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The influence of transformational Leadership, organizational culture, and personality on employee resistance to change within a manufacturing organization in Cape Town

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DECLARATION

By submitting this thesis, I declare that the entirety of the work contained therein 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

Various reasons exist as to why change initiatives in organizations fail. Some research studies indicate that 60-70% of planned change initiatives fail due to performance not meeting the required expectations or plans not simply being implemented. Given this new reality of change, changing organizations is becoming increasingly difficult, due to the difficulty in understanding the internal complexities of organizational change. Change remains complex and unpredictable in the organizational context, whether it is related to the market the organization finds itself in or global scale changes such as the era of the Fourth Industrial revolution.

The main objective of this study is to determine how leadership, organizational culture and personality impacts on employee resistance to change. In the present study, a questionnaire was used to gather information that would provide some insight and understanding into the phenomenon of interest. Three instruments were used to explore the hypotheses of the study, Multifactor Leadership Questionnaire (MLQ), Organizational Culture Inventory (OCI), the Five Factor Model (FFM) and the Resistance to change questionnaire. The target population for this research study compromised of 248 employees working within a selected organization. Since the factors of this study focuses on transformational leadership, organizational culture, personality and resistance to change, a probability sampling method would yield the desired results as it is most commonly used in quantitative research.

The overall measurement model was assessed using structural equation modelling via the LISREL program. Both the measurement and structural models were found to fit the data reasonably well. The results indicated a positive and significant relationship between transformational leadership and organizational culture, conscientiousness and organizational culture and neuroticism and resistance to change. Negative relationships were also present in this study and these findings were discussed in relation to existing literature studies. The limitations, practical implications, and suggestions for future research have been highlighted. The results provide valuable information for human resource professionals and change agents on the influence of transformational leadership, organizational culture, and personality on employee resistance to change.
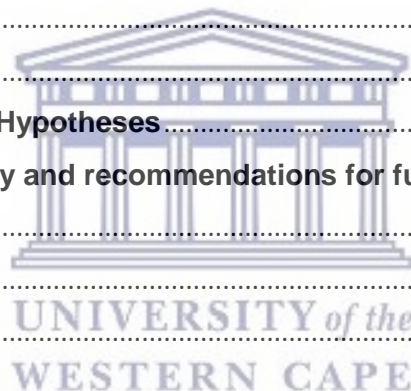
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CHAPTER 1

INTRODUCTION, RESEARCH INITIATING QUESTION AND RESEARCH OBJECTIVES

1.1. Introduction and Background

Various reasons exist as to why change initiatives in organizations fail. Some research studies indicate that 60-70% of planned change initiatives fail due to performance not meeting the required expectations or plans not simply being implemented (Bartunek & Heracleous, 2021). Given this new reality of change, changing organizations are becoming increasingly difficult, due to the difficulty in understanding the internal complexities of organizational change (Burnes, 2005). Change remains complex and unpredictable in the organizational context, whether it is related to the market the organization find itself in or global scale changes such as the era of the Fourth Industrial revolution. It is rarely an occurrence that presents itself in a single event; however, change is a process that evolves over a period of time (Bleijenbergh et al., 2018). Often, the most well executed change strategies tend to bring about unintentional consequences. In planned organizational change, consequences which evade strategies set out by change initiators are considered unintended (Jian, 2007). As constant as these changes are, resistance to change remain a critical conundrum that impedes on the successful implementation of change. There are no definite strategies or enduring answers on how to best manage change initiatives. The focus is then to determine the principal reason behind change failure, namely, employee resistance to change. Asrani et al. (2018) describe resistance to change whereby an employee is expected to adjust their conduct or views, in the general direction given by a senior, but is unable or not willing to see to the change. This can be related to employees not identifying with the urgency or the need for change or management's shortcoming on preparing the organization for change.

Evangelist-Roach (2020) speaks about how communication breakdown and relying entirely on perceived organizational notions can further contribute to resistance. This is especially likely when employees encounter inconsistencies, feel misled or management fails to engage employees in the decision-making process. Leaders, therefore, play a crucial role in driving change initiatives in organizations. If change is

not driven and supported by the top, or if leaders fail to drive the process of inclusion, employees will not buy-in to such efforts or the support toward the initiative can be very minimal. Employees generally draw their encouragement from actions displayed by leaders, since they tend to be the custodians for change. Leadership effectiveness is therefore justified in the sense of its direct relation to organizational change impediments (Bateh et al., 2013). To some degree, leaders are also responsible for determining their readiness for change as well as the factors that can bring about further hindrances. D'Amelio et al. (2008) notes how resistance to change stems from relationships of distrust or broken agreements. Therefore, in the lead up to transformation within organizations, it is imperative for employees to be consulted from implementation phase where leaders advocate for a process of inclusion. This can be encouraged through promoting transparency and open channels of communication on all levels of the organization. Based on previous studies, transformational leadership tends to be the best suited leadership style to drive and foster change within an organization (Burton et al., 2020). This type of leaders is commonly known to stimulate confidence in their followers, foster trust relationships, drive mutual respect in their followers, who in turn are further motivated to perform above certain expectations (Appelbaum et al., 2015). It is supported by Bryman (1992) that these leaders tend to be visionaries who see the psychological needs of employees of wanting to feel valued for their contribution in the organization. When this is realized amongst employees, there seem to be increased cooperation and readiness. This can further be attributed to the fact that transformational leaders demonstrate high-levels of ethical and moral behaviour which brands them as favourable leaders within organizations (Burton et al., 2020).

Not only do transformational leaders foster employee relationships, but they are also responsible for creating the culture of the organization. Ledimo (2014) indicates that leadership is inherently linked to an organization's culture given that it can create cultural change or be able to assist in strengthening the prevailing organizational norms. Resistance can therefore be driven by organizational cultural features which focuses on the way members should perceive, think and feel regarding organizational conditions, and not necessarily motivated directly by the human element. The features of an organization's culture are typically measured according to artefacts, norms, values, and basic assumptions (Cummings & Worley, 2015). On the basic assumption

level, speaking to human activity, nature and relationships; this assumption is the most misunderstood when deciding on techniques for remedying organizational problems (Cummings & Worley, 2015). Numerous studies attempted to classify organizational cultures into categories. Cooke and Szumal (1993) distinguished three types of organizational cultures, namely constructive, passive-defensive and aggressive-defensive. In the present study, a constructive organizational culture will be emphasized in relation to employee resistance to change. This type of culture encourages team cohesion and assist members in their behavioural approach toward tasks to satisfy their higher-order satisfaction needs (Ledimo, 2014). The features of an organization's culture as alluded to earlier, are unique to each organization. For a constructive organizational culture, the normative beliefs and characteristics are achievement, self-actualization, humanistic encouragement and affiliation (Cooke & Szumal, 1993). A constructive organizational culture strengthens the psychological perception of employees and assist in creating behaviour which supports organizational change (Cao et al., 2019). Martin (2013) asserts that organizational culture is driven through shared values which in turn create a sense of belonging, identity and foster a community amongst its members. Therefore, the context created by organizational cultures, lead to the behaviours demonstrated by its members. Similar to the role of transformational leaders, constructive cultures encourage an environment which promotes solution-oriented thinking, inspire employees to become innovative and expressive, and become team players (Luţ, 2020). The effectiveness of an organization change initiative can therefore be influenced, either directly or indirectly, by the culture and the subsequent thinking and contentment amongst the employees (Armenakis et al., 2009).

In order to understand the resistance shown by employees, their personality need to be taken into account. Oreg (2006) argues that little research exists in the context of understanding the dispositional tendency in resisting change. In understanding the overall hereditary nature of personality, the Five Factor Model of Personality or the Big Five personality dimension is often used. These dimensions are extraversion, agreeableness, conscientiousness, neuroticism and openness to experience (John & McCrae, 1992). Furthermore, LePine (2003) suggested that individuals demonstrating a high degree of openness to experience, tend to be more open-minded and are more inclined to try new things. This is further supported by Costa and McCrae (1985) that

such high degree of openness to experiences predisposes individuals to desire new experiences with a strong need for change and novelty. An earlier study conducted by Colquitt et al. (2000), proposed the importance of considering an individual's adaptability during the selection process. This is important to consider, especially when it is expected that employees need to be capable and willing to work in an environment which is constantly changing. In this present study, the role of openness to experience, as one of the Five Factor model dimensions, will be considered as a predictor in accepting change.

1.2. Statement of the research problem

Resistance to change has become an entrenched culture within various organizations which directly impacts on organizational growth and employee perception to change.

This study has therefore been inspired since the inception of the researcher into an organization prone to change. The researcher has witnessed many failed organization-wide implementations, within departments, or across various departments. One element remained constant, the project either ceased to exist or the implementation was done haphazardly in order to see the project through. Considering the researcher's line of work in Human Resources, and recently moving into the space of Organizational Development, it became increasingly important to understand the nature of failed implementations within organizations.

Although considerable research has been devoted to understanding the relationships between transformational leadership, personality, and culture (Naveed & Saleem, 2017; Schultz & Schultz, 2016; Shurbagi & Zahari, 2013) there is a dearth of studies that attempted to document how transformational leadership, personality and organizational culture combine to influence employee resistance to change in a structural model. These three variables have been the leading contributing factors in hindering internal change management initiatives.

1.3. Research questions

This study aims to answer the following main research question:

- How does Transformational Leadership, Organizational Culture and Personality influence employee resistance to change?

The main research question is broken down into the following sub-research questions:

- What is the influence of Transformational Leadership on employee resistance to change?
- What is the influence of Organizational Culture on employee resistance to change?
- What is the influence of Personality on employee resistance to change?

1.4. Research objectives

The main objective of this study is to determine how Leadership, Organizational Culture and Personality impacts employee resistance to change. In order to derive at a conclusion, the following objectives are set:

- To determine how Transformational Leadership influences employee resistance to change
- To determine how Organizational Culture influences employee resistance to change
- To determine how Personality influences employee resistance to change
- To propose recommendations to senior level management of the selected organization for future organizational-wide change implementations

1.5. Significance of the study

Although considerable research has been conducted in the area of employee resistance to change, this study focuses on employee resistance to change within a selected organizations. In preparing for this study, the theorizing approach allowed for the identification of factors which are directly linked to this organization based on several observations made by the researcher. In examining the impact of transformational leadership, organizational culture and personality on employee resistance to change, this study aims to use the findings to provide suitable recommendations to the leaders within organizations to bridge the gap of employee resistance to change. Further to this, the organization can use the findings to allow for more successful organization-wide implementations without fail.

1.6. Structure of the thesis

The thesis is comprised of five chapters:

Chapter one consists of the introduction the purpose of the research, the objectives of the study, the significance of the research investigation and the structure of the thesis.

Chapter two provides an outline of the theoretical foundations behind the theorising concerning the conceptual model under study. The concept of how transformational leadership, organizational culture and personality influence employee resistance to change.

Chapter three outlines the procedure utilised to address the key problem under investigation. The methodology addresses the research design, sampling strategy, and data collection procedures, measuring instruments, research hypotheses, statistical analysis, issues of item and dimension analysis and how to deal with missing values.

Chapter four presents the findings of the study based on the empirical evidence obtained.

Chapter five provides a detailed discussion of the most significant results of the previous chapter. Conclusions are drawn based on the results obtained and integrated with the empirical literature. Furthermore, practical implications of the results are highlighted, limitations of the study are outlined and directions for future research are presented.

1.7. Chapter Summary

This chapter has outlined the background as well as motivation for the study. The specific research questions that the study aims to address have also been provided. Finally, the structure of the five chapters contained in the study have been described and provided. The following chapter will focus on the prevalent literature of the research variables in the study.
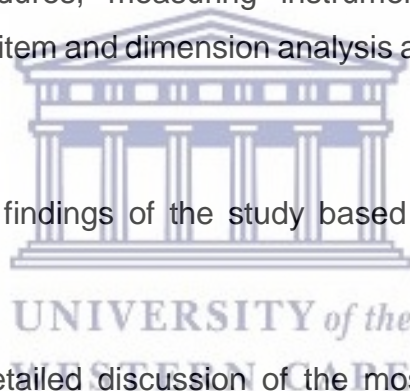
CHAPTER 2

LITERATURE REVIEW

2.1 Introduction

In the previous section, argument guiding the study was outlined. This section focuses on the theoretical framework of the research paper. This includes a discussion of the existing literature on the topic and an overview of previous research done. The first part of the discussion focuses on the overview of resistance to change followed by the situations that bring about change. Thereafter, the reactions to organizational change, as well as the overt and implicit nature will be discussed. The last section of the literature focuses on the discussion of transformational leadership, culture and personality.

2.1. Resistance to change, the overall view:

Change is transformation which occurs over time, affecting the structure and functionality of an organization either temporarily or briefly, bringing about fundamental shifts to its history or advancement (Grama & Todericiu, 2016). The level of insecurity displayed by employees tend to be the constant variable to resistance to change. According to Bleijenbergh et al. (2018), resistance to change is often associated with a behavioural response by a change recipient toward the change initiative introduced or driven by a leader. The intensity of the behavioural response can alter and become observant either prior, during or after the proposed implementation.

2.2. Situations bringing about change:

There are various organizational contexts that can affect change recipients due to proposed change. According to Agboola and Salawu (2011), structural changes may have an impact on the perceived culture of the organization as well as the attitude of employees where their work is concerned. When changes in structures are proposed, this often implies a change in departmental reporting relationships, the decrease or addition of tasks and new job descriptions. If the change recipients feel any sense of

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disadvantage, this can be the first trigger of resistance as a result of the new structural arrangement. Employees can easily show a level of discomfort when placed in situations that are unfamiliar to them. Considering that this change occurs at the organizational level and of such magnitude, the outcome of this creates great challenges for management, especially around the implementation of the change. Fleming and Spicer (2003) therefore commented on how resistance to change is at times created by the inefficiency displayed by management or the lack thereof or in instances where the behaviour used by management is not appropriate toward the employee. When the motives of management are questioned by employees, there is the likelihood of increased resistance to be exhibited (Grama & Todericiu, 2016).

Further elements that influence perceptions toward change pertains to the manner in which the change was communicated, whether the recipients understand why change is proposed and the consistency in which management work toward the change initiative (Erwin & Garman, 2010). These factors are perhaps crucial in avoiding resistance and winning over the trust of the employees. The more employees are involved in the process and valuable information is made available, the more receptive they can be towards the change. This is, however, challenged by Oreg (2006) on the basis that the over-sharing of information does not necessarily guarantee a reduction in resistance. Employees rather base their decision on whether or not they disagree with the initial change proposal. This is further supported by Amjad and Rehman (2018) who argued that whether the proposed change has positive outcomes and is less damaging, employees still have many reasons and motivations as to why they do not accept the change.

Given that resistance is somewhat inevitable during change implementation, one can almost assume that change leaders or agents want to ensure the successful integration of proposed change due to the negative consequences' resistance has for the organization. As much as various organizational contexts exists which can create resistance, Vos (2006) proposed that change agents focus on the conditions of change such as levels of uncertainty and pressure which in turn predict perceived employee outcomes. These conditions might be the underlying reasons for influencing the employees' approach toward change.

2.3.   Reactions to organizational change: passive and active resistance

Change recipients can display their distraught to organizational change in various ways.   Resistance can come in the form of employee work stoppages, arrogant behaviour or malicious intent by destroying organizational technologies or machinery (Fleming & Spicer, 2003). This can be due to organizational change placing employees in difficult situations where they face the possible termination of their service, demotion or cancellation of financial benefits which they enjoyed at some stage of their tenure (Grama & Todericiu, 2016). Employees can further resist change by simply being unwilling to learn a new task or process. The human being can be very unpredictable, therefore making it difficult to determine their behavioural or physical reaction. One cannot, at any point of the implementation phase, govern the reaction to be shown by the change recipient. Grama and Todericiu (2016) associated insolence and counterproductive behaviours displayed by employees when resisting change, and with further studies for example, dishonesty, employee cynicism and divergence are some of the additional constructs that came to light in understanding employee resistance.

To put the above into more perspective, a distinction was made between two types of resistance, namely active (overt) and passive (covert) resistance. According to Bovey and Hede (2001), active (overt) resistance is explicit action displayed whereas passive (covert) resistance is being inert.

In the midst of organizational change, active resistance is displayed by deliberate sabotage or being intentional, whereas passive resistance is shown by not being willing to learn and withdrawing from the process. It is therefore important for change agents to understand and decipher how change might be reacted to in order to be prepared to deal with the active or passive response of employees. Change will always be associated with negative connotations, especially by management because regardless of the value it can bring, it will be challenged, nonetheless.

Figure 2.1

Distinction between overt and covert resistance

	Overt ← (openly expressive behaviour)	Covert → (concealed behaviour)
Active (originate action)	*Elements* • Resistance • Oppose • Argue • Obstruct • Support • Initiate • Embrace	*Elements* • Resistance • Stall • Dismantle • Undermine • Support • Support • Co-operate
Passive (not acting, inert)	*Elements* • Resistance • Observe • Refrain • Wait • Support • Agree • Accept	*Elements* • Resistance • Ignore • Withdraw • Avoid • Support • Give in • Comply

Source. Bovey, W. H., & Hede, A. (2001). Resistance to organizational change: the role of cognitive and affective processes. *Leadership & Organization Development Journal, 2*(8), 372-382
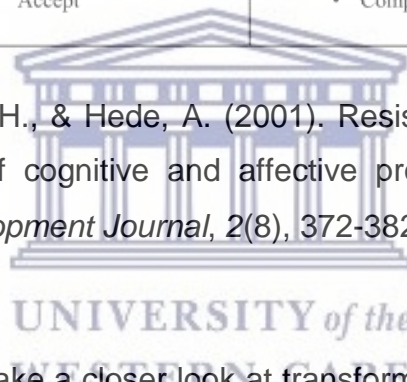
In the section to follow, we take a closer look at transformational leadership and how this construct influences resistance to change.

2.4. Leadership

Throughout the study there has been several inclinations shown towards resistance as a result of change initiatives driven by management or change leaders with little to no guidance provided. As much as various factors exists which can determine the success or failure of a change initiative, the role of leadership is important and vital in handling organizational change.

To lead is to have the ability to encourage individual and organizational excellence, whilst working toward a common vision and successfully managing change to obtain

optimal organizational performance (Helgo & Karp, 2008). Leaders are crucial in creating direction for the organization and gaining trust from employees to assist in achieving the desired organizational outcomes. In a study conducted by Oreg (2006), the relationship between management trust and resistance within organizations was evaluated. The trust factor relates to the extent to which employees or change recipients have confidence in management to lead change initiatives effectively, yet still being cognisant of working towards an objective that is mutually beneficial towards the employee as well as the organization. There can be various debate and opinions shared about the effectiveness of leaders, however, there is one constant in leaders and change initiatives; leaders are viewed as the drivers for organizational change.

The question then remains, what type of leader is most effective in driving successful change initiatives?

2.4.1. Transformational Leadership

Transformational Leadership is well-known and most commonly applied. Asad et al. (2013) defines this style as a leader who displays integrity, is expressive and communicates well by clearly defining goals and progression. This leader strives on showing recognition by rewarding employees for their performance and inspiring employees to work effectively towards common organizational goals. Shvindina (2017) characterizes transformational leaders by their ability to stimulate followers intellectually, allowing them to think "outside of the box" and become innovative in their thinking. They are considered risk-takers to achieve organizational success and are effective in their approach to get rid of futile processes and procedures (Lowder, 2009). Employees generally trust transformational leaders because of their work ethic and using best practices to succeed. in the workplace, this leader is best supported by transactional leaders who takes the place of direct reporting managers, driving tasks and team objectives.

It is further supported by Bass (1997) that transformation leaders are focused on constructive changes, are receptive to the needs of the team by empowering them through goal alignment with the organization, the team and the individual tend to focus on the bigger picture where the organization is concerned. Moreover, transformational

leaders empower their followers with the mandate to fulfil the objectives as identified by the organization (Burton et al., 2020). Lowder (2009) further supports that the transformational leader develops the employee with the opportunity to enhance their innovation and creativity. This development is done with a focus on the organization in order to meet a common goal where both parties' needs are being seen too.

2.4.1.1. *Dimensions of Transformation Leadership*

Transformational Leadership is described using four dimensions by Bass and Riggio (2006):

1. *Idealized influence*

This component comprises of two elements. Namely, charismatic behaviours displayed by the leader and the elements of leadership attributed to the leader by their followers. This is the extent to which leaders are trusted, appreciated and respected by their followers given the behaviours demonstrated by the said leader. Transformational leaders therefore become highly regarded by their followers and in turn, these followers emulate the behaviours displayed by their leader (Bass & Riggio, 2006).

2. *Inspirational motivation*

This concept focuses on the high expectations that are set by leaders and the extent to which they will motivate and inspire the followers to meet these expectations. These expectations are often set with clear guidelines and the leader demonstrate the same shared value in being equally committed to meet these expectations (Bass & Riggio, 2006).

3. *Intellectual stimulation*

This component describes the process undertaken by leaders to stimulate their followers to be creative and innovative. Furthermore, transformational leaders will promote an environment where the status quo can be questioned, and the norms of the organization can be challenged. This allows followers to become increasingly independent in their thinking, as long as such leaders fosters an environment that is

open to ideas without being criticized if these ideas differ to that of the leader (Bass & Riggio, 2006).

4. Individualized consideration

The final component captures how leaders create a supportive environment and the extent to which the psychological needs of followers are being seen to (i.e. need for growth and achievement). This is often achieved in situations where the leaders provide relevant tasks to followers that can aid them in developing themselves and the leader then in turn, serve as a mentor to assist the follower in seeing the task through.

Transformational leadership can therefore be considered the most suitable leadership style in driving and managing organizational change. It focuses on a mutual relationship where both the employee as well as the objectives of the organization is being seen to during the change process. Since change can disrupt organizational dynamics fairly easily, transformational leaders are further instrumental in providing the ultimate purpose and vision for the change (Bass & Riggio, 2006).

2.5.   **Organizational Culture**

An organization's culture is a system of shared meaning adopted by its members which allows for differentiation between various organizations (Ledimo, 2014). The culture is often expressed through espoused artefacts, norms and beliefs which can take the form of rituals, historical nature of the organization and behaviour displayed by the employees (Martin, 2013). Cummings and Worley (2015) describes these 4 key elements of culture and how these elements bring about a level of sense and belonging to individuals within the organisation. The elements are namely: Artefacts, Norms, Values and Basic Assumptions.

Figure 2.2

Culture Components
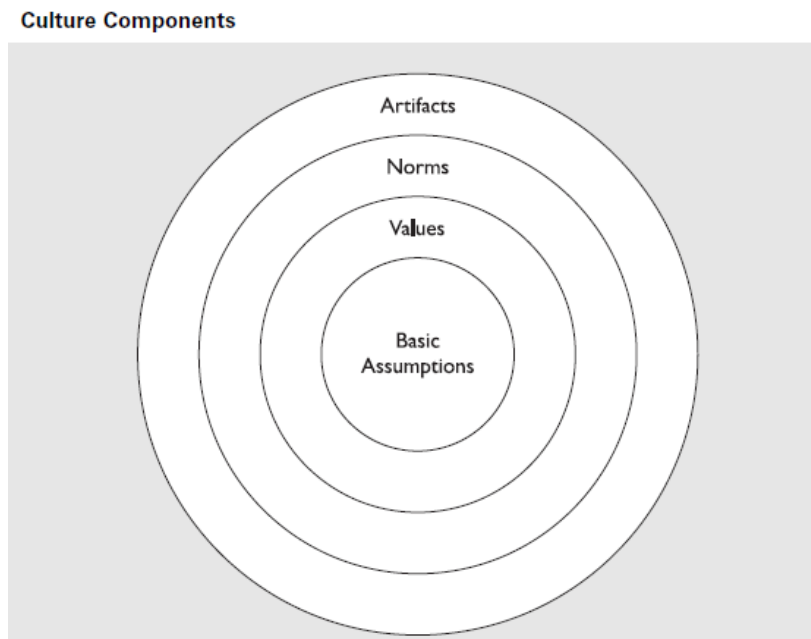
Source. Cummings, T. G., & Worley, C. G. (2015). Organisation development and change. *Cengage Learning, 10,* 1-832

Artefacts are concerned with those noticeable aspects of culture, whereas norms are concerned with the behaviour and interactions of members amongst one another (Cummings & Worley, 2015). Values on the other hand highlight the qualities that the organization considers to be important and on the basic assumption level, the awareness focuses on the way members should perceive, think and feel regarding conditions (Cummings & Worley, 2015). Culture is therefore considered the pattern of the aforementioned elements. This pattern provides insight into an organization's ability to solve problems and act as the premise for the behaviours to be adopted by newcomers into an organization (Cummings & Worley, 2015).

2.5.1. Constructive Organizational Cultures

Aarons and Sawitzky (2006) defined constructive cultures as "*characterized by organizational norms of achievement and motivation, individualism and self-actualization, and being humanistic and supportive. Constructive cultures encourage interactions with people and approach to tasks that will enable staff to meet their higher-order satisfaction needs*". Cultural styles can be determined by a measure,

Organizational Culture Inventory (OCI), which has been used by various organizations for the purpose of evaluating and monitoring organizational change. Although the OCI is administered to evaluate the current organizational culture, it is further effective in identifying an ideal culture for the organization (Cooke & Szumal, 2013).

According to Adcroft et al. (2016), Constructive Organizational Cultures are characterized according to the following norms:

- **Achievement:**
  The extent to which employees are expected to set difficult goals and establish plans to reach those goals with high levels of enthusiasm.

- **Self-Actualizing:**
  Employees are expected to show levels of appreciation toward their tasks, focus on self-development and pursue new and innovative job activities.

- **Humanistic-Encouraging:**
  The degree to which employees are expected to be supportive and collaborative, as well as be open to influences from other employees.

- **Affiliative:**
  Employees are expected to be approachable and cooperative in their dealings with others, and to approach their team members with levels of sensitivity.

These norms encourage employee interaction as well as inspire employees to pursue their set goals to meet their high-order needs (Adcroft et al., 2016). On the contrary, when employees tend to resist change, there is increased withdrawal from the job and the organization, resulting in them becoming less cooperative in their approach to other organizational members (Kirkman & Shapiro, 1997). Constructive norms further lead to organizational effectives, sustainability and encourage organizational leaders to adopt this value system and act in accordance with it (Luţ, 2020). When leaders display the espoused values of an organization and play a visible role in change efforts, they are said to be more effective in managing the change initiative (Martin, 2013). Furthermore, Pardo et al. (2017) asserts that a constructive culture is typical in

promoting the transfer of knowledge amongst organizational members, emphasizes teamwork and promotes collaborative work environments. Employees are likely to experience more job satisfaction when an organization's culture is consistent with their demands (Gordijn, 2015).

In a study conducted by O'Reilly (1989), it was argued that norms vary on two primary dimensions: the intensity to which expectations are approved/disapproved; and crystallization, the extent to which norms or values are shared in a consistent manner. An example focuses on the degree to which an organization promotes consistent values ("we value innovation"), but this is done with little to no intensity; in essence, the value is being promoted but there are no action around shaping the day-to-day behaviours to entrench this said value. When organizations fail to understand the underlying assumptions of its culture, it can certainly lead to cultural conflict. By building a constructive organizational culture, it can positively influence an organization's growth, direction, commitment and satisfaction of employees, enhance communication amongst organizational members, and more importantly, its success (Kim & Mondello, 2014).

2.6. Personality

Individuals differ from one another on various dimensions. Some people are outgoing, whilst others tend to be more reserved. Yet one individual can be dominating, and the next individual may be extremely accommodating. There can be various possibilities to consider, however, understanding these differences is important. Personality is therefore the essence of what makes a person unique. It is a consistent cluster of characteristics that may change in response to different situations (Schultz & Schultz, 2016). The challenging part in understanding personality, is exploring those distinct differences that make dealing with individuals a bit complex. Differences in individuals are easily shown in their behaviour and this behaviour determines the relationship with others. Kazdin (2000) defines personality as "*individual differences in characteristic patterns of thinking, feeling and behaving.*" The source of these human characteristics is generally drawn from an individual's perception, personalities and needs (Agboola & Salawu, 2011). This permanent and steady display of characteristics determines an individual's response to his or her environment (Mohan & Mulla, 2013). Based on the

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psychological model of resistance, challenging change is an intrinsic characteristic displayed by individuals. Personality is thus an integral determinant of employee behaviour within organizations. According to Grama and Todericiu (2016), an individual's attitude toward change is further driven by past experiences and their cognitive processes. In a study conducted by Erwin and Garman (2010), they considered the link between individual-level characteristics in being open to organizational change and tenure. Amjad and Rehman (2018) found the negative effects of employee self-esteem as a result of exclusion during change initiatives. This can be supported in study by Oreg (2006) where employee self-esteem was considered as a trait in predicting openness to organizational change.

2.6.1. The Five Factor Model of Personality

The Five-factor model of personality is an approach that defines personality traits in terms of five basic dimensions: Extraversion, Agreeableness, Conscientiousness, Neuroticism, and Openness to Experience (John & McCrae, 1992). Personality models are best suited in bringing order to personality dimensions. The Five-factor model has been pertinent in understanding how personality affects organizational behaviour. According to Sev (2019), the effective management of people requires an understanding of the factors that impact work performance. This entails understanding individual differences, characteristics that people possess, their personality traits and the subsequent behaviour which manifests in the workplace. Sev (2019) therefore describes personality as a product of two types of natures, one being hereditary and the other based on past life experiences. In this present study, openness to experience, as one of the dimensions of The Five Factor personality model will be discussed.

2.7.1.1. Openness to Experience

John and McCrae (1992) describe openness to experience as the constant desire to seek new experiences. This dimension further defines the extent to which an individual allows oneself to be impacted by either internal or external influences. It comprises of the ability to be imaginative, eccentric, curious, open-minded and sophisticated (Clarke & Robertson, 2005). This dimension comprises of different facets such as

fantasy, aesthetics, feelings, actions, ideas and values, (Costa & McCrae, 1992). A high rating describes an imaginative and creative character, whereas a low rating would speak to a conservative and down-to-earth character (John & McCrae, 1992).

Based on the overall dimension, openness to experience, Griffin and Hesketh (2004) describes the facets, as referred to earlier. The descriptions below are based on high scorers (see Table 2.2):

Table 2.2

The facets of openness to experience

Fantasy	Tend to be rich in their imagination and fantasy which they believe enhances their life
Aesthetics	Highly admirable and tend to be moved by finer things such as art, music, poetry and beauty
Feelings	Very responsive to inner feelings, tend to deeply experience emotions and consider this very important
Actions	Willing to experience with new things (i.e. food, culture, places), and prefer unique experiences as opposed to traditional ways of doing things
Ideas	Open to consider other viewpoints and pursue interests which are intellectually stimulating
Values	Willing to challenge the status quo on social, political and religious views.

An employee demonstrating high openness to experience may be more alluded to seeking job efficiency, since this enables employees to fulfil their curious nature, explore alternative opinions as well as developing an actual interest in their day-to-day tasks (Sev, 2019). On a similar note, broadminded individuals are considered to be more agreeable to change (Colquitt et al., 2000). They achieve high levels of efficiency at work because they are open to opportunities and are able to thrive in ambiguous conditions (Nandkeolyar & Stewart, 2006). This can therefore be positively linked to how effective employees with high openness to experience are in dealing with taxing

situations, especially relating to organizational change (Costa & McCrae, 1986). This can be supported by Oreg (2003), where the author's findings emphasized that employees with low levels of openness to experience, struggle with uncertainty, are less likely to take risks and are more inclined to resist organizational change.

2.7.1.2. *Agreeableness*

Novikova (2013) describes individuals high in Agreeableness to be altruistic, cooperative, compassionate, appreciative, forgiving, generous, kind, sympathetic, and trust the good intentions of others. Low scorers are generally branded by their innate ability to be antagonizing, displaying scepticism and having a rather competitive approach to life than being cooperative. This is further supported by John and McCrae (1992) who postulates that individuals demonstrating high levels of agreeableness shows characteristics of care, nurture and emotional support at the end of one spectrum and low scorers tend to display hostility, indifference and self-centeredness. In essence, this dimension describes the extent to which individuals are helpful (highly agreeable) against hostility (highly disagreeable) (Vos, 2006). Individuals that display high levels of agreeableness are less likely to resist change and more open to follow new policies and procedures (McCrae & Costa, 1986).

Based on the overall dimension, agreeableness, Costa and McCrae (1992) describes the facets for high and low scorers (see table 2.3).

Table 2.3

The facets for agreeableness

Trust	The belief in the sincerity and good intentions of others
Straightforwardness	Sincerity and unwillingness to manipulate others
Altruism	Concern for the welfare of others
Compliance	Willingness to cooperate with others, ability to inhibit aggression and forgive others when faced with a potential conflict
Modesty	Humility
Tendermindedness	Attitude of sympathy for others

2.7.1.3. Conscientiousness

Costa and McCrae (1986) describe conscientiousness as employees displaying self-discipline, ambition and competence. High scorers are generally more dependable, organized, strong-willed and hard-working (high conscientiousness). Low scorers on the other hand come across as lazy, disorganized, inconsiderate and unreliable (low conscientiousness) (Vos, 2006). These statements are further supported by Novikova (2013) who suggests that high scorers have a sense of achievement, they are deliberate in their actions, thorough and responsible. Low scorers fail to plan ahead, they come across as disorganized in their undertaking of tasks and does not fare well in defining life goals for themselves. Where change is concerned, individuals displaying high levels of conscientiousness tend to gravitate naturally toward values and responsibilities, such as change initiatives driven by management within an organization (Costa & McCrae, 1986).

Based on the overall dimension, conscientiousness, Taylor (2004) describes the following facets (see Table 2.4):

Table 2.4

The facets for Conscientiousness

Order	Neatness and organization
Self-Discipline	Ability to start and complete tasks and remain motivated when faced with unpleasant tasks
Dutifulness	The extent to which a person is reliable and dependable
Effort	The extent to which a person is ambitious and diligent and works hard to achieve outcomes
Prudence	The tendency to be careful

2.7.1.4. Neuroticism

This subscale is described by Migliore (2011) as behaviour associated with excessive concern leading to mental distress, anguish and the inability to cope with the demands of life. Individuals that score high on this subscale generally display behaviours related to anxiety, anger or depression, whereas those scoring low on this subscale tend to be more resilient, appear calm and the have the ability to manage stress. Highly neurotic individuals (i.e., emotionally unstable) tend to become easily triggered and have frequent negative episodes, whereas low scorers (i.e., emotionally stable) experience less negative emotions and shows high levels of confidence, even under the most stressful situations (Novikova, 2013). Considering that environments prone to change generally triggers some element of stress and uncertainly, Costa and McCrae (1986) claims that individuals with high levels of neuroticism display more negative attitudes toward change. Oreg (2003) suggests that high scorers (i.e., less emotionally stable) are more likely to feel threatened by change and therefore resist it due to lack of faith in their ability to manage such change.

Based on the overall dimension, neuroticism, Taylor (2004) describes the following facets (see Table 2.5):

Table 2.5

The facets for neuroticism

Anxiety	Nervousness and apprehension
Depression	Low mood, helplessness and guilt
Self-consciousness	Sensitivity to criticism and a tendency towards experiencing embarrassment
Affective instability	Emotional volatility and a tendency towards experiencing anger and irritability

2.7.1.5.   Extraversion

Extraversion describes individuals that display characteristics such as assertiveness, achievement oriented as well as individuals who seek opportunities, enjoys attention and talking. Low scorers on this subscale tend to be more introverted, shy away from being the centre of attention, reserved and less action oriented (Migliore, 2011). Individuals displaying high levels of extraversion naturally gravitate toward social stimulation (Costa & McCrae, 1985). Furthermore, high scorers tend to be more solutions-oriented and are less likely to engage in self-blame, wishful thinking and avoidance, however, they focus their energy on positive thinking and finding meaningful coping strategies to dealing with challenging emotions (Vos, 2006).

Based on the overall dimension, extraversion, Taylor (2004) describes the following facets (see Table 2.6):

Table 2.6

The facets of extraversion

Gregariousness	The need for social contact and interaction
Positive affectivity	The tendency to experience positive emotions such as optimism and love
Ascendance	A penchant for being assertive and leading groups
Excitement-seeking	The preference for stimulating activities
Liveliness	A person's energy and activity level

The Five Factor Model of Personality can be considered a useful approach to understanding individual characteristics and their differences toward organizational change. The dimensions discussed will be sufficient in assessing employee readiness and willingness to change.

2.8.   The relationships between transformational leadership, organizational culture, personality and employee resistance to change.

The following section will discuss the relationship between transformational leadership, organizational culture, personality and employee resistance to change.

2.8.1. The relationship between organizational culture and employee resistance to change:

Little empirical research exists on constructive organizational cultures and its influence on employee resistance to change. In a study conducted by Al-Karaghouli et al. (2014), they too asserted the gap in empirical literature between organizational culture and individual readiness for change. Their aim was to close this gap by conducting empirical research, examining the influence of organizational culture types on individual readiness for change. The study focused on Total Quality Management (TQM) implementation within a manufacturing organization in Syria. The study examined four culture types, namely group, market, hierarchy and adhocracy culture,

the overall result of study showed that individual readiness for change is significantly influenced by an organization's culture. This was supported by Choi and Ruona (2011) in their conceptual research study where they hypothesized that an organization's culture is considered to be the most important factor which influences employee's readiness for change. Using the Organizational Culture Inventory-Ideal measurement, Cooke and Szumal's (2013) study revealed that respondents in the United States strongly recommended Constructive Norms as they most likely increase performance, irrespective of the type of organization they find themselves in. This was further supported in a study conducted by Thornbury (1994) where the results showed that the effectiveness of dealing with change, strongly correlated with constructive norms. Furthermore, in study conducted by Green and Otto (2016), they focused on the restructuring of a Motor Vehicle Department (MVD) to become a more constructive culture. MVD was influenced by the ever-changing financial and technology sector. This resulted in the current practices of the department to change as well. In the department, 25 employees, ranging from front line workers to managers, were involved in a discussion on how they intended to rebuild DMV. The process encouraged innovative thinking and required managers to reduce their input, in order to promote ideas and insights from other employees. Those who were involved in the process noted that the approach of the anticipated constructive culture allowed for two-way communication, something that did not necessarily occur in the past. Employees were involved in facilitating the future design of the organization, this allowed for creativity and collaboration to occur.

Hypothesis 1: Organizational culture has a negative influence on employee resistance to change.

2.8.2. The relationship between transformational leadership and employee resistance to change:

Numerous studies have explored the relationship between transformational leadership and employee resistance to change. Naveed and Saleem (2017) conducted an empirical study to examine the role of transformational leadership in influencing employee's attitudes toward organizational change in an educational sector organization. The study showed that transformational leadership had a substantial negative correlation ($r = -.23$, $p < .05$) with the employee's behavioural intention to

resist change (Naveed & Saleem, 2017). In other words, employees under the management of highly transformational leaders, were less likely to resist organizational change. This result were consistent with the findings by Penava and Šehić (2014) on a power utility organization in Bosnia, considered to be the largest company in the country. They studied the leadership role of change agents in the implementation of organizational change. The results revealed a negative relationship between transformational leadership and resistance to change through the effect of inspirational motivation as a behavioural characteristic displayed by such leaders. This means, leaders who motivate and encourage their teams and providing task significance, reduces the negative connotation when employees think about change, and they are less likely to engage in behaviour that is contradictory to being receptive to change. Likewise, in an empirical study conducted by Chou (2015), it was hypothesized that there is a direct relationship between transformational leadership and behavioural support for change across 10 companies from various sectors in Taiwan. The results indicated that transformational leadership had a significantly positive relationship with behavioural support for change (0.69, $p < 0.01$) (Chou, 2015). In essence, transformational leadership alleviates the stress associated with change initiatives and in turn, promotes the behavioural support necessary to assist in driving organizational change.

Hypothesis 2: Transformational leadership has a negative influence on employee resistance to change.

2.8.3. The relationship between transformational leadership and organizational culture

Shurbagi and Zahari (2013) conducted a study to determine relationship between transformational leadership and organizational culture in a national oil corporation of Libya. Two instruments were used to determine the variables of the study, namely the Multifactor Leadership Questionnaire (MLQ) and the Organizational Culture Assessment Instrument (OCAI). A total of 280 questionnaires were distributed with only 227 questionnaires that were completed in full and considered useful for the research study. The Cronbach alpha was used to test the reliability of the instruments and both instruments, LMQ and OCIA yielded a Cronbach alpha of .92 and .95

respectively. In this study, the results demonstrated a significant positive relationship between transformational leadership and organizational culture with a correlation coefficient of 0.678 at 0.01 level. These results were further supported in a study conducted by Seloane (2010) with the aim to determine the positive relationship between transformational leadership and organisational culture. A total of 238 employees of a Military organization in South Africa were selected to participate in this study. The instruments used in the study were the Leadership Profile Inventory (LPI) and the Organisational Culture Inventory (OCI). The Cronbach alpha of the LPI instrument ranged between 0.901 to 0.938 and the Cronbach alpha values for the OCI ranged between 0.867 to 0.964. Both results were considered desirable. The Pearson's correlation coefficient was conducted to test the hypothesis. The results demonstrated a statistically significant relationship with a correlation coefficient of 0.572 ($p<0.001$) between the scores of the LPI and constructive organizational culture dimension.

Hypothesis 3: Transformational leadership has a positive influence on organizational culture.

2.8.4. The relationship between the Big Five factor traits and employee resistance to change

Dunican (2015) examined the level of correlation between mindfulness, tolerance of ambiguity, and resistance to change among employees within various industries based in Kentucky. The result revealed a strong negative relationship between mindfulness and employee resistance to change, ($r = -.53$, $p< .01$) (Dunican, 2015). It is sensible to suggest that individuals with an open state of mind are less likely to resist change. Moreover, Oreg's (2003) previous studies indicated a similar relationship between tolerance for uncertainty and resistance to change. In this study, the results demonstrated a strong relationship between the two constructs, ($r = .62$, $p< .01$) (Oreg, 2003). The results showed those who scored high on tolerance for ambiguity had a relatively low score for resistance to change. As mentioned in the earlier literature, an individual's attitude toward change is significantly driven by their cognitive processes (Grama & Todericiu, 2016). This can be supported by the result of the study conducted

by Sozbilir and Yesil (2013) where they examined the impact of personality on individual innovation behaviour (hereafter IIB) in the hospitality industry in Turkey. They hypothesized openness to experience being positively related to IIB. The results presented a positive effect by openness to experience on IIB. This strengthens the argument on the Five Factor Model dimension that high scorers on the openness to experience scale are imaginative and creative in character (John & McCrae, 1992). The study further revealed that individuals displaying innovative behaviour are more likely to effectively engage in innovative initiatives (Sozbilir & Yesil, 2013).

Furthermore, in a study conducted by Oreg (2003), participants completed the Big Five Factor questionnaire and needed to rate how each of the items described them. The questionnaire was presented in the format of a 9-point Likert scale ranging from running from 1 (extremely inaccurate) to 9 (extremely accurate). The reliability of the instrument was tested and the reliability results in the study were .78 for openness to experience, .84 for agreeableness, .79 for neuroticism, for extraversion, and .84 for Conscientiousness (Oreg, 2003). Based on the results, weaker, yet significant relationships were present for resistance to change and neuroticism ($r = .28$, $p < .01$) and openness to experience ($r = -.19$, $p < .05$). Neuroticism had a stronger correlation with to emotional reaction ($r = .33$, $p < .01$) and short-term focus ($r = .33$, $p < .01$) on the resistance to change dimensions. This led to the hypothesis individuals with high levels of neuroticism and who were low on openness to experience were more likely to score high on resistance to change.

The extraversion subscale was tested in a study conducted by Cao et al. (2018) whereby the study aimed to understand the relationship between extraversion and employees' innovative behaviour and moderating effect of organizational innovative climate. Innovative behaviour refers to how an individual creates, conceptualizes and implement ideas which ultimately benefits the organization and themselves. This is often in relation to the development of new methods and adapting to new routines (Cao et al., 2018). Extraversion had a significant positive effect on employees' innovative behaviour ($r=0.390$, $p<0.01$). This finding was supported in a study conducted by Vos (2006) whereby he concluded that high levels of extraversion are negatively correlated with resistance to change. This was based on the beta result of

extraversion (r = -2-, p <.06), which was indicative that extraversion was negatively related with negative emotions. These results are in agreement with the findings of Åström and Forsell (2012) where the results showed that extraversion were negatively correlated with resistance to change.

A study conducted by Ali et al. (2019) aimed to understand the relationship between behavioural intention and user resistance behaviour and the moderating role of conscientiousness. The assumption drawn were that individuals with higher levels of conscientiousness demonstrates improved organizational skills and self-discipline which in turn reduces their resistance behaviour. The results demonstrated a negative correlation (r = - 0.136, t =1.993, p < 0.05) between behavioural intention and user resistance behaviour among employees with a low level of conscientiousness. Employees scoring high on conscientiousness are less likely to commit to change because of the perceived costs and risks of not engaging in organizational change (Sai, 2018). In a study conducted by Nikolaou et al. (2004), the results indicated a positive relationship between conscientiousness and employees' attitudes toward change; implying that employees scoring high on conscientiousness are more receptive towards organizational change. However, Sai (2018) found no significant relationship between conscientiousness and organizational commitment to change. In a separate study, Chen and Chen (2008) confirmed the negative relationship between conscientiousness and resistance to change.
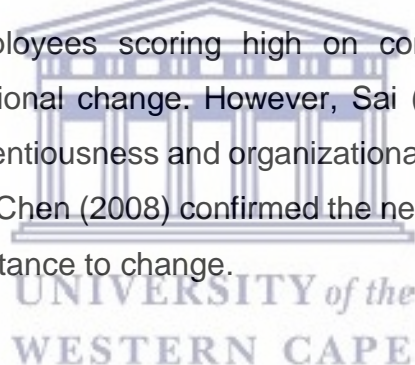
The final subscale in relation to its influence on employee resistance to change is agreeableness. Cakiroglu and Seren (2019) conducted a study to evaluate the relationship between attitudes towards change and five factor personality traits in nurses. The sample included 714 nurses, of which data were obtained from 457 participants. The sample of nurses selected have all previously been exposed to organizational change. The instruments used were the Attitudes Towards Change Scale (ATCS) and the Five Factor Personality Trait Scale (FFPTS). Both instruments produced a Cronbach alpha of .92 and .87 respectively. Statistically significant relationships were found for the sub-dimensions of the ATCS and agreeableness (r = 0.131, p <0.01) as well as well a statistically significant relationship between the resistance to change sub-dimensions and agreeableness (r = 0.108, p <0.01). This is further supported by literature where Hwang and Yang (2014) suggests that

employees possessing traits such as agreeableness tend to adapt more easily to new environments and are more receptive to change.

Hypothesis 4: Conscientiousness has a negative influence on employee resistance to change.

Hypothesis 5: Openness to experience has a negative influence on resistance to change.

Hypothesis 6: Neuroticism has a positive influence on resistance to change.

Hypothesis 7: Extraversion has a negative influence on employee resistance to change.

Hypothesis 8: Agreeableness has a positive influence on employee resistance to change.

2.8.5. *The relationship between the Big Five Factor traits and organizational culture*

According to Marchalina et al. (2020), organizational culture controls the relationship between personality traits and how employees perceive organizational change. This is supported by Algawazi et al. (2021) where they propose the mediating role of organizational culture and its influence on an employee's personality which in turns influences task performance. Personality traits thereby playing a mediating role between a culture of an organization and impacting performance as an outcome. In a study conducted by Cenkci and Ötken (2015), they examined the relationship between the Big Five personality traits on employee dissent and the moderating role of organizational climate on this relationship. The results showed a positive significant relationship between a humanistic organizational culture and conscientiousness in relation to upward dissent. Organizational cultures that focus on human relations, tend to motivate their conscientious employee toward the need for open communication and welcome their disagreements and criticisms. Thus, conscientious employees

might choose to express their discord with leaders that they know can influence organizational adjustments. In further studies, Brodman et al. (2008) investigated that conscientiousness, agreeableness and openness to experience showed significantly positive relationships with organizational commitment. This was further supported by Khan et al. (2019) whereby the study investigated the impact of agreeableness on workplace deviance. The result produced a negative relationship between the two constructs. According to Costa and McCrae (1992), agreeableness has negative relation with feelings of aggression and hostility since agreeable individuals generally appear to be helpful, trusting and generous.

Anderson, Flynn and Spataro (2008) measured the level of influence of extraversion and conscientiousness in a consulting firm and engineering department, respectively. Both traits, extraversion (r=.22, p < 0.01) and conscientiousness (r = -.13, p < 0.05), were found to be a strong predictor of influence in both the consulting firm as well as the engineering department. Based on Algawazi et al. (2021), positive relationships were found between openness to experience as a mediator for organizational culture and task performance. Neuroticism, on the other hand, appeared to be significantly related with organizational deviance. This was reported in a study conducted by Khan and Sudha (2013) whereby neuroticism had a positive relationship with organizational deviance in both the public and private sector, (r = 0.411, p <.05) and (r = 0.582, p <.01), respectively.
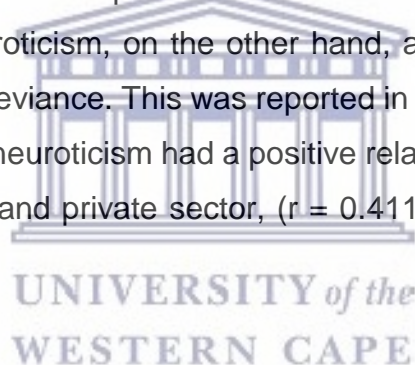
Hypothesis 9: Conscientiousness has a positive influence on organizational culture.

Hypothesis 10: Openness to experience has a positive influence on organizational culture.

Hypothesis 11: Neuroticism has a negative influence on organizational culture.

Hypothesis 12: Extraversion has a positive influence on organizational culture.

Hypothesis 13: Agreeableness has a positive influence on organizational culture.

2.9.   Conceptual Model

After a thorough literature review, a conceptual model was developed aimed at illustrating the hypothesized casual relationships between transformational leadership, organizational culture and personality on employee resistance to change.

Figure 2.3

The proposed model
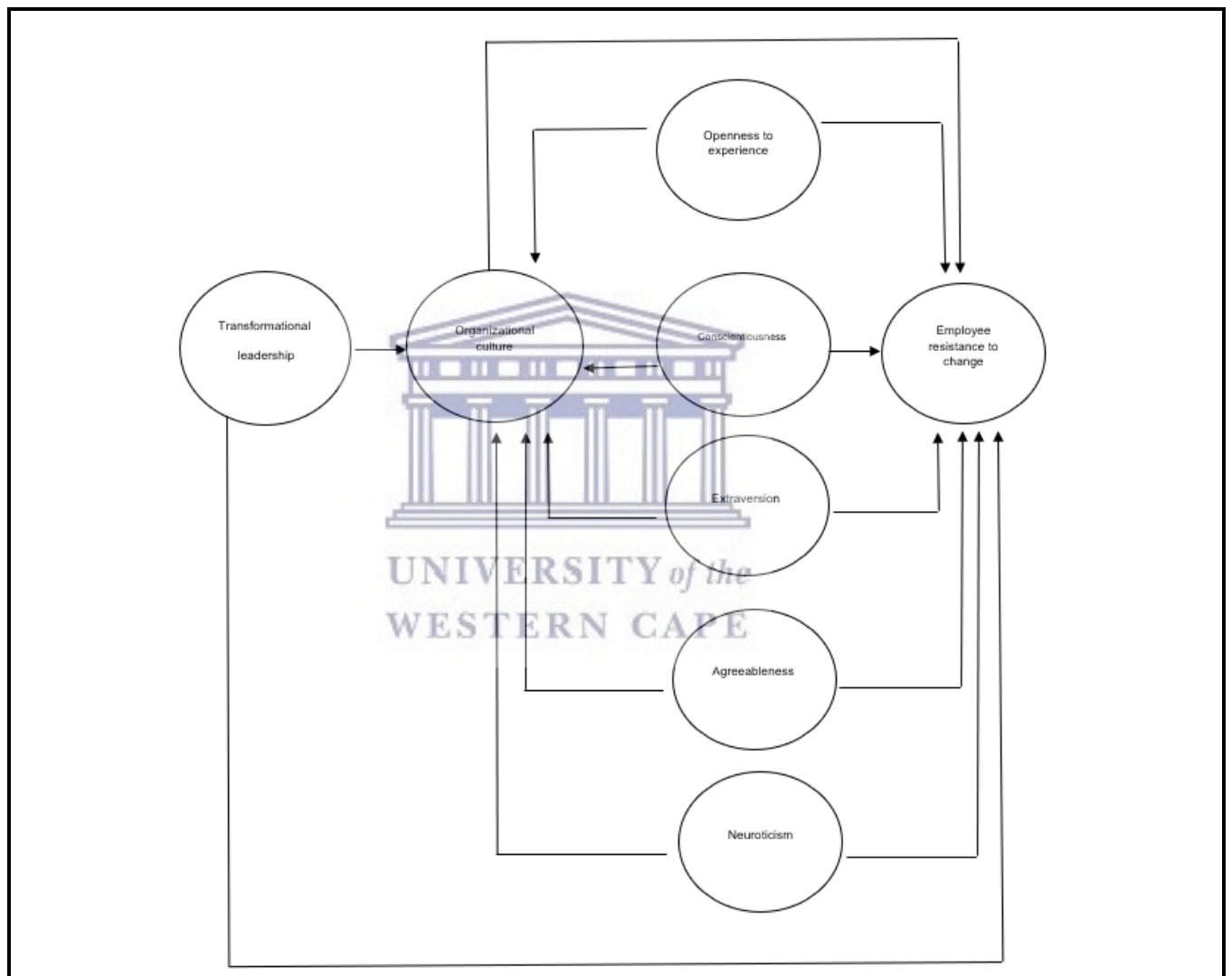
2.10. Chapter Summary

This chapter provided an overview of the research literature on transformational leadership, organizational culture and personality on employee resistance to change. Each construct was conceptualized and a review of the relationship between the constructs were provided leading to the postulation of the hypotheses that will guide the study. The chapter concluded with the proposed conceptual model. The following chapter will look at the research methodology used to test the model as well as answer the overarching research question.

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CHAPTER 3

RESEARCH METHODOLOGY

3.1. Research Methodology

This section discusses the research plan that the researcher followed in order to determine the nature of the relationships among the variables selected in the study. This section explores the research design, research methodology, sampling technique, data collection method as well as the methods used to analyze the data collected in this study. Further to the above, the ethical considerations that guided the study during the data collection procedure will be discussed.

3.2. Research Design

To generate an understanding of transformational leadership, organizational culture and personality, and how this influence employee resistance to change, the researcher would be expected to observe and measure these reactions. Quantitative research is therefore best suited as it is considered to be more of a "scientific" approach to social science (Fouché, Strydom, & Roestenburg, 2021). The emphasis of this approach falls on the use of specific definitions and the cautious engagement of certain concepts and variables and for the ability to make correct predictions (Tewksbury, 2009). This research design attempts to produce knowledge about a phenomenon from a rather detached standpoint (Saunders, Lewis & Thornhill, 2016; Senosi, 2005).

Since the researcher needed to examine the relationships between the variables as indicated in the research objectives, this was done using the correlational research approach. The correlational approach, according to Goes and Simon (2011), examines variables in their natural environment and does not include actions imposed by the researcher. This approach involved the examination of the effect of an independent variable on one or more dependent variables. It is important to note that the researcher only described the nature of this effect without inferring causality and

could not say something beyond what the researcher observed. The purpose of the correlational study was to determine whether a relationship exists between the variables identified and determined a regression equation that was implemented to make predictions to the entire population (Goes & Simon, 2011).

3.3.   Population and Sampling design

The target population for this research study compromised of 248 employees working within a selected organization. Since the factors of this study focuses on transformational leadership, organizational culture and personality, a probability sampling method would yield the desired results as it is most commonly used in quantitative research.

Probability sampling, according to Latham (2008), provides an advantage to the researcher since it enables the researcher to determine certain bias and error with regards to the data being collected. Probability sampling is further defined as having the distinguishing characteristic that each unit in the population provided has a known, non-zero probability of being included in the sample (Latham, 2008).

The study utilized simple random sampling which is the most basic form of probability sampling (Bryman, 2011). Each unit of the population that is studied has an equal chance of inclusion. The benefit of using simple random sampling is that this method of sampling is very straightforward since it only involves a single random selection and requires little advanced knowledge about the population. Also, this method uses randomization and therefore, any research performed on this sample should have high internal and external validity.

3.4.   Data collection and procedure

In the present study, a questionnaire was used to gather information that would provide some insight and understanding into the phenomenon of interest. Ethical clearance was provided to the researcher prior to distributing the questionnaires. Further to this, permission was requested from the management team of the selected organizations to conduct the research study. Once approved, respondents were asked

for their consent to participate and the opportunity to withdraw at any point during the process was discussed with each participant. The questionnaire was captured on the platform, Survey Monkey, of which the link was distributed to various business units within the organization. The link included the researcher's information sheet, consent form and the POPIA information required from each participant.

3.5.   Instrument Measurements

Three instruments were used to explore the hypotheses of the study, Multifactor Leadership Questionnaire (MLQ), Organizational Culture Inventory (OCI) and the Five Factor Model (FFM). These measuring instruments are discussed below:

3.5.1. *Multifactor Leadership Questionnaire:*

Transformational Leadership was assessed using the Multifactor Leadership Questionnaire (MLQ). The MLQ (5X short) consists of 45 items that reveals the behaviour linked to leadership and effectiveness in both individual and organizational success (Avolio & Bass, 1995). This instrument consists of two parts. Part 1 on Transformational Leadership is based on the dimensions that define transformational leadership namely: Intellectual Stimulation, Idealized Influence, Inspirational Motivation, Idealized Influence and Individualized Consideration. Part 2 consists of Transactional Leadership based on the dimensions of Active Management by Exception, Passive Management by Exception, and 'Laissez–faire' leadership (Avolio & Bass, 1995). Garcia (2016) reported a reliability of Cronbach alpha .98 of the MLQ. Further validation of the MLQ instrument found an alpha coefficient of 0.74 (Aladwan, Al-Raggad & Al-sawalhah, 2015).

3.5.2. *Denison Organizational Culture Survey*

Organizational Culture was measured using the Denison Organizational Culture Survey developed by Daniel Denison (1990). This instrument was developed with the aim to understand how organizational culture impacts on performance. The Organizational Culture survey consists of 60 items categorized into four cultural traits namely, adaptability, mission, involvement and consistency (Denison, 1990). These four traits must be observed when evaluating the culture of an organization. The

Organizational culture survey is a self-reporting instrument which can be administered electronically or in a paper and pen format. According to Denison et al. (2012), the internal reliability and validity were done to test the instruments quality. The internal consistency for the Organizational culture survey dimensions ranged from Cronbach alpha .70 to .86 which were all at an acceptable level. In another study conducted by Irawanto et al. (2019), the Organizational culture survey were used as a method to evaluate the organizational culture of an international hotel. As part of the study, a reliability and validity test were performed to ensure the quality of the instrument used. The results produced a Cronbach alpha of .85 which is considered reliable.

3.5.3. Five Factor Model Questionnaire:

Personality was measured using the Five Factor Model questionnaire. The items identified was used to measure the facets of the openness to experience, conscientiousness, extraversion, agreeableness and neuroticism dimension (Sev, 2019). The overall Five Factor Model has been subjected to a reliability test using Cronbach Alpha with an overall result of 0.812 which is considered very good (Sev, 2019). However, with the adaptation of this instrument using the IPIP scales, Mohan and Mulla (2013) calculated the reliability for each of the facets and reported a Cronbach alpha value of 0.83.
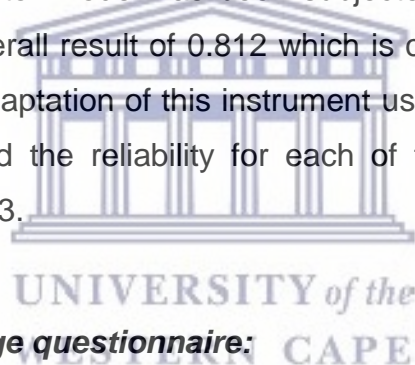
3.5.4. Resistance to change questionnaire:

Resistance to change was assessed using the Resistance to change questionnaire developed by Oreg (2003). This instrument was designed to measure an individual's disposition to resist change as well predicting the reaction to proposed change. The resistance to change instrument consists of four subscales namely, routine seeking, emotional reaction, short-term thinking and cognitive rigidity and comprises of 17 items. The overall resistance to change questionnaire has been subjected to a reliability test during a study conducted by Prezerakos et al. (2020). The values for the overall instrument produced a Cronbach alpha of .80, whilst the Cronbach alpha values for the subscales ranged from .70 to .79, confirming the instruments internal consistency. Further validation of the resistance to change instrument was in a study conducted by Oreg (2003) whereby the Cronbach alpha was .92.

3.6. Data analysis techniques

Data collected was analyzed using the Statistical Package for the Social Sciences (SPSS). The data was initially screened and prepared on an external Excel spreadsheet before importing the data into the SPSS Programme. Item analysis was performed on the data to determine the reliability of each of the instruments used as well as the quality of the items in these scales. This was followed by dimensional analysis which was meant to determine if the subscales used were uni-dimensional. Confirmatory factor analysis was performed using structural equation modelling. The measurement model fit indices were initially assessed for goodness of fit before running the structural model which would provide answers to the hypothesized relationships.

3.7. Ethical Considerations

During this study, the following ethical considerations were followed.

3.7.1. Informed Consent
Upon inception of the study, purpose of the study was explained to all the participants, and they were informed of the voluntary nature of the study. In addition to this, all participants were asked to complete an informed consent form which requested for their willingness to participate in the research study.

3.7.2. Confidentiality
As part of the informed consent, confidentiality was guaranteed to all research participants as well as how the data gathered would be stored. Participants were further notified of the stakeholders that will access to the data during the informed consent process.

3.7.3. Fidelity
By acting in good faith as the researcher in question, being loyal towards all participants and stakeholders concerned, as well as being a reliable resource through the research study.

3.7.4. Non-maleficence and beneficence

Participants were assured that no harm will be caused to any participant during the research study. Participants took part voluntary and were given the freedom to withdraw from the study at any time. The intention of the study was to provide some beneficence by way of assisting the organization through the provision of corrective actions and recommendations using the data provided by all research participants.

3.8. Statistical Analysis

This section outlines the statistical analysis used in the study to perform the analysis of the data. The process involved an item analysis with the objective of identifying and excluding items not contributing to the internal consistency of the variables being measured by these subscales. Additionally, the data was analyzed to identify missing values through means of the multiple imputation method in order to aggregate the scores. Item analyses were performed using SPSS Version 28 and LISREL version 8.80 was used to perform confirmatory factory analysis (CFA).

3.9. Missing Values

Missing values is a common phenomenon when conducting research studies. It may arise when there are respondents that fail to reply to a question. This can generally happen by accident or when respondents prefer not to answer the question (Bell & Bryman, 2019). The missing values can negatively impact inferences drawn from the analysis. Therefore, it is encouraged that the researcher knows how to handle missing data or values when it does occur. The multiple imputation method is considered the ideal approach used in statistical analysis to address the problem of missing values. The aim of this method is to derive to plausible data sets with averages calculated from complete cases on a variable.

3.10. Item Analysis

In the present study, item analysis was conducted using the reliability analysis procedure available in SPSS version 28. This procedure calculated and generated the Cronbach alpha value, item-total correlation and inter-item statistics. In order to

accurately determine levels of reliability for the scales Nunnally's (1967) guidelines were used as indicated in Table 3.1. An item is excluded from further analyses if it has an item-total correlation value below .30 and would result in a significant increase in the internal consistency scale when removed (Pallant, 2016).

Table 3.1

General guidelines for interpreting reliability coefficients

Reliability coefficient value	Interpretation
0.9 and above	excellent
0.80 – 0.89	good
0.70 – 0.79	adequate
below 0.70	may have limited applicability

Source: Extracted from Nunnally, J. C. (1967). *Psychometric theory*. New York: McGraw-Hill

3.11. Exploratory Factor Analysis (EFA)

The following guidelines were followed to determine which items to extract and which items to include when conducting the EFA:

- factors with an eigenvalue of >1.0 will not be extracted and instead be retained for further investigation (Tabachnick & Fidell, 2013);
- An item will be excluded if an item results in an item-total correlation of less than 0.30 on any factor, it means that the item is measuring something different from the scale as a whole (Field, 2005);
- an item loading less than 0.30 on more than one factor would be excluded if the difference between the higher and the lower loading was 0.25 (Nunnally & Bernstein, 1994; Tabachnick & Fidell, 2013); and
- a Kaiser-Meyer-Olkin measure of sampling adequacy (KMO index) cut-off value used in this research study was 0.70. According to Kaiser (as cited in Fields, 2005), values greater than 0.50 is acceptable, values between 0.50 and 0.70

as mediocre, and values between 0.70 and 0.80 as good. Furthermore, values between 0.80 and 0.90 are great and values above 0.90 are superb (Field, 2005).

3.12. Confirmatory Factory Analysis (CFA)

Confirmatory factor analysis is a statistical technique used with the aim to validate the structure of a set of observed variables. This technique allows the researcher to test the hypothesis and to determine that a relationship does exist between the observed variables and their underlying latent constructs. This can be validated by use of existing literature and empirical evidence to postulate relationship patters (Suhr, 2006). The CFA produces a sequence of fit indices which indicate how close the measurement model, with its parameter estimates, fits the data collected (Mahembe & Engelbrecht, 2013; Suhr, 2006).

3.13. Structural Equation Modelling (SEM)

Structural equation modelling was used to determine the goodness-of-fit of both the measurement and structural model. This technique further tested and evaluated the hypothesized relationships. Structural equation modeling entails the performing of confirmatory factor analysis on the measures to determine the goodness of fit of the measurement model. Structural equation modeling was performed using the LISREL version 8.80 software.

3.14. Chapter Summary

An overview of the research methodology used in this study was discussed in this chapter. It further provided a description of the research design, statistical hypotheses and methodology. Information of the sample including sampling procedure was explained. In addition, the procedure followed for data gathering, measuring instruments used, as well as the psychometric properties of the measuring instruments were outlined. The results are presented in chapter four and will be discussed in chapter five.

CHAPTER 4

PRESENTATION OF RESULTS

4.1. Introduction

This chapter provides a summary of the results obtained from the statistical analysis based on the data collected from the research respondents. This section further aims to present the statistical analyses outputs to test the hypotheses described in the empirical research, chapter 2. The statistical programme used for the analyses and presentation of the data in this research is the Statistical Package for Social Sciences (SPSS) version 28 and LISREL 8.80.

4.2. Missing Values

Missing values is a common phenomenon when conducting research studies. It may arise when there are respondents that fail to reply to a question. This can generally happen by accident or when respondents prefer not to answer the question (Bell & Bryman, 2019). The missing values can negatively impact on inferences drawn from the analysis. Therefore, it is encouraged that the researcher knows how to handle missing data or values when it does occur. The multiple imputation method is considered the ideal approach used in statistical analysis to address the problem of missing values. The aim of this method is to derive to plausible data sets with averages calculated from complete cases on a variable. After multiple imputation the sample size used in the study is 200.

4.3. Item Analysis

Reliability or the testing of reliability is concerned with the question of whether the results of a study are repeatable (Bell & Bryman, 2019). The term is used often in relation to the question of whether or not the measures examined are consistent. Reliability is particularly important when one executes quantitative research, to ask the question: is the measure stable or not? For example, if the results of Leadership tests, which are designed to indicate the different leadership styles, fluctuate extremely when administered on two or more occasions, the researcher would consider those leadership style scores as unreliable and would not have faith in using them as a

measure of leadership. Reliability scores with a Cronbach alpha value as low as .50 are generally satisfactory for tests with 10 to 15 items, however, tests with more than 50 items should produce Cronbach alpha values of .80 to be considered suitable (McCowan & McCowan, 1999). Therefore, the objective of using item analysis is to determine the extent to which test results remain consistent, steady and free of error variance. In this study the Cronbach alpha value of α = .70 is considered acceptable as proposed by Nunnally and Bernstein (1994).

4.3.1. *Item analysis of the Transformational Leadership Questionnaire*

The Transformational Leadership Questionnaire developed by Avolio and Bass (1995) includes 20 items and measures four dimensions, namely Idealized Influence, Inspirational Motivation, Intellectual Stimulation, and Individualized Consideration. The following section will discuss the item analyses that were performed separately for each of the 4 subscales.

4.3.1.1. *Idealized Influence*

Cronbach Alpha values above .70 are considered reliable (Cohen, 1988; Nunnally & Bernstein, 1994). Thus, with the reliability analysis of the *Idealized Influence* subscale, the result reported a Cronbach alpha of .91, which is considered to be reliable. The Corrected Item-Total Correlation column provides insight into how much each item correlates with the total score. Items with corrected item-total correlation values less than .30 are a cause for concern as they might be measuring something different from the scale as a whole. Based on the Corrected Item-Total Correlation column as shown in Table 4.1, items range from .53 to .79 which indicates acceptable values. The inter-item correlation matrix as indicated in table 4.1, ranges from .32 to .74 which indicates that a medium relationship exists between the items in the *Idealized Influence* subscale. A well-researched guideline is used for analyzing the correlation between items: small r= .10 to .29; medium r= .30 to .49; and large r=.50 to 1.0 (Cohen, 1988).

Table 4.1

The reliability analysis output for the Idealized influence subscale

Reliability Statistics		
Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
.912	.912	8

Item-Total Statistics					
	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Squared Multiple Correlation	Cronbach's Alpha if Item Deleted
C1	30.94	67.233	.718	.615	.901
C3	31.54	65.154	.692	.531	.903
C6	31.12	64.327	.755	.630	.897
C8	31.06	63.263	.773	.648	.896
C10	31.18	63.030	.787	.683	.894
C12	30.93	67.151	.735	.599	.899
C13	30.91	70.187	.533	.342	.915
C19	31.15	65.652	.726	.642	.900
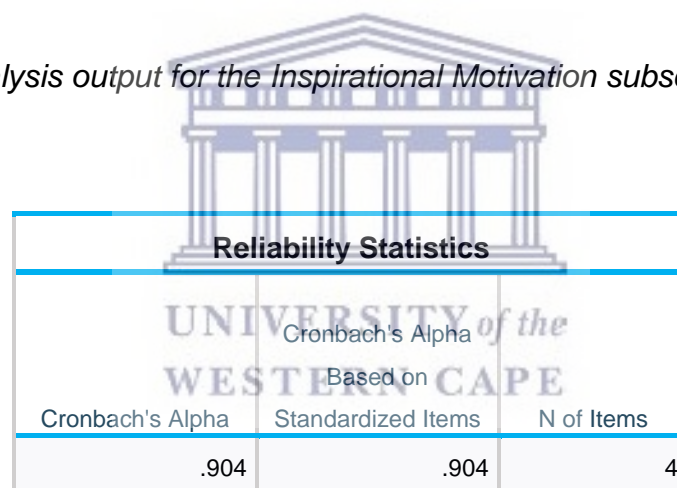
Inter-Item Correlation Matrix								
	C1	C3	C6	C8	C10	C12	C13	C19
C1	1.000	.506	.621	.584	.687	.705	.322	.557
C3	.506	1.000	.673	.553	.589	.545	.481	.500
C6	.621	.673	1.000	.622	.574	.636	.523	.511
C8	.584	.553	.622	1.000	.677	.592	.475	.738
C10	.687	.589	.574	.677	1.000	.656	.412	.725
C12	.705	.545	.636	.592	.656	1.000	.385	.548
C13	.322	.481	.523	.475	.412	.385	1.000	.424
C19	.557	.500	.511	.738	.725	.548	.424	1.000

4.3.1.2.   Inspirational Motivation

Cronbach Alpha values above .70 are considered reliable (Cohen, 1988; Nunnally & Bernstein, 1994). Thus, with the reliability analysis of the *Inspirational Motivation* subscale, the result reported a Cronbach alpha of .90, which is considered to be reliable. The Corrected Item-Total Correlation column provides insight into how much each item correlates with the total score. Items with corrected item-total correlation values less than .30 are a cause for concern as they might be measuring something different from the scale as a whole. Based on the Corrected Item-Total Correlation column as shown in Table 4.2, items range from .75 to .80 which indicates acceptable values. The inter-item correlation matrix as indicated in Table 4.2, ranges from .65 to .75 which indicates that a large relationship exists between the items in the *Inspirational Motivation* subscale. A well-researched guideline is used for analyzing the correlation between items: small r= .10 to .29; medium r= .30 to .49; and large r=.50 to 1.0 (Cohen, 1988).

Table 4.2

The reliability analysis output for the Inspirational Motivation subscale

Reliability Statistics		
Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
.904	.904	4

Item-Total Statistics				
	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Squared Multiple Correlation	Cronbach's Alpha if Item Deleted
C5	13.80	14.787	.745	.569	.889
C7	13.51	14.271	.805	.654	.868
C14	13.85	14.038	.783	.626	.876
C20	13.57	14.046	.802	.660	.869

Inter-Item Correlation Matrix				
	C5	C7	C14	C20
C5	1.000	.715	.658	.650
C7	.715	1.000	.693	.739
C14	.658	.693	1.000	.750
C20	.650	.739	.750	1.000

4.3.1.3. *Intellectual Stimulation*

Cronbach Alpha values above .70 are considered reliable (Cohen, 1988; Nunnally & Bernstein, 1994). Thus, with the reliability analysis of the *Intellectual Stimulation* subscale, the result reported a Cronbach alpha of .86, which is considered to be reliable. The Corrected Item-Total Correlation column provides insight into how much each item correlates with the total score. Items with corrected item-total correlation values less than .30 are a cause for concern as they might be measuring something different from the scale as a whole. Based on the Corrected Item-Total Correlation column as shown in Table 4.3, items range from .60 to .76 which indicates acceptable values. The inter-item correlation matrix as indicated in Table 4.3, ranges from .47 to .78 which indicates that a large relationship exists between the items in the *Intellectual Stimulation* subscale. A well-researched guideline is used for analyzing the correlation between items: small r= .10 to .29; medium r= .30 to .49; and large r=.50 to 1.0 (Cohen, 1988).

Table 4.3

The reliability analysis output for the Intellectual Stimulation subscale

Reliability Statistics		
Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
.860	.859	4

Item-Total Statistics				
	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Squared Multiple Correlation	Cronbach's Alpha if Item Deleted
C2	12.90	15.075	.599	.427	.862
C4	12.76	13.583	.740	.566	.807

C16	12.71	13.093	.757	.654	.799
C18	12.85	13.083	.729	.630	.811

Inter-Item Correlation Matrix				
	C2	C4	C16	C18
C2	1.000	.645	.486	.467
C4	.645	1.000	.638	.606
C16	.486	.638	1.000	.781
C18	.467	.606	.781	1.000

4.3.1.4. *Individualized Consideration*

Cronbach Alpha values above .70 are considered reliable (Cohen, 1988; Nunnally & Bernstein, 1994). Thus, with the reliability analysis of the *Individualized Consideration* subscale, the result reported a Cronbach alpha of .86, which is considered to be reliable. The Corrected Item-Total Correlation column provides insight into how much each item correlates with the total score. Items with corrected item-total correlation values less than .30 are a cause for concern as they might be measuring something different from the scale as a whole. Based on the Corrected Item-Total Correlation column as shown in Table 4.4, items range from .60 to .77 which indicates acceptable values. The inter-item correlation matrix as indicated in Table 4.4, ranges from .50 to .80 which indicates that a large relationship exists between the items in the *Individualized Consideration* subscale. A well-researched guideline is used for analyzing the correlation between items: small r= .10 to .29; medium r= .30 to .49; and large r=.50 to 1.0 (Cohen, 1988).

Table 4.4

The reliability analysis output for the Individualized Consideration subscale

Reliability Statistics		
Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
.859	.858	4

Item-Total Statistics

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Squared Multiple Correlation	Cronbach's Alpha if Item Deleted
C9	13.12	14.524	.759	.663	.797
C11	12.58	15.894	.697	.491	.823
C15	12.96	16.873	.599	.382	.861
C17	12.94	14.403	.765	.665	.794

Inter-Item Correlation Matrix

	C9	C11	C15	C17
C9	1.000	.611	.499	.797
C11	.611	1.000	.580	.607
C15	.499	.580	1.000	.516
C17	.797	.607	.516	1.000

4.3.2. *Item analysis of the Organizational Culture Questionnaire*

The Organizational Culture Questionnaire developed by Denison (1990) includes 60 items and measures 12 dimensions (Empowerment, Team Orientation, Capability Development, Core Values, Agreement, Coordination and Integration, Adaptability and Creating Change, Customer Focus, Organizational Learning, Mission (Strategic Direction and Intent), Goals and Objectives, and Vision. The following section will discuss the item analysis which was performed separately for each of the 12 subscales.

4.3.2.1. *Empowerment*

Cronbach Alpha values above .70 are considered reliable (Cohen, 1988; Nunnally & Bernstein, 1994). Thus, with the reliability analysis of the *Empowerment sub*scale, the result reported a Cronbach alpha of .84 which is considered to be reliable. The Corrected Item-Total Correlation column provides insight into how much each item correlates with the total score. Items with corrected item-total correlation values less than .30 are a cause for concern as they might be measuring something different from the scale as a whole. Based on the Corrected Item-Total Correlation column as shown in Table 4.5, items range from .53 to .72 which indicates acceptable values. The inter-

item correlation matrix as indicated in Table 4.5 ranges from .38 to .61 which indicates a moderate to large relationship exists between the items in the *Empowerment* subscale. A well-researched guideline is used for analyzing the correlation between items: small r= .10 to .29; medium r= .30 to .49; and large r=.50 to 1.0 (Cohen, 1988).

Table 4.5.

The reliability analysis output for the Empowerment subscale

Reliability Statistics		
Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
.842	.842	5

Item-Total Statistics					
	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Squared Multiple Correlation	Cronbach's Alpha if Item Deleted
D1	13.57	11.785	.528	.299	.839
D2	13.82	10.353	.676	.470	.801
D3	13.96	10.093	.664	.464	.805
D4	13.82	10.530	.718	.521	.791
D5	13.99	10.246	.654	.451	.807

Inter-Item Correlation Matrix					
	D1	D2	D3	D4	D5
D1	1.000	.495	.398	.469	.381
D2	.495	1.000	.516	.612	.524
D3	.398	.516	1.000	.592	.594
D4	.469	.612	.592	1.000	.572
D5	.381	.524	.594	.572	1.000

4.3.2.2.   Team Orientation

Cronbach Alpha values above .70 are considered reliable (Cohen, 1988; Nunnally & Bernstein, 1994). Thus, with the reliability analysis of the *Team Orientation sub*scale, the result reported a Cronbach alpha of .86, which is considered to be reliable. The

Corrected Item-Total Correlation column provides insight into how much each item correlates with the total score. Items with corrected item-total correlation values less than .30 are a cause for concern as they might be measuring something different from the scale as a whole. Based on the Corrected Item-Total Correlation column as shown in Table 4.6, items range from .62 to .75 which indicates acceptable values. The inter-item correlation matrix as indicated in Table 4.6 ranges from .46 to .69 which indicates a moderate to large relationship exists between the items in the *Team Orientation* subscale. A well-researched guideline is used for analyzing the correlation between items: small r= .10 to .29; medium r= .30 to .49; and large r=.50 to 1.0 (Cohen, 1988).

Table 4.6

The reliability analysis output for the Team Orientation subscale

Reliability Statistics		
Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
.860	.859	5

Item-Total Statistics					
	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Squared Multiple Correlation	Cronbach's Alpha if Item Deleted
D6	14.53	11.034	.649	.427	.838
D7	14.76	10.095	.749	.573	.811
D8	14.61	9.949	.730	.550	.817
D9	14.45	11.435	.617	.385	.846
D10	14.66	11.170	.644	.418	.839
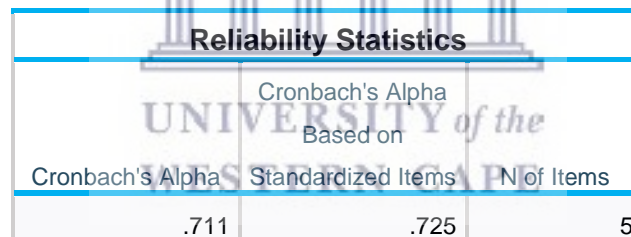
Inter-Item Correlation Matrix					
	D6	D7	D8	D9	D10
D6	1.000	.575	.558	.460	.532
D7	.575	1.000	.689	.556	.567
D8	.558	.689	1.000	.547	.545
D9	.460	.556	.547	1.000	.469
D10	.532	.567	.545	.469	1.000

4.3.2.3. Capability Development

Cronbach Alpha values above .70 are considered reliable (Cohen, 1988; Nunnally & Bernstein, 1994). Thus, with the reliability analysis of the *Capability Development* subscale, the result reported a Cronbach alpha of .71, which is considered to be reliable. The Corrected Item-Total Correlation column provides insight into how much each item correlates with the total score. Items with corrected item-total correlation values less than .30 are a cause for concern as they might be measuring something different from the scale as a whole. Based on the Corrected Item-Total Correlation column as shown in Table 4.7, items range from .09 to .65 which indicates acceptable values. The inter-item correlation matrix as indicated in Table 4.7, ranges from 03 to .66 which indicates that a small to large relationship exists between the items in the *Capability Development* subscale. A well-researched guideline is used for analyzing the correlation between items: small r= .10 to .29; medium r= .30 to .49; and large r=.50 to 1.0 (Cohen, 1988).

Table 4.7

The reliability analysis output for the Capability Development subscale

Reliability Statistics		
Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
.711	.725	5

Item-Total Statistics				
	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Squared Multiple Correlation	Cronbach's Alpha if Item Deleted
D11	14.18	8.199	.453	.263	.669
D12	14.07	7.714	.645	.533	.598
D13	13.89	7.174	.647	.508	.586
D14	14.08	7.366	.622	.538	.598
D15R	14.49	9.889	.093	.038	.815

Inter-Item Correlation Matrix					
	D11	D12	D13	D14	D15R
D11	1.000	.500	.358	.392	.079
D12	.500	1.000	.606	.647	.025
D13	.358	.606	1.000	.661	.152
D14	.392	.647	.661	1.000	.037
D15R	.079	.025	.152	.037	1.000

4.3.2.4.   Core Values

Cronbach Alpha values above .70 are considered reliable (Cohen, 1988; Nunnally & Bernstein, 1994). Thus, with the reliability analysis of the *Core Values* subscale, the result reported a Cronbach alpha of .77, which is considered to be reliable. The Corrected Item-Total Correlation column provides insight into how much each item correlates with the total score. Items with corrected item-total correlation values less than .30 are a cause for concern as they might be measuring something different from the scale as a whole. Based on the Corrected Item-Total correlation as shown in Table 4.8, items range from .43 to .71 which indicates acceptable values. The inter-item correlation matrix as indicated in Table 4.8, ranges from .22 to .62 which indicates that a small to large relationship between the items in the *Core Values* subscale. A well-researched guideline is used for analyzing the correlation between items: small r= .10 to .29; medium r= .30 to .49; and large r=.50 to 1.0 (Cohen, 1988).

Table 4.8

The reliability analysis output for the Core Values subscale

Reliability Statistics		
Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
.770	.774	5

Item-Total Statistics					
	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Squared Multiple Correlation	Cronbach's Alpha if Item Deleted
D16	15.04	7.516	.559	.411	.724
D17	14.77	8.741	.497	.322	.743
D18	14.51	7.477	.709	.535	.669
D19	14.50	8.352	.434	.293	.768
D20	14.17	8.674	.540	.372	.731

Inter-Item Correlation Matrix					
	D16	D17	D18	D19	D20
D16	1.000	.475	.616	.249	.329
D17	.475	1.000	.536	.216	.262
D18	.616	.536	1.000	.377	.487
D19	.249	.216	.377	1.000	.523
D20	.329	.262	.487	.523	1.000

4.3.2.5.   Agreement

Cronbach Alpha values above .70 are considered reliable (Cohen, 1988; Nunnally & Bernstein, 1994). Thus, with the reliability analysis of the *Agreement* subscale, the result reported a Cronbach alpha of .79, which is considered to be reliable. The Corrected Item-Total Correlation column provides insight into how much each item correlates with the total score. Items with corrected item-total correlation values less than .30 are a cause for concern as they might be measuring something different from the scale as a whole. Based on the Corrected Item-Total Correlation column as shown in 4.9, items range from range from .36 to .69 which indicates acceptable values. The inter-item correlation matrix as indicated in Table 4.9, ranges from 23 to .61 which indicates that a small to large relationship exists between the items in the Agreement subscale. A well-researched guideline is used for analyzing the correlation between items: small r= .10 to .29; medium r= .30 to .49; and large r=.50 to 1.0 (Cohen, 1988).
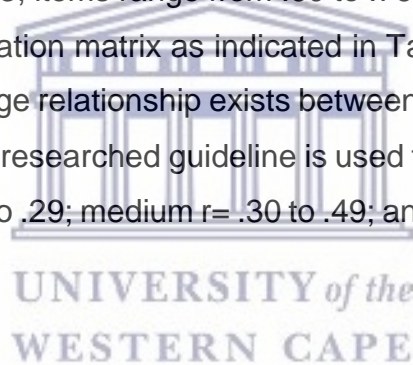
Table 4.9

The reliability analysis output for the Agreement subscale

Reliability Statistics		
Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
.790	.792	5

Item-Total Statistics					
	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Squared Multiple Correlation	Cronbach's Alpha if Item Deleted
D21	14.14	7.850	.688	.512	.710
D22	14.07	8.182	.590	.396	.744
D23	14.34	8.013	.681	.490	.714
D25	13.95	8.796	.555	.355	.756
D24R	14.44	9.423	.356	.134	.818

Inter-Item Correlation Matrix					
	D21	D22	D23	D25	D24R
D21	1.000	.535	.614	.573	.305
D22	.535	1.000	.583	.408	.254
D23	.614	.583	1.000	.463	.338
D25	.573	.408	.463	1.000	.248
D24R	.305	.254	.338	.248	1.000

4.3.2.6.   Coordination and Integration

Cronbach Alpha values above .70 are considered reliable (Cohen, 1988; Nunnally & Bernstein, 1994). Thus, with the reliability analysis of the *Coordination and Integration* subscale, the result reported a Cronbach alpha of .79, which is considered to be reliable. The Corrected Item-Total Correlation column provides insight into how much each item correlates with the total score. Items with corrected item-total correlation values less than .30 are a cause for concern as they might be measuring something different from the scale as a whole. Based on the Corrected Item-Total Correlation column as shown in Table 4.10, items range from .31 to .71 which indicates acceptable

values. The inter-item correlation matrix as indicated in Table 4.10, ranges from .07 to .66 which indicates that a small to large relationship exists between the items *Coordination and Integration* subscale. A well-researched guideline is used for analyzing the correlation between items: small r= .10 to .29; medium r= .30 to .49; and large r=.50 to 1.0 (Cohen, 1988).

Table 4.10

The reliability analysis output for the Coordination and Integration subscale

Reliability Statistics		
Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
.785	.785	5

Item-Total Statistics				
	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Squared Multiple Correlation	Cronbach's Alpha if Item Deleted
D26	13.43	9.643	.462	.296	.775
D27	13.61	7.817	.710	.531	.692
D28	13.72	8.162	.650	.446	.714
D30	13.46	8.330	.711	.531	.697
D29R	13.79	9.999	.314	.151	.824

Inter-Item Correlation Matrix					
	D26	D27	D28	D30	D29R
D26	1.000	.470	.424	.472	.069
D27	.470	1.000	.597	.664	.326
D28	.424	.597	1.000	.599	.290
D30	.472	.664	.599	1.000	.317
D29R	.069	.326	.290	.317	1.000

4.3.2.7.   Adaptability and creating change

Cronbach Alpha values above .70 are considered reliable (Cohen, 1988; Nunnally & Bernstein, 1994). Thus, with the reliability analysis of the *Adaptability and Creating*

change subscale, the result reported a Cronbach alpha of .57 which is below the cut-off level of .70 (Cohen, 1988; Nunnally & Bernstein, 1994). The Corrected Item-Total Correlation column provides insight into how much each item correlates with the total score. Items with corrected item-total correlation values less than .30 are a cause for concern as they might be measuring something different from the scale as a whole. Based on the Corrected Item-Total Correlation column as shown in Table 4.11, Tem D34 is a cause for concern a decision was made to exclude it from further analyses thereby improving the Cronbach's alpha for the scale to α = .759.

Table 4.11

The reliability analysis output for the adaptability and Creating Change subscale

Reliability Statistics		
Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
.574	.595	5

Item-Total Statistics					
	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Squared Multiple Correlation	Cronbach's Alpha if Item Deleted
D31	14.21	4.780	.451	.266	.441
D32	13.71	5.194	.436	.274	.457
D33	13.77	4.924	.547	.418	.393
D34	14.06	7.735	-.144	.023	.759
D35	13.90	5.347	.551	.397	.415
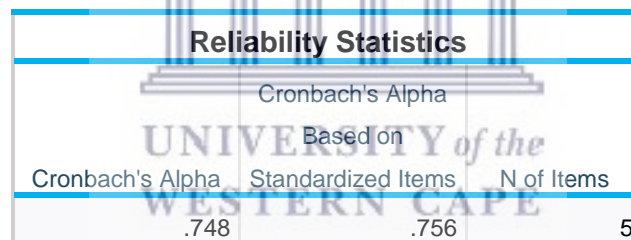
Inter-Item Correlation Matrix					
	D31	D32	D33	D34	D35
D31	1.000	.338	.455	-.080	.444
D32	.338	1.000	.465	-.119	.443
D33	.455	.465	1.000	-.134	.570
D34	-.080	-.119	-.134	1.000	-.112
D35	.444	.443	.570	-.112	1.000

4.3.2.8.   Customer Focus

Cronbach Alpha values above .70 are considered reliable (Cohen, 1988; Nunnally & Bernstein, 1994). Thus, with the reliability analysis of the *Customer Focus* subscale, the result reported a Cronbach alpha of .75, which is considered to be reliable. The Corrected Item-Total Correlation column provides insight into how much each item correlates with the total score. Items with corrected item-total correlation values less than .30 are a cause for concern as they might be measuring something different from the scale as a whole. Based on the Corrected Item-Total Correlation column as shown in Table 4.12, items range from .42 to .65 which indicates acceptable values. The inter-item correlation matrix as indicated in Table 4.12, ranges from .20 to .64 which indicates that a small to large relationship exists between the items in the *Customer Focus* subscale. A well-researched guideline is used for analyzing the correlation between items: small r= .10 to .29; medium r= .30 to .49; and large r=.50 to 1.0 (Cohen, 1988).

Table 4.12

The reliability analysis output for the Customer Focus subscale

Reliability Statistics		
Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
.748	.756	5

Item-Total Statistics					
	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Squared Multiple Correlation	Cronbach's Alpha if Item Deleted
D36	14.78	7.399	.653	.496	.658
D37	14.73	7.535	.588	.445	.679
D38	14.76	7.221	.521	.286	.702
D40	14.74	7.713	.423	.203	.740
D39R	14.48	7.949	.419	.203	.738

Inter-Item Correlation Matrix					
	D36	D37	D38	D40	D39R
D36	1.000	.635	.474	.411	.336
D37	.635	1.000	.368	.316	.398
D38	.474	.368	1.000	.349	.338
D40	.411	.316	.349	1.000	.202
D39R	.336	.398	.338	.202	1.000

4.3.2.9.   Organizational Learning

Cronbach Alpha values above .70 are considered reliable (Cohen, 1988; Nunnally & Bernstein, 1994). Thus, with the reliability analysis of the *Organizational Learning* subscale, the result reported a Cronbach alpha of .78, which is considered to be reliable. The Corrected Item-Total Correlation column provides insight into how much each item correlates with the total score. Items with corrected item-total correlation values less than .30 are a cause for concern as they might be measuring something different from the scale as a whole. Based on the Corrected Item-Total Correlation column as shown in Table 4.13, items range from .43 to .63 which indicates acceptable values. The inter-item correlation matrix as indicated in Table 4.13, ranges from .26 to .62 which indicates that a small to large relationship exists between the items in the *Organizational Learning* subscale. A well-researched guideline is used for analyzing the correlation between items: small r= .10 to .29; medium r= .30 to .49; and large r=.50 to 1.0 (Cohen, 1988).

Table 4.13

The reliability analysis output for the Organizational Learning subscale

Reliability Statistics		
Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
.776	.783	5

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Item-Total Statistics

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Squared Multiple Correlation	Cronbach's Alpha if Item Deleted
D41	14.00	8.508	.626	.457	.713
D42	14.29	8.134	.618	.444	.712
D44	14.00	8.829	.530	.310	.742
D45	14.52	7.889	.579	.353	.725
D43R	14.83	8.567	.425	.198	.782

Inter-Item Correlation Matrix

	D41	D42	D44	D45	D43R
D41	1.000	.617	.449	.482	.310
D42	.617	1.000	.429	.418	.382
D44	.449	.429	1.000	.475	.260
D45	.482	.418	.475	1.000	.364
D43R	.310	.382	.260	.364	1.000

4.3.2.10. Mission (Strategic Direction and Intent)

Cronbach Alpha values above .70 are considered reliable (Cohen, 1988; Nunnally & Bernstein, 1994). Thus, with the reliability analysis of the *Mission (Strategic Direction and Intent)* subscale, the result reported a Cronbach alpha of .86, which is considered to be reliable. The Corrected Item-Total Correlation column provides insight into how much each item correlates with the total score. Items with corrected item-total correlation values less than .30 are a cause for concern as they might be measuring something different from the scale as a whole. Based on the Corrected Item-Total Correlation column as shown in Table 4.14, items .54 to .80 which indicates acceptable values. The inter-item correlation matrix as indicated in Table 4.14, ranges from .28 to .75 which indicates that a small to large relationship exists between the items in the *Mission (Strategic Direction and Intent)* subscale. A well-researched guideline is used for analyzing the correlation between items: small r= .10 to .29; medium r= .30 to .49; and large r=.50 to 1.0 (Cohen, 1988).

Table 4.14

The reliability analysis output for the Mission (Strategic Direction and Intent)
subscale

Reliability Statistics		
Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
.864	.872	5

Item-Total Statistics					
	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Squared Multiple Correlation	Cronbach's Alpha if Item Deleted
D46	14.88	8.538	.777	.615	.813
D47	15.19	9.220	.590	.476	.859
D48	14.88	8.558	.803	.685	.808
D49	14.88	8.534	.768	.636	.815
D50R	15.18	8.694	.540	.361	.881

Inter-Item Correlation Matrix					
	D46	D47	D48	D49	D50R
D46	1.000	.606	.711	.691	.519
D47	.606	1.000	.650	.498	.284
D48	.711	.650	1.000	.746	.494
D49	.691	.498	.746	1.000	.562
D50R	.519	.284	.494	.562	1.000

4.3.2.11.   Goals and Objectives

Cronbach Alpha values above .70 are considered reliable (Cohen, 1988; Nunnally &
Bernstein, 1994). Thus, with the reliability analysis of the *Objectives* subscale, the
result reported a Cronbach alpha of .84 which is considered to be reliable. The
Corrected Item-Total Correlation column provides insight into how much each item
correlates with the total score. Items with corrected item-total correlation values less
than .30 are a cause for concern as they might be measuring something different from
the scale as a whole. Based on the Corrected Item-Total Correlation column as shown
in Table 4.15, items range from .60 to .68 which indicates acceptable values. The inter-

item correlation matrix as indicated in Table 4.15, ranges from .43 to .64 which indicates that a moderate to large relationship between the items in the *Objectives* subscale. A well-researched guideline is used for analyzing the correlation between items: small r= .10 to .29; medium r= .30 to .49; and large r=.50 to 1.0 (Cohen, 1988).

Table 4.15

The reliability analysis output for the Goals and Objective subscale

Reliability Statistics		
Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
.836	.837	5

Item-Total Statistics					
	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Squared Multiple Correlation	Cronbach's Alpha if Item Deleted
D51	15.12	6.960	.608	.398	.813
D52	14.99	6.965	.676	.479	.791
D53	14.85	7.589	.641	.470	.803
D54	14.80	7.136	.667	.499	.794
D55	14.83	7.442	.602	.379	.812

Inter-Item Correlation Matrix					
	D51	D52	D53	D54	D55
D51	1.000	.575	.433	.495	.436
D52	.575	1.000	.519	.483	.542
D53	.433	.519	1.000	.639	.449
D54	.495	.483	.639	1.000	.504
D55	.436	.542	.449	.504	1.000

4.3.2.12.   Vision

Cronbach Alpha values above .70 are considered reliable (Cohen, 1988; Nunnally & Bernstein, 1994). Thus, with the reliability analysis of the *Vision* subscale, the result reported a Cronbach alpha of .73 which is considered to be reliable. The Corrected Item-Total Correlation column provides insight into how much each item correlates

with the total score. Items with corrected item-total correlation values less than .30 are a cause for concern as they might be measuring something different from the scale as a whole. Based on the Corrected Item-Total Correlation column as shown in Table 4.16, item D58R is a poor item. It was subsequently excluded thereby increasing the scale reliability to α = .85.

Table 4.16

The reliability analysis output for the Vision subscale

Reliability Statistics		
Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
.734	.741	5

Item-Total Statistics					
	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Squared Multiple Correlation	Cronbach's Alpha if Item Deleted
D56	13.73	5.615	.689	.565	.605
D57	13.43	6.538	.589	.473	.657
D59	13.78	5.720	.651	.515	.622
D60	13.71	6.275	.633	.449	.638
D58R	14.54	8.471	.041	.018	.849

Inter-Item Correlation Matrix					
	D56	D57	D59	D60	D58R
D56	1.000	.658	.627	.582	.042
D57	.658	1.000	.563	.460	-.024
D59	.627	.563	1.000	.615	.017
D60	.582	.460	.615	1.000	.099
D58R	.042	-.024	.017	.099	1.000

4.3.3. Item analysis of the Resistance to Change Questionnaire
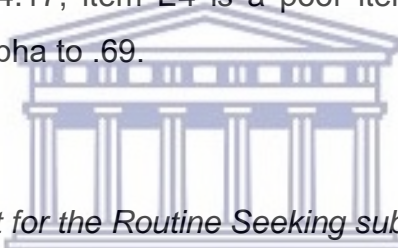
The Resistance to Change developed by Oreg (2003) includes 17 items and measures 4 dimensions namely, Routine Seeking, Emotional Reaction, Short-term Thinking, and Cognitive Rigidity. The following section will discuss the item analysis which was performed separately for each of the 4 subscales.

4.3.3.1.   Routine Seeking

Cronbach Alpha values above .70 are considered reliable (Cohen, 1988; Nunnally & Bernstein, 1994). Thus, with the reliability analysis of the *Routine Seeking* subscale, the result reported a Cronbach alpha of .47 was found which is below the cut-off level of .70. The Corrected Item-Total Correlation column provides insight into how much each item correlates with the total score. Items with corrected item-total correlation values less than .30 are a cause for concern as they might be measuring something different from the scale as a whole. Based on the Corrected Item-Total Correlation column as shown in Table 4.17, item E4 is a poor item. It was excluded thereby increasing the Cronbach's alpha to .69.

Table 4.17

The reliability analysis output for the Routine Seeking subscale

	Reliability Statistics		
	Cronbach's Alpha		
	Based on		
Cronbach's Alpha	Standardized Items	N of Items	
.472	.513	5	

	Item-Total Statistics				
	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Squared Multiple Correlation	Cronbach's Alpha if Item Deleted
E1	9.98	5.165	.371	.172	.365
E2	8.87	4.174	.292	.276	.389
E3	9.78	4.085	.578	.421	.192
E4	8.66	6.666	-.172	.101	.685
E5	9.67	4.383	.405	.369	.306

Inter-Item Correlation Matrix					
	E1	E2	E3	E4	E5
E1	1.000	.358	.322	-.018	.208
E2	.358	1.000	.380	-.261	.320
E3	.322	.380	1.000	-.009	.587
E4	-.018	-.261	-.009	1.000	-.146
E5	.208	.320	.587	-.146	1.000

4.3.3.2.   Emotional Reaction

Cronbach Alpha values above .70 are considered reliable (Cohen, 1988; Nunnally & Bernstein, 1994). Thus, with the reliability analysis of the *Emotional Reaction* subscale, the result reported a Cronbach alpha of .82, which is considered to be reliable. The Corrected Item-Total Correlation column provides insight into how much each item correlates with the total score. Items with corrected item-total correlation values less than .30 are a cause for concern as they might be measuring something different from the scale as a whole. Based on the Corrected Item-Total Correlation column as shown in Table 4.18, items range from .52 to .72 which indicates acceptable values. The inter-item correlation matrix as indicated in Table 4.18, ranges from .37 to .70 which indicates that a moderate to large relationship between the items *Emotional Reaction* subscale. A well-researched guideline is used for analyzing the correlation between items: small r= .10 to .29; medium r= .30 to .49; and large r=.50 to 1.0 (Cohen, 1988).

Table 4.18

The reliability analysis output for the Emotional Reaction subscale

Reliability Statistics		
Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
.815	.814	4

tem-Total Statistics					
	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Squared Multiple Correlation	Cronbach's Alpha if Item Deleted
E6	8.27	6.206	.716	.547	.726
E7	8.26	6.432	.724	.556	.725
E8	7.76	6.766	.582	.358	.792
E9	8.30	7.417	.524	.286	.815

Inter-Item Correlation Matrix				
	E6	E7	E8	E9
E6	1.000	.701	.524	.504
E7	.701	1.000	.566	.468
E8	.524	.566	1.000	.373
E9	.504	.468	.373	1.000

4.3.3.3. *Short-Term Thinking*

Cronbach Alpha values above .70 are considered reliable (Cohen, 1988; Nunnally & Bernstein, 1994). Thus, with the reliability analysis of the *Short-term Thinking* subscale, the result reported a Cronbach alpha of .82, which is considered to be reliable. The Corrected Item-Total Correlation column provides insight into how much each item correlates with the total score. Items with corrected item-total correlation values less than .30 are a cause for concern as they might be measuring something different from the scale as a whole. Based on the Corrected Item-Total Correlation column as shown in Table 4.19, items range from .55 to .69 which indicates acceptable values. The inter-item correlation matrix as indicated in Table 4.19, ranges from .42 to .65 which indicates that a moderate to large relationship exists between the items in the *Short-term Thinking* subscale. A well-researched guideline is used for analyzing the correlation between items: small r= .10 to .29; medium r= .30 to .49; and large r=.50 to 1.0 (Cohen, 1988).

Table 4.19

The reliability analysis output for the Short-Term Thinking subscale

	Reliability Statistics		
	Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
	.816	.816	4

Item-Total Statistics					
	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Squared Multiple Correlation	Cronbach's Alpha if Item Deleted
E10	6.87	5.688	.549	.324	.807
E11	6.86	4.831	.669	.458	.754
E12	6.94	5.238	.643	.461	.766
E13	6.97	4.909	.690	.519	.743

Inter-Item Correlation Matrix				
	E10	E11	E12	E13
E10	1.000	.539	.423	.433
E11	.539	1.000	.511	.590
E12	.423	.511	1.000	.653
E13	.433	.590	.653	1.000

4.3.3.4. *Cognitive Rigidity*

Cronbach Alpha values above .70 are considered reliable (Cohen, 1988; Nunnally & Bernstein, 1994). Thus, with the reliability analysis of the *Cognitive Rigidity* subscale, the result reported a Cronbach alpha of .43 which is below the cut-off level of .70. The Corrected Item-Total Correlation column provides insight into how much each item correlates with the total score. Items with corrected item-total correlation values less than .30 are a cause for concern as they might be measuring something different from the scale as a whole. Based on the Corrected Item-Total Correlation column as shown in Table 4.20, item E14 is a poor item. It was excluded from the study resulting in the increase in the Cronbach's alpha to α = .70.

Table 4.20

The reliability analysis output for the Cognitive Rigidity subscale

Reliability Statistics		
Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
.432	.446	4

Item-Total Statistics					
	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Squared Multiple Correlation	Cronbach's Alpha if Item Deleted
E14	9.39	5.052	-.127	.033	.699
E15	9.46	2.802	.463	.364	.091
E16	9.48	3.075	.414	.395	.167
E17	8.81	3.766	.351	.160	.276

Inter-Item Correlation Matrix				
	E14	E15	E16	E17
E14	1.000	-.078	-.178	-.037
E15	-.078	1.000	.588	.340
E16	-.178	.588	1.000	.369
E17	-.037	.340	.369	1.000

4.3.4. *Item analysis of the Five Factor Personality Questionnaire*

The Five Factor Personality Questionnaire developed by Goldberg (1999) includes 50 items and measures 5 dimensions namely, Conscientiousness, Openness to experience, Extraversion, Agreeableness, and Neuroticism. The following section will discuss the item analysis which was performed separately for each of the 5 subscales.

4.3.4.1.   *Conscientiousness*

Cronbach Alpha values above .70 are considered reliable (Cohen, 1988; Nunnally & Bernstein, 1994). Thus, with the reliability analysis of the *Conscientiousness* subscale,

the result reported a Cronbach alpha of .73, which is considered to be reliable. The Corrected Item-Total Correlation column provides insight into how much each item correlates with the total score. Items with corrected item-total correlation values less than .30 are a cause for concern as they might be measuring something different from the scale as a whole. Based on the Corrected Item-Total Correlation column as shown in Table 4.21, items 28 to .48 which indicates that a small to moderate correlation exists between the items and the total score. The inter-item correlation matrix as indicated in Table 4.21, ranges from -.02 to .53 which indicates that a small to large relationship exists between the items in the *Conscientiousness* subscale. A well-researched guideline is used for analyzing the correlation between items: small r= .10 to .29; medium r= .30 to .49; and large r=.50 to 1.0 (Cohen, 1988).

Table 4.21

The reliability analysis output for the Conscientiousness subscale

Reliability Statistics		
Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
.727	.734	10

Item-Total Statistics				
	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Squared Multiple Correlation	Cronbach's Alpha if Item Deleted
b1	37.29	16.448	.329	.199	.714
b2	36.76	17.359	.276	.172	.720
b3	37.03	16.351	.399	.262	.704
b4	36.81	16.258	.476	.381	.697
b5	37.36	15.186	.463	.379	.692
b6	37.20	16.985	.306	.132	.717
b7R	37.42	13.783	.465	.285	.694
b8R	36.86	15.843	.432	.317	.699
b9R	37.17	14.976	.401	.319	.704
b10R	36.86	15.397	.371	.167	.709

Inter-Item Correlation Matrix										
	b1	b2	b3	b4	b5	b6	b7R	b8R	b9R	b10R
b1	1.000	.297	.209	.157	.274	.136	.217	.209	.037	.175
b2	.297	1.000	.228	.272	.209	.144	.131	.063	-.019	.167
b3	.209	.228	1.000	.350	.255	.281	.121	.313	.122	.237
b4	.157	.272	.350	1.000	.533	.261	.265	.178	.232	.129
b5	.274	.209	.255	.533	1.000	.210	.250	.095	.291	.214
b6	.136	.144	.281	.261	.210	1.000	.151	.098	.160	.154
b7R	.217	.131	.121	.265	.250	.151	1.000	.356	.418	.271
b8R	.209	.063	.313	.178	.095	.098	.356	1.000	.402	.279
b9R	.037	-.019	.122	.232	.291	.160	.418	.402	1.000	.193
b10R	.175	.167	.237	.129	.214	.154	.271	.279	.193	1.000

4.3.4.2. Openness to experience

Cronbach Alpha values above .70 are considered reliable (Cohen, 1988; Nunnally & Bernstein, 1994). Thus, with the reliability analysis of the *Openness to experience* subscale, the result reported a Cronbach alpha of .77, which is considered to be reliable. The Corrected Item-Total Correlation column provides insight into how much each item correlates with the total score. Items with corrected item-total correlation values less than .30 are a cause for concern as they might be measuring something different from the scale as a whole. Based on the Corrected Item-Total Correlation column as shown in Table 4.22, item b18R was identified as a poor item and was subsequently excluded from the study thereby increasing the Cronbach's alpha of the scale to α = .79

Table 4.22

The reliability analysis output for the Openness to experience subscale

Reliability Statistics		
Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
.774	.781	10

Item-Total Statistics

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Squared Multiple Correlation	Cronbach's Alpha if Item Deleted
b11	33.15	20.165	.574	.448	.739
b12	33.17	19.780	.441	.243	.756
b13	32.95	20.605	.568	.585	.741
b14	32.75	21.585	.416	.267	.758
b15	33.97	20.572	.407	.295	.760
b16	32.82	21.287	.391	.196	.761
b17	33.00	19.955	.582	.579	.737
b18R	33.63	22.646	.182	.140	.788
B19R	32.86	20.131	.451	.294	.754
b20R	32.92	20.566	.460	.342	.752

Inter-Item Correlation Matrix

	b11	b12	b13	b14	b15	b16	b17	b18R	B19R	b20R
b11	1.000	.367	.439	.199	.489	.361	.477	.146	.258	.213
b12	.367	1.000	.288	.214	.297	.249	.368	.074	.312	.155
b13	.439	.288	1.000	.467	.187	.308	.723	.007	.305	.285
b14	.199	.214	.467	1.000	.207	.232	.386	.041	.224	.276
b15	.489	.297	.187	.207	1.000	.157	.232	.125	.209	.249
b16	.361	.249	.308	.232	.157	1.000	.338	.127	.150	.192
b17	.477	.368	.723	.386	.232	.338	1.000	-.003	.305	.252
b18R	.146	.074	.007	.041	.125	.127	-.003	1.000	.135	.326
B19R	.258	.312	.305	.224	.209	.150	.305	.135	1.000	.464
b20R	.213	.155	.285	.276	.249	.192	.252	.326	.464	1.000

4.3.4.3.   Extraversion

Cronbach Alpha values above .70 are considered reliable (Cohen, 1988; Nunnally & Bernstein, 1994). Thus, with the reliability analysis of the *Extraversion* subscale, the result reported a Cronbach alpha of .91, which is considered to be reliable. The Corrected Item-Total Correlation column provides insight into how much each item correlates with the total score. Items with corrected item-total correlation values less than .30 are a cause for concern as they might be measuring something different from the scale as a whole. Based on the Corrected Item-Total Correlation column as shown in Table 4.23, items .49 to .77 which indicates acceptable values. The inter-item correlation matrix as indicated in Table 4.23, ranges from .28 to .68 which indicates

that a small to large relationship between the items in the *Extraversion* subscale. A well-researched guideline is used for analyzing the correlation between items: small r= .10 to .29; medium r= .30 to .49; and large r=.50 to 1.0 (Cohen, 1988).

Table 4.23

The reliability analysis output for the Extraversion subscale

Reliability Statistics		
Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
.905	.906	10

Item-Total Statistics				
	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Squared Multiple Correlation	Cronbach's Alpha if Item Deleted
b21	29.60	50.482	.640	.522	.896
b22	29.63	49.842	.646	.548	.896
b23	28.60	52.030	.694	.562	.894
b24	28.79	50.144	.750	.638	.890
b25	29.04	47.596	.769	.672	.888
b26R	28.79	50.988	.666	.525	.895
b27R	29.01	50.156	.690	.527	.893
b28R	28.67	52.996	.577	.343	.900
b29R	29.58	52.767	.494	.366	.906
b30R	29.29	49.805	.706	.547	.892

Inter-Item Correlation Matrix										
	b21	b22	b23	b24	b25	b26R	b27R	b28R	b29R	b30R
b21	1.000	.653	.412	.473	.570	.432	.435	.421	.374	.465
b22	.653	1.000	.513	.508	.522	.392	.439	.401	.464	.406
b23	.412	.513	1.000	.679	.659	.545	.523	.404	.322	.540
b24	.473	.508	.679	1.000	.727	.555	.561	.481	.344	.613
b25	.570	.522	.659	.727	1.000	.618	.583	.483	.302	.604
b26R	.432	.392	.545	.555	.618	1.000	.633	.449	.283	.532
b27R	.435	.439	.523	.561	.583	.633	1.000	.421	.427	.555
b28R	.421	.401	.404	.481	.483	.449	.421	1.000	.347	.477

b29R	.374	.464	.322	.344	.302	.283	.427	.347	1.000	.487
b30R	.465	.406	.540	.613	.604	.532	.555	.477	.487	1.000

4.3.4.4. Agreeableness

Cronbach Alpha values above .70 are considered reliable (Cohen, 1988; Nunnally & Bernstein, 1994). Thus, with the reliability analysis of the *Agreeableness* subscale, the result reported a Cronbach alpha of .86, which is considered to be reliable. The Corrected Item-Total Correlation column provides insight into how much each item correlates with the total score. Items with corrected item-total correlation values less than .30 are a cause for concern as they might be measuring something different from the scale as a whole. Based on the Corrected Item-Total Correlation column as shown in Table 4.24, items .38 to .68 which indicates acceptable values. The inter-item correlation matrix as indicated in Table 4.24, ranges from .17 to .60 which indicates that a small to large relationship exists between the items in the *Agreeableness* subscale. A well-researched guideline is used for analyzing the correlation between items: small r= .10 to .29; medium r= .30 to .49; and large r=.50 to 1.0 (Cohen, 1988).

Table 4.24

The reliability analysis output for the Agreeableness subscale

Reliability Statistics		
Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
.862	.867	10

Item-Total Statistics				
	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Squared Multiple Correlation	Cronbach's Alpha if Item Deleted
b31	36.74	26.111	.555	.333	.851
b32	36.49	25.719	.680	.522	.841
b33	36.60	27.146	.559	.433	.851
b34	36.63	25.773	.667	.497	.842
b35	36.63	25.551	.681	.558	.841
b36	36.57	27.513	.554	.365	.852

b37R	36.57	25.815	.629	.410	.845
b38R	36.08	28.828	.383	.180	.863
b39R	36.72	24.826	.630	.443	.845
b40R	36.69	25.481	.466	.330	.864

Inter-Item Correlation Matrix										
	b31	b32	b33	b34	b35	b36	b37R	b38R	b39R	b40R
b31	1.000	.469	.330	.425	.457	.335	.450	.226	.404	.303
b32	.469	1.000	.586	.517	.598	.455	.455	.308	.446	.316
b33	.330	.586	1.000	.505	.554	.407	.368	.169	.347	.212
b34	.425	.517	.505	1.000	.602	.486	.516	.216	.441	.339
b35	.457	.598	.554	.602	1.000	.549	.457	.281	.439	.251
b36	.335	.455	.407	.486	.549	1.000	.390	.261	.346	.223
b37R	.450	.455	.368	.516	.457	.390	1.000	.310	.478	.377
b38R	.226	.308	.169	.216	.281	.261	.310	1.000	.316	.290
b39R	.404	.446	.347	.441	.439	.346	.478	.316	1.000	.534
b40R	.303	.316	.212	.339	.251	.223	.377	.290	.534	1.000

4.3.4.5.   Neuroticism

Cronbach Alpha values above .70 are considered reliable (Cohen, 1988; Nunnally & Bernstein, 1994). Thus, with the reliability analysis of the *Neuroticism* subscale, the result reported a Cronbach alpha of .86, which is considered to be reliable. The Corrected Item-Total Correlation column provides insight into how much each item correlates with the total score. Items with corrected item-total correlation values less than .30 are a cause for concern as they might be measuring something different from the scale as a whole. Based on the Corrected Item-Total Correlation column as shown in Table 4.25, items range from .38 to .73 which indicates acceptable values. The inter-item correlation matrix as indicated in Table 4.25, matrix ranges from .14 to .75 which indicates that a small to large relationship exists between the items in the *Neuroticism* subscale. A well-researched guideline is used for analyzing the correlation between items: small r= .10 to .29; medium r= .30 to .49; and large r=.50 to 1.0 (Cohen, 1988).

Table 4.25

The reliability analysis output for the Neuroticism subscale

Reliability Statistics		
Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
.864	.865	10

Item-Total Statistics				
	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Squared Multiple Correlation	Cronbach's Alpha if Item Deleted
b41	23.10	39.709	.390	.239	.867
b42	23.41	36.384	.699	.664	.841
b43	23.11	37.395	.598	.512	.849
b44	23.19	35.217	.728	.627	.837
b45	23.39	36.660	.701	.692	.841
b46	23.71	37.546	.679	.697	.843
b47	23.63	37.060	.681	.520	.843
b48	22.36	39.577	.476	.323	.859
b49R	23.01	39.769	.462	.346	.860
b50R	22.91	40.032	.375	.269	.868

Inter-Item Correlation Matrix									
	b41	b42	b43	b44	b45	b46	b47	b48	b49R	b50R
b41	1.000	.276	.284	.361	.260	.164	.316	.369	.171	.228
b42	.276	1.000	.632	.557	.647	.749	.563	.244	.268	.249
b43	.284	.632	1.000	.496	.626	.510	.497	.241	.199	.137
b44	.361	.557	.496	1.000	.705	.543	.483	.477	.454	.268
b45	.260	.647	.626	.705	1.000	.701	.500	.321	.267	.150
b46	.164	.749	.510	.543	.701	1.000	.623	.240	.314	.229
b47	.316	.563	.497	.483	.500	.623	1.000	.340	.397	.376
b48	.369	.244	.241	.477	.321	.240	.340	1.000	.370	.320
b49R	.171	.268	.199	.454	.267	.314	.397	.370	1.000	.422
b50R	.228	.249	.137	.268	.150	.229	.376	.320	.422	1.000

4.4. Dimensionality Analysis

This section will report on the Exploratory Factor Analysis (EFA) of the measurement instruments used in this research study. The aim of this section is to determine whether the subscales for instruments used are uni-dimensional. Uni-dimensionality is used to describe a specific type of measurement scale. A uni-dimensionality measurement scale has only one uni-dimension. Uni-dimensionality can also refer to measuring a single ability, attribute, construct, or skill. Uni-dimensionality is a key concept that affects the outcomes of many statistical tests and analyses.

4.4.1. Dimensionality analysis output for the Transformation Leadership Questionnaire

4.4.1.1.   The dimensionality analysis output for the Idealized Influence subscale
The Kaiser-Meyer-Olkin for *Idealized Influence* is 0.900 which is greater than the acceptable value of 0.50 considered suitable for factor analysis (Brown et al., 2010). The Bartlett's Test of Sphericity was 988.630 (df = 28, p =.001) for this subscale. The Bartlett's Test of Sphericity should be significant (p>.05) in order for factor analysis to be suitable (Brown et al., 2010). This indicates that factor analysis can be conducted. As further indicated in Table 4.26, the eigenvalues for factor 1 indicate a total of 4.989 which is greater than 1 and represents 62.357% of the variance for this subscale. As indicated in Table 4.26, all factor loadings are above .50 which are acceptable for the *Idealized Influence* subscale.

Table 4.26

Dimensionality analysis for the Idealized Influence subscale

KMO and Bartlett's Test		
Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.900
Bartlett's Test of Sphericity	Approx. Chi-Square	988.630
	df	28
	Sig.	<,001

Total Variance Explained						
	Initial Eigenvalues			Extraction Sums of Squared Loadings		
Factor	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	4.989	62.357	62.357	4.581	57.269	57.269
2	.804	10.044	72.401			
3	.647	8.083	80.484			
4	.459	5.733	86.217			
5	.354	4.428	90.645			
6	.296	3.705	94.350			
7	.235	2.940	97.290			
8	.217	2.710	100.000			

Factor Matrix

	Factor
	1
C1	.765
C3	.722
C6	.788
C8	.813
C10	.836
C12	.779
C13	.552
C19	.765

4.4.1.2.   The dimensionality analysis output for the Inspirational Motivation subscale

The Kaiser-Meyer-Olkin for *Inspirational Motivation* is 0.833 which is greater than the acceptable value of 0.50 considered suitable for factor analysis (Brown et al., 2010). The Bartlett's Test of Sphericity was 503.827 (df = 6, p =.001) for this subscale. The Bartlett's Test of Sphericity should be significant (p<.05) in order for factory analysis to be suitable (Brown et al., 2010). This indicates that factor analysis can be conducted. As indicated in Table 4.27, only one factor with an eigenvalue greater than 1 was obtained and this factor accounted for 77.594% of the variance for this subscale. As indicated in Table 4.27, all the factor loadings were substantially above .50 suggesting that the factor solution provided a valid explanation of the observed inter-item correlation matrix for the *Inspirational Motivation* subscale.

Table 4.27

Dimensionality analysis for the Inspirational Motivation subscale

KMO and Bartlett's Test		
Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.833
Bartlett's Test of Sphericity	Approx. Chi-Square	503.827
	df	6
	Sig.	<,001

Total Variance Explained						
	Initial Eigenvalues			Extraction Sums of Squared Loadings		
Factor	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	3.104	77.594	77.594	2.808	70.197	70.197
2	.381	9.535	87.129			
3	.288	7.203	94.332			
4	.227	5.668	100.000			

Factor Matrix	
	Factor 1
C5	.791
C7	.863
C14	.836
C20	.860

4.4.1.3.   The dimensionality analysis output for the Intellectual Stimulation subscale

The Kaiser-Meyer-Olkin for *Intellectual Stimulation* is 0.753 which is greater than the acceptable value of 0.50 considered suitable for factor analysis (Brown et al., 2010). The Bartlett's Test of Sphericity was 407.719 (df = 6, p =.001) for this subscale. The Bartlett's Test of Sphericity should be significant (p>.05) in order for factory analysis to be suitable (Brown et al., 2010). This indicates that factor analysis can be conducted. As indicated in Table 4.28, the eigenvalues for factor 1 indicate a total of 2.818 which is greater than 1, which represents 70.442% of the variance for this

subscale. As indicated in Table 4.28, all factor loadings are above .30 which are acceptable for the *Intellectual Stimulation* subscale.

Table 4.28

Dimensionality analysis for the Intellectual Stimulation subscale

KMO and Bartlett's Test		
Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.753
Bartlett's Test of Sphericity	Approx. Chi-Square	407.719
	df	6
	Sig.	<,001

Total Variance Explained						
	Initial Eigenvalues			Extraction Sums of Squared Loadings		
Factor	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	2.818	70.442	70.442	2.446	61.146	61.146
2	.647	16.169	86.611			
3	.318	7.959	94.570			
4	.217	5.430	100.000			

Factor Matrix	
	Factor 1
C2	.647
C4	.807
C16	.846
C18	.813

4.4.1.4.   The dimensionality analysis output for the Individualized Consideration subscale

The Kaiser-Meyer-Olkin for *Individualized Consideration* is 0.768 which is greater than the acceptable value of 0.50 considered suitable for factor analysis (Brown et al., 2010). The Bartlett's Test of Sphericity was 398.322 (df = 6, p =.001) for this subscale. The Bartlett's Test of Sphericity should be significant (p>.05) in order for factory analysis to be suitable (Brown et al., 2010). This indicates that factor analysis can be conducted. As further indicated in Table 4.29, the eigenvalues for factor 1 indicate a

total of 2.813 which is greater than 1, accounting for 70.320% of the variance for this subscale. As indicated in Table 4.29, all factor loadings are above .30 which are acceptable for the *Individualized Consideration* subscale.

Table 4.29

Dimensionality analysis for the Individualized Consideration subscale

KMO and Bartlett's Test		
Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.768
Bartlett's Test of Sphericity	Approx. Chi-Square	398.322
	df	6
	Sig.	<,001

Total Variance Explained						
	Initial Eigenvalues			Extraction Sums of Squared Loadings		
Factor	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	2.813	70.320	70.320	2.447	61.164	61.164
2	.594	14.839	85.159			
3	.391	9.785	94.943			
4	.202	5.057	100.000			

Factor Matrix	
	Factor
	1
C9	.852
C11	.753
C15	.642
C17	.860

4.4.2. Dimensionality analysis output for the Organizational Culture Questionnaire

4.4.2.1.   The dimensionality analysis output for the Empowerment subscale
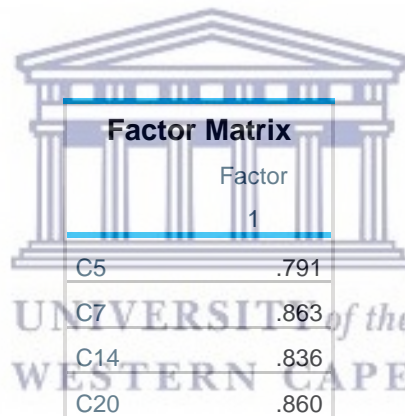
The Kaiser-Meyer-Olkin for *Empowerment* is 0.847 which is greater than the acceptable value of 0.50 considered suitable for factor analysis (Brown et al., 2010). The Bartlett's Test of Sphericity was 375.697 (df = 10, p =.001) for this subscale. The Bartlett's Test of Sphericity should be significant (p>.05) in order for factor analysis to be suitable (Brown et al., 2010). This indicates that factor analysis can be conducted. As further indicated in Table 4.30, the eigenvalues for factor 1 indicate a total of 3.073 which is greater than 1 and represents 61.453% of the variance for this subscale. As indicated in Table 4.30, all factor loadings are substantially above .50 suggesting that the factor solution provided a valid explanation of the observed inter-item correlation matrix for the *Empowerment* subscale.

Table 4.30

Dimensionality analysis for the Empowerment subscale

KMO and Bartlett's Test		
Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.847
Bartlett's Test of Sphericity	Approx. Chi-Square	375.697
	df	10
	Sig.	<,001

Total Variance Explained						
	Initial Eigenvalues			Extraction Sums of Squared Loadings		
Factor	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	3.073	61.453	61.453	2.612	52.236	52.236
2	.681	13.623	75.076			
3	.468	9.367	84.443			
4	.411	8.220	92.663			
5	.367	7.337	100.000			

Factor Matrix	
	Factor 1
D1	.579
D2	.751
D3	.736
D4	.804
D5	.724

4.4.2.2. The dimensionality analysis output for the Team Orientation subscale

The Kaiser-Meyer-Olkin for *Team Orientation* is 0.864 which is greater than the acceptable value of 0.50 considered suitable for factor analysis (Brown et al., 2010). The Bartlett's Test of Sphericity was 418.716 (df = 10, p =.001) for this subscale. According to Brown et al. (2010), these values are highly acceptable and show that the correlation matrix of the *Team Orientation* subscale was factor analyzable. Only one factor with an eigenvalue greater than 1 was obtained, and this factor accounted for 64.122% of the variance. The factor loadings were all above .50 and suggest that the factor solution provided a permissible explanation of the observed inter-item correlation factor matrix. The results are presented in Table 4.31.
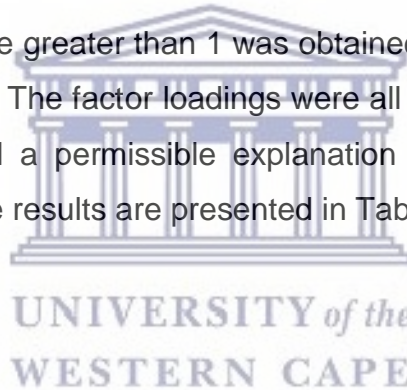
Table 4.31

Dimensionality analysis for the Team Orientation subscale

KMO and Bartlett's Test		
Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.864
Bartlett's Test of Sphericity	Approx. Chi-Square	418.716
	df	10
	Sig.	<,001

80

Total Variance Explained

Factor	Initial Eigenvalues			Extraction Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	3.206	64.122	64.122	2.774	55.475	55.475
2	.559	11.181	75.303			
3	.475	9.498	84.801			
4	.450	8.998	93.799			
5	.310	6.201	100.000			

Factor Matrix

	Factor 1
D6	.706
D7	.829
D8	.806
D9	.669
D10	.700

4.4.2.3.   The dimensionality analysis output for the Capability Development subscale
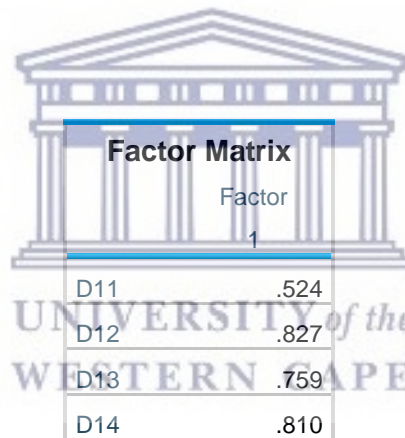
Exploratory factor analysis was performed on the *Capability Development* subscale of the organizational culture questionnaire. The KMO index and Bartlett's test of sphericity were computed and yielded the values of 0.772 and 299.056 (df = 6, p =.001) respectively. According to Brown et al. (2010) these values are highly acceptable and shows the factor analyzability of the *Capability Development* subscale. The *Capability Development* subscale was found to be uni-dimensional. Only one factor with an eigenvalue greater than 1 was obtained and accounted for 65.051% of the variance. The factor loadings were all above.50, suggesting that the factor solution provided a valid explanation of the inter-item correlation matrix (Cohen, 1988). The results are presented in Table 4.32.

Table 4.32

Dimensionality analysis for the Capability Development subscale

KMO and Bartlett's Test		
Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.772
Bartlett's Test of Sphericity	Approx. Chi-Square	299.056
	df	6
	Sig.	<,001

Total Variance Explained						
	Initial Eigenvalues			Extraction Sums of Squared Loadings		
Factor	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	2.602	65.051	65.051	2.189	54.730	54.730
2	.707	17.673	82.724			
3	.366	9.138	91.862			
4	.326	8.138	100.000			

Factor Matrix	
	Factor
	1
D11	.524
D12	.827
D13	.759
D14	.810

4.4.2.4.   The dimensionality analysis output for the Core Values subscale

Exploratory factor analysis shows that the *Core Values* subscale is factor analyzable as indicated by KMO index and Bartlett's test of sphericity values of 0.808 and 303.941 (df = 10, p =.001) respectively. The Bartlett's Test of Sphericity should be significant (p>.05) in order for factory analysis to be suitable (Brown et al., 2010). EFA showed the existence of two factors. These factors account for 53.028% and 20.111% respectively. The identities of the two factors were determined by the common themes that emerged from the items loading on the two factors. Factor 1 relates to managers practicing what they preach and factor 2 relates to a characteristic management style

and a distinct set of management practices. This can be considered a meaningful fission of the original organisational culture latent variable. The two factors will be used to indicate the *Core Values* subscale.

Table 4.33

Dimensionality analysis for the Core Values subscale

KMO and Bartlett's Test		
Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.750
Bartlett's Test of Sphericity	Approx. Chi-Square	291.790
	df	10
	Sig.	<,001

Total Variance Explained							
	Initial Eigenvalues			Extraction Sums of Squared Loadings			Rotation Sums of Squared Loadings[a]
Factor	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %	Total
1	2.651	53.028	53.028	2.230	44.603	44.603	2.002
2	1.006	20.111	73.139	.523	10.454	55.057	1.668
3	.538	10.757	83.896				
4	.467	9.335	93.231				
5	.338	6.769	100.000				

Pattern Matrix		
	Factor	
	1	2
D16	.748	-.021
D17	.671	-.049
D18	.742	.179
D19	-.012	.666
D20	.030	.776

4.4.2.5.   The dimensionality analysis output for the Agreement subscale

The Kaiser-Meyer-Olkin for the *Agreement* is 0.808 which is greater than the acceptable value of 0.50 considered suitable for factor analysis (Brown et al., 2010). The Bartlett's Test of Sphericity was 303.941 (df = 10, p =.001) for this subscale. That indicates that factor analysis can be conducted. As further indicated in Table 4.34, the eigenvalues for factor 1 indicate a total of 2.779 which is greater than 1 and represents 55.581% of the variance for this subscale. The *Agreement* subscale proved to be uni-dimensional. As indicated in Table 4.34, all factor loadings are above .30.

Table 4.34

Dimensionality analysis for the Agreement subscale

KMO and Bartlett's Test		
Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.808
Bartlett's Test of Sphericity	Approx. Chi-Square	303.941
	df	10
	Sig.	<,001

Total Variance Explained						
	Initial Eigenvalues			Extraction Sums of Squared Loadings		
Factor	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	2.779	55.581	55.581	2.299	45.990	45.990
2	.821	16.411	71.992			
3	.624	12.477	84.470			
4	.421	8.420	92.889			
5	.356	7.111	100.000			
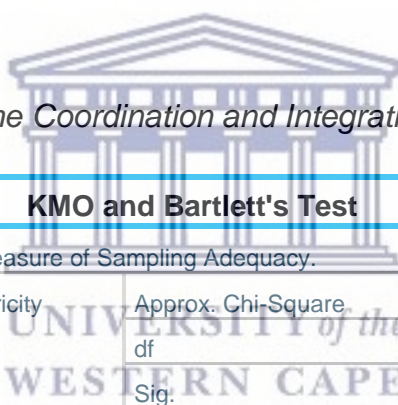
Factor Matrix	
	Factor 1
D21	.811
D22	.682
D23	.787
D25	.635
D24R	.393

4.4.2.6.   The dimensionality analysis output for the Coordination and Integration subscale

The Kaiser-Meyer-Olkin for *Coordination and Integration* is 0.807 which is greater than the acceptable value of 0.50 considered suitable for factor analysis (Brown et al., 2010). The Bartlett's Test of Sphericity was 321.237 (df = 10, p =.001) for this subscale. The Bartlett's Test of Sphericity should be significant (p>.05) in order for factory analysis to be suitable (Brown et al., 2010). This indicates that factor analysis can be conducted. As indicated in Table 4.35, the eigenvalues for Factor 1 indicate a total of 2.775 which is greater than 1, which represents 55.493% of the variance for this subscale. As indicated in Table 4.35, all factor loadings were substantially above .30, suggesting that the rotated factor solution provided a reasonably credible explanation of the observed inter-item correlation.

Table 4.35

Dimensionality analysis for the Coordination and Integration subscale

KMO and Bartlett's Test		
Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.807
Bartlett's Test of Sphericity	Approx. Chi-Square	321.237
	df	10
	Sig.	<,001

Total Variance Explained						
	Initial Eigenvalues			Extraction Sums of Squared Loadings		
Factor	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	2.775	55.493	55.493	2.331	46.630	46.630
2	.937	18.739	74.232			
3	.535	10.707	84.939			
4	.417	8.347	93.286			
5	.336	6.714	100.000			

Factor Matrix

	Factor 1
D26	.549
D27	.824
D28	.741
D30	.823
D29R	.354

4.4.2.7. *The dimensionality analysis output for the Adaptability and Creating Change subscale*

The Kaiser-Meyer-Olkin for *Adaptability and Creating Change* is 0.771 which is greater than the acceptable value of 0.50 considered suitable for factor analysis (Brown et al., 2010). The Bartlett's Test of Sphericity was 198.337 (df = 6, p =.001) for this subscale. As indicated in table 4.36, the eigenvalues for factor 1 indicate a total of 2.366 which is greater than 1 and represents 59.138% of the variance for this subscale. The *Adaptability and Creating Change* subscale proved to be uni-dimensional. As indicated in table 4.36, the factor loadings were all above .50 and suggest that the factor solution provided a permissible explanation of the observed inter-item correlation matrix.

Table 4.36

Dimensionality analysis for the Adaptability and Creating Change subscale

KMO and Bartlett's Test		
Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.771
Bartlett's Test of Sphericity	Approx. Chi-Square	198.337
	df	6
	Sig.	<,001

Total Variance Explained						
	Initial Eigenvalues			Extraction Sums of Squared Loadings		
Factor	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	2.366	59.138	59.138	1.849	46.232	46.232
2	.662	16.551	75.689			
3	.544	13.590	89.279			
4	.429	10.721	100.000			

Factor Matrix	
	Factor
	1
D31	.587
D32	.594
D33	.773
D35	.745

4.4.2.8.   The dimensionality analysis output for the Customer Focus subscale

The Kaiser-Meyer-Olkin for *Customer Focus* is 0.756 which is greater than the acceptable value of 0.50 considered suitable for factor analysis (Brown et al., 2010). The Bartlett's Test of Sphericity was 242.376 (df = 10, p =.001) for this subscale. The Bartlett's Test of Sphericity should be significant (p<.05) in order for factory analysis to be suitable (Brown et al., 2010). This indicates that factor analysis can be conducted. As indicated in Table 4.37, only one factor with an eigenvalue greater than 1 was obtained, and this factor accounted for 51.184% of the variance. As indicated in Table 4.37, all factor loadings are above .30.

Table 4.37

Dimensionality analysis for the Customer Focus subscale

KMO and Bartlett's Test		
Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.756
Bartlett's Test of Sphericity	Approx. Chi-Square	242.376
	df	10
	Sig.	<,001

Total Variance Explained

Factor	Total	Initial Eigenvalues % of Variance	Cumulative %	Total	Extraction Sums of Squared Loadings % of Variance	Cumulative %
1	2.559	51.184	51.184	2.020	40.391	40.391
2	.814	16.275	67.459			
3	.678	13.566	81.025			
4	.612	12.232	93.257			
5	.337	6.743	100.000			

Factor Matrix

	Factor 1
D36	.818
D37	.727
D38	.592
D40	.489
D39R	.483

4.4.2.9. *The dimensionality analysis output for the Organizational Learning subscale*
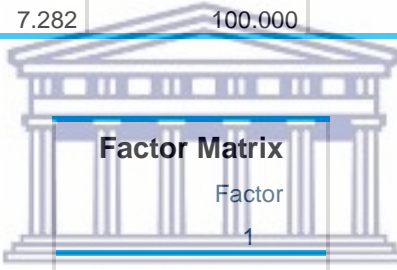
Exploratory factor analysis shows that the *Organizational Learning* subscale is factor analyzable as indicated by KMO index and Bartlett's test of sphericity values 0.786 and 268.116 (df = 10, p =.001) respectively. The Bartlett's Test of Sphericity should be significant (p>.05) in order for factory analysis to be suitable (Brown et al., 2010). As indicated in Table 4.38, the eigenvalues for factor 1 indicate a total of 2.694 which is greater than 1, accounting for 53.888% of the variance for this subscale. As indicated in Table 4.38, all factor loadings are above .30 which are acceptable for the *Organizational Learning* subscale.

Table 4.38

Dimensionality analysis for the Organizational Learning subscale

KMO and Bartlett's Test		
Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.786
Bartlett's Test of Sphericity	Approx. Chi-Square	268.116
	df	10
	Sig.	<,001

Total Variance Explained						
	Initial Eigenvalues			Extraction Sums of Squared Loadings		
Factor	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	2.694	53.888	53.888	2.155	43.098	43.098
2	.769	15.390	69.278			
3	.656	13.122	82.400			
4	.516	10.318	92.718			
5	.364	7.282	100.000			

Factor Matrix	
	Factor 1
D41	.755
D42	.736
D44	.615
D45	.662
D43R	.475

4.4.2.10. The dimensionality analysis output for the Mission (Strategic Direction and Intent) subscale

The Kaiser-Meyer-Olkin for *Mission (Strategic Direction and Intent)* is 0.833 which is greater than the acceptable value of 0.50 considered suitable for factor analysis (Brown et al., 2010). The Bartlett's Test of Sphericity was 534.377 (df = 10, p =.001) for this subscale. The Bartlett's Test of Sphericity should be significant (p>.05) in order for factory analysis to be suitable (Brown et al., 2010). This indicates that factor analysis can be conducted. As further indicated in table 4.39, the eigenvalues for factor 1 indicate a total of 3.335 which is greater than 1 and represents 66.708% of the

variance for this subscale. All the factor loadings were substantially above .50 suggesting that the factor solution provided a valid explanation of the observed inter-item correlation matrix for the *Mission (Strategic Direction and Intent)* subscale.

Table 4.39

Dimensionality analysis for the Mission (Strategic Direction and Intent) subscale

KMO and Bartlett's Test		
Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.833
Bartlett's Test of Sphericity	Approx. Chi-Square	534.377
	df	10
	Sig.	<,001

Total Variance Explained						
	Initial Eigenvalues			Extraction Sums of Squared Loadings		
Factor	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	3.335	66.708	66.708	2.973	59.469	59.469
2	.743	14.867	81.576			
3	.397	7.930	89.506			
4	.305	6.093	95.599			
5	.220	4.401	100.000			

Factor Matrix	
	Factor
	1
D46	.846
D47	.658
D48	.888
D49	.836
D50R	.582

4.4.2.11.   The dimensionality analysis output for the Goals and Objectives subscale

The Kaiser-Meyer-Olkin for *Goals and Objectives* is 0.812 which is greater than the acceptable value of 0.50 considered suitable for factor analysis (Brown et al., 2010). The Bartlett's Test of Sphericity was 367.295 (df = 10, p =.001) for this subscale. The

Bartlett's Test of Sphericity should be significant (p>.05) in order for factory analysis to be suitable (Brown et al., 2010). This indicates that factor analysis can be conducted. As indicated in Table 4.40, only one factor with an eigenvalue greater than 1 was obtained and this factor accounted for 60.653% of the variance for this subscale. As indicated in Table 4.40, all the factor loadings were substantially above .50 suggesting that the factor solution provided a valid explanation of the observed inter-item correlation matrix for the *Goals and Objectives* subscale.

Table 4.40

Dimensionality analysis for the Goals and Objectives subscale

KMO and Bartlett's Test		
Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.812
Bartlett's Test of Sphericity	Approx. Chi-Square	367.295
	df	10
	Sig.	<,001

Total Variance Explained						
	Initial Eigenvalues			Extraction Sums of Squared Loadings		
Factor	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	3.033	60.653	60.653	2.546	50.923	50.923
2	.649	12.989	73.642			
3	.562	11.244	84.885			
4	.437	8.735	93.620			
5	.319	6.380	100.000			

Factor Matrix	
	Factor 1
D51	.672
D52	.749
D53	.722
D54	.754
D55	.667

The Kaiser-Meyer-Olkin for *Vision* is 0.794 which is greater than the acceptable value of 0.50 considered suitable for factor analysis (Brown et al., 2010). The Bartlett's Test of Sphericity was 338.153 (df = 6, p =.001) for this subscale. The Bartlett's Test of Sphericity should be significant (p<.05) in order for factory analysis to be suitable (Brown et al., 2010). This indicates that factor analysis can be conducted. As indicated in Table 4.41, only one factor with an eigenvalue greater than 1 was obtained and this factor accounted for 68.891% of the variance for this subscale. As indicated in Table 4.41, all the factor loadings were substantially above .50 suggesting that the factor solution provided a valid explanation of the observed inter-item correlation matrix for the *Vision* subscale.

Table 4.41

Dimensionality analysis for the Vision subscale

KMO and Bartlett's Test		
Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.794
Bartlett's Test of Sphericity	Approx. Chi-Square	338.153
	df	6
	Sig.	<,001

Total Variance Explained						
	Initial Eigenvalues			Extraction Sums of Squared Loadings		
Factor	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	2.756	68.891	68.891	2.352	58.810	58.810
2	.561	14.028	82.920			
3	.367	9.181	92.100			
4	.316	7.900	100.000			

Factor Matrix	
	Factor
	1
D56	.838
D57	.723
D59	.793
D60	.706

4.4.3. Dimensionality analysis output for the Resistance to Change Questionnaire

4.4.3.1. The dimensionality analysis output for the Routine Seeking subscale

The Kaiser-Meyer-Olkin for *Routine Seeking* is 0.667 which is greater than the acceptable value of 0.50 considered suitable for factor analysis (Brown et al., 2010). The Bartlett's Test of Sphericity was 153.647 (df = 6, p =.001) for this subscale. According to Brown et al. (2010) these values are highly acceptable and shows the factor analyzability of the *Routine Seeking* subscale. As indicated in Table 4.42, the eigenvalues for factor 1 indicate a total of 2.103 which is greater than 1, which represents 52.569% of the variance for this subscale. The *Routine Seeking* subscale proved to be uni-dimensional. As indicated in Table 4.42, all factor loadings are above .30.

Table 4.42

Dimensionality analysis for the Routine Seeking subscale

KMO and Bartlett's Test		
Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.667
Bartlett's Test of Sphericity	Approx. Chi-Square	153.647
	df	6
	Sig.	<,001

Total Variance Explained						
	Initial Eigenvalues			Extraction Sums of Squared Loadings		
Factor	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	2.103	52.569	52.569	1.549	38.726	38.726
2	.872	21.806	74.375			
3	.626	15.649	90.024			
4	.399	9.976	100.000			

Factor Matrix

	Factor
	1
E1	.430
E2	.529
E3	.809
E5	.656

4.4.3.2.   *The dimensionality analysis output for the Emotional Reaction subscale*

Exploratory factor analysis shows that the *Emotional Reaction* subscale is factor analyzable as indicated by KMO index and Bartlett's Test of Sphericity values of 0.777 and 285.058 (df = 6, p =.001) respectively. The Bartlett's Test of Sphericity should be significant (p<.05) in order for factory analysis to be suitable (Brown et al., 2010). Only one factor with an eigenvalue greater than 1 was obtained and accounted for 64.558% of the variance. As indicated in Table 4.43, all factor loadings were above .50. suggesting that the factor solution provided a valid explanation of the inter-item correlation matrix (Cohen, 1988). The results are presented in Table 4.43.

Table 4.43

Dimensionality analysis for the Emotional Reaction subscale

KMO and Bartlett's Test		
Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.777
Bartlett's Test of Sphericity	Approx. Chi-Square	285.058
	df	6
	Sig.	<,001

Total Variance Explained						
	Initial Eigenvalues			Extraction Sums of Squared Loadings		
Factor	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	2.582	64.558	64.558	2.161	54.023	54.023
2	.640	16.002	80.560			
3	.484	12.091	92.651			
4	.294	7.349	100.000			

Factor Matrix	
	Factor 1
E6	.833
E7	.842
E8	.650
E9	.579

4.4.3.3.   *The dimensionality analysis output for the Short-term Thinking subscale*

The Kaiser-Meyer-Olkin for *Short-term Thinking* is 0.762 which is greater than the acceptable value of 0.50 considered suitable for factor analysis (Brown et al., 2010). The Bartlett's Test of Sphericity was 279.391 (df = 6, p =.001) for this subscale. The Bartlett's Test of Sphericity should be significant (p<.05) in order for factory analysis to be suitable (Brown et al., 2010). This indicates that factor analysis can be conducted. As further indicated in Table 4.44, the eigenvalues for factor 1 indicate a total of 2.581 which is greater than 1, which represents 64.522% of the variance for this subscale. The factor loadings were all above .50 and suggest that the factor solution provided a permissible explanation of the observed inter-item correlation matrix. The results are presented in Table 4.44.

Table 4.44

Dimensionality analysis for the Short-term Thinking subscale

KMO and Bartlett's Test		
Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.762
Bartlett's Test of Sphericity	Approx. Chi-Square	279.391
	df	6
	Sig.	<,001

Total Variance Explained						
	Initial Eigenvalues			Extraction Sums of Squared Loadings		
Factor	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	2.581	64.522	64.522	2.128	53.195	53.195
2	.653	16.318	80.840			
3	.440	11.012	91.851			
4	.326	8.149	100.000			

Factor Matrix	
	Factor
	1
E10	.607
E11	.758
E12	.736
E13	.802

4.4.3.4.   *The dimensionality analysis output for the Cognitive Rigidity subscale*

The Kaiser-Meyer-Olkin for *Cognitive Rigidity* is 0.626 which is greater than the acceptable value of 0.50 considered suitable for factor analysis (Brown et al., 2010). The Bartlett's Test of Sphericity was 117.894 (df = 6, p =.001) for this subscale. The *Cognitive Rigidity* subscale proved to be uni-dimensional. As further indicated in table 4.45, the eigenvalues for Factor 1 indicate a total of 1.875 which is greater than 1, which represents 62.503% of the variance for this subscale. As indicated in Table 4.45, all factor loadings were all substantially above .30, suggesting that the rotated factor solution provided a reasonably credible explanation of the observed inter-item correlation.

Table 4.45

Dimensionality analysis for the Cognitive Rigidity subscale

KMO and Bartlett's Test		
Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.626
Bartlett's Test of Sphericity	Approx. Chi-Square	117.894
	df	3
	Sig.	<,001

Total Variance Explained						
	Initial Eigenvalues			Extraction Sums of Squared Loadings		
Factor	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	1.875	62.503	62.503	1.393	46.417	46.417
2	.714	23.810	86.314			
3	.411	13.686	100.000			

Factor Matrix	
	Factor
	1
E15	.739
E16	.795
E17	.462

4.4.4. Dimensionality analysis output for the Five-Factor Personality Questionnaire

4.4.4.1. The dimensionality analysis output for the Conscientiousness subscale
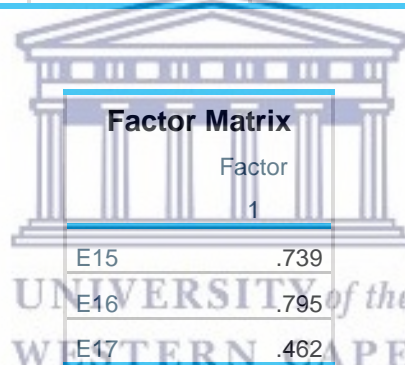
The Kaiser-Meyer-Olkin for *Conscientiousness* is 0.713 which is greater than the acceptable value of 0.50 is considered suitable for factor analysis (Brown et al., 2010). The Bartlett's Test of Sphericity was 245.426 (df = 28, p =.001) for this subscale. The Bartlett's Test of Sphericity should be significant (p<.05) in order for factory analysis to be suitable (Brown et al., 2010). EFA showed the existence of three factors. Items b8R and b10R were identified as complex items as they loaded on more than one

factor and the difference between them was less than .250. The items were removed, and another round of exploratory factor analysis was performed. This resulted in two factors. These two factors explained 32.53% and 15.41% respectively. The pattern matrix depicted in Table 4.46 shows the loading of the two factors underlying the *Conscientiousness* subscale. Factor 1 relates to always being prepared and Factor 2 relates to paying attention to details.

Table 4.46

Dimensionality analysis for the Conscientiousness subscale

KMO and Bartlett's Test		
Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.713
Bartlett's Test of Sphericity	Approx. Chi-Square	245.426
	df	28
	Sig.	<,001

Total Variance Explained							
	Initial Eigenvalues			Extraction Sums of Squared Loadings			Rotation Sums of Squared Loadings[a]
Factor	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %	Total
1	2.602	32.528	32.528	1.973	24.662	24.662	1.753
2	1.233	15.413	47.941	.729	9.111	33.773	1.317
3	.972	12.152	60.092				
4	.841	10.509	70.601				
5	.708	8.846	79.447				
6	.690	8.629	88.076				
7	.548	6.850	94.926				
8	.406	5.074	100.000				

Pattern Matrix		
	Factor	
	1	2
b1	.439	.045
b2	.517	.151
b3	.500	-.003
b4	.610	-.161
b5	.540	-.221
b6	.348	-.095
b7R	.200	-.417
b9R	-.082	-.880

4.4.4.2.   The dimensionality analysis output for the Openness to experience subscale

The Kaiser-Meyer-Olkin for *Openness to experience* is 0.724 which is greater than the acceptable value of 0.50 considered suitable for factor analysis (Brown et al., 2010). The Bartlett's Test of Sphericity was 180.642 (df = 15, p =.001) for this subscale. The Bartlett's Test of Sphericity should be significant (p<.05) in order for factory analysis to be suitable (Brown et al., 2010). This indicates that factor analysis can be conducted. As indicated in Table 4.47, only one factor with an eigenvalue greater than 1 was obtained and this factor accounted for 39.883% of the variance for this subscale. As indicated in Table 4.47, all factor loadings are above .30 which are acceptable for the *Openness to experience* subscale.

Table 4.47

Dimensionality analysis for the Openness to Experience subscale

KMO and Bartlett's Test		
Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.724
Bartlett's Test of Sphericity	Approx. Chi-Square	180.642
	df	15
	Sig.	<,001

Total Variance Explained						
	Initial Eigenvalues			Extraction Sums of Squared Loadings		
Factor	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	2.393	39.883	39.883	1.684	28.071	28.071
2	.942	15.699	55.582			
3	.855	14.254	69.836			
4	.773	12.890	82.726			
5	.557	9.278	92.004			
6	.480	7.996	100.000			

Factor Matrix	
	Factor
	1
b12	.507
b14	.493
b15	.434
b17	.598
B19R	.593
b20R	.536

4.4.4.3. The dimensionality analysis output for the Extraversion subscale

The Kaiser-Meyer-Olkin for the *Extraversion* subscale is 0.906 which is greater than the acceptable value of 0.50 considered suitable for factor analysis (Brown et al., 2010). The Bartlett's Test of Sphericity was 1044.520 (df = 45, p =.001) for this subscale. As indicated in Table 4.48, the eigenvalues for factor 1 indicate a total of 5.458 which is greater than 1 and represents 54.559% of the variance for this subscale. The *Extraversion* subscale proved to be uni-dimensional. As indicated in Table 4.48, all factor loadings are above .30.

Table 4.48

Dimensionality analysis for the Extraversion subscale

KMO and Bartlett's Test		
Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.906
Bartlett's Test of Sphericity	Approx. Chi-Square	1044.520
	df	45
	Sig.	<,001

Total Variance Explained						
	Initial Eigenvalues			Extraction Sums of Squared Loadings		
Factor	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	5.456	54.559	54.559	4.980	49.801	49.801
2	.939	9.393	63.951			
3	.763	7.629	71.581			
4	.636	6.364	77.944			
5	.570	5.695	83.640			
6	.461	4.609	88.249			
7	.350	3.497	91.746			
8	.304	3.038	94.785			
9	.279	2.792	97.577			
10	.242	2.423	100.000			

Factor Matrix	
	Factor
	1
b21	.663
b22	.669
b23	.741
b24	.803
b25	.828
b26R	.711
b27R	.728
b28R	.604
b29R	.510
b30R	.743

4.4.4.4.   The dimensionality analysis output for the Agreeableness subscale

Exploratory factor analysis was performed on the *Agreeableness* subscale of the Five Factor personality questionnaire. The KMO index and Bartlett's Test of Sphericity were computed and yielded the values 0.886 and 624.204 (df = 36, p =.001) respectively. The Bartlett's Test of Sphericity should be significant (p>.05) in order for factory analysis to be suitable (Brown et al., 2010). This indicates that these values are highly acceptable and shows the factory analyzability of the Agreeableness subscale. As indicated in Table 4.49, the eigenvalues for factor 1 indicate a total of 4.182 which is greater than 1, accounting for 46.462% of the variance for this subscale. The initial round of exploratory factor analysis showed the existence of two factors. Item b37R was identified as a complex item as it loaded on more than one factor and the difference between them was less than .250. The item was removed, and another round of exploratory factor analysis was performed. This resulted in two factors. These two factors explained 46.46% and 12.28% respectively. The pattern matrix depicted in Table 4.49 shows the loading of the two factors underlying the *Agreeableness* subscale. Factor 1 relates to showing interest in others and Factor 2 relates to sympathizing with others' feelings. This can be considered a meaningful fission of the original personality latent variable. The two factors will be used to indicate the *Agreeableness* subscale.

Table 4.49

Dimensionality analysis for the Agreeableness subscale

KMO and Bartlett's Test		
Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.886
Bartlett's Test of Sphericity	Approx. Chi-Square	624.204
	df	36
	Sig.	<,001

Total Variance Explained

Factor	Initial Eigenvalues			Extraction Sums of Squared Loadings			Rotation Sums of Squared Loadings[a]
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %	Total
1	4.182	46.462	46.462	3.697	41.079	41.079	3.514
2	1.105	12.282	58.745	.620	6.890	47.970	2.416
3	.800	8.887	67.631				
4	.661	7.346	74.978				
5	.619	6.873	81.851				
6	.466	5.183	87.034				
7	.445	4.946	91.980				
8	.375	4.167	96.147				
9	.347	3.853	100.000				

Pattern Matrix

	Factor	
	1	2
b31	.427	.218
b32	.713	.085
b33	.743	-.094
b34	.664	.102
b35	.859	-.058
b36	.627	.009
b38R	.151	.318
b39R	.183	.633
b40R	-.106	.799

4.4.4.5.   The dimensionality analysis output for the Neuroticism subscale

Exploratory Factor Analysis shows that the *Neuroticism* subscale is factor analyzable as indicated by the KMO index and Bartlett's test of sphericity values 0.789 and 597.137 (df = 28, p =.001) respectively. The Bartlett's Test of Sphericity should be significant (p>.05) in order for factory analysis to be suitable (Brown et al., 2010). The initial round of exploratory factor analysis showed the existence of two factors. Item b47 was identified as a complex item as it loaded on more than one factor and the difference between them was less than .250. The item was removed, and another round of exploratory factor analysis was performed. Two factors with an eigenvalue greater than 1 were obtained and these factors accounted for 44.08% and 17.17% of

the variance. Factor 1 relates to being easily disturbed and Factor 2 relates to changing one's mood a lot. The results are presented in Table 4.50. This can be considered a meaningful fission of the original personality latent variable. The two factors will be used to indicate the *Neuroticism* subscale.

Table 4.50

Dimensionality analysis for the Neuroticism subscale

KMO and Bartlett's Test		
Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.789
Bartlett's Test of Sphericity	Approx. Chi-Square	597.137
	df	28
	Sig.	<,001

Total Variance Explained								
	Initial Eigenvalues			Extraction Sums of Squared Loadings			Rotation Sums of Squared Loadings	
Factor	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %	Total	
1	3.527	44.084	44.084	3.106	38.819	38.819	2.948	
2	1.373	17.166	61.250	.798	9.974	48.794	1.964	
3	.924	11.550	72.800					
4	.651	8.136	80.935					
5	.529	6.610	87.545					
6	.468	5.848	93.393					
7	.331	4.133	97.526					
8	.198	2.474	100.000					

Pattern Matrix		
	Factor	
	1	2
b41	.122	.361
b42	.852	.011
b43	.718	-.009
b45	.823	.008
b46	.809	.013
b48	.021	.611
b49R	.013	.604
b50R	-.086	.640

4.5. The overall Measurement Model Fit

A variety of fit statistics are used to assess the goodness of fit for the overall measurement model. Table 4.51 provides a summary of the fit indices. The Root Mean Square Error of Approximation (RMSEA) is used to identify and measure the closeness of fit. Values less than 0.05 are considered a good fit, for a reasonable fit the values have to be between 0.05 and 0.08. Values between .08 and 1.0 indicate a mediocre fit, and values greater than .10 are indicative of a poor fit (Diamantopoulos & Siguaw, 2000).

Therefore, based on the results which indicate a value of 0.0404, for the RMSEA, the overall measurement model has a good fit. The Root Mean Squared Residual (RMR) and the standardized RMR values are 0.0271 and 0.0459 respectively. The RMR and standardized RMR values indicate a good fit.

The Comparative Fit Index is a measure of relative fit (De Bruin, 2018). The indices compare the fit of the model at hand to the fit of a so-called null model that specifies no relations between the items at all. A researcher always hopes to see that the model performs much better than the null model. The CFI ranges from zero to unity, where a value of 1.00 indicates a perfect fit. Researchers tend to regard CFI values > .95 as indicative of a good fit and values > .90 as an acceptable fit. CFI is regarded as a measure of relative fit.

The GFI and AGFI have values of 0.844 and 0.808 respectively, which are below the 0.90 level indicative of a good fit. The statistics, as indicated in table 4.51, the NFI, NNFI, CFI, IFI and RFI values are 0.95, 0.99, 0.99, 0.99 and 0.94 respectively. These indices indicate a relatively good fit. The measurement model path diagram is depicted in Figure 4.1.

Table 4.51

Goodness-of-Fit statistics for the overall Measurement Model

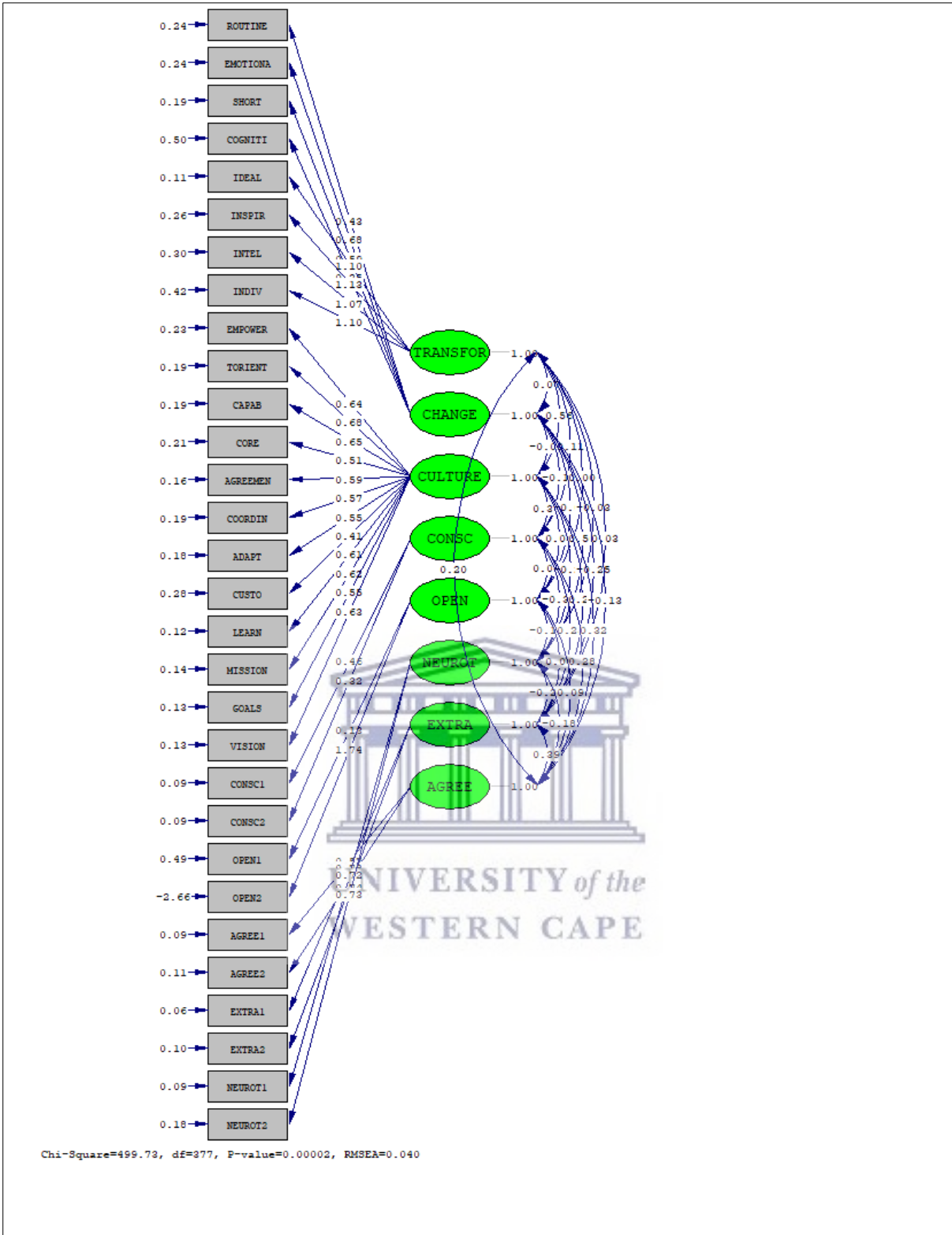| Fit Index	Value
Degrees of Freedom	377
Satorra-Bentler Scaled Chi-Square	571.273 (P = 0.0)
Root Mean Square Error of Approximation (RMSEA)	0.0404
90 Percent Confidence Interval for RMSEA	(0.0303;0.0496)
P-Value for Test of Close Fit (RMSEA < 0.05)	0.957
Normed Fit Index (NFI)	0.951
Non-Normed Fit Index (NNFI)	0.986
Parsimony Normed Fit Index (PNFI)	0.824
Comparative Fit Index (CFI)	0.987
Incremental Fit Index (IFI)	0.988
Relative Fit Index (RFI)	0.944
Critical N (CN)	177.733
Root Mean Square Residual (RMR)	0.0271
Standardized RMR	0.0459
Goodness of Fit Index (GFI)	0.844
Adjusted Goodness of Fit Index (AGFI)	0.808
Parsimony Goodness of Fit Index (PGFI)	0.684

Figure 4.1: The Measurement Model path diagraph

4.5.1. The Completely Standardized Solution

There are two types of standardized solutions, namely, standardized solution which is only the latent variables that are standardized and then completely standardized Solution which is the observed variables that are standardized. During this analysis, the values should be above 0.30 to conclude that they are loading adequately (Cohen, 1988).

In this study, the completely standardized factor loadings appear to be significantly above 0.30 with the exception of the openness to experience 1 subscale (0.178) as indicated in table 4.52.

Table 4.52

Completely standardized lambda-X matrix for the item parcels

	TRANSFOR	CHANGE	CULTURE	CONSC	OPEN	NEUROT
	--------	------	-------	-----	-----	------
ROUTINE	--	0.658	--	--	--	--
EMOTIONA	--	0.815	--	--	--	--
SHORT	--	0.806	--	--	--	--
COGNITI	--	0.332	--	--	--	--
IDEAL	0.958	--	--	--	--	--
INSPIR	0.912	--	--	--	--	--
INTEL	0.891	--	--	--	--	--
INDIV	0.861	--	--	--	--	--
EMPOWER	--	--	0.802	--	--	--
TORIENT	--	--	0.841	--	--	--
CAPAB	--	--	0.829	--	--	--
CORE	--	--	0.743	--	--	--
AGREEMEN	--	--	0.826	--	--	--
COORDIN	--	--	0.792	--	--	--
ADAPT	--	--	0.789	--	--	--
CUSTO	--	--	0.612	--	--	--
LEARN	--	--	0.872	--	--	--
MISSION	--	--	0.859	--	--	--
GOALS	--	--	0.832	--	--	--
VISION	--	--	0.867	--	--	--
CONSC1	--	--	--	0.834	--	--
CONSC2	--	--	--	0.731	--	--
OPEN1	--	--	--	--	0.178	--
OPEN2	--	--	--	--	2.921	--
AGREE1	--	--	--	--	--	--
AGREE2	--	--	--	--	--	--
EXTRA1	--	--	--	--	--	--
EXTRA2	--	--	--	--	--	--
NEUROT1	--	--	--	--	--	0.921
NEUROT2	--	--	--	--	--	0.867

4.6. Goodness of Fit for the Structural Model

The structural model tests the relationship between unobserved (latent) and observed (measured) variables (Austin & MacCallum, 2000). To determine the fit of the structural model the LISREL programme, version 8.80, was used. The indices are presented in Table 4.53 and the path diagram of the structural model is represented in Figure 4.2.
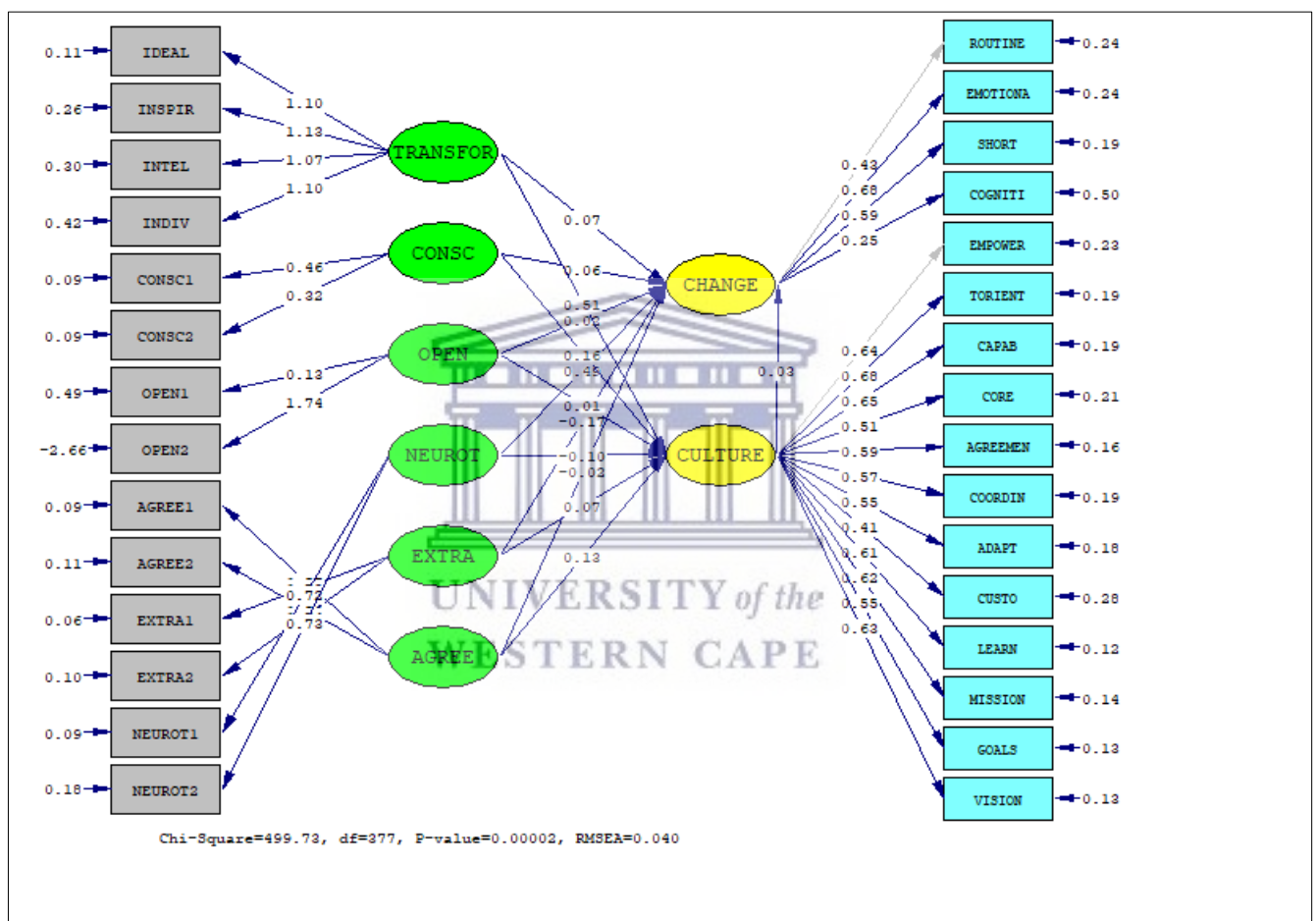
The Structural Model

Figure 4.2: The path diagram of the fitted structural model

Table 4.53

Goodness-of-Fit statistics for the overall Structural Model

Fit Index	Value
Degrees of Freedom	377
Satorra-Bentler Scaled Chi-Square	571.273 (P = 0.0)
Root Mean Square Error of Approximation (RMSEA)	0.0404
90 Percent Confidence Interval for RMSEA	(0.0303;0.0496)
P-Value for Test of Close Fit (RMSEA < 0.05)	0.957
Normed Fit Index (NFI)	0.951
Non-Normed Fit Index (NNFI)	0.986
Parsimony Normed Fit Index (PNFI)	0.824
Comparative Fit Index (CFI)	0.987
Incremental Fit Index (IFI)	0.988
Relative Fit Index (RFI)	0.944
Critical N (CN)	177.733
Root Mean Square Residual (RMR)	0.0271
Standardized RMR	0.0459
Goodness of Fit Index (GFI)	0.844
Adjusted Goodness of Fit Index (AGFI)	0.808
Parsimony Goodness of Fit Index (PGFI)	0.684

Based on the results which indicate a value of 0.0404, for the RMSEA, the overall structural model has a reasonable fit.

The Root Mean Squared Residual (RMR) and the standardized RMR values are 0.0271 and 0.0459 respectively. The RMR and standardized RMR values indicate a good fit. The GFI and AGFI have values of 0.844 and 0.808 respectively, which are below the 0.90 level indicative of a good fit. The statistics, as indicated in table 4.52, the NFI, NNFI, CFI, IFI and RFI values are 0.95, 0.99, 0.99, 0.99 and 0.94 respectively. These indices indicate a relatively good fit.

4.6.1. Parameter estimates

To determine if a model fit is acceptable, the parameter estimates need to be examined. During this stage, the emphasis is on the relationship between the independent and dependent variables by analyzing the gamma (γ) and beta (β) matrices. In order for a relationship to be considered significant, the parameter estimates should be significant ($p<0.05$) with t-values greater than 1.65 for one-tailed hypotheses and t-values greater than 1.96 for two-tailed hypotheses.

Table 4.54

The Beta Matrix

BETA	CHANGE	CULTURE
	--------	--------
CHANGE	--	0.030
		(0.128)
		0.232
CULTURE	--	--

Table 4.55

The Gamma matrix

GAMMA	TRANSFOR	CONSC	OPEN	NEUROT	EXTRA	AGREE
	--------	--------	-------	--------	-------	-------
			-		-	-
CHANGE	0.073	0.059	0.019	0.491	-0.168	-0.017
	(0.115)	(0.085)	(0.041)	(0.097)	(0.093)	(0.096)
	0.631	0.691	0.464	5.087	-1.812	-0.178
CULTURE	0.512	0.160	0.011	-0.096	0.072	0.125
	(0.080)	(0.076)	(0.025)	(0.074)	(0.067)	(0.078)
	6.361	2.114	(0.458)	-1.292	1.085	1.601

Hypothesis 1: Organizational culture has a negative influence on employee resistance to change.

The t-value between organizational culture is less than +/-1.65, leading to the observation that there is no significant relationship between organizational culture and employee resistance to change (t=0.232, p<0.05). A non-significant relationship is therefore evident between these two constructs, which suggests that the proposed relationship between these two latent variables was not supported.

Hypothesis 2: Transformational leadership has a negative influence on employee resistance to change.

The t-value between transformational leadership is less than +/-1.65, leading to the observation that there is no significant relationship between transformational leadership and employee resistance to change (t=0.631, p<0.05). A non-significant relationship is therefore evident between these two constructs, which suggests that the proposed relationship between these two latent variables was not supported.

Hypothesis 3: Transformational leadership has a positive influence on organizational culture.

There is a statistically significant relationship between transformational leadership and organizational culture (t=6.361, p<0.05). This finding suggests that the proposed relationship between these two variables exists.

Hypothesis 4: Conscientiousness has a negative influence on employee resistance to change.

The t-value between employee resistance to change and conscientiousness is less than +/-1.65, leading to the observation that there is no significant relationship between conscientiousness and employee resistance to change (t=0.691, p<0.05). A non-significant relationship is therefore evident between these two constructs, which suggests that the proposed relationship between these two latent variables was not supported.

Hypothesis 5: Openness to experience has a negative influence on resistance to change.

The t-value between openness to experience and organizational culture is less than +/-1.65, leading to the observation that there is no significant relationship between organizational culture and employee resistance to change (t=0.464, p<0.05). A non-significant relationship is therefore evident between these two constructs, which suggests that the proposed relationship between these two latent variables was not supported.

Hypothesis 6: Neuroticism has a positive influence on resistance to change.

The t-value for the connection between employee resistance to change and neuroticism is (t= 5.087, p<0.05) which is greater than +/-1.65, which states that a significant positive relationship exists between these two variables.

Hypothesis 7: Extraversion has a negative influence on employee resistance to change.

The t-value for the connection between extraversion and resistance to change is
(t= -1.812, p<0.05) which is more than +/-1.65, which states that a non-significant relationship exists between these two variables. This suggests that there is a significant negative relationship between the two variables and that the proposed hypothesis was supported.

Hypothesis 8: Agreeableness has a positive influence on employee resistance to change.

The t-value between agreeableness is less than +/-1.65, leading to the observation that there is no significant relationship between agreeableness and employee resistance to change (t=-0.178, p<0.05). A non-significant relationship is therefore evident between these two constructs, which suggests that the proposed relationship between these two latent variables was not supported.

Hypothesis 9: Conscientiousness has a positive influence on organizational culture.

There is a statistically significant relationship between conscientiousness and organizational culture (t=2.114, p<0.05). This finding suggests that the proposed relationship between these two variables exists.

Hypothesis 10: Openness to experience has a positive influence on organizational culture.

The t-value for the relationship between openness to experience and organizational culture is (t= 0.458, p<0.05) which is less than +/-1.65. A non-significant relationship is therefore evident between these two constructs, which suggests that the proposed relationship between these two latent variables was not supported.

Hypothesis 11: *Neuroticism has a negative influence on organizational culture.*

The t-value between neuroticism and organizational culture is less than +/-1.65, leading to the observation that there is a significant negative relationship between neuroticism and organizational culture (t= -1.292, p<0.05). This suggests that there is a significant negative relationship between the two variables and that the proposed hypothesis was supported, which states that a non-significant relationship exists between these two variables.

Hypothesis 12: Extraversion has a positive influence on organizational culture.

The t-value for the relationship between personality and organizational culture is (t= 1.085, p<0.05) which is less than +/-1.65. A non-significant relationship is therefore evident between these two constructs, which suggests that the proposed relationship between these two latent variables was not supported.

Hypothesis 13: Agreeableness has a positive influence on organizational culture.

The t-value between agreeableness and organizational culture is less than +/-1.65, leading to the observation that there is no significant relationship, (t=1.601, p<0.05). A non-significant relationship is therefore evident between these two constructs, which

suggests that the proposed relationship between these two latent variables was not supported.

4.7. Chapter Summary

The purpose of this chapter was to present the results of the statistical analyses achieved through the statistical packages namely, SPSS (version 28) and LISREL (version 8.80). Item and dimensional analyses were performed on the data to identify poor items. The overall measurement model was assessed using the method of item parcelling. Both the measurement and structural models were found to fit the data reasonably well. The results indicated a positive and significant relationship between transformational leadership and organizational culture, conscientiousness and organizational culture and neuroticism and resistance to change.

CHAPTER 5

DISCUSSION OF RESEARCH RESULTS AND RECOMMENDATIONS FOR FUTURE RESEARCH

5.1. Introduction

The previous chapters aimed to provide an overview of the research problem, a review of the literature on existing research and empirical findings as well as the research methodology used to conduct this research study. This chapter presents the summary of the findings, limitations of the study as well as recommendations based on the data presented in the previous chapter. Further conclusions are drawn and the direction for future research is presented.

The aim of this study was to determine how Transformational Leadership, Organizational Culture, and Personality influence employee resistance to change. The objectives of this study were to:

- To determine how Transformational Leadership influences employee resistance to change
- To determine how Organizational Culture influences employee resistance to change
- To determine how Personality influences employee resistance to change
- To propose recommendations to senior-level management of organizations for future organizational-wide change implementations

5.2. Assessment of Model Fit

5.2.1. Measurement Model

Based on the measurement model fit, the RMSEA has a value of 0.0404, which is indicative of good fit. The Root Mean Squared Residual (RMR) and the standardized RMR values are 0.0271 and 0.0459 respectively. The RMR and standardized RMR values indicate a good fit.

The GFI and AGFI have values of 0.844 and 0.808 respectively, which are marginally below the 0.90 level indicative of a good fit. The statistics, as indicated in table 4.51,

the NFI, NNFI, CFI, IFI and RFI values are 0.95, 0.99, 0.99, 0.99 and 0.94 respectively. These indices indicate a relatively good fit. The Measurement Model path diagram is depicted in Figure 4.1.

5.2.2. Structural Model

The structural model tests the relationship between unobserved (latent) and observed (measured) variables (Austin & MacCallum, 2000). Based on the results which indicate a value of 0.0404, for the RMSEA, the overall structural model has a good fit. The Root Mean Squared Residual (RMR) and the standardized RMR values are 0.0271 and 0.0459 respectively. The RMR and standardized values indicate a good fit. The GFI and AGFI have values of 0.844 and 0.808 respectively, are below the 0.90 level indicative of a good fit. The statistics, as indicated in table 4.52, the NFI, NNFI, CFI, IFI and RFI values are 0.95, 0.99, 0.99, 0.99 and 0.94 respectively. These indices indicate a relatively good fit.

5.3. Assessment of Model Hypotheses

The results regarding the 13 hypotheses will now be discussed:

Hypothesis 1: Organizational culture has a negative influence on employee resistance to change.

The t-value between organizational culture is less than 1.65, leading to the observation that there is no significant relationship between organizational culture and employee resistance to change (t=0.232, p<0.05). A non-significant relationship is therefore evident between these two constructs, which suggests that the proposed relationship between these two latent variables was not supported.

The above result is in contrast with the existing study literature conducted by Al-Karaghouli et al. (2014). The overall result of the study showed that individual readiness for change is significantly influenced by an organization's culture. Furthermore, a research study by Choi and Ruona (2011) indicated that an organization's culture is considered to be the most important factor which influences employees' readiness for change.

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Hypothesis 2: Transformational leadership has a negative influence on employee resistance to change.

The t-value between transformational leadership is less than 1.65, leading to the observation that there is no significant relationship between transformational leadership and employee resistance to change (t=0.631, p<0.05). A non-significant relationship is therefore evident between these two constructs, which suggests that the proposed relationship between these two latent variables was not supported.

This is in contradiction to a study conducted Naveed and Saleem (2017) examining the role of transformational leadership in influencing employee attitudes toward organizational change. The study showed that transformational leadership had a substantial negative correlation (r = -.23, p < .05) with the employee's behavioural intention to resist change.

Hypothesis 3: Transformational leadership has a positive influence on organizational culture.

There is a statistically significant relationship between transformational leadership and organizational culture (t=6.361, p<0.05). This finding suggests that the proposed relationship between these two variables exists.

This is consistent with a study conducted by Seloane (2010) with a sample of 238 employees of a military organization. The results from this study indicated a statistically significant relationship between transformational leadership and organizational culture. In addition, Shurbagi and Zahari (2013) collected data from 227 employees and found a significant positive relationship between the two constructs.

Hypothesis 4: Conscientiousness has a negative influence on employee resistance to change.

The t-value between employee resistance to change and conscientiousness is less than 1.65, leading to the observation that there is no significant relationship between conscientiousness and employee resistance to change (t=0.691, p<0.05). A non-

significant relationship is therefore evident between these two constructs, which suggests that the proposed relationship between these two latent variables was not supported.

This is in contradiction to a study conducted by Ali et al. (2019) which found a relationship between behavioural intention and user resistance and the moderating role of conscientiousness. In the same study, a negative relationship was found between user resistance and individuals with low levels of conscientiousness. This was supported by a study conducted by Sai (2018) whereby no significant relationship was found between conscientiousness and organizational commitment to change. In a separate study, Chen and Chen (2008) confirmed the negative relationship between conscientiousness and resistance to change. Nikolaou et al. (2004), however, found a positive relationship between conscientiousness and employees' attitudes toward change; implying that employees scoring high on conscientiousness are more receptive towards organizational change

Hypothesis 5: Openness to experience has a negative influence on resistance to change.

The t-value between openness to experience and organizational culture is less than 1.65, leading to the observation that there is no significant relationship between organizational culture and employee resistance to change (t=0.464, p<0.05). A non-significant relationship is therefore evident between these two constructs, which suggests that the proposed relationship between these two latent variables was not supported.

The above result is in contradiction to results obtained through several studies. Dunican (2015) examined the level of correlation between mindfulness, tolerance of ambiguity, and resistance to change among employees within various industries based in Kentucky. The result revealed a strong negative relationship between mindfulness and employee resistance to change, (r = -.53, p< .01). (Dunican, 2015). It is sensible to suggest that individuals with an open state of mind are less likely to resist change. Moreover, Oreg's (2003) previous studies indicated a similar relationship between tolerance for uncertainty and resistance to change. In this study,

the results demonstrated a strong relationship between the two constructs, (r = .62, p< .01) (Oreg, 2003). The results showed those who scored high on tolerance for ambiguity had a relatively low score for resistance to change.

Hypothesis 6: Neuroticism has a positive influence on resistance to change.

The t-value for the connection between employee resistance to change and neuroticism is (t= 5.087, p<0.05) which is greater than 1.65, which states that a significant positive relationship exists between these two variables.

Similar findings were reported by Oreg (2003) whereby the results indicated a significant relationship between neuroticism and employee resistance to change. Although the results were weak, in the same study, neuroticism had a stronger correlation with the emotional reaction on the resistance to change dimension. This was further supported by Migliore (2011) where neuroticism had a positive relationship with uncertainty avoidance, a common character displayed by individuals when resisting change.

Hypothesis 7: Extraversion has a negative influence on employee resistance to change.

The t-value for the connection between extraversion and resistance to change is (t= -1.812, p<0.05) which is more than +/-1.65. This suggests that there is a significant negative relationship between the two variables and that the proposed hypothesis was supported.

The above hypothesis is supported by the study conducted by Cao et al. (2018) where extraversion had a significant positive effect on employee's innovative behaviour (r=0.390, p<0.01). Innovative behaviour refers to how an individual creates, conceptualizes and implements ideas that ultimately benefit the organization and themselves. This is often in relation to the development of new methods and adapting to new routines (Cao, et al., 2018). Similarly, the results demonstrated a negative correlation (r = - 0.136, t =1.993, p < 0.05) between behavioural intention and user resistance behavior. Further studies conducted by Åström and Forsell (2012) are in

agreement with the above as the results showed a negative relationship between extraversion and resistance to change.

Hypothesis 8: Agreeableness has a positive influence on employee resistance to change.

The t-value between agreeableness is less than +/-1.65, leading to the observation that there is no significant relationship between agreeableness and employee resistance to change (t=-0.178, p<0.05). A non-significant relationship is therefore evident between these two constructs, which suggests that the proposed relationship between these two latent variables was not supported.

Although existing research literature has shown a significantly positive relationship between agreeableness and employee resistance to change, this relationship was not confirmed in this study. Cakiroglu and Seren (2019) found a statistically significant relationship between agreeableness and resistance to change (r = 0.108, p <0.01). Research by Hwang and Yang (2014) found that employees possessing traits such as agreeableness tend to adapt more easily to new environments and are more receptive to change. However, these findings do not correlate with the current study.

Hypothesis 9: Conscientiousness has a positive influence on organizational culture.

There is a statistically significant relationship between conscientiousness and organizational culture (t=2.114, p<0.05). This finding suggests that the proposed relationship between these two variables exists.

Results emanating from Anderson, Flynn and Spataro (2008) support the findings of the results indicated conscientiousness to be a strong predictor of influence. This study was conducted in both a consulting firm as well as an engineering department. Additionally, Tziner et al. (2008) revealed significant relationships between conscientiousness and organizational commitment.

Hypothesis 10: Openness to experience has a positive influence on organizational culture.

The t-value for the relationship between openness to experience and organizational culture is (t= 0.458, p<0.05) which is less than 1.65. A non-significant relationship is therefore evident between these two constructs, which suggests that the proposed relationship between these two latent variables was not supported.

This is in contrast to the study conducted by Algawazi et al. (2021) that found positive relationships between openness to experience as a mediator for organizational culture and task performance. Similar findings are reported by a study conducted by Brodman et al. (2008) which indicates that openness to experience showed significantly positive relationships with organizational commitment.

Hypothesis 11: Neuroticism has a negative influence on organizational culture.

The t-value between neuroticism and organizational culture is less than +/-1.65, leading to the observation that there is no significant negative relationship between neuroticism and organizational culture (t= -1.292, p<0.05). This suggests that there is no significant negative relationship between the two variables and that the proposed hypothesis was not supported.

The current literature indicates that neuroticism is significantly related to organizational deviance. This was reported in a study conducted by Khan and Sudha (2013) whereby neuroticism had a positive relationship with organizational deviance in both the public and private sectors, (r = 0.411, p <.05) and (r = 0.582, p <.01), respectively. In essence, individuals that score high on the neuroticism dimension are more prone to work against organizational norms and standards than being receptive to change.

Hypothesis 12: Extraversion has a positive influence on organizational culture.

The t-value for the relationship between personality and organizational culture is (t= 1.085, p<0.05) which is less than 1.65. A non-significant relationship is therefore

evident between these two constructs, which suggests that the proposed relationship between these two latent variables was not supported.

The above result is in contradiction to the findings of Anderson, Flynn and Spataro (2008) whereby extraversion (r=.22, p < 0.01) was found to be a strong predictor of influence in both the consulting firm as well as the engineering department the study was conducted in. This result was supported by Cenkci and Ötken (2015) where the results indicated that organizational climate has an influence on the relationship between extraversion and employee dissent.

Hypothesis 13: Agreeableness has a positive influence on organizational culture.

The t-value between agreeableness and organizational culture is less than 1.65, leading to the observation that there is no significant relationship, (t=1.601, p<0.05). A non-significant relationship is therefore evident between these two constructs, which suggests that the proposed relationship between these two latent variables was not supported.

The above is in contradiction to previous studies conducted by Brodman et al. (2008) where the results reported significantly positive relationships between agreeableness and organizational commitment. These findings are supported by the results of Khan et al. (2019) whereby the study investigated the impact of agreeableness on workplace deviance. The result produced a negative relationship between the two constructs. According to Costa and McCrae (1992), agreeableness has negative relation with feelings of aggression and hostility since agreeable individuals generally appear to be helpful, trusting and generous.

5.4. Limitations to the study and recommendations for future research

The sample size used in the current study was too small hence the statistical analyses could not identify significant relationships within the data set and the study could not be generalized. A larger population sample size could have generated more accurate results. Furthermore, the current research used simple random sampling which is the

most basic form of probability sampling (Bryman, 2011). Certain groups may thus have been under-represented.

The formulation of the research aims, and objectives was too broad. The research study could have focused on a specific organization experiencing change, such as a merger or acquisition in order for the level of focus of the study to increase. Instead, the objectives were broad and resulted in the research instrument asking questions that were open to interpretation as opposed to guiding respondents to answer the questions with a specific change scenario in mind.

Another limitation to this study is in relation to cross-sectional research design. If this research design was considered in the present study, the researcher would have been able to collect data from a larger pool of respondents at a single point in time as well as draw inferences from various participating groups.

In addition to the above, the researcher only used quantitative research methodology and could have used qualitative research methods in order to draw more insights and experiences from the participants.

There are opportunities that exist for future studies to expand the constructs of the present study, particularly focusing on the Big Five Factor traits and their influence on organizational culture. Limited empirical evidence was found that could assist in the present study.

Furthermore, similar studies could be conducted at different companies among employees that have been either affected by or part of a change process. The insights gained in such a context might be valuable to future research.

5.5.   Practical implications

The current study reported positive relationships between transformational leadership and organizational culture; neuroticism and resistance to change and conscientiousness and organizational culture. The findings infer that transformational leadership is effective across organizational cultures and aid in the optimal performance thereof. The findings of this study can assist leadership within organizations in terms of leadership development since the findings are clear as to the type of leadership required to drive organizational change. In instances where organizations are not clear on the type of style the leaders within organizations possess, appropriate interventions can be introduced in order to establish leadership styles. It will be important that practitioners in the field of organizational behaviour ascertain leadership styles before embarking on change initiatives in order to avoid failed change implementations. The results of this study should ensure confidence in undertaking such interventions in order for leaders to drive and ultimately create a culture that is conducive to change. This, however, will only be realized when employees have confidence in leaders to drive change initiatives which is mutually beneficial to both the employee and the organization (Oreg, 2006).

In addition, it was found that neuroticism has a positive relationship with resistance to change. This can be due to the behaviour that is generally associated with neurotic (i.e., emotionally unstable) individuals such as anxiety, anger and easily triggered. In environments that are consistently prone to change, emotionally unstable will display negative attitudes and a level of resistance towards the change. Oreg (2003) associated this display of behaviour with the individuals' lack of faith in their ability to manage change. In instances where employees appear anxious or angry in relation to proposed change initiatives, change agents should understand that these employees feel threatened by the change. As a result, their retaliation will be demonstrated by hindering the change process. Change agents should therefore actively work towards mitigating those emotions and introducing visible communication reinforcement strategies to reduce uncertainly amongst these individuals. Effective communication strategies are helpful tools in minimizing resistance to change. These initiatives should not be limited to employees who openly expresses their dissent, however, change

initiatives should be for all employees and in turn, those that can see the benefit of the proposed change can encourage individuals feeling threatened and resist the change.

Another positive relationship found was between conscientiousness and organizational culture. Conscientious individuals tend to be dutiful, reliable and hardworking and generally display positive attitudes and welcome change easily (Costa & McCrae, 1986). In turn, they drive a culture of open communication and express their dissent with leaders that they know can influence organizational change. It is important that the culture of the organization focuses on driving transparency within and amongst its employees which in turn can motivate individuals to voice concerns and criticisms.

The study will be of value to human resource professionals in the analyses of an organization's leadership style, culture preference and personality traits embodied by employees. In addition, change agents and human resource professionals can benefit from this study in utilizing the results to implement appropriate interventions to ensure the effective and efficient undertaking of change initiatives. This research study could thus assist in the development of strategies to create environments that are conducive to change and reduce the resistance and uncertainly that is often associated with change.

5.6. Conclusion

The process of this present study provided the researcher with new insights and a deeper understanding of the role of transformational leadership, organizational culture and personality on employee resistance to change. Organizations need to be deliberate in their approach when undertaking any change interventions and ensure they assess the organization's readiness for change based on the leadership styles, culture and personality traits of the employees. In all three of these aspects, the one constant is employees and one often underestimate the role employees play in driving organizational success. Therefore, when change initiatives are planned, and they are radical and disruptive in nature, leaders must be cognizant of the effects that may arise in response to change.

The hypotheses have been discussed and interpreted. The results indicated a positive and significant relationship between transformational leadership and organizational culture, conscientiousness and organizational culture and neuroticism and resistance to change. Negative relationships were also present in this study and these findings were discussed in relation to existing literature studies. The limitations, practical implications, and suggestions for future research have been highlighted. The results provide valuable information for human resource professionals and change agents on the influence of transformational leadership, organizational culture, and personality on employee resistance to change. Given the proposed limitations to this study as well as the recommendations for future research, forthcoming studies can add to the further body of research and the limitations can be accounted for to ensure the advancement of this study.

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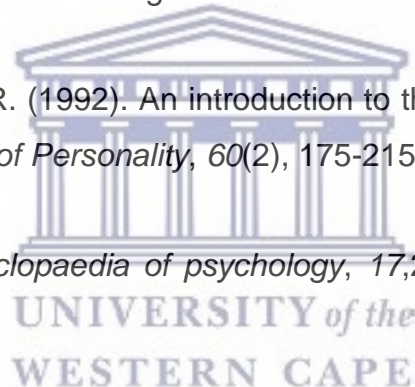
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