THE ROLE OF EMOTIONAL INTELLIGENCE IN TRANSFORMATIONAL LEADERSHIP: A LEADER MEMBER EXCHANGE PERSPECTIVE

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DECLARATION

By submitting this thesis, I declare that *The Role of Emotional Intelligence in Transformational Leadership: A Leader Member Exchange Perspective*, in its entirety is my own, original work, that I am the owner of the copyright thereof (unless to the extent explicitly otherwise stated) and that I have not previously in its entirety or in part submitted it for obtaining any qualification.

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ABSTRACT

The Transformational Leadership style has shown that it elicits improved performance in followers and that emotion plays an important part in the leadership process. The goal of the present study is to investigate the role of emotional intelligence in the effectiveness of leadership in organisations through high Leader Member Exchange (LMX) relationships. The overarching research initiating question can be framed as “Does high emotional intelligence in leaders lead to higher LMX relationships?”.

Through the synthesis of literature, the study proposes that leadership style and high-quality leader member exchange relationships have a profound impact on follower performance. It is hypothesized that emotional intelligence in both leaders and followers would have a positive impact in the quality of the exchange. Transformational leaders make use of emotional intelligence to understand the emotional needs of their followers, which in turn results in a high-quality relationship between the leader and their followers. High quality LMX relationships typically result in higher levels of follower commitment and performance. However, the mediating role of emotional intelligence between Transformational Leadership, LMX and follower performance have not been explored fully in the management literature and to date, there has been very little research exploring the sequential chain of influence between these variables.

The current study aims to contribute to the body of knowledge in the fields of leadership, emotional intelligence, LMX and unit level performance. The research follows a quantitative approach. The sample for this research project consists of managers and employees in the banking sector. The biographical characteristics of the sample will include age, gender, educational level, years of service, type of employment and job level. The targeted sample size is between 300-350 employees working in the financial services industry in the Western Cape. The goal of the study was to examine the complex nomological network of relationships between Transformational Leadership, LMX, Emotional Intelligence, and unit level performance.

The findings of the study indicate that the proposed model could be considered a credible representation of how emotional intelligence, LMX, and transformational leadership interact to influence unit level performance.
Key words: Transformational leadership, Leader-member exchange (LMX), emotional intelligence, Unit level performance, job characteristics, autonomy
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A leader is one who knows the way, goes the way, and shows the way. —John Maxwell
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1 INTRODUCTION

1.1 Background of the Study

Organizational leadership is a dual focused management approach where the leader need to focus on the interest of the organisation at large as well as the individual employee (Khator, 2012). Wagner and Hollenbeck (2015) contend that competitive advantage for an organization is centered on the people selected to lead an organization. The sustainability of organizations is fundamentally dependent on its human resources. Leaders are said to influence followers’ unit level performance through building quality relationships and teams (Kovjanić, Schuh, Jonas, Quaquebeke, & Van Dick, 2012). One of the most important mechanisms to attain these elusive goals is through the effective coordination of work activities.

Transformational Leadership is often regarded as the leadership style that is most effective in building team morale and high follower performance. Bass (1990b, p.21) explained the impact of Transformational Leadership on followers, noting that leaders adopting this style essentially “broaden and elevate the interests of their employees, when they generate awareness and acceptance of the purposes and mission of the group, and when they stir their employees to look beyond their own self-interest for the good of the group.”

Although the links between Transformational Leadership and follower performance are well established in literature (Dvir, Eden, Avolio, & Shamir, 2002; Bartram & Casimir, 2007; Umayz, 2015; Buil, Martínez & Matute, 2019) much less is understood about the psychological mechanism that takes place in the social interaction between the leader and follower. Stated differently, what is the impact of leadership on follower experiences based on psychological safety and empowerment embedded in the relationship. For this reason, the social exchange in the reciprocal relationship lies at the heart of Transformational Leadership theory and team effectiveness.

Recently, scholars have begun paying more attention to the dynamic formation of work relationships, and the establishment of trust between leaders and followers, rather than mainly focusing on innate traits of leaders. Logically, leaders with virtuous attributes are likely to be seen as being authentic and visionary by followers, but that does not necessarily translate to follower commitment and performance. There are numerous variables that can influence leadership performance such as personality, integrity, leadership style and values (Kolzow (2014). However,
few of these attributes have been linked to the effective social exchanges that take place between leaders and followers. Leader Member Exchange and emotional intelligence are key transmission variables between leaderships and the resulting high-quality relationships in followers (Little, Gooty & Williams, 2016). However, the mechanism is not linear and may be complex to understand. The current study argues that emotional intelligence is not always universally researched, or acknowledged, as a key attribute used by leaders to understand and gauge followers’ emotions. In this study, it is argued that emotional intelligence is a key ingredient in the formation of high quality LMX relationships.

In addition to the quality of the social exchange relationship, it is argued that contextual factors have an impact on the link between unit level performance and LMX. Given the psychological safety provided by transformational leaders, followers are able to work more independently and autonomously. Autonomy in high quality LMX relationships often results in high performance and extra role behaviours of followers. The reason for this is that followers take ownership of outputs and reciprocate the trust placed in follower by leaders (Volmer, Spurk & Nissen, 2012). For this reason, autonomy has been included as a key variable, along with emotional intelligence, to explain the nomological network of relationships between transformational leadership, LMX and unit level performance.

1.2 Research Problem

The link between leadership and occupational performance is a well-researched topic in organizational psychology. However, the current study aims to contribute to the existing literature by building a conceptual model that contains both contextual factors (Job characteristics), interpersonal attributes (Transformational Leadership) and relationship dyads (Leader Member Exchange).

1.3 Objectives of the Study

The objectives of the study are conceptualized in response to the research problem presented in the preceding section. The primary research objective of the study is concerned with exploring the leadership and contextual variables that shape performance in the workplace by considering the role of LMX, emotional intelligence, and job autonomy. The outcome of this investigation is a complex network of variables that are grouped together in a conceptual model through several direct, indirect, and mediated relationships.
1.4 Selected Variables of the Study

The conceptual model aims to explain the complex sequence of relationships that mediate and moderate the relationship between Transformational Leadership and unit level performance. Emotional intelligence, LMX and job autonomy are included as transmission variables in the leadership-performance sequence. The aim is to understand and empirically validate the complex and dynamic linkages between the variables in shaping unit level performance in organisations.

1.5 Overview of the Thesis

Chapter 1 outlined the background to the research problem, the research objectives and proposed conceptual model. The individual hypotheses that make up the conceptual model were delineated.

Chapter 2 will provide a review of the literature relating to Transformational Leadership, LMX, Emotional Intelligence and Job Autonomy. The literature review is used to develop a theoretical understanding of the substantive research hypotheses proposed by the study, as well as a sufficient understanding of their implications.

Chapter 3 will provide an overview of the research design that was used in the study. These include the sampling technique, data collection methodology, measurement instruments and data analysis techniques.

Chapter 4 will present the results and analysis of the data collected for the study. The chapter highlights the strength and direction of the relationships between the variables, as well as an interpretation of the results.

Chapter 5 provides a synthesis of the research findings, and a conclusion based on the results and analysis of the findings. Additionally, the chapter highlights future recommendations, managerial implications and the limitations of the study.
2 LITERATURE REVIEW

2.1 Introduction

Globalization has presented both challenges and opportunities for organizations in recent decades. Organizations in the 21st century are less hierarchical and flatter than during the preceding century and the leadership role has shifted from one leader to many managers having leadership qualities (Lee and Edmondson, 2017). Undeniably, there are still many organizations today who make use of a point-and-direct leadership style in managing their human resources. Today however, the new world of work has brought about vast changes and a centralised leadership structures with consolidated power becoming more inefficient as the rate of change increases.

Job instability and shorted periods of tenure in organisations have created the need for a more flexible leadership approach. The rise of working groups and policy institutes has led to virtual jobs allowing a customised approach to work arrangements. Couple these changes with large scale demographic changes (younger age cohorts are entering the workforce) in the workplace, and it becomes apparent, that top-down hierarchical leadership is probably not well suited for this modern-day work environment. The implementation of E-leadership has become prevalent and more emphasis is placed on trust between leader and member (Nohe & Hertel, 2017).

In the 1950’s, the concern for leadership was to break jobs up into meaningful sub-tasks in order to promote specialization. The primary focus was on efficiency and little or no attention was paid to the motivational aspects of the work. By the 1980’s and 1990’s, organisations around the world had begun to experience strong and sustained economic growth and the focus was on global expansion. During this period, there was a significant structural change in the global economy away from primary sectors towards the services industry. Knowledge workers and graduates were in high demand and low supply. This necessitated organisations to rethink the way they attract and retain the most talented workers. Organisations started paying attention to the value proposition they offer to attract top talent. During this era, organisations started introducing various job enrichment programmes to make work more attractive for high potential employees.

This new way of conducting work and organising teams challenged the prevailing leadership structures that were popular at the time. Due to the mobility of knowledge workers, simple incentives or sanctions were not enough to drive optimal performance. Organisational structure also became flatter and organic in contrast to the traditional functional organisational structure. The leader’s main objective was to keep multidisciplinary teams motivated and intact.
Transformational leadership emerged as a managerial philosophy that was well suited for this new world of work as we know it today. Based on the original research by Bass (1990), various leadership theories emerged including servant leadership (Parris & Peahey, 2013), authentic leadership (Avolio & Gardner, 2005), ethical leadership (Yukl, 2006) and emotional intelligence leadership (Salovey & Mayer, 1990).

More recently, leadership theory and research have moved away from the trait-based perspective of leadership and started focussing on the relational elements between leaders and followers. Thus, the focus is much less on the innate ability and traits of leaders, and more on the emotional mechanisms that are used by leaders to establish high quality relationships with followers.

Leaders with virtues attributes are likely to be seen as authentic and visionary by followers, but that does not necessarily translate to follower commitment and performance. The current study argues that emotional intelligence is not always universally researched or acknowledged as a key attribute used by leaders to understand and gauge followers’ emotions (Makkar & Basu, 2019). In this study it is argued that emotional intelligence is a key ingredient in the formation of high-quality relationships with followers.

### 2.2 Research Initiating Question

The link between leadership and organizational performance is a well-researched topic in organizational psychology (Jing & Avery, 2008; Knies, Jacobsen & Tummers, 2016), however the current study aims to contribute to the existing literature by building a conceptual model that contains both contextual factors (Autonomy), interpersonal attributes (Transformational Leadership) and relationship dyads (Leader Member Exchange).

### 2.3 Background on Leadership

Leadership has many definitions and remains an interest in the field of management (Schneider, 2002). It plays an integral part of organizational success and the concept of leadership can be defined in various ways. The earliest understanding of leadership by Burns (1978, p.2) was that “it is one of the most observed phenomena on earth, but also one of the least understood.”

The subject of leadership and what good leadership is, will remain a captivating topic, specifically because this phenomenon of leadership has assumed that the innate traits of leaders are what make them different. Most studies around the subject have been motivated by the same question – what sets good leaders apart from less effective leaders? Voluminous research has been conducted to
examine the most prominent innate capabilities and traits of successful leaders. However, the networks of relationships that shape the influencing role of leaders on followers are complex and multifaceted.

Alternatively, leadership can be defined in terms of its area of influence. It may be considered as an intra-individual process; a dyadic process; a group process or an organizational process (Yukl, 2006). Leadership theory can therefore be applied and understood in various ways, such as the charismatic leadership of individuals such as Mahatma Ghandi and Nelson Mandela, or even despotic leadership traits such as those of Adolf Hitler.

To understand the importance of leadership in relation to unit level performance and how it influences working relationships in the professional environment, a thorough analysis of leadership theories will be explored in the next section.

### 2.4 Historical Theories of Leadership

The earliest research on leadership was to distinguish between leaders by focussing on the effectiveness of leaders (Galton & Eysenck, 1869). The interest in studying leaders based on their individual traits began in the early 1900’s and was regarded as the trait approach to leadership (Bass, 1990). The following sub-sections will review four trait-based theories of leadership.

#### 2.4.1 Trait Approach

The term trait includes aspects of personality, values and is usually regarded as stable in adulthood (Yukl, 2006). The trait approach was the earliest approach to be studied (Stogdill, 1948). In a study conducted between the 1930’s and 1940’s, the belief that traits of leaders would determine the success of a leader, has since been proven somewhat limited in value and application. This can largely be explained by the lack of intervening variables in theoretical models of leadership. Stated differently, the contextual and interpersonal dynamics that intervene between leaders and their followers must be considered.

Recently, leadership traits have been studied to analyse what makes some people great leaders (Northouse, 2016, p. 19), and that only some “great” people were born with these traits. Stogdil (1948) was one of the pioneers of this concept. He reviewed 124 studies in which he found that effective leaders had traits of intelligence, responsibility and initiative, and that situational factors also contributed to leadership effectiveness.
Between 1959 and 2004, numerous studies examined the competencies and traits that make leaders effective in the workplace. From these studies, there emerged a central list of traits which included intelligence, self-confidence, determinations, integrity, and sociability (Northouse, 2016, p. 23). Researchers have found that leaders tend to have higher intelligence than non-leaders; they tend to be faster learners, make better deductions, and are better at developing strategies to make their vision a reality.

During its former years, trait research was theoretical in nature and lacked the psychometric rigour in measurement. However, research findings on the relationship between individual characteristics and leadership effectiveness were sparse and as a result, the focus in leadership studies moved away from the trait approach towards examining the relationships between leaders and followers. The common critique that is levelled against the trait-based approach to leadership is how to explain why the same leaders are not equally effective in different settings (Judge, Bono, Ilies & Gerhardt, 2002). The next section will look at leadership theories that emanated from the behavioural approach.

2.4.2 The Behavioural Approach

During the 1950’s and 1960’s, researchers became more interested in the behaviour that leaders demonstrate, and not so much in the traits they have (Stogdill, 1963). Researchers were keen to determine the characteristics of a leader (Rodriguez, 2013), and techniques were developed to facilitate a process in which group members were asked to describe leader behaviour. The study gave rise to the Leader Behaviour Description Questionnaire (LBDQ). The 150-item questionnaire was designed to assess how a leader’s behaviour impacts their leadership effectiveness. The LBDQ contained items describing possible ways in which the leader may behave (Halpin, 1957), and its target population was the leader’s immediate line of management. The questionnaire prompted the establishment of two behaviours. The first being initiating structure, and the second being consideration. (Stogdill, 1974).

Initiating structure implies a delegating authority, and leaders who emphasize behaviour such as coordinating, planning, problem solving (Gorton & Snowden, 1993), and delegating authority. The second dimension of consideration signifies the interpersonal relationship between leader and follower, where the perception of warmth and trust is established.
According to Coppola and Ledlow (2010), leaders could be grouped into two classifications, namely employee orientation and production orientation. The employee orientation referred to time spent with the employee and enhancing the relationship between leader and follower. In contrast, the production orientation focused primarily on the production output and technical aspects of the job of the employee. The Michigan studies also identified initiating structure and consideration, as well as a third finding which they referred to as participative leadership. This eventually led to the debate about whether leadership should be defined as leading individuals or leading teams (Likert, 1961).

Northouse (1997) concluded that the study could not identify a universal set of behaviours which could produce effective leadership. Furthermore, the study did not include external influences such as the environment or conditional impacts which could serve as moderators and mediators of leader effectiveness (Northouse, 1997).

Later research by Derue, Narangh, Wellman and Humphrey (2011) found that leader behaviours tend to explain more variance in leadership effectiveness than leader traits. The authors posit that “behaviours can also serve as a mediator in the relationship between leader traits and effectiveness” (Derue, Narangh, Wellman & Humphrey, 2011, p.12). The next section discusses the importance of the Contingency Theory which includes external factors affecting leadership success.

### 2.4.3 Contingency Theory

A third broad leadership theory, known as the Contingency Theory, was developed in the 1960’s and it emphasized leadership contingencies (Coppola & Ledlow, 2010). The Contingency Theory is a behavioural theory which asserts that there is no single absolute way in which a leader can lead an organization effectively (Yukl, 2006). Instead, leadership performance is shaped by several constraints such as the size of the organization, the type of work activities and the span of control which influences leadership effectiveness.

This theory of leadership suggests that by using different styles of leadership, follower needs may be met depending on the situation in the organization, which varies from one organization to the next. The contingency leadership school of thought suggest that for leaders to be effective, they need to deploy a range of behaviours.
Fred Fiedler, a scientist in the early 1960s, studied personalities and characteristics of leaders and created a model known as the Least Preferred Co-worker (LPC) contingency model, which contributed considerably to research on leadership in the 1970’s and 1980’s (Yukl, 2006). Leadership theorists were interested in “aspects of the situation that enhance or nullify the effects of a leader’s traits or behaviour” (Yukl, 2010, p. 224). The theory hypothesized that leader effectiveness is based on the situational contingency due to the interaction between the situation and the leadership style. The research focussed on the association between organizational performance and leadership. The LPC scale was developed to measure the individual leadership orientation and subordinates are asked to think of everyone whom they have previously worked with in the past and presently.

The scale consists of 18 - 25 items, and when the score is high, it is an indication that the leader has a potential of having close interpersonal relationships with subordinates. The task objective becomes important only when the affiliation motive is fulfilled (Yukl, 2006), whilst leaders who are motivated by task-related activities tend to rate their co-workers in negatively, resulting in lower LPC scores.

As early as 1978, available data indicated more support for value-attitude interpretation, rather than a motive hierarchy interpretation (Rice, 1978). This essentially means that the relationship depends on the situation and is better supported by research (Yukl, 2006). It also emphasizes the value-attitude congruency. Hence, the result of a leader’s effectiveness is dependent on the interaction between the leadership style and the organizational context. Situational theory emphasizes the way in which leadership styles can be changed depending on the member’s maturity level. This is discussed in the following sub-section.

2.4.4 Situational Theory

Situational Theory departs from the three theories already discussed in that it advocates for the notion that good leaders modify their leadership styles (Goodson, McGee & Cashman, 1989), depending on the contextual contingencies. The Situational Theory, also known as the Hersey-Blanchard Situational Theory, expands on the notion of relationship and task dimensions to leadership. According to McCleskey (2014), effective leadership involves comprehensively understanding various situations, and the theory emphasizes leadership style and focuses specifically on a leadership style which is dependent on the followers’ level of maturity.
A concept central to situational leadership is a leader’s behaviour, which will adapt and change as followers’ mature (Hersey & Blanchard, 1988). According to this theory, leaders should adapt their strategies and style as followers reach higher levels of maturity. A study on group development found that when a leader can understand group development and be more flexible, it eventually allows for follower maturation (Goodson et al., 1989). One of the criticisms levelled against this approach is that follower’s maturity levels are difficult to determine (Northouse, 1997). The theory therefore projects that leadership style and behaviour differ depending on the situation, and thus the level of maturity of the followers is quite critical.

Situational Theory appears to be the most practical of all the theories since individuals are all different and by applying this theory, it allows the leader to apply their leadership skills in a more effective way. According to Bass (2008), the level of maturity of followers determines the most effective leadership style. Furthermore, the concentration of Situational Leadership Theory (SLT) is essentially on leaders’ behaviour, which is either task or people focused. SLT focuses on leaders’ behaviours as either task or people focused. It also shows effective leadership dependent on follower maturity.

Arvidsson, Johansson, Ek, and Akselsson (2007) set out to investigate how leadership styles and adaptability differ across various situations, conditions, structures, and tasks in the air traffic control job context. The authors researched the questions about the relationship between leadership adaptability, task-orientation of the leader, leadership style, working situation, operational conditions, organizational structure, and level of leadership experience. The study, as authors also assumed, indicated that differences among co-workers require leaders to exhibit sensitivity to, and the ability to diagnose, varying levels of maturity or readiness among employees. Given that leadership studies have taken a lead in research in the behavioural sciences, the following sub-section focuses on two important theoretical perspectives; transformational leadership and transactional leadership.

### 2.4.5 The Full-Range Leadership Theory

The theories discussed above notably made it challenging for researchers to conclude what the best approach for leaders to manage their followers is. In an attempt to address this, Avolio and Bass (1994) tried to organise the major leadership theories into two overarching leadership styles namely transformational leadership and transactional leadership.
Over the years, researchers and scholars have been unable to conclude if a specific leadership style is more effective than others (Bass & Riggio, 2006). Avolio and Bass (1994) focussed on three broad leadership styles namely transformational leadership, transactional leadership, and laissez-faire leadership. Their model adopts a supposition that leaders present all three styles of leadership at different levels. Furthermore, they posit that a style of leadership is thus determined by the style most frequently adopted. Each leadership style is discussed below in detail.

2.4.5.1 Conceptualization of Transformational Leadership and Transactional Leadership

Transformational Leadership (TL) Theory has been a significant field of inquiry in organizational psychology and has convinced researchers to seek to understand the relationship that it has in the functioning of organizations (Gardner, Lowe, Moss, Mahoney, & Collier, 2010; Lowe & Gardner, 2001). In fact, it has been put forth that one of the most universal cravings of our time is a hunger for compelling and creative leadership (Pillay, Viviers & Mayer, 2013, p. 8).

The origin of transformational leadership began with MacGregor Burns (1978). He distinguished between the transformational leader and the transactional leader. The transformational leader raises the needs and motivations of followers, and promotes dramatic change in individuals, groups and organisations, whilst the transactional leader addresses the current needs of subordinates by focusing their attention on exchanges (rewards for performance, mutual support and bilateral exchanges). Bass (1985) further developed this paradigm by integrating transformational and transactional leadership, suggesting that both styles may be linked to the achievement of desired goals and objectives. The transformational leaders therefore orient their subordinates towards performance beyond established standards and goals. The transactional leader, however, looks at setting standards followed by reducing errors and reinforcing the appropriate behaviours to avoid errors and promote efficiency (Avolio & Bass, 2004). This leadership style can be described as a contractual social exchange.

In general, the transformational leadership style is polarised to transactional leadership in terms of its underlying theory of management. The idea behind transformational leadership is setting goals, and pushing, for the growth of every employee. The transformational leadership style is also an important driver for valued organisational and follower benefits (Wang, Oh, Courtright & Colbert, 2011). Moreover, one of the dimensions of the Transformational Leadership Theory is the influence that leaders have on their followers by creating meaningful work (Bass, 1985). Transformational leaders are charismatic and inspirational. They can stimulate followers...
intellectually, thereby encouraging logical thinking when it comes to problem solving. This leadership style emphasizes social exchange with emphasis on a psychological contract (Jiang, Zhao & Ni, 2017).

In a study by Phaneuf, Boudrias, Rosseau and Brunelle (2016), two theoretical models were used to understand the contextualized situation of transformational leadership. The first model was the Trait Activation Model (Tett & Burnett, 2003). The second was Bartram’s (2005) Personality Model in which personality variables could match the dimensions of transformational leadership. The study consisted of a sample of 89 leaders and 643 followers and the goal was to investigate the moderating potential of organizational context and personality on transformational leaders. Results from the analysis showed that leaders who have a sense of co-operation and willingness to engage followers have a strong support base from their followers. This in turn increases the likelihood of higher effectiveness (Hater & Bass, 1988; Jandaghi, Matin & Farjami, 2009). As transformational leaders spend more time with followers, they develop an understanding of their most important work values. Since transformational leaders appeal to the psychological needs of followers, their work relationship is based on trust and affective commitment, rather than work outcomes. A longitudinal study conducted by Dvir, Avolio and Shamir (2002) in a military setting found that strong relationships between transformational leaders and followers lead to long term unit level performance.

The next section will discuss the main characteristics of transformational leadership and how each leader style differs in terms of its value contribution to an organization’s performance.

### 2.4.5.2 Characteristics of Transformational Leadership

Bass and Avolio (1990) described four characteristics of transformational leadership; inspirational motivation, intellectual stimulation, individualized consideration, and idealized influence. These four styles are often referred to as the four I’s. The Four I’s are manifested through the behaviours of transformational leadership, and according to Bass and Bass (2008), this style of leadership is fundamental to improving performance and bringing about change in teams. The transformational leadership style has dominated research in leadership over the past decade and many researchers are expanding on the basic tenets of the theory by introducing personality variables and contextual variables (Bommer, Rubin & Baldwin, 2004; Zaccaro, 2012).
2.4.5.3 The four I’s of Transformational Leadership

Barling (2014) discusses the transformational leadership style the Four I’s of transformational leadership which comprise of different behaviours which will be elaborated on in this section. In explaining the Four I’s that make up the transformational leadership style, the author aims to differentiate between the typical roles of leaders in comparison to managers. The Four I’s of transformational leadership are discussed below:

2.4.5.3.1 Idealised influence

The idealised influence of a leader encompasses a sense of power, which can be used to provide perspective and calm in a crisis. The leader utilises his influence to galvanise the effort of followers towards achieving the shared goals and vision of the organisation (Conger & Kanungo, 1988). Furthermore, the belief in the leader allows followers to carry out the leader’s vision and goals by means of emulating the leader (Bass, 1990).

The psychological mechanism at the core of the idealized influence is the ability of the leader to transform and motivate followers by way of intellectual stimulation, thereby encouraging their followers to challenge the organization to become successful. With the admiration and respect that followers have for a charismatic leader, the leaders are essentially compelled to lead by example. The transformational leader expresses the importance of values and beliefs and the importance of trust between members in the organization. The characteristics of idealised influence also include emphasizing a collective mission for the greater good of the organization.

2.4.5.3.2 Inspirational Motivation

The philosophy of a trusting relationship is largely dependent on a leader establishing a connection between member and leader. The leader helps the follower to believe in themselves and as the relationship is established. Suda (2013) posits that in the same way that followers can shape leadership behaviour, so too can leaders develop good followership. Inspirational motivation encourages an energetic environment where the followers have a sense of direction; and promotes individual respect, fosters change in a positive way, and adapts to a collective vision for the future.

Inspiration can be considered the basis of motivation. It is significantly pertinent in organizations experiencing challenges, and it is quite suitable where motivation is low, especially within teams. An example would be to ensure that followers have a shared vision of the leader and ensuring that
high standards are set to accomplish this vision. Encouragement is a key factor for leaders in assisting with the assimilation of members into the organization’s culture.

2.4.5.3.3 Intellectual Stimulation

The third ‘I’ refers to intellectual stimulation. The basic premise behind intellectual stimulation is to inspire followers on an intellectual level. Intellectual stimulation allows for critical thinking and problem-solving, and this in turn motivates creative thinking. When an organization is faced with challenging situations in a teamwork scenario, the need for new and inspiring ideas encourages followers to innovate existing work practises (Daft, 2005). Once a follower feels that they are stimulated to think for themselves and develop within the workplace they, typically take ownership of their work outcomes (Barling, 2014). This in turn is likely to lead to a greater perception of ownership over their work outcomes.

A study by Hetland and Sandal (2003) found positive correlation between intellectual stimulation and leadership style, suggesting that leaders can instil a sense of ownership in their followers. Research on the effect of intellectual stimulation on staff self-ratings conducted by McGuire and Kennelly (2006) showed that nurse managers rated themselves higher than staff nurses regarding their application of intellectual stimulation. These patterns of results suggest that leadership style has an impact on follower intellectual stimulation.

2.4.5.3.4 Individualized Consideration

Individualized Consideration being an element of transformational leadership, takes cognisance of that fact that each person is driven by different motivational factors. A transformational leader considers each employee as an individual with unique talents and guides them to high levels of accomplishing goals. One notable characteristic of an emotionally intelligent leader is being considerate, embodied by the leader offering the follower any necessary emotional support. This encourages and fosters a personal relationship between a leader and their follower (Bass & Riggio, 2006). Furthermore, the behaviour that is typical of individualized consideration invariably enables followers to respond to leaders because of their compassionate traits.

Since Transformational Leadership Theory is defines leadership as the ability to influence followers in a way that provides them with enough support to enable them to grow and be confident in their roles, it is thus considered as an interactive approach. It involves engaging with the followers’ personal values (Krishnan, 2005). The main mechanism of influence is through individualized empathy and understanding of the unique set of personal variables that shape
behaviour at the workplace. Barling et al. (2000) found that a leader with high levels of emotional intelligence will enhance the leader’s transformational leadership behavioural traits. Individualized consideration is arguably an ideal method for fostering growth on the part of the follower.

2.5 Transformational Leadership and Transactional Leadership

As discussed earlier, transformational leadership which was primarily influenced by Burns (1978) had further expanded to include transactional leadership. The main concept of the Transformational Leadership Theory is that leadership creates positive change in the followers, where the interests of the follower and the group are important (Warrilow, 2012). Fundamentally, a leader employing transformational leadership tries to understand and align the work values of followers to his/her personal work values. This often leads to commitment to the leader, by the follower, that extends beyond organisational commitment and the achievement of tasks (Bacha, 2014).

Earlier research has shown that transformational leadership does not only have considerable influence at the individual level, but also on group and organizational levels (Shamir, House & Arthur, 1993). However, recent research by Jiang, Zhao and Ni (2017) found that contextual performance is an important element of unit level performance at the individual level and is also referred to as relational performance. Subordinates who do not trust their leaders (supervisors), will not be able to concentrate on value producing activities. (Alén, Banerjee, & Gupta, 2017).

Transactional leadership is also known as managerial leadership, and its foremost purpose is to increase the likelihood of compliance of the followers in the organization. There is a need to ensure that regular performance is accomplished, and that specific tasks are completed. Transactional leadership stands for leadership through social exchange and has two components, contingent reward/punishment and management by exception. The essence of the contingent reward is that the leader promises a reward to the follower, and the reward is given once a goal has been set and achieved. Contingent punishment is given when the follower has a set goal but fails to meet the goal at all. Leadership through management by exception is when the leader takes charge where corrective action is required in the leader-follower transaction (Judge & Piccolo, 2004). Management by exception has two further subdivisions, one being management by exception
active (MBEA), and the other being management by exception passive (MBEP) (Bass & Riggio, 2006).

Though management by exception is more recent, the primary difference between MBEA and MBEP depends on the timing of the leaders’ intervention (Bass & Riggio, 2006). In the MBEA style, the leader frequently monitors work performance and is continuously assisting where changes need to be made. MBEAP is somewhat different, where the leader corrects an issue when it arises. Hence, a more passive approach.

The main difference between the two theories is that transformational leadership increases follower motivation, whilst transactional leadership involves a reward exchange which may lead to great commitment from the follower, only in the short term. In other words, the main distinction is that transformational leadership is a consequence of the leader and their leadership characteristics, whilst the transactional leader focus strongly on task completion and equitable rewards.

2.5.1 Laissez-Faire Leadership

A third category in addition to transformational leadership and transactional leadership is that of Laissez-Faire leadership. The Laissez-faire style is referred to as “abdicat[ing] responsibilities [and] avoid making decisions” (Robbins & Judge, 2007, p.475.) Similarly, Barling (2014, p.9), refers to laissez faire as “leaders who could be seen by their employees as disengaged and psychologically absent.” Laissez-Fair is therefore a set of behavioural traits that make it seem like the leader is uninvolved in the work of the unit. Authors define this style as one characterized by leaders normally not wanting to interfere in the decision-making process. Such leaders would normally avoid making decisions, and to a greater extent, do not involve themselves in working units because they want to give their subordinates complete freedom to make their own decisions. This leadership style is considered a non-leadership style wherein the leader allows things to occur (Katz & Kahn, 1978).

From the above, it is noted that the three leadership styles discussed are most often considered a style into which leaders fall based on researchers’ understanding of how performance is derived based on the leader’s approach. What remains to be considered is the context in which the leadership occurs, as well as the situational variables that affect the leadership style on follower performance. The previous sections and subsections looked at the background of leadership, the
theories of leadership, as well as the three types of leadership. The next section will investigate the relationship between transformational leadership and unit level performance.

2.6 The Effect of Transactional Leadership on Unit Level Performance

Leadership plays a crucial role in follower performance in managing followers to reach the goals of an organization. In the absence of a leader, an organization will essentially be functioning with a group of people with no guidance (Kozlowski and Bell, 2003). A leader must be a role model, and thus motivate followers to work well together. It can be said that each leader has a different relationship with their employees and some leaders prefer to avoid the transactional relationship completely, whereas other leaders gain a good reputation by being considerate, giving immediate feedback, and keenly learning about the individuals’ potential to perform (Avolio & Bass, 2004).

The two types of leadership mentioned above, transactional leadership and transformational leadership, notably resonate with Maslow’s hierarchy of needs. The transactional leadership style correlates and works toward satisfying the lower need of satisfaction in the hierarchy of needs and the extrinsic motivation is either reward or punishment. Transformational leadership appeals to the higher order needs in Maslow’s hierarchy of needs by satisfying the self-actualisation needs of followers.

As early as 1996, research findings suggested a strong relationship between transformational leadership and the performance of followers (Lowe, Kroeck & Sivasubramaniam, 1996). Follower development as well as follower performance are the targeted outcomes of transformational leadership (Bass & Avolio, 1990). Wang et al. (2011) conducted a meta-analysis of the relationship based on material published during the 25 years preceding the year of their research. The research indicated that a strong relationship exists between transformational leadership and performance across individual performance criteria which included task and contextual performance. However, the relationship was even stronger when considering contextual performance, compared to task performance across most study settings examined. Furthermore, the research also showed a positive relationship between transformational leadership and individual performance across organizational type, leader level, and geographic region. Also, there was a positive effect of transformational leadership on performance in individual, team, and organizational levels, with a higher relationship at the team level.

Transformational leadership allows the follower to be involved in the problem and solution process (Thamrin, 2012). This fosters the establishment of a trusting relationship. Transformational leaders
often achieve work goals through the establishment of strong teams. This in turn leads to extra role behaviours such as organizational citizenship behaviours (OCB) of followers (Chi & Liang, 2013, Wang et al., 2005). The mechanism through which transformational leadership can achieve follower support is through building a strong relationship with the follower. The follower in turn feels empowered to complete their job tasks. In comparison, the transactional leader does not focus on the relationship, but rather awards the correct behaviour through incentives.

Each organization has its own specific culture and only through the applied leadership methodology, together with the follower relationships, can we ascertain the relationship between leader and follower, and hence the follower performance. For this reason, a positive relationship is hypothesised between transformational leadership and unit level performance of followers. The hypothesis is given below:

**Hypothesis 1:** There is a positive relationship between transformational leadership and unit level performance

The following section will discuss the LMX theory in relation to the leader and the dyadic process of leader and member and will examine the role that it has in the link between transformational leadership and unit level performance.

### 2.7 Leader Member Exchange Theory

Given the strong emphasis on the relationship between the leader and the follower in the transformational leadership framework, it makes sense to pay close attention to the role-making process between the transformational leader and their followers. Leader member exchange (LMX) defines the relationship between leaders and their followers. Furthermore, the theory states that leaders and members interact with one another in a dyadic relationship, where the leader affects the follower and the follower affects the leader (Northouse, 2016). It describes the quality of the relationship and the outcomes of the relationship. This theory emerged from the transformational leadership literature and was introduced by Dansereau, Graen, and Haga (1975) in their paper titled "A Vertical Dyad approach to leadership within formal organizations". The word "dyad" means "two", referring to the leader and the others with whom she/he interacts.

It is formerly known as the vertical dyad linkage theory, where one person has an influence over another person (Barling, 2016). The role of the follower in the relationship has also dominated recent research. Amongst all the leadership theories to date, the LMX theory has a unique focus
on the dyadic relationship between leader and follower and this is known as the Vertical Dyad Linkage (VDL) Theory (Dansereau, Graen & Haga, 1975). The theory advocates that a dyadic relationship exists between a leader and a follower and that leaders treat individual followers differently (Krishnan, 2005). The result is two groups of followers, one being the in-group and the other being the out-group. The in-group is characterised by a “high quality exchange” relationship, whereas the out-group has a “more formal” relationship (Krishnan, 2005).

The LMX theory, considers that most leaders develop a high exchange relationship between a few subordinates (Yukl, 2006). Earlier studies by Dinesh and Liden (1986) observed the results of individuals with high-quality relationships with the leader typically have a greater reciprocal relationship, as well as open communication and respect, between each other. The level of mutual dependence that is created over time leads to an expectation of commitment to task objectives, and the leader on the other hand, must maintain that relationship. The value of the leader-member exchange, from the perspective of both leader and member, is influenced by perceptions of warmth and trust (Liden & Graen, 1980).

The LMX theory is based on the Social Exchange Theory and the Role Theory (Liden & Maslyn, 1998). Role Theory relates to the role that leaders play, whilst the Social Exchange Theory refers to the relationship between leader and member. Research by Dienesch and Liden. (1986) indicates that LMX is the second most widely studied theory and continues to gain support in leadership studies. Today we find that LMX studies have shifted focus to understanding the antecedents and moderators of these relationships specifically at an individual level (Erdogan & Bauer, 2015). Studies involving LMX theory also started looking at the implication of differentiated exchanges between various dyads in the leader-follower relationships (Liden et.al, 2006). The research by Linden et al. (2006) found that LMX differentiation has a positive contribution to group performance. Considering this background, the next section looks at the relationship between transformational leadership and LMX.

2.7.1 Transformational Leadership and Its Impact on LMX

Much of the leadership literature focuses on the exchange relationship between leaders and followers, be it individual, groups or teams. LMX emphasizes leadership as the leader-follower relationship and it is not focused on the leader within the organization alone. Transformational leadership, initially developed by Burns (1978), emphasised the role of leaders in facilitating the growth of subordinates to develop their potential and to reach their personal goals. The theory is
different in that it studies the dual relationship between the leader and followers (Northouse, 2016). The shift from previous research is toward establishing whether there is a quality relationship, and not just the leaders’ characteristics.

LMX is closely related to the central tenets of transformational leadership. The core of transformational leadership theory is the empowerment of followers in a way that results in a conscious change in the individual or group. Hence, transformational leadership can be described as the operative form of the LMX. “Effective leadership processes occur when leaders and followers are able to develop mature leadership relationships” (Graen & Uhl-Bien, 1995, p.225). The result of such a relationship is many-fold. Examples include respect and mutual obligation between the leader and follower, which in turn will have an impact on the performance of the follower.

The empathy that a leader shows their followers is what creates trust and a reciprocal beneficial exchange. An apparent prerequisite for leaders to understand their followers and be able to have empathy for them is the need to be able to understand their own feelings and emotions, as well as those of their followers. This would suggest that leaders with a high level of emotional intelligence are likely to be more effective than those with low levels of emotional intelligence, specifically when it comes to establishing high quality dyadic relationships. The relationship between a leader and their follower is thus only likely to be maximized and mature if the leader has a high level of emotional intelligence. Numerous studies have examined the relationship between transformational leadership and LMX (Wang et al., 2005; Krishnan, 2005; Wong & Berntzen, 2018). The study by Wang et al. (2005) found that (a) transformational leadership promotes strong relationship through LMX, and (b) LMX is positively related to unit level performance. The study found that with the quality of the two-way relationship, it determines the transformational leader’s influence which affects the performance of the follower. Against the foregoing background, the following hypotheses are proposed:

**Hypothesis 2 – There is a positive relationship between transformational leadership and LMX**

**Hypothesis 3 - The relationship between transformational leadership and follower performance is mediated by LMX.**
2.8 Emotional Intelligence

The concept of emotional intelligence can be understood by separating the two words making up the term and examining them in isolation to dissolve the confusion associated with the term. Emotions stem from the brain and are a result of a physiological experience and they result in pulses, flushes and “movements” in our livers, minds, hearts, stomach and skin (Rosaldo 1984, p.143). As such Russell and Barchard (2002, p.356) provide a unique understanding of how emotions are subdivided into five components; objectless affect, attributed effect, emotional behaviour, perception of affective quality, and emotional episodes which have an effect on an individual’s desires (Brown, Gregory-Curran & Smith, 2003). Emotions can allow a person to feel inspired and as such, influence followers’ career paths.

Intelligence has been defined in various ways, and Wechsler (1958, p.7) provided one of these, defining intelligence as “the aggregate or global capacity of the individual to act purposefully, to think rationally and to deal effectively with his environment”. Kannaiah and Shanthi (2015) found that high degrees of emotional intelligence led to effective midlevel managers since they can understand their own emotions and manage them effectively.

According to Pillay et al., (2013), there is a continuous debate regarding the practice of applying emotional intelligence (EI) in the context of leadership. There are studies showing the impact that leadership has on the emotional states of employees and their performance (Riggio & Reichard, 2008). As a leader progresses within an organization, their leadership skills, including reasoning ability and interpersonal skills, become an important component of their role.

One of the most prominent developments in the investigation of emotional intelligence and transformational leadership is the confirmation of its value in increasing the overall satisfaction, commitment and effectiveness of followers (Kumar, 2014). Furthermore, the literature supports the links between a leader’s emotional intelligence and organizational commitment, satisfaction and performance (Ölçer, Floresco & Năstase, 2014; Dabke, 2016).

Leaders use various skills in the workplace and emotional skills are one of the necessary skills for a leader. Mayer and Caruso (2002) believed emotional intelligence is a contributing factor to leadership theory, and that by managing emotions, leaders can handle stress without the fear of making poor decisions. Is emotional intelligence then one of the leadership characteristics that make transformational leaders effective in the workplace? In a study by Kim and Kim (2017), they reviewed earlier studies on the relationship between emotional intelligence and transformational
leadership. The results showed that most studies provide empirical support of the relationship, with variances in sub-factors of emotional intelligence and transformational leadership.

Another view on emotional intelligence is the underlying competencies that Goleman (2001) proposed in earlier studies, which distinguished individual differences in workplace performance. It could be argued that many of the transformational behaviours applied positively are in fact because of leaders applying emotional intelligence to the leader-member relationship, and this raises the question about emotional intelligence being a possible mediator between transformational leadership and LMX?

In a recent study by Pekaar, Van Linden, Bakker and Born (2017), the debate over emotional intelligence and its usage in literature studies was discussed. Their argument was based on Salovey and Mayer’s (1997) four-branch model in which emotional regulation, being the highest order dimension, had an important role on the overall emotional intelligence score. The crux of their findings relates to fact that the link between emotional intelligence and key organisational outcomes should be investigated on the sub-dimension level, rather than on the overall aggregate level. Similarly, Goleman’s (2001) model of emotional intelligence involves twenty competencies underlying four general abilities. The abilities according to Goleman’s model are summarized in Table 1.

Goleman (2001) found that emotional intelligence is mostly learnt and developed over time and a successful leader is one who can build emotional intelligence competency. However, his model of emotional intelligence competencies also indicates that no single leader will be equally good in all the areas of emotional intelligence.

Table 1

<table>
<thead>
<tr>
<th>Concept</th>
<th>Explanation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Self-management</td>
<td>The ability to manage internal states, impulses and resources</td>
</tr>
<tr>
<td>Social awareness</td>
<td>The ability to read people and groups accurately</td>
</tr>
<tr>
<td>Relationship management resources</td>
<td>The ability to manage internal states, impulses and resources</td>
</tr>
<tr>
<td>Self-awareness</td>
<td>The ability to be self-confident and emotionally self-aware</td>
</tr>
</tbody>
</table>

2.8.1 Emotional Intelligence and Transformational Leadership

The positive effects of transformational leadership in organisations has steered research to further investigate the role of emotional intelligence as an essential requirement for transformational leaders in organizations to motivate subordinates (Avolio & Bass, 2004). As the concept of emotional intelligence has dominated the field of organizational psychology over the years, the focus on the emotional manifestation and competencies of an emotionally competent leader have been closely linked to performance outcomes.

In 1990, Salovey and Mayer wrote a paper on EI and identified it as a subcategory of social intelligence characterised by a set of four interrelated cognitive abilities which are associated with the processing of emotional information. Later on, Salovey and Mayer (1993) found that leaders who develop strong connections with followers, and who can communicate well with others, notably had high levels of emotional intelligence.

Like the broader concept of intelligence, emotional intelligence has been described as “the ability to perceive accurately, appraise, and express emotion; the ability to access and generate feelings when they facilitate thought; the ability to understand emotion and emotional knowledge; and the ability to regulate emotions to promote emotional and intellectual growth” (Mayer & Salovey, 1997, p. 10). Over the last few decades, the emphasis on emotional intelligence in relation to people and their behaviour at work was beginning to grasp the attention of researchers in the field of leadership, yet only a handful of studies researched the link between emotional intelligence and leadership (Barling, Slater, & Kelloway, 2000; Rosete & Ciarrochi, 2005).

2.8.2 Is Emotional Intelligence Part of Transformational Leadership?

Emotional intelligence is the ability to understand our own feelings and those of others, and to manage relationships. Goleman (2001) described the importance of emotional intelligence in the workplace, stating that leadership success is primarily concerned with a leader that has emotional intelligence. Current research by Gupta and Bajaj (2017), has indicated that through leaders’ emotional intelligence, the leader can manifest their emotions and influence followers, and that at each interaction, there is a display of emotion.

Not all research evidence has been supportive of the proposed link between transformational leadership and emotional intelligence (e.g. Brown, Bryant, & Reilly, 2006; Weinberger, 2004). However, according to Barling, Slater and Kelloway (2000), many research studies have found an overwhelmingly positive association between emotional intelligence and transformational
leadership. When the four I’s of transformational leadership are considered in relation to the characteristics of emotional intelligence, it becomes apparent that there is conceptual overlap between the two concepts. Bass (1985) recognized the difference between a transactional leader and a transformational leader. He noted that transformational leaders are less controlling, but more inclined towards nurturing a relationship between leader and follower. This in turn allows a transformational leader to be more effective in driving results than a typical manager who may not display a high level of emotional intelligence in the workplace (Docket & Macfarlane, 2003). Fundamentally, it can be argued that the transformational leader is more effective than the transactional leaders since their concern for their followers through applying higher levels of emotional intelligence could result in a higher quality LMX relationship. The following hypotheses are constructed regarding the preceding points:

**Hypothesis 4** - There is a positive relationship between Transformational Leadership and Emotional Intelligence

**Hypothesis 5** - The relationship between Transformational Leadership and Leader Member Exchange is mediated by Emotional Intelligence

**Hypothesis 6** - There is a positive relationship between Emotional Intelligence and unit level performance

### 2.9 LMX - Unit Level Performance Relationship

Social Exchange Theory lies at the heart of the LMX mechanism. According to Social Exchange Theory, performance depends on a favourable reciprocal exchange between leader and member (Volmer, Niessen, Spurk, Linz, Abele, 2011). The theory suggests that once a relationship is established between leader and member, high work performance is likely to be one of the positive outcomes of a high-quality relationship. Good performance will in turn strengthen the trust in the LMX relationship. This upward spiral effect is one way to understand the link between LMX and follower performance.

There are numerous mechanisms through which transformational leaders influence their followers, but the mechanism through which the processes of influencing operate have not been universally supported in the literature (Keskes, 2014). In previous studies by Dunegan, Uhl-Bien and Duchon (2002), the relationship between LMX and turnover were statistically weak (Vecchio & Norris, 1996), as well as the association between LMX and member performance (Gerstner & Day, 1995; Jensen, Olberding, & Rodgers, 1997). Many authors have argued that although a link can be expected between LMX and follower performance, there may be potential mediators (Byun, Dai,
Lee & Kang, 2017; Choi, Kim & Kang, 2017). One of the potential mediators may be the emotional intelligence of a leader. Since a high quality LMX relationship is a critical condition of high performance by followers, it is expected that emotional intelligence of followers and leaders will act as transmission mechanism between transformational leadership and unit level performance (Head, 2014). The preceding points are thus used to construct the following hypothesis:

*Hypothesis 7: The relationship between Transformational Leadership and unit level performance is mediated by Emotional Intelligence*

Additionally, it is argued that a direct positive relationship exists between LMX and unit level performance. In a 2015 study on Chinese supervisors and their employees, high-quality LMX resulted in improved performance (Gu, Tang & Jiang, 2015). Thus, a positive relationship is expected between LMX and follower performance, although some of the variance in follower performance may be explained by the mediation of emotional intelligence. Regarding this factor, the following hypothesis is constructed:

*Hypothesis 8: There is a positive relationship between Leader Member Exchange and unit level performance*

### 2.9.1 Job Characteristics as a Mediator Between LMX and Unit Level Performance

The literature broadly identified two classes of employee behaviour which lead to positive unit level performance. The first is derived from task performance, and the second from contextual performance (Bormann & Motowidlo, 1993). Recent studies suggested that the way jobs are designed and structured can have a major impact on task performance and ultimately toward organisational success (Garg and Restage, 2006; Parker & Van den Broeck, 2017). The original work by Hackman and Oldham (1976) played an important role in establishing the motivational potential of job context on employees. Hackman and Oldham (1975) proposed the Job Characteristics Theory which posited that work attitude may be manipulated by changes in job design.
Hackman and Oldham’s (1975) Job Characteristics Model argued that by enriching jobs, critical psychological states are satisfied (e.g. meaningfulness, responsibility, knowledge of results) which in turn drives higher productivity and individual task performance. The motivational mechanism of their model is illustrated in Figure 1.

Figure 1. Hackman and Oldham’s Job Characteristics Model (Source: Adapted from Oldham & Hackman, 1975, p. 161)

According to the model, five aspects of a job design can have an important influence on an employee’s psychological states and work outcomes (Steyn & Vanda, 2014). The positive psychological states are critical in driving motivation of employees, which in turn influence work motivation, performance or turnover (Hackman & Oldham, 1975, 1976).

Hackman and Oldham’s (1975) Job Characteristics Model assumes that the task itself is the key to employee motivation. The model illustrated in Figure 1 contains five core job characteristics namely skill variety, task identity, task significance, autonomy and feedback. These have an impact on three critical psychological states (experienced meaningfulness, experienced responsibility for outcomes, and knowledge of the actual results). In turn these influences determine outcomes (job satisfaction, absenteeism, work motivation, low turnover). If all variables
are held equally, jobs will hypothetically be more motivating if they allow for high degrees of responsibility, meaningfulness, and decision-making autonomy.

The Hackman and Oldham (1975) model highlighted five core dimensions that influence motivation and test the fulfilment of the job characteristics of the followers. A single index consisting of the five core dimensions can be combined to form the Motivating Potential Score (MPS) for a job (Yaverbaum & Culpan 2011).

2.9.2 Transformational Leadership and Core Job Characteristics

In the preceding section, the Job Characteristics Model was used to explain the way followers may be motivated by the contextual characteristics of their jobs. Previously, it was argued that transformational leaders may motivate employees to perform productively, and by setting a shared vision of the future by intellectually stimulating and empowering employees to drive toward excellence. This resulted in a high quality LMX relationship developed using emotional intelligence by transformational leaders. Thus, it was argued that transformational leadership may determine the LMX relationship. However, the characteristics of a job are likely to moderate the strength of this proposed relationship. The question that remains pertains how transformational leadership relates to job characteristics.

Although there is a myriad of different job characteristics that may moderate the relationship between transformational leadership and job characteristics, the literature suggest that autonomy may be particularly important due to its association with transformational leadership. Job autonomy refers to the discretion and independence in determining the procedure of how work will be performed (Hackman & Lawler, 1971, p.265). According to Cleavenger and Munyon (2013), if personal development is considered important for an employee, then job autonomy will serve as a measure of how the job will be performed. A core part of transformational leadership is to empower employees to take ownership of their own work activities (Yammarino, 1994). For this reason, we would expect a strong relationship between transformational leadership and autonomy.

A transformational leader can shape followers’ perceptions of their jobs, but given that job autonomy allows employees to explore practical ways to complete their work (Chang, Jia, Takeuchi, & Cai, Y. 2014), this may result in employees taking ownership of their work which may in turn boost creativity. Increased job autonomy enables employees to break out of a routine and to find the best solution along the way (Shalley & Gilson, 2004). In contrast, employees who
have a good LMX relationship, but little job autonomy, might not be able (or may be limited in ability) to exercise their creative problem-solving ability (Voler, Spurk & Niessen, 2012).

In a study conducted by Griffin (1981), the authors found that leaders can influence job perceptions without altering the job characteristics. Core to their argument was the idea that five basic sources of information can influence task perceptions, and these are technology, organizational structure, co-workers, characteristics of a job incumbent and an individual’s immediate supervisor. In an experimental study over a period of three months, the managers reported the extent to which they exhibited behaviours intended to influence job perceptions. It was found that the experimental group reported higher ratings of core job characteristics, even when no changes were made to the job design.

Griffin (1981) asserted that the change in perceptions of job characteristics can be attributed to the informational cues from the supervisors. This assertion was supported by Shamir et al. (1993) who proposed that transformational leaders who display transformational behaviours can influence how followers judge their work environment. Shamir et al. (1993, p. 578) further argued that by associating employees’ work to organizational goals, leaders have a direct influence on followers’ perceptions of their jobs, wherein they state that “followers of charismatic leaders are expected to have a high sense of ‘meaningfulness’ associated with the task”.

Researchers are in search of ways to improve employees’ experiences in the work environment, and specifically looking at the relationship between social interaction and performance. The importance placed on job autonomy in high-quality LMX relationships is thought to produce positive outcomes such as job satisfaction and favourable levels of performance because job autonomy allows for meaning and purpose in the life of an employee. The possibility of applying transformational leaders’ intellectual influence, idealized influence and inspirational motivation to followers will influence the perceptions that followers have on job variety, job autonomy and task identity.

In their study on the moderating effects of LMX and unit level performance, Kim, Liu and Diefendorf (2015) found research to support their argument that leaders differentiate employees resulting in different types of exchange relationships (Lide, Sparrowe & Wayne, 1997), and that the level of exchange is attributable to a sense of psychological empowerment ultimately resulting in improved unit level performance (Kim, Liu & Diefendorf, 2015). Thus, high quality LMX relationships are likely to be associated with higher levels of autonomy. The higher autonomy in
turn is likely to lead to higher levels of unit level performance (Slemp, Kern, Patrick and Ryan (2018). Based on the preceding discussion, it is argued that a positive relationship exists between transformational leadership and follower perceptions of core job characteristics. This argument is used to construct the following hypotheses:

**Hypothesis 9:** There is a positive relationship between Leader Member Exchange and Autonomy

**Hypothesis 10:** The relationship between Leader Member Exchange and unit level performance is moderated by Autonomy

**Hypothesis 11:** There is a positive relationship between Transformational Leadership and Autonomy

### 2.9.3 Proposed Conceptual Model

The arguments presented in the previous sections culminate in a complex model containing direct, indirect, and mediating effects. More specifically, the hypotheses constructed are intended for developing a complex, yet coherent, theoretical model which aims to explain unit level performance in the workplace. Building on the work of previous authors, it is argued in this study that the link between transformational leadership and unit level performance may have been presented in a more simplified manner. The network of indirect and mediating variables that shape individual performance in the workplace may start with the transformational leadership, but subsequently follow a sequential mediating model through LMX and emotional intelligence, before resulting in unit level performance. The proposed sequential model may be moderated by autonomy in the final link between LMX and unit level performance. In addition to the mediating effects, transformational leadership is expected to have additional direct effects on unit level performance and autonomy. The proposed model is illustrated in Figure 2.
This literature chapter focused on transformational leadership, emotional intelligence, leader member exchange, job autonomy and unit level performance. Firstly, the literature on leadership and leader member exchange processes was reviewed by looking at the historical approach as well as more recent approaches in understanding the concept and its relationship with members in organizations. Secondly, the importance of emotional intelligence as a contributor to leadership effectiveness was reviewed. Thirdly, the LMX concept was reviewed in relation to job autonomy and unit level performance to understand if a strengthened LMX can improve performance.

**Figure 2. Conceptual model**
3 RESEARCH METHODOLOGY

3.1 Introduction

The literature review chapter culminated in a complex structural model. The goal of this chapter is to explain the research strategy that will be utilised to empirically test the hypotheses constructed in Chapter 2. Specifically, this chapter aims to provide a design of the process that was used to examine the validity of the proposed relationships. Additionally, the chapter will outline the planned research design, sampling strategy and choice of measures used to operationalize the latent variables used in the proposed theoretical model.

3.2 Research Design

The strategy used to provide empirical verification of hypotheses is known as a research design (Kerlinger, 1973; Kerlinger & Lee, 2000). Ideally, a research design should be engineered to ensure that variance in the to-be-measured construct (unit level performance) is clearly linked to the proposed exogenous latent variables by limiting the variance caused by error variables (Kerlinger, 1973). Specifically, this study will follow the quantitative approach within the framework of the positivist paradigm. The data collection procedure will be quantitative in nature, and statistical techniques will be used to validate the hypotheses (Kivunja & Kuyini, 2017). A quantitative design uses objective measures though statistical analysis of data which is collected through surveys or questionnaires, and data is derived through a computational analysis (Babbie, 2010).

The research design can be regarded as an *ex-post facto* research design. In social science research, the *ex-post facto* investigation attempts to explore relationships by observing current situations or contributing factors (Simon and Goes, 2013). The overarching substantive research hypotheses can be dissected into a few specific research hypotheses. The research initiating question and the theoretical model that emanated from the research questions are discussed in more detail in the section below

3.3 Research Initiating Question and Substantive Hypotheses

The overarching research initiating question is concerned with exploring the leadership and contextual variables that shape performance in the banking sector. The research initiating question led the researcher to propose a complex network of variables which can be graphically depicted as
a structural model. Each one of the structural paths represents one respective hypothesis from the following list of hypotheses:

**Hypothesis 1:** There is a positive relationship between Transformational leadership and unit level performance

**Hypothesis 2:** There is a positive relationship between Transformational Leadership and Leader Member Exchange

**Hypothesis 3:** The relationship between transformational leadership and follower performance is mediated by Leader Member Exchange.

**Hypothesis 4:** There is a positive relationship between Transformational Leadership and Emotional Intelligence.

**Hypothesis 5:** The relationship between Transformational Leadership and Leader Member Exchange mediated by Emotional Intelligence

**Hypothesis 6:** There is a positive relationship between Emotional Intelligence and unit level performance

**Hypothesis 7:** There is a positive relationship between Transformational leadership and unit level performance and mediated by Emotional Intelligence

**Hypothesis 8:** There is a positive relationship between Leader Member Exchange and unit level performance

**Hypothesis 9:** A positive relationship exist between Leader Member Exchange and Autonomy

**Hypothesis 10:** The relationship between Leader Member Exchange and unit level performance is moderated by Autonomy

**Hypothesis 11:** There is a positive relationship between Transformational leadership and Autonomy

### 3.4 Sampling Method

#### 3.4.1 Population

The population refers to the entire group of people, events, or things of interest that a researcher wishes to investigate (Neuman, 2000; Sekaran, 2003). The population for this research project consists of managers and employees at a banking institution. The target population will include leaders (supervisors) in supervisory or managerial positions, as well as followers (supervisees). The biographical characteristics of the sample will include age, gender, educational level, years of service, type of employment and job level.
3.4.2 Sample Size

Sampling is the process by which researchers select a proportion of the target population as the study population, to represent the entire unit. It is more practical and economical to work with samples rather than with large target populations (Polit & Beck, 2010). The targeted sample size is 500 across all business units.

3.4.3 Sampling Procedure

The two types of sampling techniques are probabilistic or representative sampling, and non-probabilistic sampling (Saunders et al., 2012). The main difference between the two is that probabilistic sampling uses a procedure that selects participants randomly, in which case each participant has an equal chance of being selected, and non-probabilistic sampling has no assurance that each case has an equal chance of being included in the sample.

This study made use of convenience sampling since it was impractical, in terms of time and cost, to use a stratified sampling approach. Given that the convenience sampling approach is a non-probabilistic sampling technique, findings from the current study cannot be reasonably generalized to the rest of the population, and this counts as a disadvantage for the sampling procedure. The sample is easily accessible, which is one advantage for of this sampling procedure.

3.4.4 Sample Characteristics

The initial target sample size was 500 participants. However, only 226 participants completed the questionnaire. A good general rule of thumb for factor analysis is 300 cases (Tabachnick & Fidell, 1996) or they provide the following guide samples sizes: 50 as very poor; 100 as poor, 200 as fair, 300 as good, 500 as very good and 1000 as excellent.

The demographic characteristics of the sample are summarised in Table 2. Generally, the proportion of missing responses were negligible. As shown in the table, the proportion of missing responses on the demographic variables was below three per cent, although 5.8% of respondents did not disclose in which business unit they were employed. This was the only demographic variable with the highest percentage of missing values. The business unit is important in determining the performance score of the participants.
Table 2

Demographic Characteristics of Participants

<table>
<thead>
<tr>
<th>Variable</th>
<th>Category</th>
<th>Frequency of participants</th>
<th>% of participants</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gender</td>
<td>Male</td>
<td>55</td>
<td>24.3</td>
</tr>
<tr>
<td></td>
<td>Female</td>
<td>169</td>
<td>74.8</td>
</tr>
<tr>
<td></td>
<td>Missing</td>
<td>2</td>
<td>0.9</td>
</tr>
<tr>
<td>Ethnicity</td>
<td>Black/African</td>
<td>20</td>
<td>8.8</td>
</tr>
<tr>
<td></td>
<td>Coloured</td>
<td>101</td>
<td>44.7</td>
</tr>
<tr>
<td></td>
<td>Indian</td>
<td>3</td>
<td>1.3</td>
</tr>
<tr>
<td></td>
<td>White</td>
<td>94</td>
<td>41.6</td>
</tr>
<tr>
<td></td>
<td>Other</td>
<td>6</td>
<td>2.7</td>
</tr>
<tr>
<td></td>
<td>Missing</td>
<td>2</td>
<td>0.9</td>
</tr>
<tr>
<td>Highest level of education</td>
<td>Grade 12</td>
<td>51</td>
<td>22.6</td>
</tr>
<tr>
<td></td>
<td>Certificate</td>
<td>64</td>
<td>28.3</td>
</tr>
<tr>
<td></td>
<td>Diploma</td>
<td>59</td>
<td>26.1</td>
</tr>
<tr>
<td></td>
<td>B-Degree</td>
<td>24</td>
<td>10.6</td>
</tr>
<tr>
<td></td>
<td>Honours</td>
<td>15</td>
<td>6.6</td>
</tr>
<tr>
<td></td>
<td>Masters</td>
<td>4</td>
<td>1.8</td>
</tr>
<tr>
<td>Marital status</td>
<td>Co-habitation</td>
<td>3</td>
<td>1.3</td>
</tr>
<tr>
<td></td>
<td>Divorced</td>
<td>21</td>
<td>9.3</td>
</tr>
<tr>
<td></td>
<td>Married</td>
<td>147</td>
<td>65.0</td>
</tr>
<tr>
<td></td>
<td>Separated</td>
<td>6</td>
<td>0.4</td>
</tr>
<tr>
<td></td>
<td>Single</td>
<td>48</td>
<td>21.2</td>
</tr>
<tr>
<td></td>
<td>Widow(er)</td>
<td>5</td>
<td>2.2</td>
</tr>
<tr>
<td></td>
<td>Missing</td>
<td>1</td>
<td>0.4</td>
</tr>
<tr>
<td>How many followers report to you?</td>
<td>Between 1-5</td>
<td>13</td>
<td>5.8</td>
</tr>
<tr>
<td></td>
<td>Between 5-20</td>
<td>41</td>
<td>18.1</td>
</tr>
<tr>
<td></td>
<td>Above 20</td>
<td>6</td>
<td>2.7</td>
</tr>
<tr>
<td></td>
<td>None</td>
<td>166</td>
<td>73.5</td>
</tr>
<tr>
<td>Business unit</td>
<td>Business Bank</td>
<td>79</td>
<td>35.0</td>
</tr>
<tr>
<td></td>
<td>Distribution</td>
<td>86</td>
<td>38.1</td>
</tr>
<tr>
<td></td>
<td>Home loans</td>
<td>19</td>
<td>8.4</td>
</tr>
<tr>
<td></td>
<td>Private Banking</td>
<td>13</td>
<td>5.8</td>
</tr>
<tr>
<td></td>
<td>AVAF</td>
<td>16</td>
<td>7.1</td>
</tr>
<tr>
<td></td>
<td>Missing</td>
<td>13</td>
<td>5.8</td>
</tr>
</tbody>
</table>

The sample was predominantly composed of females. There were 169 females making up almost three quarters of the sample (74.8%), and 55 males making up 24.3% of the sample. The racial composition of the sample was dominated by the Whites and Coloured race groups.
proportional composition of the sample was 44.7% Coloureds, 41.6% White, 8.8% Black, 1.3% Indian, and 2.7% classified as other. The level of education composition was dominated by respondents in three categories of highest level of education who made up just over three quarters of the sample. These categories included Grade 12 (22.6%), Certificate (28.3%), and Diploma (26.1%). The other categories were Bachelor’s Degree (10.6%), Honours Degree (6.6%), and Master’s Degree (1.8%) Notably, the higher levels of education made up significantly lower proportions of the sample.

The marital status composition was interestingly dominated by married respondents who made up 65% of the sample, more than three times the proportion of the second ranked category of single respondents who made up 21.2% of the sample. The rest of the proportional composition of marital status was 9.3% divorcees, 2.2% widows and widowers, 1.3% co-habitants, and 0.4% separated respondents. Most of the respondents did not have any followers, with 166 (73.5%) reporting that they did had no followers. The rest of the composition was 41 respondents (18.1%) reporting having between 5 to 20 followers, 13 respondents (5.8%) reporting having between 1 to 5 followers, and 6 respondents reporting having more than 20 followers.

The business unit composition was dominated by the Business Bank (35%) and Distribution (38.1%) categories, with the two making up just under a quarter of the composition. The rest of the composition included Home Loans (8.4%), AVAF (7.1%), and Private Banking (5.8%).

3.5 Data Collection Methodology

3.5.1 Measuring Instruments

The generic name for a measurement device such as a survey or questionnaire is known as the instrument. Saunders et al. (2012) states that questionnaires are suitable as it produces quick results and easy to analyse and cost effective. The following section describes the measuring instruments that were used to in the current study. The credibility of the findings reported in the current study is dependent on the validity and reliability of the measures used to measure the proposed latent variables.

Four questionnaires were chosen based on an in-depth review of the literature. The overarching criteria for including a question in the questionnaires was based on previously reported psychometric properties of the tools, as well as cross cultural suitability to the South African context. Not all measures were used in the South African context, but based on their use in other
contexts, it was assumed that their validity and reliability would be relevant to the South African context. The final measures chosen for the current study included the Genos Questionnaire, LMX-7 Questionnaire, the Multifactor Leadership Questionnaire (MLQ), and the Work Design Questionnaire (WDQ).

Reliability refers to the consistency of a measure, where the question is asked if the instrument measures what it is supposed to measure. Validity demonstrates the extent to which an indicator measures what it is supposed to measure as it was designed to perform. The measures that are used in the study are drawn from the literature, based on previously reported validity and reliability estimates. Each of the measures is described in more detail in the sections below.

3.5.1.1 The Genos EI Inventory (Short)

Originally, the Genos EI was publicized by Ben Palmer and Con Stough at Swinburne University. It was initially published as the Swinburne University Emotional Intelligence Test (SUEIT) by Palmer and Stough (2001). The Genos EI Inventory (Short) has been designed to measure the frequency of demonstrating emotional intelligence behaviours in the work setting (Palmer & Stough, 2001). It has since been widely referred to as Genos EI.

The EI inventory measures individual differences on how people in the workplace display emotional intelligence work behaviours. Gignac (2010) explains that it is one the most widely used inventories formulated within the context of emotional intelligence performance. The Genos EI is a 70-item multi-rater assessment which has also been developed into shorter abbreviated versions. The two abbreviated versions are a 31-item concise version, and a 14-item Short version. The participant is required to indicate their level of agreement on a five-point Likert type scale ranging from 1 (Almost Never) to 5 (Almost Always). Whilst there is no specific time limit to complete the questionnaire, it normally takes between 2-5 minutes to complete.

The inventory comprises of items that represent emotional intelligence workplace behaviours. The reliability estimates are closely related to the Bar-On Emotional Quotient Inventory and the Emotional Competence Inventory (Gignac, 2010). It had been administered to many English-speaking residents in several developed countries including South Africa. The Genos EI measure is different compared to the Bar-On Emotional Quotient Inventory (Bar-On EQ-i ), as well as the Mayer–Salovey–Caruso Emotional Intelligence Test (MSCEIT) in that the latter lacks workplace face validity, given that it is not very practical as the items are too complex and take a long time to complete.
Research using Genos EI has shown that scores in the measure correlate significantly with various workplace performance indices (Gignac, 2008a). As such, Palmer, Stough, Harmer & Gignac (2009) explain that this model is meant to capture the rate of individual performance of emotional intelligence behaviour in the job area, rather than concealed emotional intelligence on its own. As for the validity and reliability of this measure, Gignac (2008a) stated that the mean subscale reliabilities ranged from 0.71 to 0.85 across five nationalities (American, Australian, Asian, Indian, and South African). The mean Genos EI total score’s internal consistency reliability (a) was estimated at 0.96. Furthermore, the test–retest reliability found test–retest correlations of 0.83 and 0.72 based on two-month and six-month time intervals for Genos EI total scores respectively. Hence, Gignac (2008a) concluded that the Genos EI inventory scores are linked to acceptable levels of internal consistency, reliability and test–retest constancy.

According to Coetzer (2013), the study conducted by Gignac (2010, p.45) amongst South Africans reported a Cronbach’s alpha coefficient of 0.90. Considering the positive results found by Coetzer (2013) using a large South African sample, the authors hoped that the instrument would be successful in measuring emotional intelligence in a diverse sample of managers in the banking sector.

3.6 Multiple Leadership Questionnaire (MLQ)

The MLQ, originally developed by Avolio and Bass (1992), and the shortened form (MLQ-6-S) further refined by Northouse (2001), is a self-report questionnaire consisting of 21 items and is measured on a five-point Likert-type scale (0 = not at all to 4 = frequently, if not always) in which the items relate to the participant presenting a range of leader behaviours.

The MLQ-6S was used to measure transformational, transactional and laissez-faire leadership styles in a systematic way in the current study. According to Vinger and Cilliers (2006), previous research has confirmed the existence of significant links between transformational leadership behaviours and organizational results. The earlier version of the tool that was developed by Bass (1985) was used to assess to measure the leadership styles of a group of South Africa managers and senior executives. From its early versions, Avolio and Bass (2004) have revised the measure several times. The MLQ instrument is considered the most widely used measure to assess leadership styles which can be universally applied across different cultures (Tejeda, Scandura & Pillai, 2001).
The questionnaire has five sub-scales that are used to assess transformational leadership behaviour (idealised attributes, idealised behaviours, inspirational motivation, intellectual stimulation and individual consideration) and three that are used to assess transactional leadership behaviour (contingent rewards, management by exception (active), and management by exception (passive)). The MLQ also measures non-transactional leadership, or laissez-faire, behaviour as well as three outcomes of leadership (Tejeda, 2001).

The main purpose of the measuring instrument is to measure transformational leadership styles in a systematic way (Northouse, 2001). An important function of the instrument is to provide a path for leaders to become effective. The MLQ has a multitudinal role as it can identify future leaders, and it could be used for possible leadership training through which leaders can adjust their leadership style (Bass & Riggio, 2006).

The MLQ provides feedback on a leadership type and facilitates a practical understanding of how the feedback can relate to promoting efficiency and excelling in a leadership position (Avolio & Bass, 2004). The MLQ consist of two forms, the self-rating form for the leaders/managers, and the rater form for the employees to rate their managers. There is evidence from studies by Tejeda (2001) and Avolio and Bass (1999), that the MLQ 6S has strong psychometric properties which are generally considered to be valid and reliable.

In a study by Vinger and Cilliers (2006) on the higher education sector in South Africa, the MLQ 6S was administered as a questionnaire, wherein the shortened form with a reduced set of items from the MLQ showed evidence of predictive and constructive validity. The transformational subscales or items were highly inter-correlated in support of convergent validity. The scale also demonstrated divergent validity where the transformational leadership scales were negatively related to management-by-exception subscales and laissez-faire leadership, thus providing support for discriminant validity.

The authors, Vinger and Cilliers (2006) also indicates that in a study by Bass (1998), several different approaches have been used to confirm the reliability of the MLQ by examining the resulting agreement among respondents. These approaches included rate-rerate consistency, subordinate-superior agreement and peer ratings based on performance in small groups. In addition, performance ratings by supervisors and direct reports, where a positive relationship between transformational behaviour and high MLQ ratings, were found (Bass, 1995). Since the MLQ instrument is confirmed as being reliable in previous studies, it can largely assist with
identifying leadership potential and in identifying leadership characteristics from a leader and a follower perspective. It is therefore a suitable tool in the present study in specifically measuring transformational leadership from the supervisor and supervisee perspective.

### 3.7 Unit Level Performance Measurement

In the unit level performance measurement phase, the researcher used the performance appraisal scores of the organization per business unit of a banking institution. The questionnaire is sent to each voluntary participant and the information is collated into an excel spreadsheet. The information from each respondent in the excel file is organized into the different business units they are situated in. There are five business units presented with six performance categories on a scale of 1 to 6 (1-underperforming, 2-improvement needed, 3-good, 4-strong, 5-very strong and 6-outstanding). Individual scores were aggregated to form business unit scores. Thus, all individuals in one business unit receive the same score. A weighted average for each unit is obtained by adding up the total score per category. The performance measurement is based on each individual in the unit’s performance over a period of time and is given by their supervisors. In general, the performance evaluation scores are used for promotion or development opportunities.

### 3.8 Work Design Questionnaire

The nature of work is different from previous years as technology has revolutionized the way in which work is done and is therefore far more complex. Organizations have begun to brace themselves for continuous change amidst the imminent fourth industrial revolution. This will ultimately transform modern society in an impactful way. Work design and job characteristics, specifically job autonomy, can influence organizational success and individual well-being (Morgeson & Campion, 2003).

Grant and Parker (2009) describes the importance of work design and the way in which it impacts the individual, group and organizational outcomes through the way jobs, tasks and roles are structured and modified. Researchers explored having a more valid and reliable instrument to assess work characteristics in modern organizational settings (Bayona, Caballer & Peiro, 2015). Two very common questionnaires, the Job Diagnostic Survey (JDS) and the Multi-method Job Design Questionnaire (MJDQ), developed by Hackman and Oldham (1975) and Campion (1985) respectively, were developed and used widely in research. They were found to have two drawbacks
on their measurement of psychometric properties, where the JDS had low internal consistency and the MJDQ had problems with its factor structure.

Considering the above, the Work Design Questionnaire (WDQ) was selected as one of the more suitable instruments designed to assess work characteristics. The instrument was developed and validated by Morgeson and Humphrey (2006), and the measure reported strong psychometric properties. The WDQ is a measure of 21 work characteristics grouped into four higher-order categories; Task, Knowledge, Social, and Contextual characteristics. Since its publication and implementation, the WDQ has been one of the most highly cited tools for assessing work characteristics in the *Journal of Applied Psychology* (Morgeson & Humphrey, 2006). The instrument consists of 72 items on a 5-point Likert-type scale which measures 14 work design variables and two outcome variables. The participant indicates the degree to which they agree with statements on a scale ranging from 1 (strongly disagree) to 5 (strongly agree). The WDQ scales demonstrate high internal consistency reliability across the dimensions within an average Cronbach’s coefficient alpha of 0.87 across a multitude of studies (Morgeson & Humphrey, 2006). Only part of the scale was used in this study.

### 3.9 Leader Member Exchange Questionnaire

The LMX-7 short form was developed by Graen and Uhl-Bien (1995). The LMX-7 scale calculates the degree to which leaders and followers have a sense of mutual trust or obligation to each other. The LMX-7 scale assesses the degree to which leaders and followers have mutual respect for each other’s capabilities, mutual trust, and a sense of strong obligation to one another. Taken together, these dimensions determine the extent to which followers will be part of the leader’s in-group or out-group. The LMX-7 questionnaire consists of questions that contain items that asks followers to describe the relationship they have with their leader and their subordinates. The score obtained on the questionnaire is used to determine the quality of the relationship.

The LMX-7 has an internal consistency reliability alpha of 0.92 according to (Aditya, 2004). The LMX-7 questionnaire is also a method of analysing one’s own leadership style and the questionnaire has a guideline of how to score. Generally, higher scores are an indication of a higher-quality leader-member relationship, and lower scores indicate the contrary. The scores of each LMX-7 question are totalled, with the total indicating the quality of the relationship (30-35 = very high; 25-29 = high; 20-24 = moderate; 15-19 = low; 7-14 = very low) (Graen & Uhl-Bien, 1995). The LMX-7 is often used in survey research and has shown high reliability.
(Lawrence & Kacmar, 2012). In a study by Fisher and Kelso (2016) on a sample of ICT managers, the LMX-7 instrument reported a Cronbach Coefficient Alpha of 0.78.

3.10 Research Participation and Ethical Consideration

3.10.1 Ethical Considerations

Each participant in the targeted organization was contacted by email to inquire about their participation. The importance of the privacy of the participants involved was ensured and no information about participants was disclosed to any third party. The participants were provided with an information form which thoroughly explained the goal of the study as well as the anticipated risks of participating in the study. Once the consent form was signed each participant, the researcher went on to administer the questionnaire electronically.

Participants could withdraw their participation from the study at any point, and it was emphasised that participation was voluntary. A partner organization encrypted the data to anonymise it before the researcher could conduct any analyses on the data. This way, it was not possible for the researcher to identify any of the research participants. The researcher obtained informed consent from the participants (See Appendix A). The protection of human participants was thus ensured by informed consent and assurance of confidentiality.

3.10.2 Informed Consent

Participant compliance to take part in a study should be established by an informed consent (Creswell, 2003). As illustrated by Leedy and Ormod (2001), participation in any research study should be voluntary. The approved consent form given to participants in this study informed them that by answering the survey, they were agreeing to the conditions described in the consent form, including voluntariness and use of the data.

3.10.3 Confidentiality

The consent form informed participants of the confidential nature of the study they were participating in. Participants were not required to fill in their names on the survey instrument. Research records and participants’ email addresses were treated confidentially. Exhaustive efforts were taken to protect the privacy, and maintain confidentiality, of the information obtained from the participants in the study. Anonymity was ensured such that participants can never be identified in any publication resulting from this study. Participants’ responses were not analysed on an
individual basis, with data from the study analysed and reported in an aggregated manner. In addition, no individual feedback will be provided to participants, as the study was not intended for evaluation, individual planning, and/or goal setting purposes.

3.11 Analysis

Once the data collection process had been completed, the researcher analysed the data using relevant statistical data packages (SPSS, Version 25, 2017). Prior to conducting the inferential analyses to test the substantive research hypotheses, descriptive statistics were generated to screen the data for outliers and to test the assumptions of multivariate statistical techniques such as multiple regression that was utilised in the current study.

With regards to Exploratory Factor Analyses (EFA) and multiple regression, the process typically involves (a) considering the sample size and dealing with missing data, (b) assessing univariate and multivariate normality, (c) dealing with statistical outliers, (d) assessing multicollinearity and singularity, (e) considering the adequacy of covariance, and (f) item parcelling and mean centring.

Exploratory Factor Analyses (EFA) was used to test the uni-dimensionality of dimensions and the quality of manifest items. According to Watson (2017), the process of factor analysis is a means of condensing data to a set of smaller, more easily interpretable variables. Kahn (2006) explains that EFA explores how many factors exist among a set of variables and the extent to which there is a relationship between the variables to the factors.

Simple linear regression and hierarchical moderated regression analyses were used to test the direct, indirect, and mediation effects proposed in Chapter 2.

3.12 Data Analysis

The objective of quantitative research is to provide valid inferences from the sample data available to some larger population to which one wishes to generalise. It can, however, not be expected that random samples from a population will yield sample values (i.e. statistics) that are exactly equal to the population values (i.e. parameters).

For the purposes of investigating the proposed linear relationships, the following research strategy was utilized during the analyses process:

a) The reliability of items and sub-scales was assessed using traditional item analysis (using SPSS statistics version 25).
b) The dimensionality of measures was assessed through Exploratory Factor Analysis (using SPSS).
c) The measurement quality of measurement models was inferred by collectively considering evidence from points (a) and (b) above.
d) The proposed direct and mediating relationships between variables was estimated using multiple linear regression (using SPSS).
e) The interaction effects were estimated using moderated regression analyses using mean centered parcels (using SPSS).

3.13 Missing Values

Missing data is normally expected in any study. Missing data can potentially reduce the statistical power of a research study, which can bias and invalidate the study (Kang, 2013). It is thus important to first approximate the missing data using appropriate statistical methods before moving onto the analysis stage in order to avoid any bias. Since the proportion of missing values in the data was negligible, no missing value analyses was needed. The study only made use of cases with complete data to conduct the statistical analyses.

3.14 Statistical Technique

Once the quantitative data had been collected, the researcher applied statistical techniques to test the research hypotheses and to describe the general characteristics of the variables in the sample. Item analysis was implemented to investigate the internal consistency of the data. Additionally, reliability tests on the items and dimensions measuring the variables in the investigation were conducted. Exploratory Factor Analysis was used to assess the dimensionality of measures. Regression analysis was used to assess the proposed direction and strength of the proposed relationships captured in the substantive research hypotheses.

3.14.1.1 Item Analysis

Item analysis is the method used to evaluate the item characteristics for the test construction and its interpretation indicates whether certain items should be selected, or not, for the test (Salkind, 2010). Whilst item analysis facilitates the selection or omission of items from the test, it is primarily a tool for assisting the item writer to improve on an item. The main purpose of conducting item analysis for a study is to exclude items that are inconsistent with the variables being measured, and by identifying them in the process, the internal consistency of the scale can be confirmed (Theron, 2007). Item analysis process is also considered a measure to increase test
effectiveness, with a main purpose of improving the quality of the test. It identifies the item difficulty and item discrimination. In this study item analysis was used using the reliability analysis procedure, wherein the Cronbach’sAlpha value and item-total were calculated.

Nunnally’s (1967) guidelines were used to determine levels of reliability for the scales as indicated in Table 3. An item is excluded from further analyses if it has an item-total correlation value less than 0.30 and would result in a considerable increase in the scale internal consistency when removed (Pallant, 2010).

Table 3

<table>
<thead>
<tr>
<th>Reliability coefficient value</th>
<th>Interpretation</th>
</tr>
</thead>
<tbody>
<tr>
<td>0.9 and above</td>
<td>Excellent</td>
</tr>
<tr>
<td>0.9 – 0.89</td>
<td>Good</td>
</tr>
<tr>
<td>0.7 – 0.79</td>
<td>Adequate</td>
</tr>
<tr>
<td>Below 0.7</td>
<td>May have limited applicability</td>
</tr>
</tbody>
</table>


### 3.14.1.2 Simple Linear Regression

Simple linear regression allows a researcher to study relationships between two quantitative variables. In simple linear regression, the variable to be predicted is known as the criterion variable and is referred to as Y. Researchers predict scores of one variable based on the scores of a second independent variable. The independent variable is known as the predictor variable and is referred to as X.

Regression models can be interpreted in various ways. One way is by means of the R-square, which can be described as the extent of variance explained in the dependent variable by the predictors. Where two or more predictors are jointly regressed against the criterion variable, it is considered a multiple regression model (Kraha, Turner, Nimon, Zientek, & Henson, 2012).

According to Kao and Green (2008), the F-test signifies the determination of significance of the F-ratio by equating it to a critical value from the probability distribution. If the F-ratio is more than the critical value, then the F-test supports refutation of the null hypothesis. The critical value is never less than 1. As the F-ratio rises, the more the disparity in the result is explained by differences in the independent variable (Kao & Green, 2008).
Freedman (2009) states that the standardised beta coefficient relates to the strength of the effect of each singular independent variable compared with the dependent variable. The greater the absolute value of the beta coefficient, the stronger the outcome. For example, a beta of -.9 has a stronger effect than a beta of +.8. Standardised beta coefficients have standard deviations as the unit of interpretation. This means the variables can be compared with each other without difficulty. Thus, standardised beta coefficients are the coefficients as a result of the variables in the regression if all were converted to z-scores before running the analysis (Freedman, 2009).

### 3.14.2 Mediation in Multiple Regression

According to Hood, Conlon, and Andrews (2008), mediation analysis can be described as a method used to determine the degree to which indirect paths via the mediator explain the association between the independent variable and the dependent variable (Shrout & Bolger, 2002; Hayes & Rockwood, 2017).

Three basic conditions need to exist for mediation:

1) The predictor must be able to explain significant variation in the hypothesised mediator, which is path a.

2) The mediator must account for significant variation of the criterion in path b.

3) When steps 1 and 2 of the analysis are satisfied, a previously significant relationship between the predictor and criterion (path c) will result in non-significance (complete mediation) or substantially reduced significance (partial mediation).
Firstly, path c of the model needs to be determined by conducting a bivariate regression analysis, predicting the dependant variable (criterion) from the independent variable (predictor). The next step entails determining path a by applying a bivariate regression, thus predicting the mediator from the independent variable (predictor). Thereafter, a multiple regression analysis predicting the dependant variable (criterion) from the mediator and the independent variable (predictor) needs to be performed. This will produce the coefficients for path b and path c. In order to produce the final coefficient, the coefficients for paths a and b that were determined in the previous steps need to be multiplied. This will provide the coefficient, indicating the mediating affect among the dependent (criterion) and independent variables (predictors) (Hood et al., 2008). The mediation model is illustrated in Figure 3.

Figure 3. Generic mediation model (Source: Adapted from Baron & Kenny, 1986, pp. 1173-1182)

3.14.3 Exploratory Factor Analysis (EFA)

In the following section, the results from the EFA analyses will be discussed in more detail. The factor analyses were conducted on each of the scales separately with the aim of establishing the uni-dimensionality of the measures.
Factor analysis is the next step in the process whereby researchers use this approach as a data reduction technique (Pallant, 2007). It is broadly used in psychology, and according to Byrant, Yarnold and Michelson (1999), factor analysis is considered the approach of choice when it comes to interpreting self-reporting surveys.

The reason for using this technique is to determine if the dimensions are interpretable in theory. The methodology involves taking large numbers and reducing them to a smaller set (Taherdoost, Sahibuddin & Jalaliyoon, 2014). Furthermore, unlike other statistical procedures, there is more subjectivity in the decision-making process in EFA (Thompson, 2004).

According to Izquierdo, Olea and Abad (2014), EFA is generally used in the social sciences and the purpose behind EFA is to determine common factors, which is necessary for producing the item correlation matrix. In addition, construct validity is considered a prerequisite for predictive or criterion related validity, whereby it refers to the extent to which a given measure assesses the construct it intends to measure (Westen & Rosenthal, 2003). For this reason, it is important to establish the uni-dimensionality of a set of items before combining them into factor scores for the purposes of regression analysis.

During EFA, a decision is made about the method of estimation to be used, either by rotation or the criteria for the factors to be determined (Orkan, 2018). To evaluate the dimensionality of the individual scales, EFA uses the Maximum Likelihood Estimator, with Promax rotations. If the factors are uncorrelated, they will remain that way after rotation, but if factors do correlate, the Promax rotation will reflect that as well (Russel, 2002).

Ruscio and Roche (2012) believe researchers rotate the extracted factors when doing EFA to assist interpretation. Promax rotations are an example of oblique rotation methods and are considered a practical tool when working with large data sets as they include raising the loadings to a power of four that results in greater correlations among the factors (Yong & Pearce, 2013). Since it is an oblique rotation, it allows factors to be correlated quickly. According to Abdi (2003), its name derives from procrustean rotation because it tries to fit a target matrix which has a simple structure.

Thurstone (1947) and Cattell (1978) supported the use of Promax rotations essentially because of the simplification of factor structures and therefore making interpretation more reliable in research. Eigenvalues that are greater than one are interpretable (Gorsuch, 1983), and as a result, the variances of each factor as well as the communalities related to the rotated factors should be reported (Kahn, 2006).
In EFA, several criteria were used to evaluate the dimensionality of measures including the Eigenvalues greater than one rule, salient factor loadings (greater than .50), percentage of common variance explained and residual correlations. High factor loadings are indicative of items that reflect large portions of common factor variance (Kinnear & Gray, 2004).

3.14.3.1 Sample Adequacy for EFA

Firstly, when doing an EFA, two factors are taken into consideration to determine if a dataset is appropriate. These are the sample size and the strength of the relationship between variables (Pallant, 2013). Sample size is important in factor analysis and various authors have noted its importance. Anderson et al. (1995) noted that sample sizes should ideally be greater than 100. Comrey (1973) suggested the following classifications in his guide to sample sizes: 100 as poor, 200 as fair, 300 as good, 500 as very good, and 1000 or more as excellent.

The adequacy therefore of sampling is tested through a method known as the Keyser Meyer Olkin (KMO) test. The researcher examines the Kaiser-Meyer-Olkin (KMO) value and Bartlett’s test as measures to determine sample adequacy. The grouping of items is confirmed through this process. The KMO value gives a measure of the amount of variation that arises from the underlying factors, whilst the strength of the relationship among variables is assessed through Bartlett’s test of sphericity (Bartlett, 1954). High values of KMO indicate EFA is possible with the data, otherwise EFA will not yield useful results.

The recommendation made by Kaiser (1974) for KMO measures is as follows. Values less than 0.5 are considered the bare minimum, values between 0.5 and 0.7 are mediocre, values between 0.7 and 0.8 are good, values between 0.8 and 0.9 are great, and values including 0.9 and above are considered superb (Hutcheson & Sofroniou, 1999). Field (2007) recommends that the minimal acceptable KMO value of 0.6 should be used if EFA is to be considered (Matlab, 2010; Chummun, 2012). Bartlett’s Test on Sphericity on the other hand assesses whether there is correlation between the subscale attributes (Hooper, 2012). If there is no correlation (an identity matrix) between the subscale attributes, then it defeats the purpose of determining factors within the subscale attributes since they will not be related in any way.

Bartlett’s Test on Sphericity provides a chi-square output that must be significant (p<.05) for factor analysis to be suitable (Tabachnick & Fidell, 2001). The sampling adequacy can therefore be assessed with the use of the Kaiser-Meyer-Olkin (KMO) (Kaiser, 1970).
3.15 Conclusion

The purpose of this chapter was to provide insight into the research methodology that was used to investigate the proposed relationship between the variables that made up the theoretical model. Detailed descriptions for the problem statement, objectives, sample and research design were provided. The sampling strategy and characteristics of the sample were discussed. In addition, the ethical considerations relating to the collection of data were reviewed.

The study made use of an ex post facto research design since the independent variables could not be manipulated. The strengths and weaknesses of the research design were discussed in detail. The treatment of missing values and the examination of the assumptions of multiple regression were also discussed. The findings of the research based on the research methodology explained in Chapter 3 are discussed in the following chapter.
4 RESEARCH RESULTS

4.1 Introduction

Theorizing in Chapter 2 culminated in a complex nomological model containing direct, indirect, and mediating effects. More specifically, the hypothesizing was directed at presenting a complex, yet coherent theoretical model, which aims to explain task performance in the workplace.

In Chapter 3 the research design and statistical methods that were used to empirically test the proposed theoretical model were discussed. This chapter presents the analysis of the data collected for the research study. The goal of this chapter is to present the results of the quantitative statistical techniques. The results will be discussed in four broad steps:

- Descriptive statistics
- Exploratory factor analysis
- Reliability analysis
- Regression analysis

4.2 Descriptive Statistics

The goal of the descriptive statistics is to inspect the characteristics of a sample, screen data for outliers and test assumptions of statistical techniques that are used in the study. Descriptive analysis is required when determining the normality of the distribution, and the skewness and kurtosis is used as a measure of variability. According to Pallant (2007), it is important to screen for outliers and typos since they may have an impact on the statistical results. Specifically, multivariate outliers can lead to spurious results when they are not transformed or deleted. The descriptive analysis of data considers the following:

- Summaries in the form of tables and graphs
- Information about the data and its variation in the form of a graphic analysis
- Provides an indication of patterns that are unexpected which is necessary when doing the analysis

4.2.1 Distribution of Scores

SPSS descriptive statistics were used to investigate the distribution of scores. More specifically, z-scores greater than 3 were regarded as outliers (Tabachnick & Fidell, 2007). Descriptive statistics
were also used to investigate the skewness and kurtosis of observed indicator variables. The significance of skewness and kurtosis can be evaluated by dividing the estimated values by their corresponding standard errors (Tabachnick & Fidell, 2007). Calculated values are interpreted as standardised z-scores and conventional, but conservative, alpha levels (i.e. \(-2.58 \leq z\)-score \(\leq 2.58\)) should be applied to assess statistically significant skewness and kurtosis (Tabachnick & Fidell, 2007).

Table 4

<table>
<thead>
<tr>
<th>Variable</th>
<th>N</th>
<th>Mean</th>
<th>Std. Deviation</th>
<th>Skewness</th>
<th>Kurtosis</th>
</tr>
</thead>
<tbody>
<tr>
<td>MLQ</td>
<td>226</td>
<td>2.56</td>
<td>0.38</td>
<td>-0.87</td>
<td></td>
</tr>
<tr>
<td>LMX</td>
<td>226</td>
<td>3.34</td>
<td>1.04</td>
<td>-0.43</td>
<td></td>
</tr>
<tr>
<td>EQ</td>
<td>226</td>
<td>3.79</td>
<td>0.36</td>
<td>-1.23</td>
<td></td>
</tr>
<tr>
<td>Autonomy</td>
<td>226</td>
<td>3.50</td>
<td>0.72</td>
<td>-0.79</td>
<td></td>
</tr>
<tr>
<td>JP</td>
<td>226</td>
<td>3.76</td>
<td>0.24</td>
<td>-6.18</td>
<td></td>
</tr>
</tbody>
</table>

From the questionnaire, questions constituting each of the dimensions were grouped together to obtain the mean centred score. Additionally, the overall unit level performance scores were combined as factor score. The score was obtained by aggregating the individual scores at the business unit level, thereafter, obtaining the weighted average for each business unit such that the performance score of an individual corresponds to the weighted average score in the business unit of the same individual. Thus, each individual working in a business unit will get the same score.

From Figure 4, we note that for LMX, Autonomy, MLQ and EQ, the distribution shows a symmetric distribution with the median lying in the middle of the box plot, suggesting the dimension scores may be normally distributed. However, for unit level performance the score was negatively skewed, which might suggest deviations from normality. This is typically what one may expect from performance evaluation scores.
The researcher considered the deviation of the distribution from the normal distribution. The methods that are used in understanding the shape of distribution is the kurtosis and the skewness. Normality may be referred to as describing a symmetrical, bell-shaped curve where most of the scores are found toward the middle, and the smaller proportion of scores toward the extreme (Gravetter & Wallnau, 2004). The Shapiro Wilk Test can be used to test the assumption of normality of factor scores. The Shapiro Wilk statistic for each of the combined factor scores are reported in Table 5.

Table 5

<table>
<thead>
<tr>
<th>Dimension</th>
<th>Shapiro-Wilk Statistic</th>
<th>Degrees of freedom</th>
<th>Significance</th>
</tr>
</thead>
<tbody>
<tr>
<td>Performance</td>
<td>0.45</td>
<td>226</td>
<td>0.0000</td>
</tr>
<tr>
<td>EQ</td>
<td>0.936</td>
<td>226</td>
<td>0.0000</td>
</tr>
<tr>
<td>LMX</td>
<td>0.971</td>
<td>226</td>
<td>0.0000</td>
</tr>
<tr>
<td>MLQ</td>
<td>0.955</td>
<td>226</td>
<td>0.0000</td>
</tr>
<tr>
<td>Autonomy</td>
<td>0.964</td>
<td>226</td>
<td>0.0000</td>
</tr>
</tbody>
</table>

The Shapiro-Wilks test is known to be extremely sensitive to outliers (Pallant, 2007), suggesting that the dimensions are normally distributed. The test rejects the hypothesis of normality when the
*p*-value is less than or equal to the level of significance which is 5%. Failing the normality test allows you to state with 95% confidence the data does not fit the normal distribution. Passing the normality test only allows you to state that no significant departure from normality was found. For the performance scores the Q-Q plot is shown in Figure 5. It is apparent from the plot that outliers in the low end of the boxplot show deviations from normality (do not appear close to the straight line).

*Figure 5. Normality plot for transformed unit level performance scores*

Although the Q-Q plots indicated that most of the factor scores are not normally distributed the scores are not deviating enough to warrant a transformation of the data. In the context of factor analysis, Muthen and Muthen (2015) found that Maximum Likelihood estimator that will be used in the Factor Analyses is relatively robust against deviations from normality. For this reason, it was not deemed necessary to delete any outliers in the data or to conduct transformations to the
normalize the data. In addition, there are relatively few missing values in the data which warrants the use of normal pairwise deletion as opposed more complex techniques such as missing value imputation.

Table 6 shows the results from the KMO and Bartlett’s Test of Sphericity. For all the measures, the KMO values were greater than 0.6, indicating that the EFA is possible for all the subscales in the data. Referring to the same table, the p-value of the Bartlett’s test is significant for all dimensions, indicating that the underlying items making up each dimension are correlated and that factor analyses is possible on each of the dimensions.

Table 6

<table>
<thead>
<tr>
<th>Subscale</th>
<th>Number of items</th>
<th>KMO</th>
<th>Bartlett’s Test of Sphericity</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>EQ</td>
<td>17</td>
<td>0.83</td>
<td>623.927 91 0.0000</td>
</tr>
<tr>
<td>LMX</td>
<td>7</td>
<td>0.92</td>
<td>1108.761 21 0.0000</td>
</tr>
<tr>
<td>MLQ</td>
<td>12</td>
<td>0.92</td>
<td>2271.443 0 0.0000</td>
</tr>
<tr>
<td>Autonomy</td>
<td>9</td>
<td>0.93</td>
<td>1670.748 36 0.0000</td>
</tr>
</tbody>
</table>

Table 6 indicates of the number of factors extracted from each subscale and the cumulative percentage of common variance. In instances where the unrestricted EFA retained more than one factor and there was no theoretical justification for additional factors beyond the first factor, the researcher forced a restricted single factor. Osborn (2014) notes that this practise is permissible since EFA is prone to extract more factors than what is typically needed to account for the intercorrelations between the items. The Factor Analysis results for each of the subscales will be discussed in the section below in more detail.

4.3 Uni-dimensionality of the Genos Emotional Intelligence Inventory

The abbreviated version of the EQ (Genos Emotional Intelligence Inventory) was used to measure emotional intelligence. Initially the unrestricted EFA returned 4 factors with eigenvalues greater than 1, explaining 37.42% of the total common variance. The first factor explained roughly 10% of the variance, while the second factor explained roughly 19% of the variance. The third and fourth factors roughly explained 5.2% and 2.9% of the common variance respectively.
Inspection of the rotated pattern matrix did not indicate a clear factor structure that made theoretical sense. However, it was evident that most of the variance was explained by a factor of 2, and most items loaded saliently on the second factor. For this reason, it was decided to force a single factor solution on the data in the hope that most of the items will load saliently on a single factor. The original authors who conceptualised the measure designed it to fundamentally measure a single underlying factor, so there was no reason to expect a multi-dimensional factor structure. This is because the measure was developed to fundamentally reflect a single underlying factor. Results from the second round of factor analyses indicated that most of the items loaded saliently on a single factor, and when combined, explained approximately 20.8 % of the common variance. The factor loadings are reported in Table 7.

Table 7

<table>
<thead>
<tr>
<th>Item</th>
<th>Description</th>
<th>Factor</th>
</tr>
</thead>
<tbody>
<tr>
<td>EQ_10</td>
<td>I have trouble finding the right words to express how I feel at work.</td>
<td>0.63</td>
</tr>
<tr>
<td>EQ_14</td>
<td>I effectively deal with things that annoy me at work.</td>
<td>0.55</td>
</tr>
<tr>
<td>EQ_13</td>
<td>I am aware of my mood state at work.</td>
<td>0.53</td>
</tr>
<tr>
<td>EQ_11</td>
<td>When I get frustrated with something at work, I discuss my frustration appropriately.</td>
<td>0.52</td>
</tr>
<tr>
<td>EQ_5</td>
<td>I understand the things that make people feel optimistic at work.</td>
<td>0.51</td>
</tr>
<tr>
<td>EQ_6</td>
<td>I fail to keep calm in difficult situations at work.</td>
<td>0.50</td>
</tr>
<tr>
<td>EQ_3</td>
<td>When upset at work, I still think clearly</td>
<td>0.45</td>
</tr>
<tr>
<td>EQ_12</td>
<td>I don’t know what to do or say when colleagues get upset at work.</td>
<td>0.41</td>
</tr>
<tr>
<td>EQ_1</td>
<td>I appropriately communicate decisions to stakeholders.</td>
<td>0.40</td>
</tr>
<tr>
<td>EQ_2</td>
<td>I fail to recognize how my feelings drive my behaviour at work.</td>
<td>0.38</td>
</tr>
<tr>
<td>EQ_7</td>
<td>I am effective in helping others feel positive at work.</td>
<td>0.36</td>
</tr>
<tr>
<td>EQ_8</td>
<td>I find it difficult to identify the things that motivate people at work.</td>
<td>0.36</td>
</tr>
<tr>
<td>EQ_9</td>
<td>I consider the way others may react to decisions when communicating them.</td>
<td>0.34</td>
</tr>
<tr>
<td>EQ_4</td>
<td>I fail to handle stressful situations at work effectively.</td>
<td>0.32</td>
</tr>
</tbody>
</table>
4.3.1 Uni-dimensionality of the Multifactor Leadership Questionnaire (MLQ)

Initial analyses suggested that 2 factors with eigenvalues greater than 1 were extracted during the unrestricted EFA. The first factor explained roughly 45% of the variance and the second factor explained 6.9%. Only items related to the transformational leadership factor were included in the factor analyses.

Since most of the variance was explained by the first factor, one can regard the solution as one-dimensional. The original authors of the measure also developed the scale to be uni-dimensional. For this reason, a single factor solution was forced on the data. The results from this analysis suggested that all the items loaded strongly on a single factor. The factor loadings of the restricted EFA are reported in Table 8.

Table 8

<table>
<thead>
<tr>
<th>Item</th>
<th>Description</th>
<th>Factor</th>
</tr>
</thead>
<tbody>
<tr>
<td>MLQ_10</td>
<td>I provide others with new ways of looking at puzzling things.</td>
<td>0.77</td>
</tr>
<tr>
<td>MLQ_16</td>
<td>I help others find meaning in their work.</td>
<td>0.76</td>
</tr>
<tr>
<td>MLQ_17</td>
<td>I get others to rethink ideas that they had never questioned before.</td>
<td>0.75</td>
</tr>
<tr>
<td>MLQ_3</td>
<td>I enable others to think about old problems in new ways.</td>
<td>0.71</td>
</tr>
<tr>
<td>MLQ_9</td>
<td>I provide appealing images about what we can do.</td>
<td>0.70</td>
</tr>
<tr>
<td>MLQ_11</td>
<td>I let others know how I think they are doing.</td>
<td>0.69</td>
</tr>
<tr>
<td>MLQ_4</td>
<td>I help others develop themselves.</td>
<td>0.68</td>
</tr>
<tr>
<td>MLQ_2</td>
<td>I express with a few simple words what we could and should do.</td>
<td>0.67</td>
</tr>
<tr>
<td>MLQ_18</td>
<td>I give personal attention to others who seem rejected.</td>
<td>0.64</td>
</tr>
<tr>
<td>MLQ_15</td>
<td>Others are proud to be associated with me.</td>
<td>0.63</td>
</tr>
<tr>
<td>MLQ_8</td>
<td>Others have complete faith in me.</td>
<td>0.53</td>
</tr>
<tr>
<td>MLQ_1</td>
<td>I make others feel good to be around me.</td>
<td>0.50</td>
</tr>
</tbody>
</table>
The results of the restricted EFA suggest that most items loaded saliently on a single factor, and that all the items in the scale can be used to compute the factor score for transformational leadership. The combined factor scores were used as input variables in the multiple regression equation.

4.3.2 Uni-dimensionality of Job Autonomy (Work Design Questionnaire)

The unrestricted EFA on the Job Autonomy items suggested that most of the items loaded on a single factor. Only one eigenvalue greater than 1 was returned and most of the factor loadings loaded strongly on the single factor. The 9 items account for roughly 72% of the common variance. Table 9 shows the factor loadings for questions related to job autonomy.

Table 9

<table>
<thead>
<tr>
<th>Item</th>
<th>Factor Matrix for Questions Related to Job Autonomy from the Questionnaire</th>
</tr>
</thead>
<tbody>
<tr>
<td>wdq_9 9</td>
<td>The job allows me to decide on my own how to go about doing my work.</td>
</tr>
<tr>
<td>wdq_8 8</td>
<td>The job gives me considerable opportunity for independence and freedom in how I do the work.</td>
</tr>
<tr>
<td>wdq_4 4</td>
<td>The job gives me a chance to use my personal initiative or judgment in carrying out the work.</td>
</tr>
<tr>
<td>wdq_7 7</td>
<td>The job allows me to make decisions about what methods I use to complete my work.</td>
</tr>
<tr>
<td>wdq_3 3</td>
<td>The job allows me to plan how I do my work.</td>
</tr>
<tr>
<td>wdq_1 1</td>
<td>The job allows me to make my own decisions about how to schedule my work.</td>
</tr>
<tr>
<td>wdq_2 2</td>
<td>The job allows me to decide on the order in which things are done on the job.</td>
</tr>
<tr>
<td>wdq_5 5</td>
<td>The job allows me to make a lot of decisions on my own.</td>
</tr>
<tr>
<td>wdq_6 6</td>
<td>The job provides me with significant autonomy in making decisions.</td>
</tr>
</tbody>
</table>

Most of the items returned robust factor loadings in excess of 0.50. Thus, one can conclude that the Autonomy scale is construct valid and uni-dimensional. None of the items was flagged for deletion in the Autonomy sub-scale.
4.3.3 Uni-dimensionality of Leader Member Exchange (LMX)

The Exploratory Factor Analyses suggest that a single factor is responsible for the intercorrelations between the items making up the LMX measure. A single eigenvalue greater than 1 was extracted, explaining 63.72% of the variance. Table 10 shows a summary of the EFA results. None of the items were regarded as problematic, and for this reason, none of the items were flagged for deletion. The factor loadings are also given in table 5.5.

Table 10

<table>
<thead>
<tr>
<th>Item</th>
<th>Description</th>
<th>Factor</th>
</tr>
</thead>
<tbody>
<tr>
<td>LMX_7q_3</td>
<td>How well does your leader recognize your potential?</td>
<td>0.87</td>
</tr>
<tr>
<td>LMX_7q_2</td>
<td>How well does your leader understand your job problems and needs?</td>
<td>0.84</td>
</tr>
<tr>
<td>LMX_7q_4</td>
<td>Regardless of how much formal authority your leader has built into his or her position, what are the chances that your leader would use his or her power to help you solve problems in your work?</td>
<td>0.83</td>
</tr>
<tr>
<td>LMX_7q_7</td>
<td>How would you characterize your working relationship with your leader?</td>
<td>0.83</td>
</tr>
<tr>
<td>LMX_7q_6</td>
<td>I have enough confidence in my leader that I would defend and justify his or her decision if he or she were not present to do so.</td>
<td>0.76</td>
</tr>
<tr>
<td>LMX_7q_1</td>
<td>Do you know where you stand with your leader and do you usually know how satisfied your leader is with what you do?</td>
<td>0.72</td>
</tr>
<tr>
<td>LMX_7q_5</td>
<td>Again, regardless of the amount of formal authority your leader has, what are the chances that he or she would “bail you out” at his or her expense?</td>
<td>0.69</td>
</tr>
</tbody>
</table>

Inspection of the factor matrix in Table 10 indicates that most of the factor loadings were strongly associated with the single underlying latent factor. Thus, the LMX measure seems to be performing well in operationalizing the LMX latent construct. Considering that uni-dimensionality is an important prerequisite for internal consistency reliability, it is important to consider it in the internal consistency reliability of each of the measures. Considering that all four measures can be regarded as uni-dimensional, the next section will consider the internal consistency of all four measures.
4.4 Reliability Analysis

Reliability is measure of consistency, and if a result is repeatedly consistent, then it is considered as reliable (Cherry, 2013). Cronbach’s Alpha Coefficient is a measure typically used for assessing the internal consistency of an instrument (Rovai, Baker & Ponton, 2014). The general acceptance rule for Cronbach’s Alpha Coefficient is as follows. If it is between 0.6 and 0.7 it indicates an acceptable level of reliability, 0.8 and greater indicates a very good level of internal consistency, and 0.95 may indicate item redundancy in the measure (Hulin, Netemeyer and Cudeck, 2001).

Generally, the Cronbach’s Alpha for all the four components of our questionnaire was greater than 0.75, indicating that the questions have relatively high internal consistency. According to Ursachi, Horodnic and Zait (2015), the purpose of using the Cronbach Alpha is to indicate the reliability of the scale. For the scale to be deemed reliable, the Cronbach Alpha Coefficient should at least be 0.70. This would be indicative of the lower bound of acceptable levels of internal consistency (Nunnally & Bernstein, 1994).

Table 1 shows the internal consistency of the revised measures used in the current study. The results in the table suggest that most of the measures can be considered reliable since most values are greater than 0.90.

Table 1

<table>
<thead>
<tr>
<th>Subscale</th>
<th>Number of Items</th>
<th>Cronbach’s Alpha</th>
<th>Mean</th>
<th>Standard Deviation</th>
</tr>
</thead>
<tbody>
<tr>
<td>MLQ</td>
<td>12</td>
<td>0.90</td>
<td>54.2</td>
<td>9.36</td>
</tr>
<tr>
<td>EQ</td>
<td>14</td>
<td>0.75</td>
<td>50</td>
<td>6.97</td>
</tr>
<tr>
<td>LMX</td>
<td>7</td>
<td>0.92</td>
<td>23.6</td>
<td>6.93</td>
</tr>
<tr>
<td>Autonomy</td>
<td>9</td>
<td>0.95</td>
<td>30.7</td>
<td>8.61</td>
</tr>
</tbody>
</table>

Looking specifically at the items that make up each measure, Table 12 contains corrected item total correlations and Cronbach’s Alpha measures after deleting metrics for each of the items in the Emotional Intelligence measure. The results indicate that all the items report a high item total correlation, which generally lead to a decrease in the overall alpha level if any of the items were deleted. This is a good indicator that each of the items contribute to the overall internal consistency of the measure.
Table 12

*Cronbach’s Alpha Results for Items Under Emotional Intelligence*

<table>
<thead>
<tr>
<th>Item</th>
<th>Description</th>
<th>Corrected Item-Total Correlation</th>
<th>Cronbach’s Alpha if Item Deleted (overall Cronbach’s Alpha)</th>
</tr>
</thead>
<tbody>
<tr>
<td>EQ_3</td>
<td>When upset at work, I still think clearly.</td>
<td>0.32</td>
<td>0.74 (0.76)</td>
</tr>
<tr>
<td>EQ_4</td>
<td>I fail to handle stressful situations at work effectively.</td>
<td>0.31</td>
<td>0.74 (0.76)</td>
</tr>
<tr>
<td>EQ_5</td>
<td>I understand the things that make people feel optimistic at work.</td>
<td>0.38</td>
<td>0.74 (0.76)</td>
</tr>
<tr>
<td>EQ_6</td>
<td>I fail to keep calm in difficult situations at work.</td>
<td>0.47</td>
<td>0.73 (0.76)</td>
</tr>
<tr>
<td>EQ_8</td>
<td>I find it difficult to identify the things that motivate people at work.</td>
<td>0.35</td>
<td>0.74 (0.76)</td>
</tr>
<tr>
<td>EQ_9</td>
<td>I consider the way others may react to decisions when communicating them.</td>
<td>0.3</td>
<td>0.75 (0.76)</td>
</tr>
<tr>
<td>EQ_10</td>
<td>I have trouble finding the right words to express how I feel at work.</td>
<td>0.54</td>
<td>0.72 (0.76)</td>
</tr>
<tr>
<td>EQ_11</td>
<td>When I get frustrated with something at work, I discuss my frustration appropriately.</td>
<td>0.42</td>
<td>0.73 (0.76)</td>
</tr>
<tr>
<td>EQ_12</td>
<td>I don’t know what to do or say when colleagues get upset at work.</td>
<td>0.35</td>
<td>0.74 (0.76)</td>
</tr>
<tr>
<td>EQ_13</td>
<td>I am aware of my mood state at work.</td>
<td>0.46</td>
<td>0.73 (0.76)</td>
</tr>
</tbody>
</table>

The item statistics for the MLQ measure is reported in Table 13: Results from the analyses suggest that MLQ items contribute towards the measurement of Transformational Leadership. In addition, all the corrected items’ total correlations are high, indicating strong item discrimination.

Table 13

*Cronbach’s Alpha results for Items Under Transformational Leadership*

<table>
<thead>
<tr>
<th>Item</th>
<th>Description</th>
<th>Corrected Item-Total Correlation</th>
<th>Cronbach’s Alpha if Item Deleted (overall Cronbach’s Alpha)</th>
</tr>
</thead>
<tbody>
<tr>
<td>MLQ_1</td>
<td>I make others feel good to be around me</td>
<td>0.49</td>
<td>0.90 (0.90)</td>
</tr>
<tr>
<td>MLQ_2</td>
<td>I express with a few simple words what we could and should do</td>
<td>0.59</td>
<td>0.89 (0.90)</td>
</tr>
<tr>
<td>MLQ_3</td>
<td>I enable others to think about old problems in new ways.</td>
<td>0.66</td>
<td>0.89 (0.90)</td>
</tr>
<tr>
<td>MLQ_4</td>
<td>I help others develop themselves.</td>
<td>0.63</td>
<td>0.89 (0.90)</td>
</tr>
<tr>
<td>Item</td>
<td>Description</td>
<td>Corrected Item-Total Correlation</td>
<td>Cronbach’s Alpha if Item Deleted (overall Cronbach’s Alpha)</td>
</tr>
<tr>
<td>--------</td>
<td>-----------------------------------------------------------------------------</td>
<td>----------------------------------</td>
<td>---------------------------------------------------------------</td>
</tr>
<tr>
<td>MLQ_8</td>
<td>Others have complete faith in me</td>
<td>0.51</td>
<td>0.89 (0.90)</td>
</tr>
<tr>
<td>MLQ_9</td>
<td>I provide appealing images about what we can do.</td>
<td>0.63</td>
<td>0.89 (0.90)</td>
</tr>
<tr>
<td>MLQ_10</td>
<td>I provide others with new ways of looking at puzzling things.</td>
<td>0.69</td>
<td>0.88 (0.90)</td>
</tr>
<tr>
<td>MLQ_11</td>
<td>I let others know how I think they are doing.</td>
<td>0.6</td>
<td>0.89 (0.90)</td>
</tr>
<tr>
<td>MLQ_15</td>
<td>Others are proud to be associated with me</td>
<td>0.57</td>
<td>0.89 (0.90)</td>
</tr>
<tr>
<td>MLQ_16</td>
<td>I help others find meaning in their work</td>
<td>0.72</td>
<td>0.88 (0.90)</td>
</tr>
<tr>
<td>MLQ_17</td>
<td>I get others to rethink ideas that they had never questioned before</td>
<td>0.66</td>
<td>0.89 (0.90)</td>
</tr>
<tr>
<td>MLQ_18</td>
<td>I give personal attention to others who seem rejected.</td>
<td>0.59</td>
<td>0.89 (0.90)</td>
</tr>
</tbody>
</table>

In Table 14, it is evident that most of the items reported high item total correlations in the Autonomy measure. None of the items lead to higher internal consistency when deleted. For this reason, it was decided to retain all the items in the scale for the purposes of the regression analyses.

Table 14

*Cronbach’s Alpha Results for Items Under Autonomy*

<table>
<thead>
<tr>
<th>Item</th>
<th>Description</th>
<th>Corrected Item-Total Correlation</th>
<th>Cronbach's Alpha if Item Deleted (overall Cronbach's Alpha)</th>
</tr>
</thead>
<tbody>
<tr>
<td>AUTONOMY_1</td>
<td>The job allows me to make my own decisions about how to schedule my work.</td>
<td>0.83</td>
<td>0.96 (0.96)</td>
</tr>
<tr>
<td>AUTONOMY_2</td>
<td>The job allows me to decide on the order in which things are done on the job.</td>
<td>0.83</td>
<td>0.96 (0.96)</td>
</tr>
<tr>
<td>AUTONOMY_3</td>
<td>The job allows me to plan how I do my work.</td>
<td>0.82</td>
<td>0.96 (0.96)</td>
</tr>
<tr>
<td>AUTONOMY_4</td>
<td>The job gives me a chance to use my personal initiative or judgment in carrying out the work.</td>
<td>0.86</td>
<td>0.95 (0.96)</td>
</tr>
<tr>
<td>AUTONOMY_5</td>
<td>The job allows me to make a lot of decisions on my own.</td>
<td>0.8</td>
<td>0.96 (0.96)</td>
</tr>
</tbody>
</table>
Results in Table 15 show the item total correlations and Cronbach’s Alpha measures after deleting metrics for each of the items in the LMX measure. The results suggest that most of the items contribute to the internal consistency of the scale. None of the items lead to an increase in Cronbach’s Alpha when deleted.

Table 15

Cronbach’s Alpha Results for Items Under Leader Member Exchange

<table>
<thead>
<tr>
<th>Item</th>
<th>Description</th>
<th>Corrected Item-Total Correlation</th>
<th>Cronbach’s Alpha if Item Deleted (overall Cronbach’s Alpha)</th>
</tr>
</thead>
<tbody>
<tr>
<td>LMX_7q_1</td>
<td>Do you know where you stand with your leader and do you usually know how satisfied your leader is with what you do?</td>
<td>0.68</td>
<td>0.92 (0.92)</td>
</tr>
<tr>
<td>LMX_7q_2</td>
<td>How well does your leader understand your job problems and needs?</td>
<td>0.81</td>
<td>0.90 (0.92)</td>
</tr>
<tr>
<td>LMX_7q_3</td>
<td>How well does your leader recognize your potential?</td>
<td>0.84</td>
<td>0.90 (0.92)</td>
</tr>
<tr>
<td>LMX_7q_4</td>
<td>Regardless of how much formal authority your leader has built into his or her position, what are the chances that your leader would use his or her power to help you solve problems in your work?</td>
<td>0.79</td>
<td>0.90 (0.92)</td>
</tr>
<tr>
<td>Item</td>
<td>Description</td>
<td>Corrected Item-Total Correlation</td>
<td>Cronbach's Alpha if Item Deleted (overall Cronbach's Alpha)</td>
</tr>
<tr>
<td>--------------</td>
<td>-----------------------------------------------------------------------------</td>
<td>----------------------------------</td>
<td>----------------------------------------------------------</td>
</tr>
<tr>
<td>LMX_7q_5</td>
<td>Again, regardless of the amount of formal authority your leader has, what are the chances that he or she would “bail you out” at his or her expense?</td>
<td>0.66</td>
<td>0.92 (0.92)</td>
</tr>
<tr>
<td>LMX_7q_6</td>
<td>I have enough confidence in my leader that I would defend and justify his or her decision if he or she were not present to do so.</td>
<td>0.73</td>
<td>0.91 (0.92)</td>
</tr>
<tr>
<td>LMX_7q_7</td>
<td>How would you characterize your working relationship with your leader?</td>
<td>0.79</td>
<td>0.91 (0.92)</td>
</tr>
</tbody>
</table>

In summary, all the measures indicated satisfactory internal consistency and it was decided to retain the items in all the measures. Given that the reliability and uni-dimensionality of the measures are confirmed by the foregoing analyses, it seems plausible to conduct the regression analyses to test the substantive research hypotheses.

### 4.5 Regression Analysis and Hypothesis Testing

The goal of the foregoing section was to verify the reliability and the validity of the measures used in the regression analysis. Reliability refers to the consistency of scores (Ritter, 2010). Uni-dimensionality and internal consistency remain important prerequisites for regression analysis since the items are combined into factor scores in order to do the regression analysis.

This section will investigate the bi-variate correlations between Autonomy, LMX, Leadership, and EQ. The validity of the hypotheses will not be tested based on the correlation results, but rather on the multiple regression results. However, the linearity of factor scores remains an important assumption to test prior to conducting multiple regression. The goal of the following section is to assess the linear relationship between variables before specifying the multiple regression models.

#### 4.5.1 Bivariate Correlations by Hypothesis

At this stage, the researcher sought to first determine if there exists a linear relationship between the derived factors from the EFA amongst themselves, as well as with the unit level performance score. Underlying the regression analysis, the factor scores should show at least some form of significant linear relationships (Schober, Boer & Schwarte, 2018). Results from the correlational analyses are reported in Table 16. The results suggest that all the relationships are linearly related.
in a statistically significant manner \((p < 0.05)\), except for the relationship between Transformational Leadership and unit level performance.

The relationships reflect a weak linear relationship amongst all the factors, except for the relationship between Transformational Leadership and unit level performance \((r = 0.11, p > .05)\). In summary, the relationships amongst the four theoretical factors included in the main theoretical model indicate a degree of association between the variables. For this reason, one would expect to find significant relationships in the multiple regression analyses. The strength of the relationships will be assessed in the next section.

Table 16

**Bivariate Correlations by Hypothesis**

<table>
<thead>
<tr>
<th>Factors</th>
<th>Hypothesis</th>
<th>Pearson’s Correlation Coefficient</th>
</tr>
</thead>
<tbody>
<tr>
<td>Transformational leadership and unit level performance score</td>
<td>1</td>
<td>(r = 0.11)</td>
</tr>
<tr>
<td>Transformational leadership and leader member exchange</td>
<td>2</td>
<td>(r = 0.15^*)</td>
</tr>
<tr>
<td>Leader member exchange and unit level performance</td>
<td>10</td>
<td>(r = 0.17^*)</td>
</tr>
<tr>
<td>Transformational leadership and emotional intelligence</td>
<td>4</td>
<td>(r = 0.45^{**})</td>
</tr>
<tr>
<td>Emotional intelligence and leader member exchange</td>
<td>5</td>
<td>(r = 0.22^{**})</td>
</tr>
<tr>
<td>Emotional intelligence and unit level performance</td>
<td>6</td>
<td>(r = 0.24^{**})</td>
</tr>
<tr>
<td>Leader member exchange and autonomy</td>
<td>9</td>
<td>(r = 0.43^{**})</td>
</tr>
<tr>
<td>Transformational leadership and autonomy</td>
<td>11</td>
<td>(r = 0.13^*)</td>
</tr>
</tbody>
</table>

*Note. **p-value < .001, *p-value < .05*

4.5.2  **Results from Regression Analysis: Direct Relationships**

Theorising culminated in the formulation of the theoretical model that was tested with regression analyses. The model that was proposed in Chapter 2 is graphically portrayed in Figure 6. The theoretical model conceptualised in the current study was operationalized and empirically tested by using regression analysis. The results of the regression analysis are summarised in Table 17.
The results in Table 17 indicate that empirical support was found for the proposed relationship between Transformational Leadership and unit level performance. Specifically, the results (H1, βMLQ = 0.133) indicate that a unit increase in the Transformational Leadership score increases the unit Level Performance score by 0.133 units, with Transformational Leadership explaining 1.8% of the variation in unit level performance.

**Figure 6. Theoretical Model**

Table 17

*Results from Simple and Multiple Linear Regression*
<table>
<thead>
<tr>
<th>Hypothesis</th>
<th>Standardised Beta Value</th>
<th>R² Value and F-Test</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. There is a positive relationship between Transformational Leadership and unit level performance</td>
<td>βMLQ = 0.133 *</td>
<td>R² = 0.018, F = 3.96</td>
</tr>
<tr>
<td>2. There is a positive relationship between Transformational Leadership and Leader Member Exchange</td>
<td>βMLQ = 0.16 *</td>
<td>R² = 0.03, F = 5.75*</td>
</tr>
<tr>
<td>4. There is a positive relationship between Transformational Leadership and Emotional Intelligence</td>
<td>βMLQ = 0.49 **</td>
<td>R² = 0.24, F = 70.79**</td>
</tr>
<tr>
<td>6. There is a positive relationship between Emotional Intelligence and unit level performance</td>
<td>βEQ = 0.24 **</td>
<td>R² = 0.05, F = 13.93**</td>
</tr>
<tr>
<td>8. There is a positive relationship between Leader Member Exchange and unit level performance</td>
<td>βLMX = 0.17 *</td>
<td>R² = 0.03, F = 6.20*</td>
</tr>
<tr>
<td>9. There is a positive relationship between Leader Member Exchange and Autonomy</td>
<td>βLMX = 0.43 **</td>
<td>R² = 0.19, F = 51.53**</td>
</tr>
<tr>
<td>11. There is a positive relationship between Transformational Leadership and Autonomy</td>
<td>βMLQ = 0.14 *</td>
<td>R² = 0.02, F = 4.59*</td>
</tr>
</tbody>
</table>

Support was also found for the relationship between Transformational Leadership and Leader Member Exchange (H2), Emotional Intelligence (H4) and Autonomy (H11). Support was found for Hypothesis 2, the relationship between Transformational Leadership and Leader Member Exchange (βMLQ = 0.16, p < 0.05). The results suggest that one unit increase in the Transformational Leadership will result in a Leader Member Exchange score increasing by 0.16, with Transformational Leadership explaining only 2.5% of the variation in Leader Member Exchange. Additionally, from Hypothesis 4 (βMLQ = 0.49, p < 0.05), a unit increase in the Transformational Leadership score was found to increase the Emotional Intelligence score by 0.49, with Transformational Leadership explaining 24% of the variation in Emotional Intelligence. Hypothesis 11 indicated that a unit increase in the Transformational Leadership score increases the Autonomy score by 0.14, with the model only explaining 2% of the variation in Autonomy (βMLQ = 0.14, p < 0.05).

From Table 5.13, we can also see that Emotional Intelligence had a significant positive relationship with unit level performance (H6), and a significant positive relationship with Leader Member Exchange (H8) and unit level performance. From hypothesis 6 (βEQ = 0.24, p < 0.05), a unit increase in the Emotional Intelligence score increased the prediction of the unit level performance score by...
0.24. Also, from Hypothesis 8 ($\beta_{LMX} = 0.17; p < 0.05$), a unit increase in the Leader Member Exchange score improved the Unit level performance score by 0.17. However, Emotional Intelligence ($R^2 = 0.05$) explains more of the variation in the unit level performance score compared to Leader Member Exchange ($R^2 = 0.03$).

Lastly, Hypothesis 9 indicates that Leader Member Exchange has a significant positive relationship with Autonomy. A one unit increase in the Leader Member Exchange score increased the prediction for the Job Autonomy score by 0.43, with Leader Member Exchange explaining almost 19% of the variation in Autonomy. The results from the regression analysis suggest that LMX is a strong predictor of Autonomy ($\beta_{LMX} = 0.433, p < 0.05$). Thus, support was found for Hypothesis 9.

In summary, the results indicate multi-relationships, with Transformational Leadership being a significant predictor for LMX, Emotional Intelligence, Autonomy and unit level performance. However, from the R-squared values, we can see that Transformational Leadership explains about a quarter of the total variation in Emotional Intelligence, and about 1.8% of the total variation in unit level performance. The next section explores if these multi-relationships reflect some mediation paths in which Transformational Leadership influences unit level performance and Leader Member Exchange.

4.5.3 Mediation Analysis

Regression analysis is a statistical tool that seeks to examine the relationship between two or more variables. Multiple regression is an extension of simple linear regression. It is a means of analysing more than one variable (Zsuzsannaa & Liviu, 2012). Mediation analysis explores the degree to which an exposure’s effect on an outcome is diverted through a mediating variable (Saunders & Bloom, 2018). Mediation analysis also determines the extent to which an outcome gets diverted through a mediating variable (Woodworth, 1928; Alwin and Hauser, 1975; Baron and Kenny, 1986). A mediating variable is appropriate when a researcher wants to understand the factors through which two variables are associated, where one variable gives rise to a mediating variable, which then creates a dependent variable (Mackinnon, 2011).

4.5.3.1 Results from the Regression Analysis: Mediation Relationships

The results of a mediation analysis are explained through the indirect effect. The method involves a few steps described below. The analysis of the mediation involves determining path ‘c’ of the model. The method used is known as Bivariate Regression Analysis.
Bivariate Regression Analysis involves analysing two variables in determining the strength of the relationship between the two variables. The results show X and Y, which denote the independent and the dependent variable respectively. The path analysis assists in estimating the magnitude or significance of a causal connection.

As illustrated in Figure 7, the arrows between two variables indicate the hypothesized relationship between the variables. Thereafter, in a path diagram, researchers use arrows to show how different variables relate to each other. An arrow pointing from, say, Variable A to Variable B, shows that Variable A is hypothesized to influence Variable B. Finally, a multiple regression analysis is done in which coefficients are formed for Path b and Path c, which are then multiplied, then concluding with a mediating coefficient which will explain the mediating relationship between the two variables.

Hypothesis 3 predicted that the relationship between Transformational Leadership and unit level performance is mediated by Leader Member Exchange. The results from the regression analysis conducted suggest that the relationship between Transformational leadership and Follower performance is mediated by Leader Member Exchange.

A) Direct Pathway

\[
\begin{align*}
\text{Transformational Leadership (IV)} & \quad c: \beta_{MLQ} = 0.133, p < 0.05 \\
\text{Unit Level Performance (DV)}
\end{align*}
\]

B) Indirect or Mediated Pathway

\[
\begin{align*}
\text{Transformational Leadership (IV)} & \quad c': \beta_{MLQ} = 0.11, p = 0.104 \\
\text{Unit Level Performance (DV)} \\
\text{LMX (Mediator)} & \quad a: \beta_{MLQ} = 0.16, p < 0.05 \\
\text{Path a-b: } & \quad \xi = 0.02 \\
\text{b: } \beta_{LMX} & \quad = 0.15, p < 0.05
\end{align*}
\]

*Figure 7. Mediation Analysis (Transformational Leadership – unit level performance Mediated by Leader Member Exchange)*
Table 18

**Mediation Analysis Results (Transformational Leadership – unit level performance Mediated by Leader Member Exchange)**

<table>
<thead>
<tr>
<th>Testing Paths</th>
<th>Unstandardized Beta</th>
<th>Standard Error (SEB)</th>
<th>Standardised Beta (B)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Path c DV = unit level performance</td>
<td>0.05</td>
<td>0.03</td>
<td>0.13*</td>
</tr>
<tr>
<td>$R^2=0.02$, $F = 3.97$, $p &lt; 0.05$</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>IV: Transformational Leadership</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Path a DV: Leader Member Exchange $R^2=0.03$, $F = 5.75$, $p &lt; 0.05$</td>
<td>0.27</td>
<td>0.11</td>
<td>0.16*</td>
</tr>
<tr>
<td>IV= Transformational Leadership</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Path b and c’ DV = unit level performance $R^2=0.04$, $F = 4.44$, $p &lt; 0.05$</td>
<td>0.04</td>
<td>0.03</td>
<td>0.11</td>
</tr>
<tr>
<td>IV: (c)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>IV: (b)</td>
<td>0.03</td>
<td>0.01</td>
<td>0.15*</td>
</tr>
<tr>
<td>Total (a)*(b)</td>
<td></td>
<td></td>
<td>0.024*</td>
</tr>
</tbody>
</table>

*Note. SE refers to Standard Error, DV refers to Dependent Variable, IV refers to Independent Variable, R^2 refers to the Coefficient of Determination, * Refers to a significant result where p<0.05, ** Refers to a significant result where p<0.001

From the above results, the direct relationship between Transformational Leadership and unit level performance was significant (step 1). After the mediation term was added to the equation, the relationship between Transformational Leadership and unit level performance was nonsignificant. The relationship between Transformational Leadership and unit level performance may be regarded as fully mediated since the relationship changed from being statistically significant relationship in step 1 ($\beta_{MLQ} = .133, p < 0.05$), to being non-significant in step 2 when the mediator variable LMX was added to the multiple regression equation ($\beta_{MLQ} = 0.11, p < 0.104$). This provides empirical support for Hypothesis 3, and for that the relationship between Leadership and unit level performance is fully mediated by LMX. The total indirect effect was 0.024, indicating that the indirect effect explained 2.4% of the variance in the total mediation model when taking the impact of the direct effect into consideration.

Hypothesis 5 posited that the relationship between Transformational Leadership and Leader Member Exchange is mediated by Emotional Intelligence. The results from the regression analysis
suggest that the relationship between Transformational leadership and Follower performance is mediated by Emotional Intelligence.

A) Direct Pathway

![Diagram of Direct Pathway]

B) Indirect or Mediated Pathway

![Diagram of Indirect Pathway]

Figure 8. Mediation Analysis (Transformational Leadership – Leader Member Exchange Mediated by Emotional Intelligence)

Table 19

<table>
<thead>
<tr>
<th>Testing Paths</th>
<th>Unstandardized Beta</th>
<th>Standard Error (SE B)</th>
<th>Standardised Beta (B)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Path c DV = Leader-Member Exchange</td>
<td>0.27</td>
<td>0.11</td>
<td>0.16*</td>
</tr>
<tr>
<td>交换 $R^2$=0.03, $F$ = 5.75, $p &lt; .031$</td>
<td>IV: Transformational Leadership</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Path a DV: Emotional Intelligence</td>
<td>0.44</td>
<td>0.05</td>
<td>0.49**</td>
</tr>
<tr>
<td>交换 $R^2$=0.24, $F$ = 70.49, $p &lt; 0.001$</td>
<td>IV=Transformational Leadership</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Path b and c’ DV = Leader-Member Exchange</td>
<td>0.12</td>
<td>0.13</td>
<td>0.07</td>
</tr>
<tr>
<td>交换 $R^2$=0.05, $F$ = 5.93, $p &lt; .01$</td>
<td>IV: (c)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>IV: (b)</td>
<td>0.35</td>
<td>0.14</td>
<td>0.18*</td>
</tr>
<tr>
<td>IV: Total (a)*(b)</td>
<td></td>
<td></td>
<td>0.08*</td>
</tr>
</tbody>
</table>

Note. SE refers to Standard Error, DV refers to Dependent Variable, IV refers to Independent Variable, $R^2$ refers to the Coefficient of Determination, * Refers to a significant result where $p<0.05$, ** Refers to a significant result where $p<0.001$
The relationship between Transformational Leadership and LMX may be regarded as fully mediated since this relationship changed from a statistically significant relationship in step 1 ($\beta_{MLQ} = 0.16, p < .05$) to a nonsignificant relationship in step 2 when the mediator variable (Emotional Intelligence) was included in the multiple regression equation ($\beta_{EQ} = 0.13, p > 0.05$). This indicates empirical support for Hypothesis 5 and the assertion that the relationship between Transformational Leadership and LMX is fully mediated by Emotional Intelligence. The total indirect effect was 0.08, indicating that the indirect effect explained 8% of the variance in the total mediation model when taking the impact of the direct effect into consideration.

Hypothesis 7 predicted that the relationship between Transformational Leadership and unit level performance is mediated by Emotional Intelligence. The results from the regression analysis conducted suggests that the relationship between Transformational Leadership and unit level performance is fully mediated by Emotional Intelligence.

A) Direct Pathway

B) Indirect or Mediated Pathway

Figure 9. Mediation Analysis (Transformational Leadership – unit level performance Mediated by Emotional Intelligence)
### Table 20

**Mediation Analysis Results (Transformational Leadership Mediated by Emotional Intelligence)**

<table>
<thead>
<tr>
<th>Testing Paths</th>
<th>Unstandardized Beta</th>
<th>Standard Error (SE B)</th>
<th>Standardised Beta (B)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Path c DV = unit level performance $R^2$=0.13, $F = 3.97, p &lt; 0.05$</td>
<td>0.05</td>
<td>0.02</td>
<td>.13*</td>
</tr>
<tr>
<td>IV: Transformational Leadership</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Path a DV: Emotional Intelligence $R^2$=0.21, $F = 70.48, p &lt; 0.001$</td>
<td>0.45</td>
<td>0.06</td>
<td>0.49**</td>
</tr>
<tr>
<td>IV= Transformational Leadership</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Path b and c’ DV = unit level performance $R^2$=0.06, $F = 6.91, p &lt; 0.01$ IV: (c)</td>
<td>0.00</td>
<td>0.03</td>
<td>0.02</td>
</tr>
<tr>
<td>IV: (b)</td>
<td>0.10</td>
<td>0.03</td>
<td>0.25*</td>
</tr>
<tr>
<td>Total (a)*(b)</td>
<td></td>
<td></td>
<td>0.12*</td>
</tr>
</tbody>
</table>

*Note. SE refers to Standard Error, DV refers to Dependent Variable, IV refers to Independent Variable, R2 refers to the Coefficient of Determination, * Refers to a significant result where $p<0.05$, ** Refers to a significant result where $p<0.001$*

In step 1 ($\beta_{MLQ} = 0.13, p < .05$), the relationship between Transformational Leadership and unit level performance changes from a significant relationship ($\beta_{MLQ} = 0.13, p < 0.05$) to a nonsignificant relationship in step 2 ($\beta_{MLQ} = 0.02, p > 0.05$) when the mediator variable (Emotional Intelligence) was included in the multiple regression equation. This indicates that empirical support was found for Hypothesis 7 and the relationship between Transformational Leadership and unit level performance is fully mediated by emotional intelligence. The total indirect effect was 0.12, indicating that the indirect effect explained 12% of the variance in the total mediation model when taking the impact of the direct effect into consideration.

#### 4.5.4 Results from Regression analysis: Moderated relationships

A moderator is a variable that modifies the form or strength of the relation between an independent and a dependent variable (Mckinnon, 2009). The following regression equations were used to test the significance of Autonomy moderating the relationship between Leader Member Exchange and unit level performance:
\[ E[Y_i|X_i, Autonomy \cdot Xi] = \alpha + \beta_1[X_i] + \beta_2[X_i \cdot Autonomy] \]

If one is unable to reject a null hypothesis, it means there is no evidence of differences of slopes in the populations from which the regression equations were developed (Berenson et al., 1983). This would mean that the relationship between Leader Member Exchange and unit level performance are the same, irrespective of the level of autonomy experience by workers in the sample. The results of the moderated regression analyses are presented in Table 21. Values of the main effects are depicted by a capital letter A, and the interaction effect by a capital letter B.

Table 21

<table>
<thead>
<tr>
<th>Hypothesis</th>
<th>Beta value and statistical significance</th>
<th>R-squared value and F-test</th>
</tr>
</thead>
<tbody>
<tr>
<td>H10: The relationship between Leader Member Exchange and unit level performance moderated by Autonomy</td>
<td>[A] ( \beta_{LMX}=0.165^* )</td>
<td>( R^2 = 0.027, F = 6.197^* )</td>
</tr>
<tr>
<td></td>
<td>[B] ( \beta_2=0.031 )</td>
<td>( R^2 = 0.028, F = 0.062 )</td>
</tr>
</tbody>
</table>

The moderated regression analysis suggests that the main effect between Leader Member Exchange and unit level performance was statistically significant (\( \beta_{LMX} = 0.165, p < 0.05 \)) however, the interaction term that was added in step 2 was unable to explain the additional variance in the regression model that already contained the main effect. This result suggests that no support was found for Hypothesis 10, which suggests that Autonomy does not moderate the relationship between Leader Member Exchange and unit level performance.

4.6 Summary of the Chapter

The purpose of this chapter was to present the empirical findings from the data analysis. The primary goal was to empirically test the substantive research hypotheses that made up the proposed conceptual model. The chapter presented the results of the quantitative statistical techniques which were discussed in four broad steps: descriptive statistics, exploratory factor analysis, reliability analysis and regression analysis. The dimensionality and reliability analyses indicated that the chosen measures were valid and reliable, and it was permissible to use the respective total scores in the regression analysis.
Overall, the regression analysis found support for most of the proposed relationships, but there were some relationships that did not survive the opportunity to be refuted. The mediation analyses suggested that the relationships between Transformational Leadership and unit level performance are mediated by LMX and Emotional Intelligence. Support was also found for the relationship between Transformational Leadership and LMX, via Emotional Intelligence. Finally, no statistical support was found for the proposed moderating relationship of Autonomy on the relationship between LMX and Unit level performance.
5 DISCUSSION OF RESULTS

5.1 Introduction

The primary goal of the current study was to investigate the relationship between transformational leadership, leader member exchange, emotional intelligence, and job characteristics in the form of job autonomy, on unit level performance. Although the concept of leadership and its impact on follower performance is well researched, there is a dearth of research on the dynamic interplay between job characteristics and person characteristics that act as transmission mechanism between leadership and follower performance. To this end, the current study aimed to conceptualise a complex, yet parsimonious, model that depicts the interplay between emotional intelligence, transformational leadership, leader member exchange and unit level performance.

In Chapter 2, the literature review provided a background to previous and contemporary perspectives on leadership, LMX and team performance. Theorizing led to the development of a complex model that was made up of several linear relationships. The relationships were operationalized by means of several direct, indirect and interactive relationships.

In Chapter 3, the research design, methodological approach, analyses strategy, and sample characteristics were discussed. The primary goal of Chapter 3 was to operationalize the substantive research hypotheses in order to empirically test the proposed relationships that make up the theoretical model. Furthermore, the measures used in the study were briefly discussed in terms of their generalizability to the South African context, as well as reported reliability and validity in other samples. Finally, the research ethics that guided the data collection were discussed.

In order to meet the objectives of the study, Chapter 4 analysed and discussed the empirical findings that emanated from the statistical analyses. Specifically, regression analysis assumptions were discussed by examining the sample characteristics in terms of central tendency, linearity, skewness and kurtosis. In addition, the uni-dimensionality of the chosen measures was examined by means of exploratory factor analysis. This step was taken to ensure that the results of the regression analysis could be interpreted unambiguously since the reliability and construct validity of the measures were initially established. Finally, regression analysis was used to empirically test the proposed direct, indirect, and interactive relationships proposed during the theorising stage of the study.

The aim of the current chapter is to discuss the empirical findings in more detail, and to link the findings of the current study to the broader canon of literature. It will also be important to highlight the practical
implications, and the limitations of the study. Ultimately, recommendations for future research will be proposed, based on synthesising the findings of the research.

5.2 Aims and Objectives of the Study

The main aim of the study was to examine the importance of transformational leadership and unit level performance within an organization in the banking sector. To this end, the researcher proposed several substantive linkages that emerged from the theoretical perspectives encountered in the literature review. Transformational leadership formed the core of the proposed model. However, emotional intelligence, leader-member exchange, and job characteristics in the form of autonomy, were included in the model to develop a more nuanced view of the relationship between leadership and unit level performance. In total, 11 hypotheses were formulated to explore the intricate linkages between variables.

Through this process, the researcher sought to answer the primary research initiating question and fulfil the overarching research objective. The primary objective of the study was to conceptualise an integrated model linking leadership with team performance.

5.3 Reliability and Uni-dimensionality of the Measuring Instruments

Although the primary aim of the study was to investigate the relationship between the leadership, LMX, emotional intelligence, autonomy, and unit level performance, it was also important to first assess the reliability and validity of the measures used in the study. Exploratory factor analysis was utilised to check the dimensionality of the measures. The results suggested that after some refinements, most of the measures were unidimensional. In some of the measures, multiple factors were extracted. However, in most cases, the results either explained negligible proportions of common variance over and above the primary factor, or indicated that there was no theoretical rationale for extracting a second factor. For this reason, most of the variable constructs included in the study were judged to be uni-dimensional.

After uni-dimensionality was established, each of the measures were subjected to item analyses using Cronbach’s Coefficient Alpha. Most of the measures reported high internal consistency metrics and were thus regarded as reliable. After these initial checks, items were combined into factor scores by calculating the mean of the items in each scale. These factor scores were then used in the regression analyses to empirically test the proposed hypotheses making up the conceptual model.

5.4 Discussion of direct relationships

The success of any organizations is fundamentally dependent on its human resources. Leaders are judged on the performance of the organisation they are lead since they are the coordinators of all
productive activities in the workplace, including the human resources. The goal of the current study was to investigate the impact of various team (LMX), personal (emotional intelligence, transformational leadership), and contextual (job autonomy) factors on unit level performance. Several direct, indirect and mediated linkages were proposed in Chapter 2, which can collectively be presented as a graphical model. In order to provide structure for the discussion, the current section will only focus on the direct effects which are depicted on the model in Figure 10.

![Conceptual Model of Direct Relationships](image)

**Figure 10. Conceptual Model of Direct Relationships**

Based on the results in Chapter 4, support was found for most of the hypotheses. Specifically, statistical support was found for the relationship proposed by hypotheses H1, H2, H4, H6, H8, H9, and H11. Results from the study support the primary idea that transformational leadership on its own is not effective in explaining unit level performance. The current results suggest that the relationship between transformational leadership and unit level performance is determined by numerous pathways through
LMX, emotional intelligence and autonomy. These findings coincide with recent research which found a diverse relationship between transformational leadership and outcomes with varying mediators (Chen, Ning, Yang, 2018; Jyoti, 2015).

Support was found for the proposed relationship between transformational leadership and leader member exchange (H\textsubscript{2}). The most recent literature suggests that transformational Leadership is effective in fostering high quality relationships between leaders and followers. Support was found for the hypothesis relating to this.

In a study among 109 community-banking managers by Howell and Hall-Merenda (1999), subordinate ratings of managers were collected on transformational leadership and LMX traits of the managers. The study found that transformational leadership traits were a significant predictor of LMX. The findings of the current study are consistent with this.

Support was also found for the proposed relationship between transformational leadership and emotional intelligence (H\textsubscript{4}). In a study based on previous literature by Kumar (2014), it was found that there were co-relationships between Emotional intelligence constructs and transformational leadership traits, which are individual influence, individualized consideration and inspirational motivation. The results suggested that emotional intelligence forms a critical part of transformational leaders’ essence.

A critical review of the literature demonstrated that the role of emotional intelligence in forming high quality LMX relationships is not universally researched, or acknowledged, as a key attribute of transformational leadership. Results from the current study found that emotional intelligence is a key attribute of the transformational leadership – LMX relationship sequence, which coincides with a study by (Mahadi, 2011). The results suggest that emotional intelligence plays a key mediating role between transformational leaders, and high-quality relationships with followers. The results also suggest that there is probably a direct relationship between transformational leaders and LMX, but the relationship is mediated by emotional intelligence.

A positive relationship was found between emotional intelligence and unit level performance (H\textsubscript{6}). The current study looked at the propensity of emotional intelligence to regulate behaviour. Pekaar, Van der Linden, Bakker and Born (2017) hypothesized that the extent to which leaders focus on followers’ emotions is a good predictor of unit level performance in social jobs. However, the context remains an important aspect as it can determine whether there will be positive effects on unit level performance or not (Jordan, Dasborough, Daus, & Ashkanasy, 2010). Nonetheless, all things held equal, emotional intelligence has been linked with higher unit level performance across a wide variety of jobs.
The links between LMX and unit level performance (H₈), and LMX and autonomy (H₉) were reviewed, with support found for the proposed relationship between LMX and unit level performance. Previous literature supports this relationship between LMX and unit level performance (Chen, Lam, Zhong, 2007; Walumbwa, Cropanzano, Goldman, 2011). Furthermore, research by Chen, Lam, Zhong (2007) showed that LMX can also foster autonomy and psychological empowerment (Chen, Lam, Zhong, 2007). This can permit followers to act autonomously once a strong LMX relationship has been established. The foregoing set of results suggest that broad support was found for the direct linkages proposed through theorizing. In the next section, the transmission mechanism (i.e. mediating effects) of emotional intelligence and LMX will be considered in the context of transformational leadership and unit level performance.

5.5 Discussion of indirect relationships

A key part of the proposed theoretical model was the transmission mechanism between transformational leadership and unit level performance. In total, three mediation linkages were proposed. The indirect effects proposed in this study are illustrated in Figure 11.

**Figure 11. Conceptual model of indirect relationships**
Support for the indirect relationships was found for the relationships posited in hypotheses H₃, H₅, and H₇ through mediation analysis. Results from the mediation analyses suggested that emotional intelligence and LMX are important mediators for the relationship between transformational leadership and unit level performance. This is an important finding which indicates the conditionality of the impact of leadership on follower performance. Specifically, this finding suggests that transformational leadership is effective in driving follower performance through emotional intelligence and strong LMX relationships.

Social Exchange Theory asserts that trust in a leader is a potential mediator between LMX and unit level performance (Liden & Maslyn 1998). Through a series of social exchanges, the leader and follower develop trust, which typically manifests as higher levels of follower performance (Sue-Chan, Au, & Hackett, 2012). Furthermore, the mediation analysis suggested that the relationship between transformational leadership and LMX is mediated by emotional intelligence. The implication of this finding is that emotional intelligence is a key attribute of effective leadership and building meaningful relationships at work. The results suggest that leaders are unlikely to be effective if they do not build up strong relationships with their followers or show high levels of emotional maturity when building the relationship.

Support was found for the mediating role of emotional intelligence between transformational leadership and unit level performance. Previous studies have also shown that emotional intelligence is an important contributor in explaining leadership effectiveness (Mayer et al., 2000a).

The foregoing results suggest that the transmission mechanism between transformational leadership and unit level performance is strongly regulated by strong LMX relationships and emotional intelligence. In a sense, LMX and emotional intelligence can be considered as two sides of the same coin. Both lead to stronger follower performance because they are mutually reinforcing. Specifically, emotional intelligence is needed to build strong LMX relationships, which in turn strengthen the use of emotional regulation in maintaining the most important work relationships.

Finally, no support was found for Hypothesis 10, which posited that the relationship between LMX and unit level performance is moderated by autonomy. Results from the moderated regression analyses suggested that the interaction effect did not explain additional variance that was not explained by the main effect. The research findings thus indicate that the relationship between LMX and unit level performance is not moderated by autonomy.
5.6 Managerial and Practical Implications of the Study

Leadership remains a topical subject in current political, economic and social world context. As the modern-day workplace is becoming more complex and unpredictable, large pockets of people are turning to leaders to provide them with direction and a vision for the future. The current study sought to explain the complex mechanism that exists between transformational leadership and unit level performance.

To a greater extent, support was found for the proposed theoretical model. Results from the study hold important practical implications for managers in organisations. Firstly, that transformational leadership has an important impact on follower unit level performance through several sequential linear linkages. The primary link is through emotional intelligence and LMX. This is a reasonable assertion because emotional intelligence is geared towards providing a facilitating and an enabling work environment for followers. It is interesting to note that the relationship was fully mediated, meaning that the relationship between transformational leadership and unit level performance would disappear in LMX if emotional intelligence was not present. This suggests that transformational leaders would be ineffective in driving performance if they do not promote strong LMX relationships and demonstrate emotional intelligence.

In a study conducted on the Royal Navy, Dulewicz, Young and Dulewicz (2015) found support for the assertion that emotional intelligence is more important than intelligence quotient (IQ) levels and managerial competencies, and that an emotionally intelligent leader will likely influence unit level performance. The finding holds important implications for the training and development of leaders in organisations, since the emphasis is not solely on the leadership traits, but also on the interactions that build strong teams.

The findings are critically important for the fast-paced banking industry where most employees work in a team, or in multiple teams. This suggests that emotional intelligence and high-quality relationships are critical for banks to reach their goals. The banking sector has an important role in South Africa, as it does for most countries, and many leadership studies have been done on the banking sector. As the findings in this study suggest, an association between transformational leadership and unit level performance, through indirect associations, and an emphasis on LMX, is strongly established through a mediating variable.

Previous research suggests that it is important that leaders attempt to develop high LMX relationships with their followers (Graen & Uhl-Bien, 1995; Scandura, 1999) as it can result in better work performance and follower outcomes. With the ‘social exchange’, LMX advocates that the exchange quality depends on the influence of the leader on the follower. However, Wang et al. (2015) proposed
that transformational leadership becomes “personalized” through LMX, and as such, high emotional intelligence probably amplifies the strong personal relationships formed through LMX. At the extreme ends of the argument, one could probably maintain that high quality LMX relationships are formed through the emotional intelligence of a transformational leader. However, the quality of the LMX relationship is also influenced by the emotional intelligence of followers. Thus, the organisation needs to make sure that the recruitment and selections strategies include emotional maturity as part of the key job attributes to assess. The ability of a leader will arguably be limited if most of the followers do not demonstrate high levels of emotional intelligence.

Results from the current study suggest that recruiting and selecting transformational leaders will not solve all the organisations’ problems, or even build strong follower performance. The dyadic process between leaders and followers, and between followers on their own, is the secret ‘ingredient’ that is needed to build a high-performance team culture. The implication of the results is that leaders need training on how to build strong dyadic relationships with followers, irrespective of their personal leadership style and preference. Emotional intelligence may help facilitate the establishment and maintenance of strong leader follower relationships, which ultimately results in above average unit level performance.

5.7 Limitations of the Study and Recommendations for Future Research

Although results from the study are overwhelmingly positive, there are notable limitations to the study. One of the limitations of using a convenience sampling, which was employed in this study, is that results cannot be generalized to the greater population due to the non-probabilistic sampling nature of the approach (Jager, Putnick, & Bornstein, 2017). Moreover, the sample used by the study was relatively small, and from a single organisation. To test the robustness of the results, one would have to replicate the research design using a different sample. Mono-method bias may have had an impact on the findings of the study since a single method of data collection was used. It is recommended that more diverse forms of data collection should be used in the future (e.g. observation, diary entries) to overcome the single method bias. Another limitation was that the data collection was cross-sectional in nature. Longitudinal data using various other data collection procedures can play an important role in establishing robustness of findings over time.

The research can also be extended by incorporating other types of leadership styles into the model, including transactional leadership and Laissez Faire leadership. It would be interesting to see if these leadership styles can lead to better follower performance if the leaders built strong LMX relationships and demonstrate high levels of emotional intelligence. It is recommended that organizations develop emotional intelligence training programs to improve the emotional competencies of management in
organizations, as well as to include emotional intelligence as part of the job specification in the recruitment and selection of leaders.

The impact that high LMX has as an indicator of positive unit level performance is an important factor, as suggested by this study. The mediation role of LMX between transformational leadership and unit level performance in the study also showed that if there is low LMX, then the relationship weakened. The outcome of the study shows that leadership on its own will have little impact on performance without the activation of strong LMX relationships (DeConinck, 2011; Loi, Ngo, Zhang, & Lau, 2011).

5.8 Conclusion

This study sought to conceptualise a model that depicts the relationship between emotional intelligence, transformational leadership, leader-member exchange, and unit level performance in a selected organization within the banking sector in South Africa. The research provided an insight on the role of emotional intelligence on transformational leadership. The study further explored the effect of such leadership, and the impact of social exchange on the leader member level. Leadership has been found to play an important role in organizations, specifically the interaction between leader and member in what is known as the LMX relationship.

As LMX and emotional intelligence were found to have a profound mediating effect on the relationship between transformational leadership and unit level performance, it ultimately creates an efficient working environment, and together with applied emotional intelligence, the leader’s role in influencing the follower to improve performance will be one of ease.


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http://doi.org/10.1037/0021-9010.79.4.475


https://doi.org/10.3389/fpsyg.2017.01364


http://doi.org/10.1108/01437730110380174

http://doi.org/10.1007/s10551-012-1322-6

http://doi.org/10.1037/0021-9010.83.6.835


https://doi.org/10.1016/j.ijnurstu.2010.06.004


Appendix A: Informed Consent Form

University of the Western Cape
Economic & Management Sciences Faculty
Industrial Psychology Department
Robert Sobukwe Road
Bellville 7535
Tel; 021 959 3187/2585

The role of emotional intelligence in transformational leadership: A Leader Member Exchange perspective

Dear Participant,

Congratulations, you have been successful in your application for partaking in the research study.

This email and form is to brief you with some detail of the research study. The research will assist me in achieving the objective of the study, which is to determine whether the role of the relationship on the performance of followers through emotional intelligence and how leadership can create an enabling environment for followers to reach career and performance goals.

The questionnaire you are about to complete is designed to allow you to express your personal point of view with regards to different aspects related to the leader member relationship and work performance. Please consider this an opportunity to express your point of view about your professional activities.

The questionnaire will take about 20 minutes to complete and consists of 119 questions. Please provide only one answer per question. It is essential that you answer all the questions by selecting the response which best reflects your thoughts on each statement. Please read the instructions carefully before responding to the statements and questions in each subsection.

If at any time you feel that the need to withdraw from participating in the study you are free to do so without any negative consequences. You are free to also not answer any question or questions and are free to decline.

Don’t forget that:

1. Your participation in the programme is completely voluntary.
2. Your information will remain strictly confidential.
3. Your information will not be shared with anyone.
4. Your participation in this programme does not in any manner impact your current employment or relationship with any of your colleagues/employer.

If you have any questions about this programme, its procedures or any concerns, you may contact the following individuals on the following contact details:

Coordinator: Maryam Waglay
Personal Email: 3688722@myuwc.ac.za

Lecturer: Dr. Jurgen Becker
Staff Email: JBecker@uwc.ac.za

We look forward to your participation!
Appendix B: Research Participation Form

RESEARCH PARTICIPATION FORM

Please note that:

1. Your participation in the programme is completely voluntary.
2. Your information will remain strictly confidential.
3. Your information will not be shared with anyone.
4. Your participation in this programme does not in any manner impact your current tertiary studies and relationships at your institution.

I hereby agree that I have read through and understood the information that has been provided to me. I agree that I have been afforded the opportunity to contact coordinators of this programme. My signature below confirms that I have agreed to my participation in this study.

____________________________________________
(Name & Surname of Respondent)
Optional
____________________________________________
(Respondent signature)

Should you require any further information or have any concerns, please feel free to contact the below individuals of the programme.

Coordinator: Maryam Waglay
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Appendix C: Demographic Questionnaire

Please note that this information is strictly for statistical research purposes only.

1. Age: _______

2. Gender: □ Male □ Female

3. Nationality: _____________________________

4. Job Title: ______________________________

5. How long are you in the current position? _____________

6. Race:
   □ White
   □ Black/African
   □ Asian
   □ Indian
   □ Coloured
   □ Other ___________

7. Marital status:
   □ Single
   □ Married
   □ Divorced
   □ Co-habitation
   □ Widow(er)

8. Principle home language:
   □ Afrikaans
   □ English
   □ Tswana
   □ Pedi
   □ Venda
   □ Swati
   □ Southern-Sotho
   □ Tsonga
   □ Ndebele
   □ Zulu
9. **Highest qualification obtained:**
   - [ ] Grade 12
   - [ ] Certificate
   - [ ] Diploma
   - [ ] B-Degree
   - [ ] Honours or equivalent
   - [ ] Masters
   - [ ] Doctorate
   - [ ] Other __________________

10. **How many staff report to you?**
   - [ ] None
   - [ ] Between 1-5
   - [ ] Between 5-20
   - [ ] Above 20

**Instructions**

Below are a series of 14 statements. Please select the number corresponding to the statement that is most indicative of the way you typically think, feel and act at work. If you make a mistake, simply cross it out and fill in the correct response.

<table>
<thead>
<tr>
<th></th>
<th>ALMOST NEVER</th>
<th>SELDOM</th>
<th>SOMETIMES</th>
<th>USUALLY</th>
<th>ALMOST ALWAYS</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>I appropriately communicate decisions to stakeholders.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2.</td>
<td>I fail to recognize how my feelings drive my behaviour at work</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3.</td>
<td>When upset at work, I still think clearly.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4.</td>
<td>I fail to handle stressful situations at work effectively.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5.</td>
<td>I understand the things that make people feel optimistic at work.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>6.</td>
<td>I fail to keep calm in difficult situations at work.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>7.</td>
<td>I am effective in helping others feel positive at work</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>8.</td>
<td>I find it difficult to identify the things that motivate people at work.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>9.</td>
<td>I consider the way others may react to decisions when communicating them.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
10. I have trouble finding the right words to express how I feel at work.  

11. When I get frustrated with something at work, I discuss my frustration appropriately.  

12. I don’t know what to do or say when colleagues get upset at work.  

13. I am aware of my mood state at work.  

14. I effectively deal with things that annoy me at work.  

Instructions: This questionnaire contains items that ask you to describe your relationship with your leader. For each of the items, indicate the degree to which you think the item is true for you by circling one of the responses that appear below the item. Please mark the number which expresses your answer which is true for you. Please give only one answer to each question.

15. Do you know where you stand with your leader and do you usually know how satisfied your leader is with what you do?

<table>
<thead>
<tr>
<th>Rarely</th>
<th>Occasionally</th>
<th>Sometimes</th>
<th>Fairly often</th>
<th>Very often</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
</tbody>
</table>

16. How well does your leader understand your job problems and needs?

<table>
<thead>
<tr>
<th>Not a bit</th>
<th>A little</th>
<th>A fair amount</th>
<th>Quite a bit</th>
<th>A great deal</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
</tbody>
</table>
17. How well does your leader recognize your potential?

<table>
<thead>
<tr>
<th></th>
<th>Not at all</th>
<th>A little</th>
<th>Moderately</th>
<th>Mostly</th>
<th>Fully</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td></td>
</tr>
</tbody>
</table>

18. Regardless of how much formal authority your leader has built into his or her position, what are the chances that your leader would use his or her power to help you solve problems in your work?

<table>
<thead>
<tr>
<th></th>
<th>None</th>
<th>Small</th>
<th>Moderate</th>
<th>High</th>
<th>Very high</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>2</td>
<td>3</td>
<td></td>
<td>4</td>
<td>5</td>
</tr>
</tbody>
</table>

19. Again, regardless of the amount of formal authority your leader has, what are the chances that he or she would “bail you out” at his or her expense?

<table>
<thead>
<tr>
<th></th>
<th>None</th>
<th>Small</th>
<th>Moderate</th>
<th>High</th>
<th>Very high</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>2</td>
<td>3</td>
<td></td>
<td>4</td>
<td>5</td>
</tr>
</tbody>
</table>

20. I have enough confidence in my leader that I would defend and justify his or her decision if he or she were not present to do so.

<table>
<thead>
<tr>
<th></th>
<th>Strongly disagree</th>
<th>Disagree</th>
<th>Neutral</th>
<th>Agree</th>
<th>Strongly agree</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>2</td>
<td>3</td>
<td></td>
<td>4</td>
<td>5</td>
</tr>
</tbody>
</table>
21. How would you characterize your working relationship with your leader?

<table>
<thead>
<tr>
<th>Extremely ineffective</th>
<th>Worse than average</th>
<th>Average</th>
<th>Better than average</th>
<th>Extremely effective</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
</tbody>
</table>

**INSTRUCTIONS:** This questionnaire provides a description of your leadership style. Twenty-one descriptive statements are listed below. Judge how frequently each statement fits you. The word others may mean your followers, clients, or group members.

<p>| | | | | | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>22.</td>
<td>I make others feel good to be around me</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>23.</td>
<td>I express with a few simple words what we could and should do</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>24.</td>
<td>I enable others to think about old problems in new ways.</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>25.</td>
<td>I help others develop themselves.</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>26.</td>
<td>I tell others what to do if they want to be rewarded for their work.</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>27.</td>
<td>I am satisfied when others meet agreed-upon standards.</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>28.</td>
<td>I am content to let others continue working in the same ways always.</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>29.</td>
<td>Others have complete faith in me</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>30.</td>
<td>I provide appealing images about what we can do.</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>31.</td>
<td>I provide others with new ways of looking at puzzling things.</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>32.</td>
<td>I let others know how I think they are doing.</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>33.</td>
<td>I provide recognition/rewards when others reach their goals.</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>34.</td>
<td>As long as things are working, I do not try to change anything.</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>35.</td>
<td>Whatever others want to do is with me</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>Statement</td>
<td>Options</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>---</td>
<td>---------------------------------------------------------------------------</td>
<td>---------</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>36.</td>
<td>Others are proud to be associated with me</td>
<td>1 2 3 4</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>37.</td>
<td>I help others find meaning in their work</td>
<td>1 2 3 4</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>38.</td>
<td>I get others to rethink ideas that they had never questioned before</td>
<td>1 2 3 4</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>39.</td>
<td>I give personal attention to others who seem rejected.</td>
<td>1 2 3 4</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>40.</td>
<td>I call attention to what others can get for what they accomplish</td>
<td>1 2 3 4</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>41.</td>
<td>I tell others the standards they have to know to carry out their work</td>
<td>1 2 3 4</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>42.</td>
<td>I ask no more of others than what is absolutely essential</td>
<td>1 2 3 4</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
### Instructions

Carefully read all the instructions before beginning. Read each statement carefully. Please respond by making a cross over the number that best indicates your answer.

<p>| | | | | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>43.</td>
<td>The job allows me to make my own decisions about how to schedule my work.</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>44.</td>
<td>The job allows me to decide on the order in which things are done on the job.</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>45.</td>
<td>The job allows me to plan how I do my work.</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>46.</td>
<td>The job gives me a chance to use my personal initiative or judgment in carrying out the work.</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>47.</td>
<td>The job allows me to make a lot of decisions on my own.</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>48.</td>
<td>The job provides me with significant autonomy in making decisions.</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>49.</td>
<td>The job allows me to make decisions about what methods I use to complete my work.</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>50.</td>
<td>The job gives me considerable opportunity for independence and freedom in how I do the work.</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>51.</td>
<td>The job allows me to decide on my own how to go about doing my work.</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>52.</td>
<td>The job involves a great deal of task variety.</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>53.</td>
<td>The job involves doing many different things.</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>54.</td>
<td>The job requires the performance of a wide range of tasks</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>55.</td>
<td>The job involves performing a variety of tasks.</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>56.</td>
<td>The results of my work are likely to significantly affect the lives of other people.</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>57.</td>
<td>The job itself is very significant and important in the broader scheme of things.</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>Description</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>---</td>
<td>------------------------------------------------------------------------------</td>
<td>---</td>
<td></td>
<td></td>
</tr>
<tr>
<td>58.</td>
<td>The job has a significant impact on people outside the organization.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>59.</td>
<td>The work performed on the job has a significant impact on people outside the organization.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>60.</td>
<td>The job involves completing a piece of work that has an obvious beginning and end.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>61.</td>
<td>The job is arranged so that I can do an entire piece of work from beginning to end.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>62.</td>
<td>The job provides me the chance to completely finish the pieces of work I begin.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>63.</td>
<td>The job allows me to complete work I start.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>64.</td>
<td>The work activities themselves provide direct and clear information about the effectiveness (e.g., quality and quantity) of my unit level performance.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>65.</td>
<td>The job itself provides feedback on my performance.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>66.</td>
<td>The job itself provides me with information about my performance.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>67.</td>
<td>The job requires that I only do one task or activity at a time.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>68.</td>
<td>The tasks on the job are simple and uncomplicated</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>69.</td>
<td>The job comprises relatively uncomplicated tasks</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>70.</td>
<td>The job involves performing relatively simple tasks</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>71.</td>
<td>The job requires me to monitor a great deal of information.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>72.</td>
<td>The job requires that I engage in a large amount of thinking.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>73.</td>
<td>The job requires me to keep track of more than one thing at a time.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>74.</td>
<td>The job requires me to analyze a lot of information.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>75.</td>
<td>The job involves solving problems that have no obvious correct answer.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>76.</td>
<td>The job requires me to be creative.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>77.</td>
<td>The job often involves dealing with problems that I have not me before.</td>
<td>①</td>
<td>②</td>
<td>③</td>
</tr>
<tr>
<td>78.</td>
<td>The job requires unique ideas or solutions to problems.</td>
<td>①</td>
<td>②</td>
<td>③</td>
</tr>
<tr>
<td>79.</td>
<td>The job requires a variety of skills.</td>
<td>①</td>
<td>②</td>
<td>③</td>
</tr>
<tr>
<td>80.</td>
<td>The job requires me to utilize a variety of different skills in order to complete the work.</td>
<td>①</td>
<td>②</td>
<td>③</td>
</tr>
<tr>
<td>81.</td>
<td>The job requires me to use a number of complex or high-level skills.</td>
<td>①</td>
<td>②</td>
<td>③</td>
</tr>
<tr>
<td>82.</td>
<td>The job requires the use of a number of skills.</td>
<td>①</td>
<td>②</td>
<td>③</td>
</tr>
<tr>
<td>83.</td>
<td>The job is highly specialized in terms of purpose, tasks, or activities.</td>
<td>①</td>
<td>②</td>
<td>③</td>
</tr>
<tr>
<td>84.</td>
<td>The tools, procedures, materials, and so forth used on this job are highly specialized in terms of purpose.</td>
<td>①</td>
<td>②</td>
<td>③</td>
</tr>
<tr>
<td>85.</td>
<td>The job requires very specialized knowledge and skills.</td>
<td>①</td>
<td>②</td>
<td>③</td>
</tr>
<tr>
<td>86.</td>
<td>The job requires a depth of knowledge and expertise.</td>
<td>①</td>
<td>②</td>
<td>③</td>
</tr>
<tr>
<td>87.</td>
<td>I have the opportunity to develop close friendships in my job.</td>
<td>①</td>
<td>②</td>
<td>③</td>
</tr>
<tr>
<td>88.</td>
<td>I have the chance in my job to get to know other people.</td>
<td>①</td>
<td>②</td>
<td>③</td>
</tr>
<tr>
<td>89.</td>
<td>I have the opportunity to meet with others in my work.</td>
<td>①</td>
<td>②</td>
<td>③</td>
</tr>
<tr>
<td>90.</td>
<td>My supervisor is concerned about the welfare of the people that work for him/her.</td>
<td>①</td>
<td>②</td>
<td>③</td>
</tr>
<tr>
<td>91.</td>
<td>People I work with take a personal interest in me.</td>
<td>①</td>
<td>②</td>
<td>③</td>
</tr>
<tr>
<td>92.</td>
<td>People I work with are friendly.</td>
<td>①</td>
<td>②</td>
<td>③</td>
</tr>
<tr>
<td>93.</td>
<td>The job requires me to accomplish my job before others complete their jobs.</td>
<td>①</td>
<td>②</td>
<td>③</td>
</tr>
<tr>
<td>94.</td>
<td>Other jobs depend directly on my job.</td>
<td>①</td>
<td>②</td>
<td>③</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>---</td>
<td>---</td>
<td>---</td>
<td>---</td>
<td>---</td>
</tr>
<tr>
<td>95.</td>
<td>Unless my job gets done, other jobs cannot be completed.</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>96.</td>
<td>The job activities are greatly affected by the work of other people.</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>97.</td>
<td>The job depends on the work of many different people for its completion.</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>98.</td>
<td>My job cannot be done unless others do their work.</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>99.</td>
<td>The job requires spending a great deal of time with people outside my organization.</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>100.</td>
<td>The job involves interaction with people who are not members of my organization.</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>101.</td>
<td>On the job, I frequently communicate with people who do not work for the same organization as I do.</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>102.</td>
<td>The job involves a great deal of interaction with people outside my organization.</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>103.</td>
<td>I receive a great deal of information from my manager and co-workers about my unit level performance</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>104.</td>
<td>Other people in the organization, such as managers and co-workers, provide information about the effectiveness (e.g., quality and quantity) of my unit level performance.</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>105.</td>
<td>I receive feedback on my performance from other people in my organization (such as my manager or co-workers).</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>106.</td>
<td>The seating arrangements on the job are adequate (e.g., ample opportunities to sit, comfortable chairs, good postural support).</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>107.</td>
<td>The workplace allows for all size differences between people in terms of clearance, reach, eye height, leg room, etc</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>108.</td>
<td>The job involves excessive reaching (reverse scored).</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>109.</td>
<td>The job requires a great deal of muscular endurance.</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>110.</td>
<td>The job requires a great deal of muscular strength.</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>Description</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>---</td>
<td>-----------------------------------------------------------------------------</td>
<td>---</td>
<td></td>
<td></td>
</tr>
<tr>
<td>111</td>
<td>The job requires a lot of physical effort.</td>
<td>1 2 3 4 5</td>
<td></td>
<td></td>
</tr>
<tr>
<td>112</td>
<td>The work place is free from excessive noise.</td>
<td>1 2 3 4 5</td>
<td></td>
<td></td>
</tr>
<tr>
<td>113</td>
<td>The climate at the work place is comfortable in terms of temperature and humidity.</td>
<td>1 2 3 4 5</td>
<td></td>
<td></td>
</tr>
<tr>
<td>114</td>
<td>The job has a low risk of accident</td>
<td>1 2 3 4 5</td>
<td></td>
<td></td>
</tr>
<tr>
<td>115</td>
<td>The job takes place in an environment free from health hazards (e.g., chemicals, fumes, etc.).</td>
<td>1 2 3 4 5</td>
<td></td>
<td></td>
</tr>
<tr>
<td>116</td>
<td>The job occurs in a clean environment.</td>
<td>1 2 3 4 5</td>
<td></td>
<td></td>
</tr>
<tr>
<td>117</td>
<td>The job involves the use of a variety of different equipment.</td>
<td>1 2 3 4 5</td>
<td></td>
<td></td>
</tr>
<tr>
<td>118</td>
<td>The job involves the use of complex equipment or technology.</td>
<td>1 2 3 4 5</td>
<td></td>
<td></td>
</tr>
<tr>
<td>119</td>
<td>A lot of time was required to learn the equipment used on the job.</td>
<td>1 2 3 4 5</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
### Appendix D

<table>
<thead>
<tr>
<th>EQ</th>
<th>Description</th>
<th>Variance</th>
<th>Skewness</th>
<th>Kurtosis</th>
</tr>
</thead>
<tbody>
<tr>
<td>EQ_1 I</td>
<td>I appropriately communicate decisions to stakeholders</td>
<td>2.70</td>
<td>-0.05</td>
<td>-1.64</td>
</tr>
<tr>
<td>EQ_2 I</td>
<td>I fail to recognize how my feelings drive my behaviour at work</td>
<td>1.59</td>
<td>-0.43</td>
<td>-0.80</td>
</tr>
<tr>
<td>EQ_3 I</td>
<td>When upset at work, I still think clearly</td>
<td>0.81</td>
<td>-0.90</td>
<td>0.94</td>
</tr>
<tr>
<td>EQ_4 I</td>
<td>I fail to handle stressful situations at work effectively.</td>
<td>1.10</td>
<td>-0.96</td>
<td>0.49</td>
</tr>
<tr>
<td>EQ_5 I</td>
<td>I understand the things that make people feel optimistic at work.</td>
<td>0.60</td>
<td>-0.63</td>
<td>0.42</td>
</tr>
<tr>
<td>EQ_6 I</td>
<td>I fail to keep calm in difficult situations at work.</td>
<td>1.30</td>
<td>-0.80</td>
<td>-0.22</td>
</tr>
<tr>
<td>EQ_7 I</td>
<td>I am effective in helping others feel positive at work</td>
<td>0.61</td>
<td>-0.82</td>
<td>1.22</td>
</tr>
<tr>
<td>EQ_8 I</td>
<td>I find it difficult to identify the things that motivate people at work.</td>
<td>1.16</td>
<td>-0.78</td>
<td>0.08</td>
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<tr>
<td>EQ_9 I</td>
<td>I consider the way others may react to decisions when communicating them.</td>
<td>0.76</td>
<td>-1.01</td>
<td>0.92</td>
</tr>
<tr>
<td>EQ_10 I have trouble finding the right words to express how I feel at work.</td>
<td>1.16</td>
<td>-0.50</td>
<td>-0.51</td>
<td></td>
</tr>
<tr>
<td>---</td>
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<td>---</td>
<td>---</td>
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</tr>
<tr>
<td>EQ_11 When I get frustrated with something at work, I discuss my frustration appropriately.</td>
<td>1.33</td>
<td>-0.70</td>
<td>-0.33</td>
<td></td>
</tr>
<tr>
<td>EQ_12 I don’t know what to do or say when colleagues get upset at work.</td>
<td>0.89</td>
<td>-0.39</td>
<td>-0.29</td>
<td></td>
</tr>
<tr>
<td>EQ_13 I am aware of my mood state at work.</td>
<td>0.52</td>
<td>-1.49</td>
<td>3.01</td>
<td></td>
</tr>
<tr>
<td>EQ_14 I effectively deal with things that annoy me at work.</td>
<td>1.00</td>
<td>-0.79</td>
<td>0.33</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Variance</th>
<th>Skewness</th>
<th>Kurtosis</th>
</tr>
</thead>
<tbody>
<tr>
<td>LMX_7q_1 Do you know where you stand with your leader and do you usually know how satisfied your leader is with what you do?</td>
<td>1.79</td>
<td>-0.51</td>
</tr>
<tr>
<td>LMX_7q_2 How well does your leader understand your job problems and needs?</td>
<td>1.77</td>
<td>-0.25</td>
</tr>
<tr>
<td>LMX_7q_3</td>
<td>&quot;How well does your leader recognize your potential?&quot;</td>
<td>1.63</td>
</tr>
<tr>
<td>LMX_7q_4</td>
<td>&quot;Regardless of how much formal authority your leader has built into his or her position, what are the chances that your leader would use his or her power to help you solve problems in your work?&quot;</td>
<td>1.36</td>
</tr>
<tr>
<td>LMX_7q_5</td>
<td>&quot;Again, regardless of the amount of formal authority your leader has, what are the chances that he or she would “bail you out” at his or her expense?&quot;</td>
<td>1.34</td>
</tr>
<tr>
<td>LMX_7q_6</td>
<td>&quot;I have enough confidence in my leader that I would defend and justify his or her decision if he or she were not present to do so.&quot;</td>
<td>1.31</td>
</tr>
</tbody>
</table>
LMX_7q_7 How would you characterize your working relationship with your leader?

0.98  -0.37  -0.18
<table>
<thead>
<tr>
<th>WDQ</th>
<th>Statement</th>
<th>Variance</th>
<th>Skewness</th>
<th>Kurtosis</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>The job allows me to make my own decisions about how to schedule my work.</td>
<td>1,30</td>
<td>-0,76</td>
<td>-0,09</td>
</tr>
<tr>
<td>2</td>
<td>The job allows me to decide on the order in which things are done on the job.</td>
<td>1,23</td>
<td>-0,62</td>
<td>-0,21</td>
</tr>
<tr>
<td>3</td>
<td>The job allows me to plan how I do my work.</td>
<td>1,26</td>
<td>-0,63</td>
<td>-0,31</td>
</tr>
<tr>
<td>4</td>
<td>The job gives me a chance to use my personal initiative or judgment in carrying out the work.</td>
<td>1,14</td>
<td>-0,63</td>
<td>-0,02</td>
</tr>
<tr>
<td>5</td>
<td>The job allows me to make a lot of decisions on my own.</td>
<td>1,22</td>
<td>-0,32</td>
<td>-0,47</td>
</tr>
<tr>
<td>6</td>
<td>The job provides me with significant Autonomy in making decisions.</td>
<td>1,05</td>
<td>-0,38</td>
<td>-0,34</td>
</tr>
<tr>
<td>7</td>
<td>The job allows me to make decisions about what methods I use to complete my work.</td>
<td>1,14</td>
<td>-0,66</td>
<td>-0,02</td>
</tr>
<tr>
<td>WDQ_8</td>
<td>The job gives me considerable opportunity for independence and freedom in how I do the work.</td>
<td>1.30</td>
<td>-0.34</td>
<td>-0.76</td>
</tr>
<tr>
<td>--------</td>
<td>---------------------------------------------------------------------------------------------</td>
<td>------</td>
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<td>-------</td>
</tr>
<tr>
<td>WDQ_9</td>
<td>The job allows me to decide on my own how to go about doing my work.</td>
<td>1.194158</td>
<td>-0.44</td>
<td>-0.51</td>
</tr>
</tbody>
</table>
Appendix E: Assumptions for normality in the regression model results by predictors

B1: Standardised residuals normality check for unit level performance score

B2: Standardised residuals normality check for Leader Member Exchange scores
B3: Standardised residuals normality check for the genos Emotional Intelligence score

B4: Standardised residuals normality check for the Autonomy score
Appendix F: Assumptions for homoscedasticity in the regression model results by predictors

C1: Homoscedasticity check for the Performance score

C2: Homoscedasticity check for Leader Member Exchange score
C3: Homoscedasticity check for Autonomy score

C4: Homoscedasticity check for genos Emotional Intelligence score