCI
constant    24,0414      ,2259   106,4156      ,0000    23,5929    24,4898
TActL         ,0190      ,0263      ,7217      ,4722     -,0332      ,0712
EI            ,1009      ,0266     3,7951      ,0003      ,0481      ,1537
Int_1         ,0040      ,0028     1,4398      ,1532     -,0015      ,0096

Product terms key:
 Int_1    :        TActL    x        EI

Test(s) of highest order unconditional interaction(s):
       R2-chng          F        df1        df2          p
X*W      ,0183     2,0729     1,0000    96,0000      ,1532
----------
    Focal predict: TActL    (X)
          Mod var: EI       (W)

*********************** ANALYSIS NOTES AND ERRORS ************************

Level of confidence for all confidence intervals in output:
  95,0000

NOTE: The following variables were mean centered prior to analysis:
          EI       TActL

------ END MATRIX -----
```

2. Output interaction effect Transformational leadership * Emotional Intelligence.

```
Run MATRIX procedure:

***************** PROCESS Procedure for SPSS Version 3.5 *****************

          Written by Andrew F. Hayes, Ph.D.       www.afhayes.com
    Documentation available in Hayes (2018). www.guilford.com/p/hayes3

**************************************************************************
Model  : 1
    Y  : JS
    X  : TFormL
    W  : EI

Sample
Size:  100

**************************************************************************
OUTCOME VARIABLE:
 JS

Model Summary
          R       R-sq        MSE          F        df1        df2
p
      ,5091      ,2591     4,2738    11,1931     3,0000    96,0000
,0000

Model
              coeff         se          t          p       LLCI       ULCI
constant    24,1637      ,2262   106,8016      ,0000    23,7146    24,6128
TFormL        ,0841      ,0207     4,0596      ,0001      ,0430      ,1252
EI            ,0362      ,0285     1,2730      ,2061     -,0203      ,0927
Int_1        -,0011      ,0018     -,5839      ,5606     -,0046      ,0025

Product terms key:
 Int_1    :        TFormL   x        EI

Test(s) of highest order unconditional interaction(s):
       R2-chng          F        df1        df2          p
X*W      ,0026      ,3410     1,0000    96,0000      ,5606
----------
    Focal predict: TFormL   (X)
          Mod var: EI       (W)

DATA LIST FREE/
   TFormL     EI         JS         .

************************ ANALYSIS NOTES AND ERRORS ************************

Level of confidence for all confidence intervals in output:
  95,0000

NOTE: The following variables were mean centered prior to analysis:
          EI       TFormL

------ END MATRIX -----
```

3. Output interaction effect Laissez-faire leadership * Emotional Intelligence.

```
Run MATRIX procedure:

***************** PROCESS Procedure for SPSS Version 3.5 *****************

          Written by Andrew F. Hayes, Ph.D.       www.afhayes.com
    Documentation available in Hayes (2018). www.guilford.com/p/hayes3

**************************************************************************
Model  : 1
    Y  : JS
    X  : LF
    W  : EI

Sample
Size:  100

**************************************************************************
OUTCOME VARIABLE:
 JS

Model Summary
          R       R-sq        MSE          F        df1        df2
p
      ,3838      ,1473     4,9191     5,5269     3,0000    96,0000
,0015

Model
              coeff         se          t          p       LLCI       ULCI
constant    24,1211      ,2225   108,3910      ,0000    23,6793    24,5628
LF           -,0559      ,0596     -,9380      ,3506     -,1741      ,0624
EI            ,0943      ,0262     3,6054      ,0005      ,0424      ,1463
Int_1        -,0047      ,0078     -,6065      ,5456     -,0202      ,0108

Product terms key:
 Int_1    :        LF       x        EI

Test(s) of highest order unconditional interaction(s):
       R2-chng          F        df1        df2          p
X*W      ,0033      ,3679     1,0000    96,0000      ,5456
----------
    Focal predict: LF       (X)
          Mod var: EI       (W)
*********************** ANALYSIS NOTES AND ERRORS ************************

Level of confidence for all confidence intervals in output:
  95,0000

NOTE: The following variables were mean centered prior to analysis:
          EI       LF

------ END MATRIX -----
```

4. Output interaction effect Transactional leadership * Collectivism.

```
Run MATRIX procedure:

***************** PROCESS Procedure for SPSS Version 3.5 *****************

          Written by Andrew F. Hayes, Ph.D.       www.afhayes.com
```

```
    Documentation available in Hayes (2018). www.guilford.com/p/hayes3

**************************************************************************
Model  : 1
    Y  : JS
    X  : TActL
    W  : C

Sample
Size:  100

**************************************************************************
OUTCOME VARIABLE:
 JS

Model Summary
          R       R-sq        MSE          F        df1        df2
p
      ,1805      ,0326     5,5808     1,0774     3,0000    96,0000
,3625

Model
              coeff         se          t          p       LLCI       ULCI
constant    24,0666      ,2450    98,2147      ,0000    23,5802    24,5530
TActL         ,0366      ,0288     1,2710      ,2068     -,0206      ,0937
C             ,0245      ,0422      ,5790      ,5639     -,0594      ,1083
Int_1         ,0029      ,0044      ,6669      ,5064     -,0058      ,0117

Product terms key:
 Int_1    :        TActL    x        C

Test(s) of highest order unconditional interaction(s):
       R2-chng          F        df1        df2          p
X*W      ,0045      ,4448     1,0000    96,0000      ,5064
----------
    Focal predict: TActL    (X)
          Mod var: C        (W)
*********************** ANALYSIS NOTES AND ERRORS ************************

Level of confidence for all confidence intervals in output:
  95,0000

NOTE: The following variables were mean centered prior to analysis:
          C        TActL

------ END MATRIX -----
```

5. Output interaction effect Transformational leadership * Collectivism.

```
Run MATRIX procedure:

***************** PROCESS Procedure for SPSS Version 3.5 *****************

          Written by Andrew F. Hayes, Ph.D.       www.afhayes.com
    Documentation available in Hayes (2018). www.guilford.com/p/hayes3

**************************************************************************
Model  : 1
    Y  : JS
    X  : TFormL
    W  : C
```

```
Sample
Size:  100

************************************************************************
OUTCOME VARIABLE:
 JS

Model Summary
          R       R-sq        MSE          F        df1        df2
p
      ,5010      ,2510     4,3209    10,7216     3,0000    96,0000
,0000

Model
              coeff         se          t          p       LLCI       ULCI
constant    24,1140      ,2180   110,6125      ,0000    23,6812    24,5467
TFormL        ,1094      ,0198     5,5295      ,0000      ,0701      ,1487
C            -,0487      ,0394    -1,2365      ,2193     -,1270      ,0295
Int_1        -,0001      ,0024     -,0604      ,9519     -,0049      ,0046

Product terms key:
 Int_1    :        TFormL   x        C

Test(s) of highest order unconditional interaction(s):
       R2-chng          F        df1        df2          p
X*W      ,0000      ,0037     1,0000    96,0000      ,9519
----------
    Focal predict: TFormL   (X)
          Mod var: C        (W)

*********************** ANALYSIS NOTES AND ERRORS ************************

Level of confidence for all confidence intervals in output:
  95,0000

NOTE: The following variables were mean centered prior to analysis:
          C        TFormL

------ END MATRIX -----
```

6. Output interaction effect Laissez-faire leadership * Collectivism.

```
Run MATRIX procedure:

***************** PROCESS Procedure for SPSS Version 3.5 *****************

          Written by Andrew F. Hayes, Ph.D.       www.afhayes.com
    Documentation available in Hayes (2018). www.guilford.com/p/hayes3

************************************************************************
Model  : 1
    Y  : JS
    X  : LF
    W  : C

Sample
Size:  100

************************************************************************
```

```
OUTCOME VARIABLE:
 JS

Model Summary
          R       R-sq        MSE          F        df1        df2
p
      ,1224      ,0150     5,6823      ,4863     3,0000    96,0000
,6926

Model
              coeff         se          t          p       LLCI       ULCI
constant    24,1069      ,2473    97,4651      ,0000    23,6159    24,5978
LF           -,0466      ,0633     -,7362      ,4634     -,1722      ,0790
C             ,0310      ,0420      ,7378      ,4624     -,0524      ,1144
Int_1        -,0006      ,0127     -,0475      ,9622     -,0259      ,0247

Product terms key:
 Int_1    :        LF       x        C

Test(s) of highest order unconditional interaction(s):
       R2-chng          F        df1        df2          p
X*W      ,0000      ,0023     1,0000    96,0000      ,9622
----------
    Focal predict: LF       (X)
          Mod var: C        (W)

************************ ANALYSIS NOTES AND ERRORS ************************

Level of confidence for all confidence intervals in output:
  95,0000

NOTE: The following variables were mean centered prior to analysis:
          C        LF

------ END MATRIX -----
```

Appendix 12.2 Syntax SPSS PROCESS

```
* Encoding: UTF-8.

/* PROCESS version 3.5 */.
/* Written by Andrew F. Hayes */.
/* www.afhayes.com */.
/* www.processmacro.org */.
/* Copyright 2017-2020 by Andrew F. Hayes */.
/* Documented in http://www.guilford.com/p/hayes3 */.
/* PROCESS workshop schedule at http://www.processmacro.org/workshops.html */.

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set printback=off.
```

Appendix 13 Research integrity form

Research Integrity Form - Master thesis

Name: Lindsay Wenas	Student number: S1046877
RU e-mail address: Lindsay.Wenas@student.ru.nl	Master specialisation: International Business

Thesis title: Lead the right way. *The impact of leadership styles, emotional intelligence and collectivism on job satisfaction.*
Brief description of the study: this study aimed to extend existing literature on leadership theories by empirically examining the main effects of transactional, transformational and laissez-faire leadership on the employee's job satisfaction. Furthermore, the objective of this study was to extend the empirical usage of the CVSCALE and to provide newly acquired knowledge on the possible moderating effects of emotional intelligence and individual-level collectivism in order to facilitate academics and managers with more knowledge regarding job satisfaction through an effective manager-employee relationship.

It is my responsibility to follow the university's code of academic integrity and any relevant academic or professional guidelines in the conduct of my study. This includes:

- providing original work or proper use of references;
- providing appropriate information to all involved in my study;
- requesting informed consent from participants;
- transparency in the way data is processed and represented;
- ensuring confidentiality in the storage and use of data;

If there is any significant change in the question, design or conduct over the course of the research, I will complete another Research Integrity Form.

Breaches of the code of conduct with respect to academic integrity (as described / referred to in the thesis handbook) should and will be forwarded to the examination board. Acting contrary to the code of conduct can result in declaring the thesis invalid

Student's Signature: _____ **Date:** 13/07/20

To be signed by supervisor

I have instructed the student about ethical issues related to their specific study. I hereby declare that I will challenge him / her on ethical aspects through their investigation and to act on any violations that I may encounter.

Supervisor's Signature: Inge Lako-Helmhout **Date:** 14/7/2020

Appendix 14 Consent form

Rights and duties of the user

As a consequence of this consent form a user of the theses repository may use the thesis for private study and/or educational and research purposes, in accordance with the provisions of the Copyright Act (Auteurswet), with full mention of the name of the student and the location of the thesis.

Student number: S1046877

Student name : Lindsay Wenas

Thesis title : Lead the right way. *The impact of leadership styles, emotional intelligence and collectivism on job satisfaction.*

■ Yes, I grant permission to make available my thesis with the above title in the Radboud thesis Repository.

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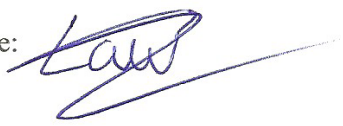
□ No, I do not grant permission to make available my thesis with the above title in the Radboud thesis Repository (permanent embargo).

Signature:  Date: 14/07/20