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Determination of the Rho factors linking behavioural inputs to organisational outcomes in the South African Chemical Industry

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of

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by

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Abstract

Changes in the modern workplace due to globalisation, technology and changes in workforce demographics have heightened interest in understanding and motivating culturally diverse workforces. Several studies have been performed to understand the relationship between leadership style, culture and work-related outcomes. However, these studies have struggled elucidate the nature of these interactions and the underlying linkages.

This study was designed to determine the underlying factors that link behavioural inputs and organisational outcomes. The behavioural inputs chosen were leadership style and individual culture. The organisational outcomes investigated were job satisfaction and organisational commitment. The leadership styles considered were limited to transactional and transformational leadership. Individual culture consisted of the allocentrism and idiocentrism constructs. A questionnaire was developed using factors for each of the constructs researched. The sample was limited to people employed in the South African chemical industry in Gauteng. The results were analysed using Rho factor analysis. This analysis negates the need to prove causality for any linkages found between the behavioural inputs and the organisational outputs.

Two significant dimensions were revealed by the interdependent factor analysis: Transformational Team Leadership and Non-committal Team Players. Transformational Team Leadership is linked to six behaviours a manager can adopt in the workplace. Analysis did show the augmentation effect of Transformational and Transactional Leadership had taken place to form this dimension. Transformational Team Leadership is also positively linked to organisational commitment and job satisfaction. The second dimension uncovered in the research was Non-committal Team Players. This dimension is linked positively to allocentrism and job satisfaction, but negatively to organisational commitment.

Job satisfaction and organisational commitment are linked to turnover intentions. Thus, a leader can positively influence a subordinate's intentions to

leave the organisation by employing the six behaviours forming Transformational Team Leadership. However, Non-committal Team Players cannot be positively influenced by a leader in any way. As such these people might leave the organisation at some point regardless of how the leader behaves.

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I, Scott Jamieson, declare that

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Signed

_____ _____

Scott Gordon Jamieson Date

(Student Number 296664)

_____ _____

Prof. Anthony Stacey Date

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1 INTRODUCTION

1.1 Purpose of the study

The purpose of this research is to determine which underlying factors link leadership style and individual culture to satisfaction with a supervisor and organisational commitment.

1.2 Context of the study

Increased international economic activities, globalisation of markets, mobility of technology and changes in workforce demographics have heightened interest in understanding and addressing ways of motivating culturally diverse workforces, on the part of both multinational corporations and indigenous companies (Walumbwa & Lawler, 2003). Studies to understand the relationship between leadership style, culture and work-related outcomes have provided several insights into these relationships (Walumbwa, Lawler & Avolio, 2007, Medonca & Kanungo, 1990, Agarwal, DeCarlo & Vyas, 1999; House *et al.*, 1997). Work by Walumbwa & Lawler (2003) proposed the theoretical model shown in Figure 1. More recent work by Walumbwa *et al.* (2007) investigated the moderating effects of individual culture on the relationship between leadership style and work-related attitudes. Individual culture was found to moderate the relationship between leadership style and work-related attitudes. However, the nature of these interactions and the underlying linkages in these relationships is not fully understood. In addition, the cross-sectional nature of the research does pose a certain limitation as only measuring a particular point in time makes it difficult to determine the causal relationships (McFarlane Shore & Martin, 1989; Walumbwa *et al.*, 2007). The causality still has to be proven statistically in order to build a reliable model. Even after this has been done, the results might still not identify the exact nature of the causal relationship. In order to do this, the underlying factors that link these subjects need to be identified, which in turn will

identify the nature of the relationship without needing to prove causality. By their very nature, these factors are the causal link itself.

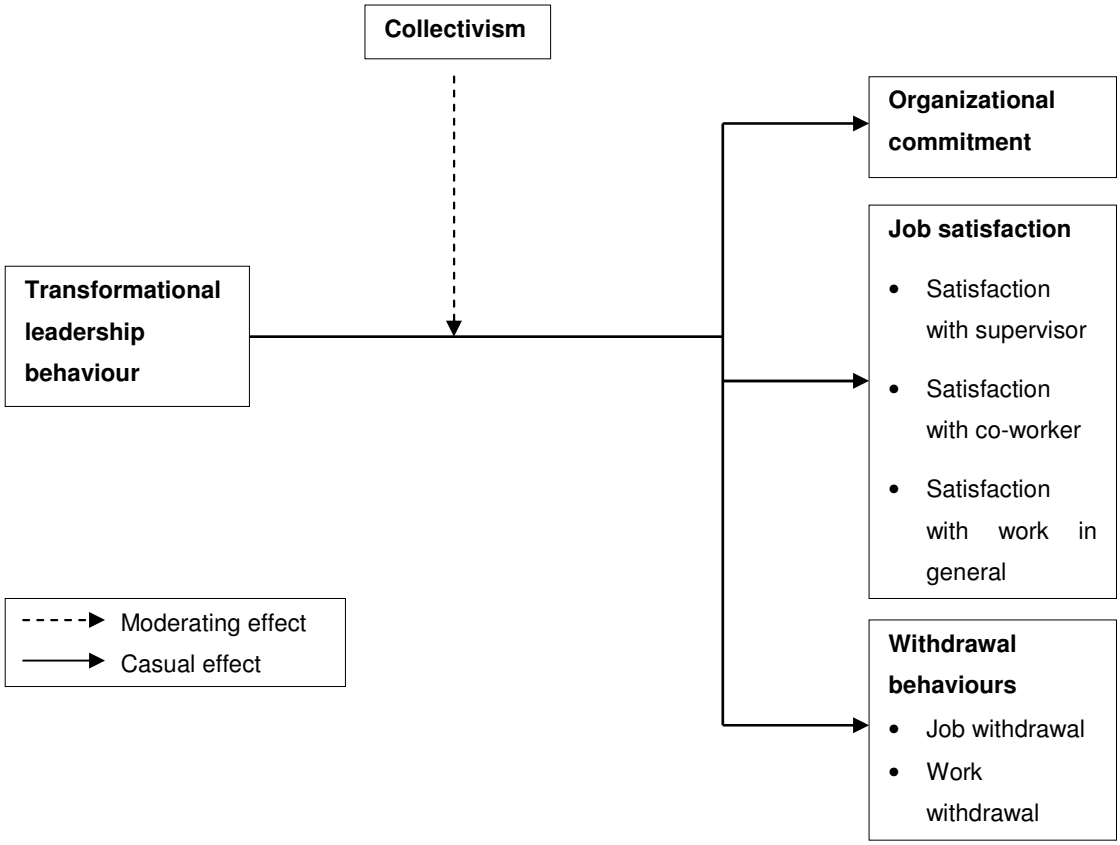

Figure 1: General theoretical framework (Walumbwa *& Lawler*, 2003)

Transformational leadership behaviour is defined as when a leader raises awareness for followers to transcend self-interest for collective interests, thereby achieving optimal levels of performance (Antonakis, Avolio & Sivasubramaniam, 2003). This behaviour utilises intellectual stimulation, individual consideration, inspiration and charisma to achieve goals. In comparison, transactional leadership is an exchange process, based on setting goals and monitoring and controlling the outcomes (Antonakis *et al.*, 2003). Knowledge of how leadership behaviour and culture interact and influence work-related outcomes will allow leaders to alter their behaviour in order to achieve better results from their followers.

1.3 Problem statement

1.3.1 *Main problem*

The main problem of this research is to identify the Rho factors which form the link between individual culture and leadership style, and organisational outcomes, specifically job satisfaction and organisational commitment.

1.4 Significance of the study

The study fills a gap in that the underlying factors that link behavioural inputs and organisational commitment will be uncovered. The requirement of proving causality will be unnecessary because of the nature of the research. Rho factor analysis is very similar to canonical analysis. However, canonical analysis does not describe the relationship between two sets of data. Rho factor analysis overcomes this shortcoming and so negates the requirement of proving causality. This is an advantage as the factors that result from the research possess intrinsic validity. The manner in which behavioural inputs link to organisational outcomes will be resolved by the underlying factors common to both. Thus, leadership and employee behaviours will determine, to some extent, organisational outcomes. The research will improve understanding of the link so that the desired organisational outcomes can be obtained by changing the input behaviours (i.e. changing management style and organisational culture).

The study provides guidance to line managers and supervisors who are managing a work force in South Africa. The research will identify which behaviours they should adopt to be more effective at connecting with and thus motivating employees. Improved organisational commitment and job satisfaction do result in reduced turnover intentions (McFarlane Shore & Martin, 1989). Understanding how organisational commitment and job satisfaction are linked to management style will allow a manager to positively impact an employee's turnover intentions. Understanding an individual's culture will

empower a manager to alter their behaviour according to the situation to better engage employees.

1.5 Delimitations of the study

This investigation has only covered the chemical industry in South Africa. This research has not considered geographic regions outside the Gauteng province. It is acknowledged that culture and other elements of the research can vary from one region to another, but this topic will not be covered here.

Only the individual culture constructs of allocentrism and idiocentrism have been used as a foundation for structuring the investigation. Likewise, transformational and transactional leadership constructs are the only leadership constructs that have been considered by this study.

Performance, productivity and other measures of organisational success are not utilised by this investigation. The measures of job satisfaction and organisational commitment are the measures that will be used to determine the organisational outcomes or "success" in this research.

1.6 Definition of terms

Allocentrism occurs when an individual values and nurtures group relationships and define themselves on the basis of in-group membership, striving to maintain a harmonious interdependence with their in-group members (Chen, Chen & Meindl, 1998).

Behavioural inputs are taken to be the combined behaviours of leaders, from a style perspective, and the cultural behaviours of an individual.

Contingent reward is behaviour where an impersonal exchange process occurs (e.g., offering incentives, rewarding good performance) (Yukl, 1999). This behaviour also includes providing praise and recognition to subordinates (Yukl, 1998).

Idiocetrism is where people view the individual as the most basic unit of social perception and give priority to individual goals over group goals (Triandis, 1995).

Rho factors are underlying factors that are common to two data sets (Stacey, 2012).

Organisational commitment is defined as the relative strength of an individual's identification with and involvement in a particular organisation (Porter & Smith, 1970).

Organisational outcomes are the combined results of organisational commitment and job satisfaction.

Transactional leadership is contingent reinforcement; leader-subordinate relationships are based on a series of exchanges or bargains between the leader and the subordinate (Howell & Avolio, 1993).

Transformational leadership involves developing, intellectually stimulating, and inspiring subordinates to transcend their own self-interests for a higher collective purpose, mission, or vision (Howell & Avolio, 1993).

1.7 Assumptions

It has been assumed that:

- the sample will consist mainly of sales representatives and product managers, which can be used as a proxy for the typical South African work force,
- the respondents are expected to understand English sufficiently to understand and answer the questionnaire correctly,
- the constructs around which the questions are based, are stable and reliable enough to produce valid results,

- the methodology will produce reliable results,
- there are interdependent factors relating the behavioural inputs and organisational outcomes,

2 LITERATURE REVIEW

2.1 Introduction

Collectivistic values are very relevant in the context of the current movement towards team-based organisations and the increasing trend towards the abandonment of traditional hierarchical patterns of authority (Pillai & Meindl, 1998). The growing number of mergers and acquisitions, globalisation, and uncertainty with the stock market, require leaders not only to exhibit confidence and direction, but also instil motivation and commitment to organisational goals (Lim & Polyhart, 2004). Because most people spend a considerable portion of their lives in the workplace, it would seem unlikely that individualism and collectivism are important at the individual and societal levels, but not in organisational contexts. In addition, individualism and collectivism might be meaningful dimensions of organisational culture as a consequence of the fact that all organisations are embedded within societal cultures, which are likely to have an influence on organisations embedded within them (Hofstede, 1985).

Cultural differences have been shown to enhance or diminish the impact of managerial practices as they bear on job attitudes (Hofstede, 1991; Laurent, 1986) and behaviours (Erez, 1994). This suggests that the successes of managerial practices and implementation procedures are dependent on an appropriate fit between the assumptions, values and beliefs inherent in any given managerial practice and the culturally-based assumptions, values, and beliefs held by those who are being managed (Hofstede, 1993; Kirkman & Shapiro, 1997; Mendonca & Kanungo, 1994; S. C. Schneider, 1988). In addition, these constructs have been used to understand the effectiveness of human resource practices and managerial policies (Ramamoorthy & Carroll,

1998), job attitudes (Hui, Yee & Eastman, 1995), and firm financial performance (Newman & Nollen, 1996).

2.2 Background discussion.

2.2.1 *The importance and influence of cultural fit*

There is a growing body of literature that suggests possible effects of organisational culture on individual attitudes and behaviours (Schein, 1992). Research on person-organisation fit stresses the notion that congruence or “fit” between an employee’s characteristics and his or her organisation's characteristics is desirable for both the individual and the organisation (Robert, Probst, Martocchio, Drasgow & Lawler, 2000). The emergence of the global organisation, with a diverse multi-cultural workforce and units embedded in multiple societies, has substantially increased the relevance of person-organisation fit issues (Robert *et al.*, 2000). In the environments of global organisations, failure to achieve person-organisation fit is often conceptualised as "cultural clash" and is described at a macro level as incongruity between the culture of the society in which a unit is embedded and the societal culture of the organisation's base of operations (Schneider, 1988). Work by Newman and Nollen (1996) demonstrated that the performance levels of organisational subunits in a globally diversified firm were related to the fit between culture and organisational practices. Erez (1994) suggested that culture acts as a filter through which individuals interpret and react to managerial practices in the workplace. If people's values and norms are not congruent with the managerial practices they encounter in the workplace, they may become dissatisfied with those aspects of their jobs (Erez, 1994). Over time, occupational commitment is influenced by an individual’s assessment of whether or not he or she is more consistently satisfied or dissatisfied with his or her job. Thus, the fact that individuals may be satisfied by certain things over others is influenced by values or norms determined by their culture.

A group that is collectivistic may place a high value on interdependence, co-operation and sharing, and may not only allow a leader who embodies these values to be more effective, but also respond to such a leader's call for teamwork and focus on collective goals (Pillai & Meindl, 1998). This may be particularly relevant for organisations that are moving towards self-managing teams, a contemporary form of an organic structure that is on the increase (Pillai & Meindl, 1998).

Of more practical importance, the significant fit and misfit of interactions also provided support for the utility of measuring organisational culture along the dimensions of individualism and collectivism (Robert & Wasti, 2002). Robert and Wasti (2002) predicted that job attitudes would be more positive when there was congruence (i.e., fit) between an individual's values and their perception of the organisation's values, and less positive when an individual's values contrasted with those of the organisation (i.e. misfit). Given the existence of individualism and collectivism as dimensions of organisational culture and their potential impact on individual job attitudes, it becomes important to determine the organisational basis for individual-level perceptions (Robert & Wasti, 2002).

2.2.2 *Culture*

Culture has been described as the "*human-made part of the environment*" (Triandis, 1994, p. 1), consisting of the shared perceptions of the social environment. Culture also specifies what behaviours are desirable for members of the culture (norms) and individuals in the social structure (roles) and the goals and principles that are important in the individual's life (values) (Robert *et al.*, 2000). Many researchers have suggested that much of the complexity of culture can be modelled by assuming that societies vary along a number of cultural dimensions (Robert *et al.*, 2000). Many such dimensions have been identified, and some have been well-developed theoretically and empirically (Hofstede, 1980; Schwartz, 1994; Triandis, 1995). These dimensions are extremely useful in linking management practices with culture by providing a framework or theoretical perspective by which both managerial practices and

cultures can be evaluated (Erez, 1994; Janssens, Brett, & Smith, 1995; Kirkman & Shapiro, 1997; Newman & Nollen, 1996).

For instance, anecdotal research evidence suggests that, culturally, employees in emerging markets may hold values completely different from those in developed countries (Kiggundu, 1989). Others have also questioned the applicability of Western theories to other cultures (Erez, 1994; Walumbwa, 1999). Researchers, such as Jung, Bass & Sosik (1995) have specifically called for an investigation to examine cultural impacts on transformational leadership processes in different environments.

2.2.3 *Collectivism and individualism*

The individualism-collectivism constructs (Lukes, 1973) have been discussed in many contexts in the social sciences (Kim, Sharkey & Singelis, 1994). For example, closely related concepts can be found in the areas of values (Kluckhohn & Strodtbeck, 1961; Hofstede, 1980), social systems (Parsons & Shils, 1951), morality (Shweder, 1982; Miller, Bershoff, & Harwood, 1990), religion (Bakan, 1966), cognitive differentiation (Witkin & Berry, 1975), economic development (Adelman & Morris, 1967), modernity (Inkeles & Smith, 1974; Taylor, 1989), the structure of constitutions (Massimini & Calegari, 1979), cultural patterns (Hsu, 1983), and the self (Markus & Kitayama, 1991; Jansz, 1991). Predictions of behavioural patterns from these constructs have been successful (Wheeler, Reis, & Bond, 1989). Theoretical work by Erez (1994) and Mendonca and Kamungo (1994) highlighted the utility of the individualism and collectivism constructs in understanding employee's reactions to managerial practices.

Collectivism and individualism are "cultural syndromes" (Triandis, 1993). That is, they reflect shared attitudes, beliefs, categorisations, norms, roles and values organised around a central theme. They are found among individuals who speak a particular language, and live in a specific geographic region during a specific historical period (Triandis, 1995).

The dimension of collectivism and individualism refers to an individual's perceptions toward him- or herself and others in social relationships (Pillai & Meindl, 1998). In an individualistic culture, people look to their own attitudes to understand who they are, whereas in a collectivistic culture, people base their self-understanding on the reactions of others (Earley, 1994). Collectivism also involves the subordination of individual goals to group goals and an emphasis on work group co-operation (Early, 1989: Triandis, 1989). As traditionally conceptualised, individualism-collectivism is a dimension of culture at the societal level, but it can also be conceptualised at organisational and group levels (Wagner & Moch, 1986). Recent trends towards team-based organisations and empowerment suggest that collectivism is especially important to organisations (Pillai & Meindl, 1998). Collectivism may sometimes seem similar to cohesiveness, commitment or conformity, but it is distinguishable from these concepts in that it is an orientation toward person-group relationships in which the relationships are viewed as being permanent and central (Wagner, 1995). Miller (1984) has shown that collectivists pay more attention to the situation or context than individualists do when it comes to making judgements about people and the appropriateness of behaviours in various situations. The emphasis on context over content is especially important in understanding cultural differences in communication patterns (Triandis, 1994, Chapter 7).

Individualism is the tendency to treat the self as the most meaningful social unit (Robert & Wasti, 2002). Individualistic societies stress the development and differentiation of a unique personality and identity. Autonomy and the importance of personal goals and needs are given priority (Robert & Wasti, 2002). In contrast, the most meaningful social units in collectivist societies are the groups to which people belong, such as the family, neighbourhood, or workplace, and a person's identity is defined by membership in these groups (Robert & Wasti, 2002). In collectivistic societies, the impact of group membership on self-definition results in a desire to maintain in-group harmony, and a tendency to subordinate personal preferences and priorities to those of the group (Triandis, 1995).

Traditionally, individualism and collectivism have been conceptualised as opposite ends of a uni-dimensional continuum (Hofstede, 1980). However, more recent research has suggests that the syndromes of individualism and collectivism are independent or discrete dimensions, because both co-exist in all individuals (Triandis, 1995) as well as in all societies (Chinese Cultural Connection, 1987; Schwartz, 1994; Triandis *et al.*, 1986). It is argued that individuals and groups activate one or the other syndrome depending on the situation. The classification of a society as individualistic or collectivistic is based on the degree to which individualistic or collectivistic values, norms, beliefs, and assumptions apply in a majority of contexts and to a majority of members of that society (Robert & Wasti, 2002). Similarly, although individuals can vary broadly within a given society, the identification of an individual as idiocentric or allocentric reflects the individual's relative probability of behaving in a way that is consistent with individualism or collectivism in a majority of contexts (Robert & Wasti, 2002). Thus the abstract values, beliefs, norms and assumptions comprise independent, discrete dimensions, but in any specific context an individual tends to view the values, beliefs, norms and assumptions associated with either individualism or collectivism as more relevant to that situation (Robert & Wasti, 2002).

2.2.4 *Allocentrism and idiocentrism*

Cultural syndromes are also present at the individual level of analysis (Schwartz, 1994) and there is considerable support for the contention that individualism and collectivism can be measured and conceptualised as individual differences (Triandis, 1995; Wagner, 1995). These individual differences are called idiocenitrism and allocentrism, respectively (Triandis, Leung, Villareal & Clack, 1985). Idiocentrism is characterised by adherence to notions such as independence, uniqueness and self-reliance; while allocentrism is suggestive of interdependence, belongingness to in-groups and subservience to the wishes of the in-group (Robert & Wasti, 2002). Whereas individualism and collectivism represent the general attributes of a given culture, the terms "idiocentrism" and "allocentrism" have been used to measure the individual-

level orientations that reflect these cultural values (Triandis, 1989). In 1989 Triandis suggested using idiocentrism and allocentrism to capture within-culture variation in personality attributes. Idiocentrics view the self as being separate from others, are concerned with achievement, and give priority to personal goals over the goals of collectives (Lam, Chen & Schaubroek, 2002). Conversely, persons scoring high on allocentrism view the self as inseparable from the others in an in-group (Lam *et al.*, 2002). They are so concerned with interpersonal harmony that, when they do distinguish between personal and collective goals, they subordinate their personal goals to the collective goals. From the individual perspective, according to Triandis (1989), idiocentrism and allocentrism are distinct constructs measurable along a normal distribution. Common societal influences tend to make one of these two dimensions higher on the average in any particular societal culture; however, individuals often differ from their society's trends (Lam *et al.*, 2002). Idiocentric persons are less motivated to co-operate with other group members outside the context of their individual roles, and thus collective efficacy cognitions have little primacy. Because they value individual achievement and autonomy, "idiocentrics" can be expected to use influence opportunities as a means of pursuing the rewards associated with effective individual performance. Lam *et al.* (2002) also observed that allocentrism (aggregated to a work-group level) and idiocentrism, mediated the relationships between the societal differences in group and individual performance, respectively. These findings suggest that allocentrism and idiocentrism are powerful individual differences that, although cultivated differently in particular societies, also have meaningful influences on behaviour, irrespective of societal boundaries.

2.2.5 *Initial research on leadership style*

From the early work on a one-dimensional model of leadership (Katz, Maccoby, & Morse, 1950), to the two-dimensional model of initiating structure and consideration (Stogdill & Coons, 1957), to recent transformational-charismatic leadership theory (Bass & Avolio, 1993; Conger & Kanungo, 1988; Shamir, House, & Arthur, 1993), the field has witnessed significant advances in theory

development and empirical work (Lim & Polyhart, 2004). Burns (1978) first introduced the concepts of transformational and transactional leadership in his treatment of political leadership. As Conger and Kanungo (1998) noted, to Burns the difference between transformational and transactional leadership is in terms of what leaders and followers offer to one another. It was the conceptual work by House (1977) and Bass (1981) that brought the concept of transformational leadership to the forefront of leadership research. To Burns (1985), transactional leadership is more common-place than is transformational leadership, if less dramatic in its consequences. Bass (1985) did not agree with Burns that transformational and transactional leadership represent opposite ends of a single continuum. Bass argued that that transformational and transactional leadership are separate concepts, and further argued that the best leaders are both transformational and transactional. Bass elaborated considerably on the behaviours that manifest transformational and transactional leadership. Although the theory has undergone several revisions, in the most recent version there are four dimensions of transformational leadership, three dimensions of transactional leadership, and a non-leadership dimension (Judge & Piccolo, 2004).

Until the 1980's, most leadership research focused on transactional leadership (Bass, 1998; Yukl and Van Fleet, 1992). Today, transformational leadership is viewed as the most prominent topic in the current research and theories of leadership (Bass, 1998; Pawar & Eastman, 1997). Burns (1978) used the term transforming leadership to refer to individuals who recognize the existing needs of potential followers, but go further, seeking to satisfy higher needs to engage the full person of the follower in terms of Maslow's hierarchy of needs (Bass, 1985).

2.2.6 *Transactional leadership*

Transactional leaders tend to focus on the short-term goals and needs of their followers because transactional leaders operate predominately through an economic model, as exemplified by path-goal theory (Koh, Steers, & Terborg,

1995). Transactional leadership behaviours are aimed at monitoring and controlling employees through rational or economic means (Bass, 1985). *Contingent reward* refers to leadership behaviours focused on exchange of resources (Bono & Judge, 2004). That is, leaders provide tangible or intangible support and resources to followers, in exchange for their efforts and performance. *Management by exception–active* refers to monitoring performance and taking corrective action as necessary (Bono & Judge, 2004). The focus of management by exception is on setting standards and monitoring deviations from these standards (Bono & Judge, 2004). In the less active version of management by exception (*management by exception–passive*), leaders take a passive approach, intervening only when problems become serious (Bono & Judge, 2004). Finally, Bass (1985) included *laissez-faire* under the transactional leadership label, though it can be thought of as non-leadership or the avoidance of leadership responsibilities.

It is interesting that across the four study settings (business, college, military, and public sector) that Judge and Piccolo (2004) analysed, contingent reward worked best in business settings. It is possible that this is so because contingent reward leadership is resource dependent (Judge & Piccolo, 2004). Specifically, business leaders may be better able to tangibly reward followers in exchange for their efforts (Judge & Piccolo, 2004).

2.2.7 *Transformational leadership*

Burns (1978) introduced the distinction between transactional and transformational leaders, and Bass (1985) identified eight dimensions of leadership behaviours covering these two broad domains. The first transformational leadership behaviour, *idealized influence*, refers to leaders who have high standards of moral and ethical conduct, who are held in high personal regard and who engender loyalty from followers. The second transformational leadership behaviour, *inspirational motivation*, refers to leaders with a strong vision for the future based on values and ideals. Leader behaviours falling into this dimension include stimulating enthusiasm, building confidence and inspiring

followers using symbolic actions and persuasive language. The idealized influence and inspirational motivation dimensions are highly correlated and are sometimes combined to form a measure of charisma (Bass, 1998, p. 5). The third transformational leadership dimension is *intellectual stimulation*, which refers to leaders who challenge organisational norms, encourage divergent thinking, and who push followers to develop innovative strategies (Bono & Judge, 2004). *Individual consideration*, the fourth transformational leadership dimension, refers to leader behaviours aimed at recognizing the unique growth and developmental needs of followers as well as coaching followers and consulting with them (Bono & Judge, 2004).

Managers at Federal Express who were rated as transformational received higher performance evaluations (Hater & Bass, 1998). Transformational leadership appears to produce higher performance at a group level (Sosik, Avolio, & Kahai, 1997) and a organisation or business unit level (Howell & Avolio, 1993). This is supported by other research, which found that transformational leaders are capable of developing important team processes such as unit cohesion, team potency, collective efficacy, organisational trust and commitment, a sense of higher purpose or shared vision (Bass *et al.*, 2003; Shamir *et al.*, 1993).

A "*fundamental*" (Bass & Avolio, 1993, p.69) proposition of transformational-transactional leadership theory that has been often discussed, but little tested, is the augmentation effect. The augmentation effect stipulates that transformational leadership adds to the effect of transactional leadership. Bass (1998) described this effect as the degree to which "*transformational leadership styles build on the transactional base in contributing to the extra effort and performance of followers*" (p.5). Bass (1999) went even further in commenting "*the best leaders are both transformational and transactional*" (p.21). Howell and Avolio (1993) agreed with this viewpoint, stating that transformational leadership complements transactional leadership and that effective leaders often supplement transactional leadership with transformational leadership. Others have interpreted the augmentation hypothesis to suggest that

transformational leadership adds beyond transactional leadership, but not vice versa (Bycio, Hackett, & Allen, 1995). This raises the possibility that whatever validity there is to transactional leadership, it is due to its association with transformational leadership (Judge & Piccolo, 2004). Bass (1998) commented that there are theoretical reasons to believe that transformational leaders will use transactional leadership and noted "*consistent honouring of transactional agreements builds trust, dependability, and perceptions of consistency with leaders by followers, which are each a basis for transformational leadership*" (p.11).

2.2.8 *Organisational commitment*

Organisational commitment in this research really focuses on what is defined by Mowday, Steers & Porter, (1979) as attitudinal commitment. Attitudinal commitment exists when "*the identity of the person is linked to the organization*" (Sheldon, 1971, p. 143) or when "*the goals of the organization and those of the individual become increasingly integrated or congruent*" (Hall, Schneider & Nygren 1970, p. 176). Attitudinal commitment thus represents a state in which an individual identifies with a particular organisation and its goals and wishes to maintain membership in order to facilitate these goals. As noted by March and Simon (1958), such commitment often encompasses an exchange relationship in which individuals attach themselves to the organisation in return for certain rewards or payments from the organisation.

Hence, commitment emphasizes attachment to the employing organisation, including its goals and values, while satisfaction emphasizes the specific task environment where an employee performs his or her duties (Mowday *et al.*, 1979). Commitment attitudes appear to develop slowly, but consistently, over time as individuals think about the relationship between themselves and their employer (Mowday *et al.* 1979). Many studies have reported significant association between organisational commitment and turnover intentions (Ferris & Aranya, 1983; Hom, Katerberg, & Hulin, 1979; Mowday *et al.* 1979; O'Reilly & Caldwell, 1980; Stumpf & Hartman, 1984). In terms of organisational

commitment, this work will focus on affective organisational commitment, which describes an individual's psychological attachment to an organisation through such feelings as loyalty, affection and belonging. Similar to work done by Walumbwa & Lawler (2002).

2.2.9 *Job satisfaction*

Job satisfaction is defined as a multi-dimensional construct and includes satisfaction with co-workers, with supervisors and with work in general (Walumbwa & Lawler, 2002). The job description index (JDI) is one of the most widely used measures of job satisfaction today (Yeager, 1981). An advantage of the JDI is its applicability across a wide variety of demographic groups (Golembiewski & Yeager, 1978). Unfortunately, job satisfaction is only slightly related to job performance (Iaffadano & Muchinsky, 1985; Petty *et al.* 1984). As Steers stated "*the fact that workers are satisfied does not mean they will necessarily produce more, only that they are satisfied*" (1981, p. 309). The relationship is moderated by many influences, such as rewards and an individual's requirements for satisfaction (Petty, McGee & Cavender 1984).

McFarlane Shore and Martin (1989) found that organisational commitment was more strongly related to turnover intentions rather than job satisfaction, for bank tellers, but not for professionals. The difficulty in choosing one measure over the other to predict employee behaviour (such as turnover intentions), is that the strength of the relationship seems to be context-specific. Therefore, both are being used in this study.

2.3 Literature review summary

The constructs of transformational and transactional leadership are well established and been thoroughly researched in many contexts. These constructs are stable and reliable for research (Judge & Piccolo, 2004). The culture constructs of allocentricity and idiocenricity have also been extensively investigated and have been shown to have very good validity and reliability

(Triandis, 1995). Leadership style and individual culture are connected by means of congruence. There is a significant relationship between the two (Agarwal *et al.*, 1999; House & Aditya 1997). Therefore, leadership style and individual culture have been combined as “behavioural inputs”. They represent behaviour by staff; leadership behaviours by managers and supervisors, and the cultural behaviour of each individual employee.

Organisational commitment has been researched since it was first defined in 1979 by Mowday *et al.*. Job satisfaction is a well-understood and widely used construct (Yeager, 1981). However, these two constructs overlap considerably in their relation to employee behaviour, such as turnover intention (McFarlane Shore & Martin, 1989). The relationship was shown by McFarlane Shore and Martin (1989) to be context-specific. Thus, it was decided they should be combined to produce a more stable and reliable predictor of employee behaviour. These combined satisfaction and commitment constructs have been labelled “organisational outcomes. These outcomes are taken to be loyalty, affection to the organisation and work satisfaction, and are benefits to the organisation.

2.4 Propositions to be tested

Although a great deal of work has been carried out in the areas of culture, leadership style, organisational commitment and job satisfaction, proving causality and understanding how these subjects interact has been challenging. The gap in linking the behaviours (leadership style and culture) to organisational outcomes (organisational commitment and job satisfaction) has not been attempted. Identifying and understanding the nature of this connection is the purpose of this investigation.

2.4.1 *Proposition 1*

One of the Rho factors which has a positive effect on organisational outcomes will be based on congruence between individual culture and leadership style.

3 RESEARCH METHODOLOGY

3.1 Research methodology / paradigm

The research will be performed using a survey questionnaire similar to the one designed and administered by Walumbwa *et al.* (2007).

3.2 Research design

This research will be conducted using a self-administered, cross-sectional questionnaire. This research was idiographic as it obtained information from a single case. In order to determine the underlying factors that link the observed behaviours, leadership and cultural behaviour, to the organisational outcomes (organisational commitment and job satisfaction), quantitative data is required. Quantitative data was used to perform the requisite analysis to discover the interdependent factors. Sufficient sample sizes are easier to obtain with a questionnaire because they are undemanding to distribute and collect. A survey allows people to respond to the dimensions and constructs identified for the research. This provided the researcher with the ability to quantify and understand the perceptions of respondents. The depth of information will not as great as an in-depth interview but will be sufficient for the analysis. Thus a survey provided the best compromise between the time spent collecting data, obtaining quantitative data and a sufficient sample size.

3.3 Population and sample

3.3.1 *Population*

The population for this research are employees in the chemical industry. The sample frame is chemical distributors. There is no expected fundamental bias in this sample frame.

3.3.2 *Sample and sampling method*

The sample was limited to employees in the chemical distribution sector dealing primarily with supplying raw materials to the manufacturing sector. The majority of the sample was expected to consist of sales representatives, account managers and product managers. Organisational research that use high-level managers as respondents pose problems, according to Triandis (1995), as wealth and education are likely to be associated with particularly high levels of individualism. This may make such samples immediately suspect as unrepresentative of their broader societal culture (Robert *et al.* 2000). Thus, high-level have been excluded from the survey so the profile of respondents more closely represents the typical South African workplace.

The sales managers were approached to initially distribute the questionnaires and then, once complete, they were collected by the researcher. A convenient sample of companies from around the Gauteng province was selected. A sample of approximately 200 respondents was approached. However, a response rate of only 50% was achieved, resulting in a sample of 101.

The cultures have been defined according to the individualism-collectivism dimension as described by Hofstede (1980). This means culture has been defined by only these two broad terms and this research has not considered any other dimensions to define culture. Thus, some richness and detail has been sacrificed when investigating culture.

It should be noted that culture may differ at different levels within a firm's hierarchy. Culture may be more individualist at senior positions with managers being assessed, led and rewarded on an individual basis.

Particular industries might be biased towards a particular culture because of the nature of the business: most of the business' employees operate alone (e.g. car salesman) and the business, therefore, hires people who prefer to work alone. Evidence provided by B. Schneider and colleagues (e.g., B. Schneider, Smith, Taylor, & Fleenor, 1998) suggests that through the processes of attraction, selection, and attrition (ASA), organisations tend to be composed of members

who are similar to each other and who are different from individuals in other organisations, even when those other organisations are in the same industry. As the majority of the sample of the sample will consist of sales representatives and product managers there should be little bias towards either collectivist or individualist culture during the hiring and training processes.

Individual differences do moderate the leadership traits preferred (Walumbwa *et al.* 2007). A sufficiently large sample has been chosen to account for any bias this may introduce to the results of the survey.

3.4 The research instrument

The survey used closed-ended questions and specific factors were loaded into the various questions. The constructs that were used to determine the interdependent factors have been developed and justified in the literature review. A Likert-type scale was used to record the responses. The questionnaire was broken into three main sections. The first section had general demographic questions such as age, education and race.

The second section of the questionnaire investigated the input behaviours. This was further broken down into sub-sections: leadership behaviours and individual cultural behaviours. Only two styles of leadership have been used as a basis for designing the questionnaire. This limits the results to investigating one of two broad leadership styles: transformational or transactional. The questions about leadership behaviour were designed around the constructs of transformational and transactional leadership and are similar to those in the Multifactor Leadership Questionnaire (MLQ) developed by Bass and Alvolio (1995). The questions about individual cultural behaviour are based on the findings of Triandis *et al.* (1995), where the most reliable measures for idiocentrism (individualism) and allocentrism (collectivism) were methods that tested the social content of self, behavioural content of self and own goals vs. parent's goals.

The third section of the questionnaire focused on the organisational outcomes. This is split into sub-sections of organisational commitment and satisfaction with the supervisor. The measurement of organisational commitment utilised questions directly from, or based upon, the work of Mowday *et al.* (1979). Determination of satisfaction with the supervisor used items from the Job Descriptive Index (JDI) developed by Smith, Kendall & Hunlin,(1969). The questionnaire can be found in Appendix A.

3.5 Procedure for data collection

The survey questionnaire was handed out to employees and they were asked to complete the questionnaire. The data from the questionnaires was then captured on a spreadsheet for analysis.

3.6 Data analysis and interpretation

The data was analysed using Rho factor analysis (Stacey, 2012). This is a multivariate multiple regression technique that has the advantage of exploratory factor analysis between two sets of data, i.e. "behavioural inputs" and "organisational outcome". The "behavioural inputs" data will consist of information gathered from section two of the questionnaire described above. Thus, data on leadership behaviour and culture will make up this data set. The "organisational outcome" data set will consist of responses to questions about organisational commitment and supervisor satisfaction.

3.6.1 *Rho factor analysis*

This method has been designed to combine the reduction power of exploratory factor analysis with the descriptive power of correspondence analysis (Stacey, 2012). Rho factor analysis is applied to a set of observed variables to identify the underlying factors that define the relationships between a subset of the variables (known as predictor variables) and the remaining variables (known as criterion variables) (Stacey, 2012). This technique assists with interpretation of

the relationship between the predictor and criterion variables by reducing the dimensionality so that the relationship can be projected into a two-dimensional subspace in a manner that retains as much of the original relationships as possible (Stacey, 2012). The main advantage of this technique is that there is no theoretical requirement of a causal link between the subsets of variables; the factors are the relationships, or linkages, between the subsets (Stacey, 2012).

Rho factor analysis will identify any linking factors between two subsets of data (Stacey, 2012). Causality does not need to be proved and the structure of the relationship between the two subsets will be described (Stacey, 2012).

Figure 2 is an illustration of the model developed from the literature review.

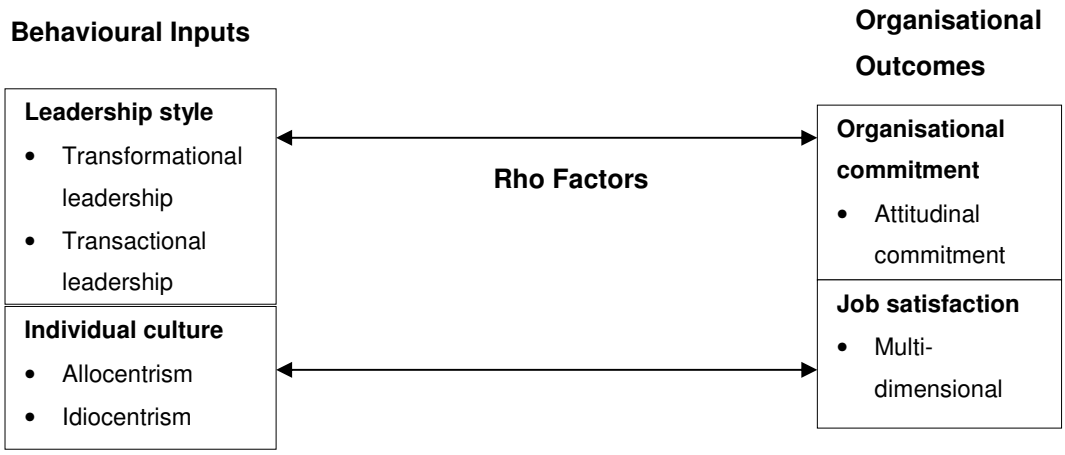

Figure 2: Visual representation of proposed model

Rho factor analysis is closely related to canonical correlation analysis. Canonical analysis will be discussed in order to position interdependent factor analysis as a statistical method. This will highlight the similarities and important differences in each technique and how Rho factor analysis addresses some of the short-comings of canonical analysis.

a. *Canonical correlation analysis*

Canonical correlation is a statistical method for assessing the relationship between variables (Hotelling, 1936). Canonical analysis was first introduced by Hotelling (1936).Canonical analysis allows the investigation of the nature of the relationship between two sets of variables (Hoetlling, 1936). In general, the objectives of canonical analysis are to: determine which variates from each set of variables are maximally correlated (*v* and *u* in Figure 3); determine the magnitude of the relationships between the variates; and to explain the nature of any relationships between the sets of variables (Alpert and Peterson, 1972). Canonical correlation analysis is illustrated in Figure 3.

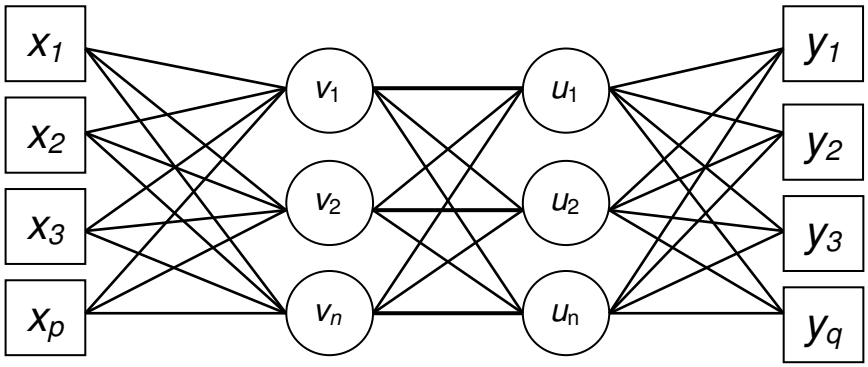

Figure 3: Visual representation of canonical correlation analysis

Canonical correlation analysis is a dependence technique and allows assessment of the relationship between a number of independent and dependent variables (Tofallis, 1999).

Interpretation of canonical analysis is an area where concern has been raised by a number of researchers over the years (Kerlinger, 1973; Nie *et al*, 1970; Cliff and Krus, 1976; Alpert and Peterson, 1972). The analysis can produce clearly defined variates that may not make any sense to the researcher (Kelinger, 1972). One of the reasons is that because canonical correlations are maximal by their nature, the relationships between sets of variables are overstated (Alpert and Peterson, 1972). Another drawback is the sensitivity of the method to multicollinearity and sampling error, which can render results

unstable (Alpert and Peterson, 1972). This sensitivity of the analysis also manifests itself when there is a high bivariate correlation between a variable in set *X* and another variable in set *Y* (Alpert and Peterson, 1972). If this is the case, then the first sample would have to be cross-validated with a second sample to counteract this instability (Alpert and Peterson, 1972). A second sample is not often a practical solution as the subsequent analysis is time consuming and may not contribute much information for the effort involved (Alpert and Peterson, 1972). Another challenge in interpreting canonical analysis is that a variable can be assigned to another relationship because it possesses a slightly higher correlation with that variate (Alpert and Peterson, 1972). This can influence the understanding of the canonical relationship, although it might not have an impact on predicting the relationship (Alpert and Peterson, 1972).

b. *Rho factor analysis*

In summary, canonical analysis does not have the ability to:

- Describe the structure of the relationship between two multivariate sets of data , which are not necessarily dependent and independent variables,
- Reduce the interdependencies in the relationships to a single set of variates,
- Depict the two sets of variables and observations on a common set of axes (Stacey, 2012).

Rho factor analysis shares the characteristics of both canonical correlation analysis (in that it analyses the relationship between multivariate data sets) and exploratory factor analysis (in that it determines underlying structure) (Stacey, 2012). A visual representation of interdependence factor analysis is shown in Figure 4.

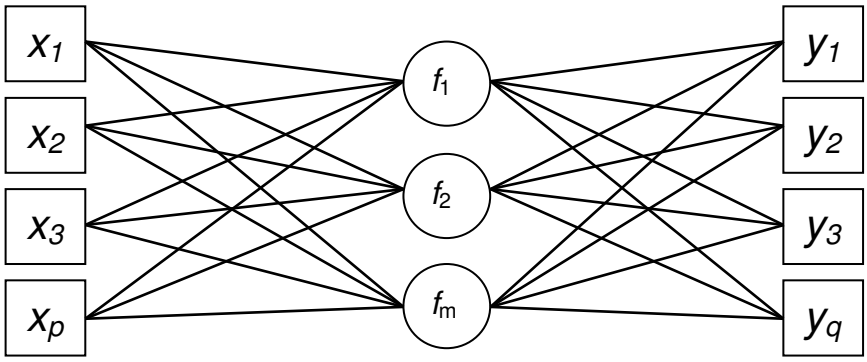

Figure 4: Visual representation of Rho factor analysis

The analysis will identify the factors, which are common to both data sets.

3.7 Limitations of the study

The sample was taken from chemical companies around Gauteng. This was done for convenience, and as a result, might not reflect the culture or preferred leadership style for the whole of South Africa.

The findings of this study are limited by its cross-sectional design and by use of a single source method of data (Walumbwa *et al.*, 2007).

The four dimensions of transformational leadership are combined to form a single scale of transformational leadership (Walumbwa *et al.* 2007). This is supported by the findings of Yukl (1999) where some constructs tested by the MLQ, namely idealized influence and inspirational motivation, are not clearly differentiated. Transformational leadership can be viewed as multi-faceted construct and it is thus possible that the different facets of transformational leadership may interact differently with individual differences and societal values to produce different results (Walumbwa *et al.* 2007).

Triandis and Gelfand (1998) showed that both individualism and collectivism may be *horizontal* (emphasizing equality) or *vertical* (emphasizing hierarchy) and that this is a viable and important distinction. However, this study has not considered individualism or collectivism taking the horizontal or vertical attributes into account.

3.8 Validity and reliability

It is desired that meaningful and defensible conclusions be drawn from the research conducted in this study. To achieve this, factors affecting the validity of this research were considered. The validity of the research refers to the "accuracy, meaningfulness, and credibility" of the study in its entirety (Leedy & Ormrod, 2001).

3.8.1 *External validity*

External validity refers to the extent to which the conclusions drawn in this study can be "generalised to other contexts" (Leedy & Ormrod, 2001). This has been addressed by selecting a sample, which is representative of the typical South African working environment. The issue of culture shifting towards individualism higher up the organisational ladder is counter-acted by surveying employees who are lower in the organisation's hierarchy. The sample has been chosen to be applicable to the general chemical industry within South Africa. The constructs used for this research have been used in many areas of research and so are applicable to other contexts beyond the industry chosen for the survey (Judge & Piccolo, 2004, Petty *et al*. 1984).

3.8.2 *Internal validity*

Internal validity refers to the extent to which the researcher can draw "accurate conclusions" from the study (Leedy & Ormrod, 2001). Meta-studies have been conducted which show that the methodology and constructs being evaluated do have sufficient validity and discriminatory power (Judge & Piccolo, 2004, Petty *et al*. 1984). The questions are designed to be clear to avoid any ambiguity. The questionnaire was piloted to ensure the questions are clear and concise. The constructs chosen for the research have been shown, by the literature review, to be well researched and understood.

3.8.3 *Reliability*

Reliability refers to the extent to which the results are consistent within the study (Leedy & Ormrod, 2001). The research uses the same mechanism and identical questions to the work done by Walumbwa *et al.* (2007). The questionnaire utilises a Likert-type response scale for one of the sections. This response scale has been used extensively in research of this nature and has been shown to be a reliable instrument (Judge & Piccolo, 2004; Petty *et al.*1984).

4 RESULTS

4.1 Rho factor analysis

4.1.1 *Eigenvalues*

The magnitude of each eigenvalue is indicative of the degree of the cross correlation between the datasets contained within the corresponding Rho factor. The analysis revealed two dimensions which account for almost all of the data. This can be seen in the percentage of the variance in Table 1 and the scree plot in Figure 5. The first component accounts for 86.6% of the variance, while the second component accounts for 5.1% of the variance. The other components have been ignored due their eigenvalues being less than 1. The results on Table 1 are from analysing the factors when unrotated. The large difference between the eigenvalues for the two components demand that the factors be rotated and analysed again. This is done to try and assist with interpreting the results. However, this raised the debate of which set of factors should be rotated. Since a causal relationship does not have to be established for this method, it could be argued that either set of factors could be rotated. This can influence the results of the analysis. It was decided to continue the analysis using the unrotated factors to avoid influencing the clarity of the results. For the sake of curiosity the factors were rotated and the results of that analysis have been included in the accompanying CD. These rotated

dimensions have been included in the scree plot Figure 5. Once again only two dimensions had eigenvalues greater than 1.

Eigenvalue summary

Component	Initial Eigenvalues			Extraction Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	22.4838	86.599	86.599	22.484	86.599	86.599
2	1.3112	5.050	91.649	1.311	5.050	91.649
3	.6895	2.656	94.304	-	-	-
4	.3699	1.425	95.729	-	-	-
5	.2341	.902	96.631	-	-	-
6	.2263	.872	97.503	-	-	-
7	.1564	.602	98.105	-	-	-
8	.1302	.502	98.607	-	-	-
9	.1067	.411	99.018	-	-	-
10	.0934	.360	99.378	-	-	-
11	.0540	.208	99.586	-	-	-
12	.0385	.148	99.734	-	-	-
13	.0263	.101	99.835	-	-	-
14	.0183	.070	99.906	-	-	-
15	.0108	.041	99.947	-	-	-
16	.0076	.029	99.977	-	-	-
17	.0054	.021	99.997	-	-	-
18	.0005	.002	99.999	-	-	-
19	.0002	.001	100.000	-	-	-
20	.0000	.000	100.000	-	-	-

Table 1: Summary of the eigenvalues

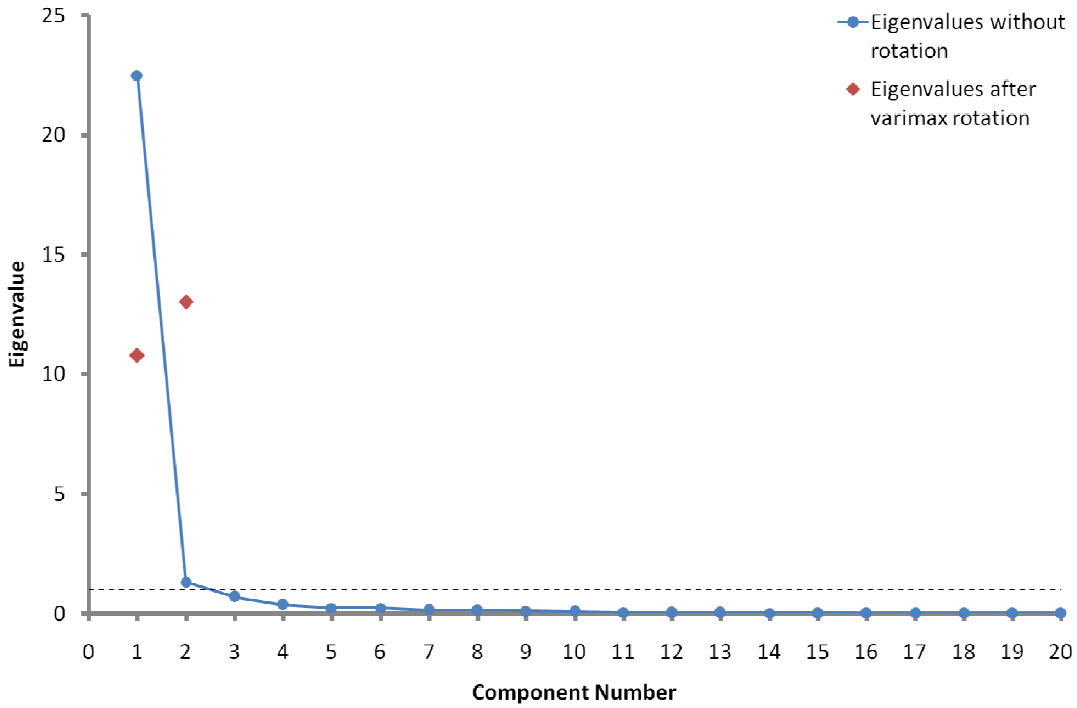

Figure 5: Scree of the eigenvalues

4.1.2 *Factor impacts*

The impacts of each factor for the two components, indentified in Section 4.1.1, were analysed and tabled next to each respective question containing that factor in Table 2. Any factors with a correlation less than 0.2000 were discarded to assist with the interpretation of the results. Component 1 had impacts from twenty three questions and Component 2 had impacts from seventeen questions. The impacts from the rotated factors have been included on the CD. Some of the impacts were expected to be negative as some questions had been framed in the negative to improve the validity and reliability of the results. However, Component 2 has numerous negative impacts and it is likely that these are not all due to negative framing of the questions. The factors underlying the questions can be found in Appendix B.

Unrotated factor impacts

		Component	
		1	2
Q1	My supervisor regularly articulates a compelling vision of the future	.2371	
Q2	My supervisor often makes clear what I can expect to receive when performance goals are achieved	.3399	
Q3	My supervisor regularly goes beyond self-interest for the good of the group	.3872	
Q4	My supervisor often focuses on mistakes, complaints and failures		
Q5	My supervisor regularly allocates time to help me develop	.3541	
Q6	My supervisor often helps me in return for my hard work	.2852	
Q7	My supervisor always looks for different approaches to solving problems	.3121	
Q8	My supervisor regularly expresses satisfaction when I do what is expected	.3257	
Q9	My supervisor often makes me feel honoured and happy to be working with him/her	.4112	
Q10	My supervisor usually refrains from direct involvement when serious problems arise		
Q11	My happiness depends very much on those around me		-.3407
Q12	My personal identity is very important to me		-.3344
Q13	I usually sacrifice my own interests for the benefit of my group		.2224
Q14	I'd rather depend on myself than others		-.2110
Q15	I feel good when I co-operate with others		
Q16	It is important that I do my job better than others		-.2000
Q17	It is important to me that I respect the decisions made by my team	.2020	.7124
Q18	I rely on myself most of the time		-.2039
Q19	The well-being of my co-workers is important to me		
Q20	When a co-worker is rewarded, I feel proud		
Q21	This organisation has a great deal of personal meaning for me	.2036	-.2365
Q22	I find my values and the organisation's are very similar	.2768	-.2008
Q23	It would take very little change in my present circumstances to cause me to leave this organisation		-.2588
Q24	I am proud to tell others that I am part of this organisation	.2340	-.2960
Q25	I feel very little loyalty to this organisation		
Q26	I am extremely glad that I chose this organisation to work for over others I was considering at the time I joined		
Q27	I could just as well be working for a different organisation as long as the type of work was similar		.3234
Q28	This organisation really inspires me to perform at my very best	.2794	
Q29	There's not too much to be gained by staying with this organisation indefinitely	-.2514	
Q30	For me this is the best of all possible organisations for which to work	.2434	-.3333
Q31	The people I work with are intelligent	.2270	.2329
Q32	I will not leave this organisation within the next year		.2632
Q33	I enjoy my work on most days	.2142	.2832
Q34	My job makes me want to work harder	.2296	
Q35	One of the things I especially enjoy about my job is working with my supervisor	.3936	
Q36	I would accept almost any type of job assignment in order to keep working for this organisation	.2501	
Q37	I often find it difficult to agree with this organisation's policies on important matters relating to its employees	-.2008	
Q38	I really care about the fate of this organisation	.2239	
Q39	Deciding to work for this organisation was a definite mistake on my part	-.2292	
Q40	I find my work challenging and interesting		.3965

Table 2: Factor impact values for Components 1 and 2

5 DISCUSSION

5.1 Analysis of Component 1

5.1.1 *Impact analysis*

The correlation analysis for Component 1, identified in the Rho factor analysis in Section 4.1.1 highlighted numerous significant impacts. The sign of these impacts and the factors underlying the question are given in Table 3.

Component 1		
Question	Correlation	Factor
1	Positive	Transformational leadership - inspirational motivation
2	Positive	Transactional leadership - contingent reward
3	Positive	Transformational leadership - inspirational motivation
5	Positive	Transformational leadership - individualized consideration
6	Positive	Transactional leadership – contingent reward
7	Positive	Transformational leadership - intellectual stimulation
8	Positive	Transactional leadership - contingent reward
9	Positive	Transformational leadership - charisma/idealised influence
17	Positive	Allocentrism
21	Positive	Organisational commitment - value commitment
22	Positive	Organisational commitment - value commitment
24	Positive	Organisational commitment - value commitment
28	Positive	Organisational commitment - value commitment
29	Negative	Organisational commitment - commitment to stay
30	Positive	Organisational commitment - value commitment
31	Positive	Job satisfaction
33	Positive	Job satisfaction
34	Positive	Job satisfaction
35	Positive	Job satisfaction
36	Positive	Job satisfaction
37	Negative	Job satisfaction
38	Positive	Job satisfaction
39	Negative	Job satisfaction/Organisational commitment

Table 3: Factors linked to Component 1

Questions 29, 37 and 39 are all framed in the negative. Thus, the impacts of these factors are in fact positive. Component 1 therefore has only positive impacts from all the factors. It is interesting to note that a number of factors had multiple impacts (i.e. the same factor had more than one significant correlation).

For example the organisational commitment-value commitment factor had five significant correlations.

5.1.2 *Interpretation of factors*

Duplicated factors presented in Table 3 have been removed and are displayed in Table 4, which provides a summary of the Rho factors which comprise Component 1.

Factor No.	Factor
1	Transformational leadership - inspirational motivation
2	Transactional leadership - contingent reward
3	Transformational leadership - individualized consideration
4	Transformational leadership - intellectual stimulation
5	Transformational leadership - charisma/idealised influence
6	Allocentrism
7	Organisational commitment - value commitment
8	Organisational commitment - commitment to stay
9	Job satisfaction

Table 4: Summary of the factors linked to Component 1

The Rho factors for Component 1 have been illustrated in Figure 6.

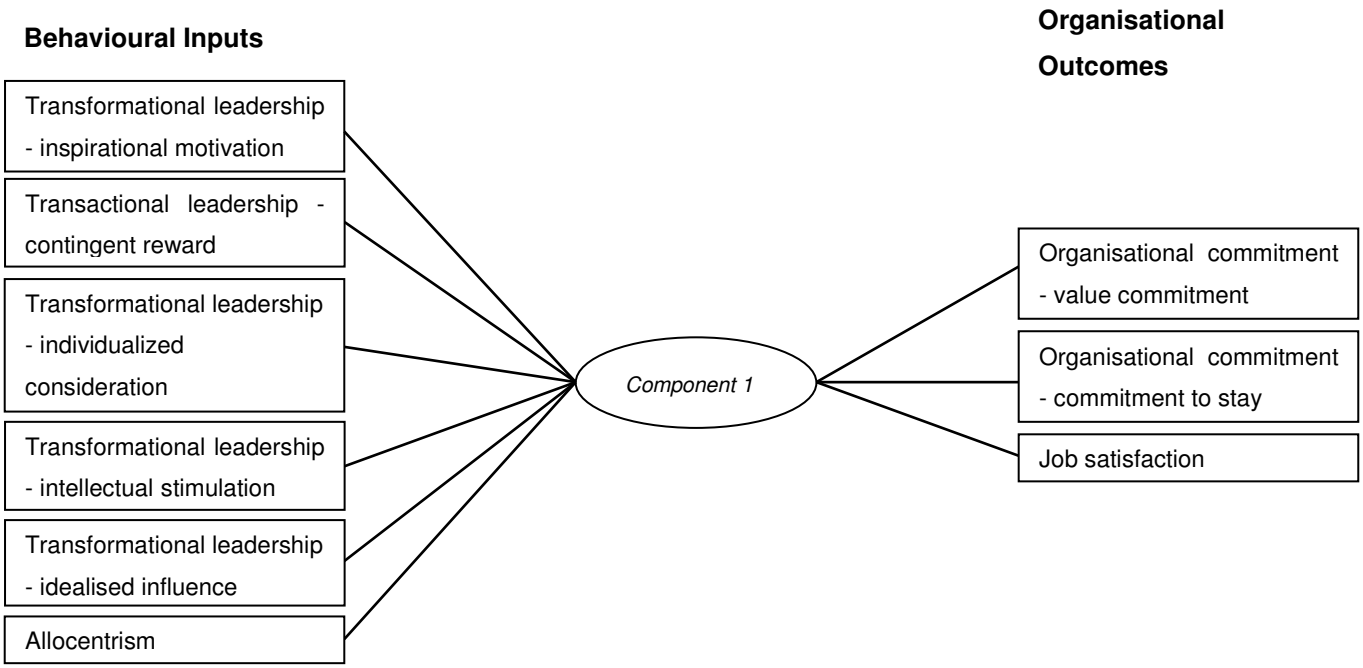

Figure 6: Visual representation of Rho factor analysis for Component 1

a. *Leadership style factors*

Component 1 consists of four transformational leadership behaviours and one transactional leadership behaviour. The first transformational leadership is inspirational motivation. As described in Section 2.2.7, this refers to having and articulating a vision of the future based on values and ideals (Bass, 1998, p. 5). The second transformational leadership behaviour is individual consideration. This behaviour involves recognising the need to develop people and actively participating in their growth (Bono & Judge, 2004). The third transformational leadership behaviour is intellectual stimulation. This behaviour involves the encouragement of divergent thinking and challenging organisational norms to become innovative (Bono & Judge, 2004). The fourth transformational leadership behaviour is idealized influence. This behaviour refers to having high standards of ethical and moral conduct (Bono & Judge, 2004).

The single transactional leadership behaviour is contingent reward. This behaviour focuses on rewarding employees for their efforts or performance (Bono & Judge, 2004). This factor was expected to be significant as the sample comprised mainly of salespeople. The expectation is that there would be rewards (such as commission or bonuses) for sales targets being achieved. Thus, contingent reward would be an expected behaviour from any sales manager and considered important to any member of a sales team.

These results suggest that the augmentation effect, discussed at the end of Section 2.2.7, between transactional and transformational leadership is taking place (Bass, 1998). Where the transactional leadership behaviour of contingent reward forms the basis of the relationship and the transformational leadership behaviours add beyond this relationship (Bycio, Hackett, & Allen, 1995). This results in greater effort from employees. All the behaviours discussed in Section 2.2.7 for transformational leadership have had an impact on Component 1. The only behaviour for transactional leadership that had an impact on Component 1 is contingent reward. If other behaviours for transactional leadership did have

an impact, or fewer behaviours for transformational leadership had had an impact, then it could be argued that both leadership styles contribute to the organisational outcomes. However, based on the evidence it is felt that the results are purely due to the augmentation effect of transformational leadership.

b. *Individual culture factors*

Allocentrism is the only cultural factor that has an impact on Component 1. This behaviour revolves around being subservient to the needs of the group and a sense of being part of a team (Robert & Wasti, 2002). There are ten questions to test for allocentrism in the questionnaire. Since this construct only had one noteworthy impact, allocentrism cannot be taken as general measure of individual culture. A number of impacts for individual culture would have indicated a general culture of either allocentrism or idiocentrism. Instead we have to look at the specific context of the question that produced an impact. Why did only this question about individual culture illicit a significant correlation? Question seventeen asks about the importance of respecting decisions made by the team. The specific context is therefore team-made decisions.

c. *Organisational commitment and job satisfaction factors*

As discussed in Section 2.2.9, organisational commitment and job satisfaction are highly correlated constructs (McFarlane, Shore & Martin, 1989). They will both be used as a measure of commitment to staying with the organisation. Value commitment refers to identifying with the organisations values, aims and goals. Commitment to stay and job satisfaction identify with intentions to stay with the organisation for a reasonable amount of time. As discussed in the literature review, depending on the context, job satisfaction or organisational commitment could be a predictor of intentions to leave the organisation. Since there are positive correlations to both constructs, we can be reasonably confident that the employees intend to stay with the organisation. This would result in a lower staff turnover rate.

d. *Describing component 1*

Component 1 consists of all the transformational leadership behaviours augmented by the transactional leadership behaviour of contingent reward. The employees who connect or identify with the leader also respect the importance of team-made decisions. This is linked to those employees who, identify with the organisation's values, wish to stay with the organisation and are satisfied with their work. Looking at all these influences on Component 1, it has been decided to describe component 1 as Transformational Team Leadership.

5.1.3 *Description of Transformational Team Leadership*

Transformational Team Leadership is a leadership style that involves rewarding people for their efforts or performance. The leader adds high ethical and moral standards, along with a strong and compelling vision of the future, to this foundation behaviour. The leader will also spend time developing employees and challenging them to think innovatively. The leader utilises the strength of his or her team to make decisions where appropriate. These behaviours lead to lower staff turnover due to employees committing to the organisation, the organisation's values, and being satisfied with their jobs.

The employee-leader relationship is built on the foundation of reward for effort. It was suggested by Bass (1998) that this creates a sense of trust upon which the relationship is built. The sense of trust will be enhanced if the leader behaves with high levels of ethical integrity. Trust and respect are the basis of any good relationship and therefore it is no surprise that behaviours which enhance a sense of trust and respect would be important to employees who wish to remain with the organisation.

The leader is expected to articulate a strong and compelling vision of the future. This is an expected behaviour as employees will not commit their future to an organisation which has unappealing prospects. Bass (1998) did note that the vision needs to be defined to make it more tangible. The vision also needs to be articulated using symbolic actions and persuasive language (Bass, 1998). A

leader simply saying that the future of the organisation is “good” will not be sufficient for most employees. If the vision does not have a sense of substance to it, people will not commit to that vision.

Transformational Team Leadership recognises the importance of individuals. The leader will develop and grow each employee according to their capabilities, which involves coaching and consulting with them (Bono & Judge, 2004). The leader is also expected to encourage divergent thinking in employees and challenge them to think outside organisational norms. This pushes employees to become innovative. In these instances the leader takes on a role of stimulating and mentoring individuals.

The decision to include “team” in the description of Component 1 was as a result of the impact of a specific context of allocentrism; the context of decisions made by a team. This is a construct not associated with transformational leadership and in fact, transformational leadership does not have constructs which refer to teams. The relevance and importance of teams in the workplace were discussed in the literature review. It was proposed that one of the Rho factors would reflect congruence between leadership style and individual culture. For Component 1 it cannot be said that this congruence exists. The factor of individual culture only applies to a specific context. The leader is expected to use the strength of a team to make decisions and to be subservient to the decision of the team. Disregarding the team’s decision would violate the trust which the subordinates have with the leader. It is believed that the use of a team for decision-making shows the leader has trust in his or her employees to make correct decisions. Thus, trust and respect are mutual between the leader and employees. These characteristics would enhance the relationship and should result in more motivated and better performing employees.

5.2 Analysis of Component 2

5.2.1 *Impact analysis*

The correlation analysis for Component 2 identified in the interdependent factor analysis in Section 4.1.1 highlighted numerous significant impacts. The factors and the sign of their correlations are given in Table 5.

Component 2		
Question	Correlation	Factor
11	Negative	Allocentrism
12	Negative	Idiocentrsim
13	Positive	Allocentrism
14	Negative	Idiocentrism
16	Negative	Idiocetrism
17	Positive	Allocentrism
18	Negative	Idiocentrism
21	Negative	Organisational commitment - value commitment
22	Negative	Organisational commitment - value commitment
23	Negative	Organisational commitment - commitment to stay
24	Negative	Organisational commitment - value commitment
27	Positive	Organisational commitment - commitment to stay
30	Negative	Organisational commitment - value commitment
31	Positive	Job satisfaction
32	Positive	Job satisfaction – withdrawal intentions
33	Positive	Job satisfaction
40	Positive	Job satisfaction

Table 5: Summary of the factors linked to Component 2

The numerous negative impacts have to be accounted for to explain the underlying relationship. The negative impact for question 11 indicates idiocentrism. Questions 12, 14, 16 and 18 had negative impacts for idiocentrism indicating a preference for allocentrism. The negative impacts for organisational commitment indicate non-commitment and a desire to leave the organisation. Question 23 is framed in the negative so a negative impact indicates a positive reaction to a commitment to stay. Question 27 is also framed in the negative, hence a positive impact indicates a desire to leave. Table 6 is a new summary of the factors accounting for the negative impacts.

Component 2	
Question	Factor
11	Idiocentrism
12	Allocentrism
13	Allocentrism
14	Allocentrism
16	Allocentrism
17	Allocentrism
18	Allocentrism
21	Organisational commitment - value non-commitment
22	Organisational commitment - value non-commitment
23	Organisational commitment - commitment to stay
24	Organisational commitment - value non-commitment
27	Organisational commitment - no desire to stay
30	Organisational commitment - value non-commitment
31	Job satisfaction
32	Job satisfaction - commitment to stay
33	Job satisfaction
40	Job satisfaction

Table 6: Corrected summary of the factors linked to Component 2

5.2.2 *Interpretation of factors*

Removing duplicated factors from Table 6 results in a summary of the interdependent factors which comprise Component 2 (Table 7).

Factor No.	Factor
1	Idiocentrism
2	Allocentrism
3	Organisational commitment - value non-commitment
4	Organisational commitment - commitment to stay
5	Organisational commitment - no desire to stay
6	Job satisfaction

Table 7: Summary of the factors linked to Component 2

The interdependent factors for Component 2 have been illustrated in Figure 7.

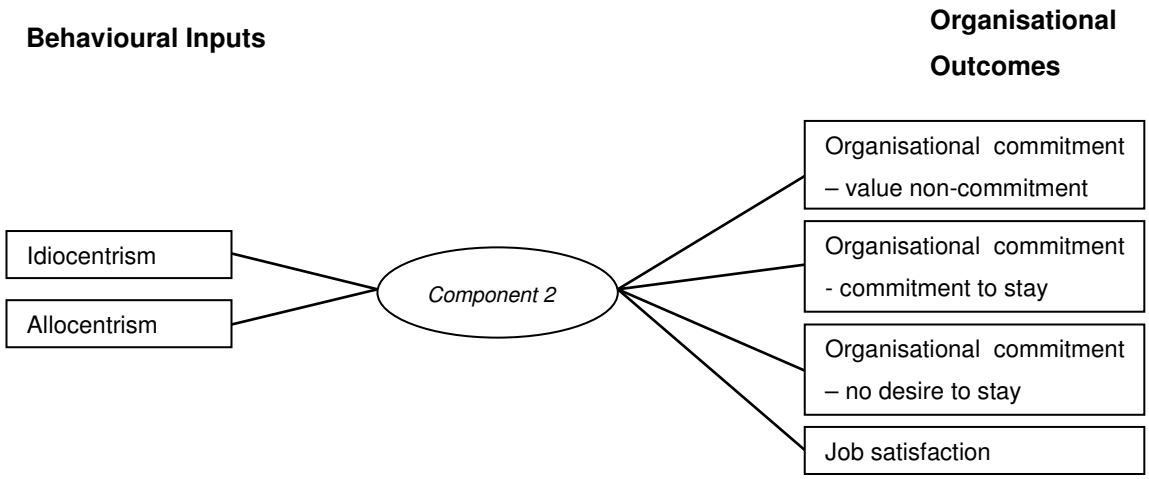

Figure 7: Visual representation of Rho factor analysis for Component 2

a. *Individual culture factors*

It will be immediately apparent that there are conflicting factors. Allocentrism has six impacts on Component 2, therefore it will be regarded as the dominant cultural factor. Since idiocentrism had only a single impact, the context for the question must be considered. Why does this particular question (question 11) result in a contrary factor having a significant correlation? Question 11 asks whether a person's happiness depends on those around them. The respondents indicated that their happiness is not dependent on others, hence, they put their needs second to the needs of the group and consider harmony in the team to be very important. However, they acknowledge that their happiness is dependent upon themselves and not the team. It was discussed in the literature review that both constructs of allocentrism and idiocentrism exist simultaneously, but one dominates over the other for most contexts. The results show that allocentrism is the dominant culture as it features in six contexts compared to the one context for idiocentrism.

b. *Organisational commitment factors*

There are five negative impacts for responses to organisational commitment, which represent an organisational non-commitment. The factors are thus non-commitment to the organisation's values and goals, and no commitment to stay with the organisation. They have been described in Table 7 as value non-

commitment and no desire to stay. This organisational non-commitment is dominant as there was only one positive impact for any commitment to the organisation. This contrary result could be due to the overlap between the constructs of organisational commitment and job satisfaction. This was discussed in Section 2.2.9 and it could be context-specific. This will be discussed after the results for job satisfaction factors have been discussed.

c. *Job satisfaction factors*

There are four positive impacts from the job satisfaction factor for Component 2, which indicates that the respondents are satisfied with their work. However, this sets up a conflict with the results from organisational commitment. The employees are satisfied with their work but are not committed to the organisation. On the surface this does not seem to conflict, however, turnover intentions can be more related to job satisfaction or organisational commitment depending on the context (McFarlane, Shore & Martin, 1989). Without further information, an inference as to which construct is more strongly related to turnover intentions cannot be made.

d. *Describing Component 2*

Component 2 consists of employees who are aware of the importance of harmony within a group. They are team players by nature. However, they do recognise that their happiness does not depend on the group. Although satisfied with their work, they also have conflicting feelings about the organisation and have no organisational commitment. This suggests that they can be swayed in their turnover intentions by having their work situation or if other members of the team are replaced. These conflicting results have led to the description of Non-committal Team Players.

5.2.3 *Description of Non-committal Team Players*

Non-committal Team Players are allocentric by nature and place a strong emphasis on in-group harmony and belonging (Robert & Wasti, 2002). They will

submit to any decisions made by the group and they are team players in every sense. However, they do acknowledge that their happiness is not dependent on the team, but on themselves.

Non-committal Team Players have conflicting loyalty to the organisation. They are definitely not committed to the organisation's goals and values and have a mixed commitment to staying with the organisation. The organisation has little importance to them, but they are satisfied with their work and generally enjoy their daily tasks.

Non-committal Team Players are not significantly influenced by leadership behaviours. The only way a leader could influence their turnover intentions would be to alter their work sufficiently that they become dissatisfied. This would only lead to negative results in the form of intentions to leave the organisation. It is possible for a leader to change the team and expect this to lead to dissatisfaction. However, Non-committal Team Players will always work to achieve harmony within the group. So this will not necessarily lead to job dissatisfaction. However, a leader will struggle to influence Non-committal Team Players positively.

5.3 Discussion of Transformational Team Leadership and Non-committal Team Players and the implications for managers

Figure 8 is a visual representation of Components 1 and 2 resulting from the Rho factor analysis.

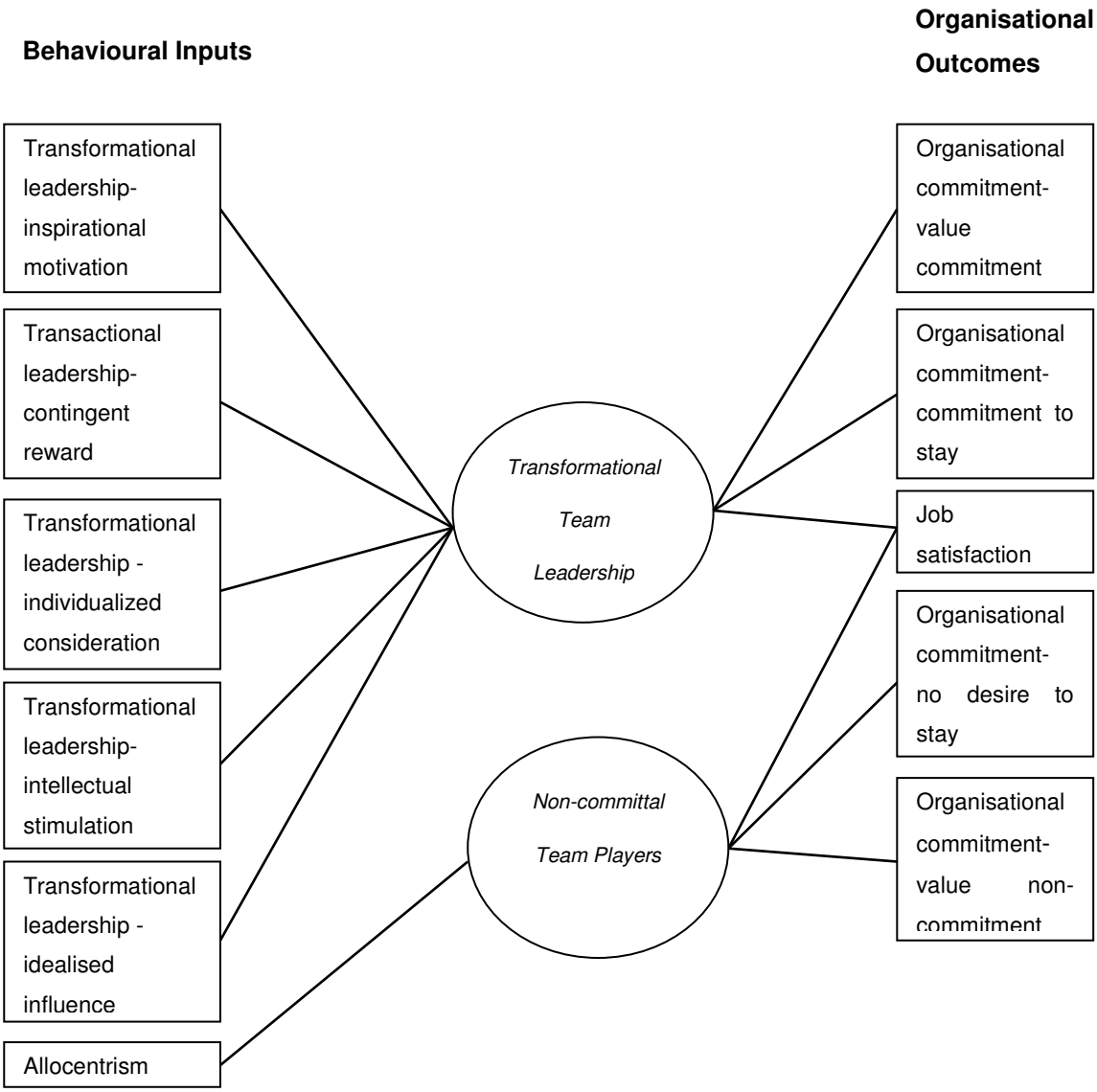

Figure 8: Visual representation of Rho factor analysis for Transformational Team Leadership and Non-committal Team Players

5.3.1 *Transformational Team Leadership*

The eigenvalue for Transformational Team Leadership was very high, which infers that this factor is very important to most employees. A manager in the chemical industry is therefore able to significantly influence organisational outcomes. The behaviours which employees feel are important have been noted in Section 5.1.2. A manager will have to firstly build trust using contingent

reward and then progress to the other behaviours, such as individually developing employees and using teams to make decisions. Thus, a manager will have to set targets and goals with corresponding rewards in order to develop a relationship with the employees. The importance of performing this rather simple exercise cannot be overstated and it is critical as the basis to developing positive work relationships.

While it was expected that transformational leadership would feature as a factor in the results, it is surprising how dominant its influence is. Employees want more from a manager than just chasing targets. They want a manager who has strong and positive vision of the future for the organisation and communicates it to them. It is understandable that employees would be more likely to stay with the organisation if the future is a positive one. Employees also want a manager who is ethically and morally beyond reproach as this would build trust in the relationship. Therefore, managers need to be cognisant of the values that influence their daily behaviour, not only towards employees, but in all interactions. Treating a customer unethically will affect the employee's perceptions of a manager, regardless of whether they are directly affected or not. Leaders need to be aware of these repercussions. Employees desire individual attention and development. It is expected that this results in higher commitment from employees as they are being offered opportunities to improve themselves and perhaps get promoted in the future. People will look to stay with an organisation where they feel they have good prospects. Although it is a similar behaviour, intellectual stimulation is a separate factor that employees desire. The manager should challenge an employee with problems. It goes hand-in-hand with developing an employee and utilising their improved capacities to solve problems and innovate. A good manager should be looking to do this regularly. It lightens the manager's workload and empowers the employee. It also opens up the possibility of some excellent ideas coming to light.

The factor of team-made decisions is a further extension of developing employees and challenging them intellectually. Rather than just utilising

individuals to solve problems, a team can be used. The combined intellect of a number of employees which have been developed to solve problems is a terrific resource to a manager. However, the problems that are chosen for a team must be chosen carefully. It must be one of sufficient complexity to give each member of the team a reasonable workload and intellectual challenge. It can take a long time for a team to reach consensus on a decision. A manager must be aware these factors in order to make use of the team successfully. Note that team work is a subject that is beyond the scope of this research; however these are just some basic guidelines on how to use a team appropriately. The manager must be subservient to the team's decision and trust is the underlying message behind using a team. The leader is showing he trusts his team to make important decisions. The individuals have been nurtured and challenged to improve and they are entrusted, as a collective, to resolve issues for the organisation. As with intellectual stimulation, the manager's workload is lightened, the employees are empowered and some powerful ideas could arise.

By utilising these behaviours, a leader can influence an employee's desire to leave the company, as well as the employee's job satisfaction.

5.3.2 *Non-committal Team Players*

The eigenvalue for Non-committal Team Players was low, but significant, which infers that a small percentage of employees will be Non-committal Team Players. As noted in Section 5.2.2, there are no leadership behaviours which influence this factor. These employees value team harmony above all else. Their personal culture is the dominant influence in their work lives. They have no commitment to the organisation, but are satisfied with their work. For a manager these people will be a difficult challenge as they will not respond to the Transformational Team Leadership behaviours, except when it comes to team-made decisions. This will appeal to their need to belong to a successful, harmonious team. However, this will not positively influence their desire to stay with the organisation. If they become dissatisfied with their work for any reason, there is a strong possibility they will leave. Managers have to recognise that

they have very little influence over such situations. They can only negatively influence these employees by altering their work so they do become dissatisfied and leave the organisation. This is a behaviour which could seriously damage the trust developed with other employees and it could be seen as a morally or ethically unacceptable behaviour. This would be contrary to the behaviours for Transformational Team Leadership.

Herein lies the challenge for a leader in the South African chemical industry: embrace the pro-active nature of Transformational Team Leadership and accept that Non-committal Team Players cannot be reached.

6 CONCLUSION AND FUTURE WORK

The problem of understanding leadership style and culture is still an area of active research. How they interact and the complexity of these interactions are still areas of debate and on-going investigation. This research concentrated on the South African chemical industry to offer managers insights relevant to their own work situation. The constructs being investigated were limited to four well-established, stable and reliable constructs. Interdependent factor analysis was used to analyse the results as causality would not have to be proven and the links between behavioural inputs and organisational outcomes could be shown.

It was decided to leave the data of the interdependent unrotated to assist with the interpretation of the results. This did raise a question around the use of interdependent factor analysis: which data set should be rotated? As causality does not have to be proved, it could be argued that either data set could be rotated. A further investigation should be done to determine how rotating one dataset or the other would influence the results. The impact of the rotation could result in completely different interpretations of the same data. This will only be elucidated by further study.

Two significant dimensions were revealed by the interdependent factor analysis: Transformational Team Leadership and Non-committal Team Players. Transformational Team Leadership had a high eigenvalue, showing that this

dimension accounts for a large amount of the data captured in the survey. This dimension is linked to six behaviours a manager can adopt in the workplace. This dimension is also positively linked to organisational commitment and job satisfaction. Thus, a manager can positively influence a subordinate's intentions to leave the organisation by employing these six behaviours.

The second dimension uncovered in the research is Non-committal Team Players. No leadership behaviours will influence this dimension. The dimension is linked positively to allocentrism and job satisfaction, but negatively to organisational commitment. A leader will have to accept that they cannot positively influence such people and that they might leave the organisation at some point regardless of what the leader does.

It was proposed that one of the Rho factors would show a need for congruence between leadership style and culture. It was expected that this fit would result in a positive link to the organisational outcomes. However, the research has shown almost the opposite. Transformational Team Leadership has only a single cultural connection. And that is only in the specific context of teams making decisions. Non-committal Team Players have no link whatsoever to leadership style. Thus, congruence of leadership style and individual culture is either unnecessary or has very little influence on employees in South African chemical industry.

The power of the research could be improved by surveying more people in the chemical industry. A larger survey might reveal more dimensions or more details to the current dimensions identified. Other leadership styles and cultural factors can also be investigated. Allocentrism and idiocentrism are just two of a number of cultural constructs that affect how employees behave. Perhaps group as opposed to individual culture might elucidate other Rho factors that influence workplace behaviour. Other leadership constructs can also be tested using the same methodology. The survey can be expanded to other industries to see whether the same dimensions are present. The survey could further be expanded to compare the dimensions in different regions or countries. As

culture can vary between populations, it would be interesting to see if the dimensions change accordingly.

REFERENCES

Adelman, I. and Morris, C. T. (1967*) Society, Politics and economic development: A quantitative approach*, Johns Hopkins Press, Baltimore, MD.

Agarwal, S., DeCarlo, T. E. and Vyas, S. B. (1999) Leadership Behavior and Organizational Commitment: A comparative study of American and Indian Salespersons, *Journal of International Business Studies*, p. 727-743.

Alpert, M. I. And Peterson, R. A. (1972) On the Interpretation of Canonical Analysis, *Journal of Marketing Research*, 9 (2), p. 187-192.

Antonakis, J, Avolio, B. J. and Sivasubramaniam, N. (2003) Context and Leadership: an examination of the nine-factor full-range leadership theory using the Multifactor Leadership Questionnaire, *The Leadership Quarterly*, (14), p. 261-295.

Bakan, D. (1966) *The duality of human existence*, Rand McNally, Chicago, IL.

Bass, B. M. (1981) From leaderless group discussions to the cross-national assessment of managers, *Journal of Management*, p. 63-76.

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

Bass, B. M. (1998) *Transformational Leadership: industrial, military, and educational impact*, Erlbaum, Mahwah, NJ.

Bass, B. M. and Avolio, B. J. (1993) 'Transformational leadership: a response to critiques'. In M.M. Chemers, & R. Aymans (eds.) *Leadership theory and research: perspectives and directions,* Academic Press, San Diego, p. 49-80.

Bono, J. E. and Judge, T. A. (2004) Personality and transformational and transactional leadership. A meta-analysis, *Journal of Applied Psychology*, p. 901-910.

Burns, J. M. (1978) *Leadership*, Harper & Row, New York.

Bycio, P., Hackett, R. D. and Allen, J. S. (1995) Further assessments of Bass's (1985) conceptualisation of transactional and transformational leadership, *Journal of Applied Psychology*, p. 468-478.

Chen, C. C., Chen, X. and Meindl, J. (1998) How Can Cooperation be Fostered? The Cultural Effect of Individualism-Collectivism, *Academy of Management Review*, p. 285-304.

Chinese Cultural Connection (1987) Chinese values and the search for culture-free dimensions of culture, *Journal of Cross-Cutural Psychology*, p. 143-164.

Cliff, N. and Krus, D. J. (1976) Interpretation of canonical analysis: rotated vs. unrotated solutions, *Psychometrika*, 14 (1) p. 35-42.

Conger, J. A. and Kanungo, R. N. (eds.) (1988) *Charismatic leadership: the elusive factor in organizational effectiveness*, Jossey Bay, San Francisco.

Earley, P. C. (1989) Social loading and collectivism: A comparison of the United Sates and the People's Republic of China, *Administrative Science Quarterly*, p. 565-581.

Earley, P. C. (1994) Self or group? Cultural effects of training on self-efficacy and performance, *Administrative Science Quarterly*, p. 89-117.

Erez, M. (1994) 'Toward a model of cross-cultural industrial and organizational psychology', In H. C. Triandis, M. Dunnette, and L. Hough (eds.*), Handbook of industrial and organizational psychology* Edition 2, p. 557-607.

Ferris, K. R., & Aranya, N. A. (1983) A comparison of two organizational commitment scales, *Personnel Psychology*, p.87-98.

Golembiewski, R. T., & Yeager, S. (1978) Testing the applicability of the JDI to various demographic groupings, *Academy of Management Journal*, p. 514-519.

Hair, J. F., Black, W. C., Babin, B. J., Anderson, R. E. and Tatham, R. L. (2006) *Multivariate data analysis*, Pearson Prentice-Hall, Upper Saddle River.

Hall, D. T., Schneider, B. and Nygren, H. T. (1970) Personal factors in organizational identification, *Administrative Science Quarterly*, p.176-189.

Hintze, J. (2004). *NCSS and PASS*. Number Cruncher statistical system. Kaysville, Utah.

Hofstede, G. (1980) *Culture's consequences: International differences in work-related value,* Sage, Beverley Hills.

Hofstede, G. (1985) The interaction between national and organizational value systems, *Journal of Management Studies*, p. 347-357.

Hofstede, G. (1991) *Cultures and Organizations*, McGraw-Hill, London.

Hom, P. W., Katerberg, R., & Hunlin, C. L. (1979) Comparative examination of three approaches to the prediction of turnover, *Journal of Applied Psychology*, p. 280-290.

Hotelling, H., (1936) Relations between two sets of variates. *Biometrika*, 28:321–377.

House, R. J. (1977) 'A 1976 thoery of charismatic leadership', In J. G. Hunt & L. L. Larson (eds.), *Leadership: The cutting edge*, Southern Illinois University Press, Carbondale, IL, p. 189-207.

House, R. J. and Aditya, R. N. (1997) The social scientific study of leadership: Quo vadis? *Journal of Management*, p. 409-473.

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

Hsu, F. L. (1983) *Rugged individualism reconsidered*, University of Tennesse Press, Knoxville, TN.

Hui, C. H., Yee, C. and Eastman, K. L. (1995) The relationship between individualism-collectivism and job satisfaction, *Applied Psychology: An International Review*, p. 276-282.

Iaffaldano, M. T. & Muchinsky, P. M. (1985) Job satisfaction and job performance: a meta-analysis, *Psychological bulletin*, p. 251-273.

Inkeles, A. and Smith, D. H. (1974) *Becoming Modern*, Harvard University Press, Cambridge, MA.

Janssens, M., Brett, J. M. and Smith, F. J. (1995) Confirmatory cross-cultural research: Testing the viability of a corporation-wide safety policy, *Academy of Management Journal*, p. 364-382.

Jansz, J. (1991) *Person, self, and moral demands: Individualism contested by collectivism*, The Netherlands: DSWO Press, Leiden, the Netherlands.

Judge, T. A. and Piccolo, R. F. (2004) Transformational and transactional leadership: A meta-analytic test of their relative validity, *Journal of Applied Psychology*, p. 755-768.

Jung, D., Bass, B. and Sosik, J. (1995) Bridging leadership and culture: A theoretical consideration of transformational leadership and collectivistic cultures, *Journal of Leadership Studies*, p. 3-18.

Katz, D., Maccoby, N. and Morse, N. C. (1950) *Productivity, supervision and morale in an office situation*. Part 1. Oxford Univeristy Press, Oxford, England.

Kerlinger, F.N. (1973) *Foundations of behavioural research*, Holt, New York, NY.

Kiggundu, M. N. (1989) *Managing Organizations in Developing Countries: An Operational and Strategic Approach*, Kumarian Press, West Hartford, CT.

Kim, M., Sharkey, W. F. and Singelis, T. M. (1994) Relationship between Individuals Self-Construals and Perceived Importance of Interactive Constraints, *International Journal of Intercultural Relations*, p. 117-140.

Kirkman, B. L. and Shapiro, D. L. (1997) The impact of cultural values on employee resistance to teams: Toward a model of globalized self-managing work team effectiveness, *Academy of Management Review*, p. 730-757.

Kluckhohn, F. and Strodtbeck, F. (1961) *Variations in value orientations*, Row Peterson, Evanston.

Koh, W. L., Steers, R. M. and Terborg, J. R. (1995) The effects of transformation leadership on teacher attitudes and student performance in Singapore, *Journal of Organizational Behavior*, p. 319-333.

Lam, S. S., Chen, X. and Schaubroek, J. (2002) Participative decision making and employee performance in different cultures: The moderating effects of allocentrism/idiocentrism and efficacy, *Academy of Management Journal*, p. 905-914.

Laurent, A. (1986) the cross-cultural puzzle of international human resource management, *Human Resource Management*, p. 91-102.

Leedy, P.D. and Ormrod, J.E. (2001) *Practical Research: Planning and Design*, 7th Edition, Merrill Prentice Hall, Upper Saddle River.

Lim, B-C. and Polyhart, R. E. (2004) Transformational Leadership: relations to the Five-Factor Model and Team Performance in Typical and Maximum Contexts, *Journal of Applied Psychology*, p. 610-621.

Lukes, S. (1973) *Individualism*, Basil Blackwell, Oxford.

March, J. G. and Simon, H. A. (1958) *Organizations*, Wiley, New York.

Markus, H. and Kitayama, S. (1991) Culture and self: Implications for cognition, emotion, and motivation, *Psychological Review*, p. 224-253.

Massimini, F. and Calegari, P. (1979) Il contesto normative sociale, Milano: Angeli.

McFarlane Shore, L. and Martin, H. J. (1989) Job satisfaction and organizational commitment in relation to work performance and turnover intentions, *Human Relations*, p. 625-638.

Mendonca, M. and Kanungo, N. K. (1994) Managing human resources: the issues of cultural fit, *Journal of Management Inquiry*, p. 189-205.

Mendonca, M. and Kanungo, N. K. (1990) 'Performance Management in Developing Countries', In Jaeger, A. M. and Kanungo, R. N. (eds.) *Management in Developing Countries*, Routledge, London.

Miller, J. G. (1984) Culture and the development of everyday social explanation, *Journal of Personality and Social Psychology*, p. 961-978.

Miller, J. G., Bershoff, D. M. and Harwood, R. L. (1990) Perceptions of social responsibilities in India and the United States: Moral imperatives or personal decisions? *Journal of Personality and Social Psychology*, p. 33-47.

Mowday, R.T., Porter, L. W. and Steers, R. M. (1979) The measurement of organisational commitment, *Journal of Vocational Behaviour*, p. 224-227.

Newman, K. I. And Nollen , S. D. (1996) Culture and congruence: The fit between management practices and national culture, *Journal of International Business Studies*, p. 753-779.

Nie, N., Brent, D. H. and Hull, C. H. (1970) *Statistical package for social sciences*, McGraw-Hill, New York, NY.

O'Reilly, C. A., III, & Caldwell, D. F. (1980) Job choice: the impact of intrinsic and extrinsic factors on subsequent satisfaction and commitment, *Journal of Applied Psychology*, p. 559-565.

Parsons, T. and Shils, E. A. (1951) *Toward a general theory of action*, Harvard University Press, Cambridge, MA.

Pawar, B. S. and Eastman, K. K. (1997) The nature and implications of contextual influences on transformational leadership: A conceptual examination, *Academy of Management Review*, p. 80-109.

Petty, M. M., McGee, G. W., & Cavender, J. W. (1984) A meta-analysis of relationships between individual job satisfaction and individual performance, p. 712-721.

Pillai, R. and Meindl, J. R. (1998) Context and charisma: A “meso” level examination of the relationship of organic structure, collectivism, and crisis to charismatic leadership. *Journal of Management*, p. 643-671.

Porter, L.W. and Smith, F. J. (1970) *The etiology of organizational commitment*, Unpublished manuscript, University of California, Irvine,

Ramamoorthy, N. and Carroll, S. (1998) Individualism/collectivism orientations and reactions toward alternative human resource management practices, *Human Relations*, p. 571-588.

Robert, C., Probst, T. M., Martocchio, J. J., Drasgow, F. and Lawler, J. J. (2000) Empowerment and Continuous Improvement in the United States, Mexico, Poland, and India: Predicting Fit on the Basis of the Dimensions of Power Distance and Individualism, *Journal of Applied Psychology*, p. 643-658.

Robert, C. and Wasti, S. A. (2002) Organizational individualism and Collectivism: theoretical development and an Empirical test of a measure, *Journal of Management*, p. 544-566.

Schein, E. H. (1992) *Organizational Culture and Leadership*, Jossey-Bass, San Francisco.

Schneider, B., Smith, D. B., Taylor, S. and Fleenor, J. (1988) Personality and organizations: A test of the homogeneity of personality hypothesis*, Journal of Applied Psychology*, p. 462-470.

Schneider, S. C. (1988) National vs. corporate culture: Implications for human resource management, *Human Resource Management*, p. 231-246.

Schwartz, S. H. (1994) 'Beyond individualism and collectivism: New cultural dimensions of values', In U. Kim, H. C. Triandis, C. Kagitcibasi, S-C. Choi & G. Yoon (eds.), *Individualism and collectivism: Theory, method, and applications*, Sage, Newbury Park, CA, p. 85-122.

Shamir, B., House, R. J. and Arthur, M. B. (1993) The motivational effects of charismatic leadership: A self-concept based theory, *Organization Science*, p. 577-594.

Sheldon, M. E. (1971) Investments and involvements as mechanisms producing commitment to the organization, *Administrative Science Quarterly*, p.142-150.

Shweder, R. A. (1982) Beyond self-constructed knowledge: The study of culture and morality, *Merrill-Palmer Quarterly*, p. 41-69.

Smith, P. C., Kendall, L. M. and Hunlin, C. L. (1969) *The measurement of satisfaction in work and retirement*, Rand-McNally, Chicago.

Sosik, J. J., Avolio, B. J. and Kahai, S. S. (1997) Effects of leadership style and anonymity on group potency and effectiveness in a group decision support environment, *Journal of Applied Psychology*, p. 89-103.

Stacey, A. G. (2012) Rho Factor Analysis: An exploratory technique to identify dimensions of association between multivariate datasets, *Unpublished manuscript*, University of the Witwatersrand, Johannesburg.

Steers, R. M. (1981) *Introduction to organizational behaviour*, Scott, Foresman, Glenview, Ill.

Stogdill, R. M. and Coons, A. E. (eds.) (1957) 'Leader behavior: its description and measurement (Research Monograph No. 88)', Bureau of Business research, Ohio State University, Columbus, OH.

Stumpf, S. A., and Hartman, K. (1984) Individual exploration to organisational commitment or withdrawal*, Academy of Management Journal*, p. 308-329.

Timm, N. H. (2002). *Applied multivariate analysis*. Springer-Verlag, New York.

Tofallis, C., (1999) Model building with multiple dependent variables and constraints, *The Statistician*, p. 371-178.

Triandis, H. C. (1989) Self and social behaviour in differing cultural contexts, *Psychological Review*, p. 269-289.

Triandis, H. C. (1993) Collectivism and individualism as cultural syndromes, *Cross-Cultural Research*, p. 155-180.

Triandis, H. C. (1994) *Culture and social behavior*, McGraw-Hill, New York.

Triandis, H. C. (1995) *Individualism and Collectivism*, Westview Press, Boulder CO.

Triandis, H. C. and Gelfand, M. J. (1998) Converging measurement of horizontal and vertical individualism and collectivism, *Journal of Personality and Social Psychology*, p.118-128.

Triandis, H. C., Leung, K., Villareal, M. and Clack, F. L. (1985) Allocentric vs. Idiocentric tendencies: Convergent and discriminant validation, *Journal of Research in Personality*, p. 395-415.

Wagner, J. A. (1995) Studies of individualism-collectivism: Effects on cooperation in groups, *Academy of Management Journal*, p. 152-172.

Wagner, J. A and Moch, M. K. (1986) Individualsim-collectivism: Concepts and measure, *Group and Organization Studies*, p. 280-303.

Walumbwa, F. O., Lawler, J. J. and Avolio, B. J. (2007) Leadership, Individual Differences, and Work-related Attitudes: A Cross-Culture Investigation, *Applied Psychology: An International Review*, p. 212-230.

Walumbwa, F. O. (1999) Rethinking the Issues of International Technology Transfer, *Journal of Technology Studies*, p. 51-54.

Walumbwa, F. O. and Lawler, J. J. (2003) Building effective organizations: Transformational leadership, collectivist orientation, work-related attitudes, and withdrawal behaviors in three emerging economies, *International Journal of Human Resource Management*, p. 1083-1101

Wheeler, L., Reis, H. T. and Bond, M. H. (1989) Collectivism-individualism in everyday social life: The Middle Kingdom and the Melting Pot, *Journal of Personality and Social Psychology*, p. 79-86.

Witkin, H. A. and Berry, J. W. (1975) Psychological differentiation in cross-cultural perspective, *Journal of Cross-Cultural Psychology*, p. 4-87.

Yeager, S. J. (1981) Dimensionality of the Job Description Index, *Academy of management Journal*, p. 205-212.

Yukul, G. (1998) *Leadership in Organizations*, Edition 4, Prentice-Hall, Englewood Cliffs, NJ.

Yukul, G. (1999) An Evaluation of Conceptual Weaknesses in Transformational and Charismatic Leadership theories, *Leadership Quarterly*, p. 285-305.

Yukul, G. and Van Fleet, D. D. (1992) 'Theory and research on leadership in organizations', In M. D. Dunette & L. M. Hough (eds.), *Handbook of industrial and organizational psychology*, Consulting Psychologists Press, Palo Alto, CA, p. 147-197.

APPENDIX A

Questionnaire

Please indicate the following with an X:

Gender: ☐ Male ☐ Female

Age: ☐ 20-29 ☐ 30-39 ☐ 40-49 ☐ 50 and up

Race: ☐ Black ☐ White ☐Indian ☐ Coloured ☐ Other

Marital status: ☐ Never married ☐ Married or living together

☐ Separated or divorced ☐ Widowed

Highest level of education: ☐ High School incomplete

☐ Matric (Senior Certificate)

☐ Technikon or College Diploma

☐ University Undergraduate degree

☐ Post-graduate degree

How many years have been in your current job? _____

How many years have you been with the organisation? _____

Please indicate how much you agree with the following statements:

	Strongly agree	Agree	Slightly agree	Neither agree nor disagree	Slightly disagree	Disagree	Strongly disagree
1. My supervisor regularly articulates a compelling vision of the future	☐	☐	☐	☐	☐	☐	☐
2. My supervisor often makes clear what I can expect to receive when performance goals are achieved	☐	☐	☐	☐	☐	☐	☐
3. My supervisor regularly goes beyond self-interest for the good of the group	☐	☐	☐	☐	☐	☐	☐
4. My supervisor often focuses on mistakes, complaints and failures	☐	☐	☐	☐	☐	☐	☐
5. My supervisor regularly allocates time to help me develop	☐	☐	☐	☐	☐	☐	☐
6. My supervisor often helps me in return for my hard work	☐	☐	☐	☐	☐	☐	☐
7. My supervisor always looks for different approaches to solving problems	☐	☐	☐	☐	☐	☐	☐
8. My supervisor regularly expresses satisfaction when I do what is expected	☐	☐	☐	☐	☐	☐	☐

	Strongly agree	Agree	Slightly agree	Neither agree nor disagree	Slightly disagree	Disagree	Strongly disagree
9. My supervisor often makes me feel honoured and happy to be working with him/her	☐	☐	☐	☐	☐	☐	☐
10. My supervisor usually refrains from direct involvement when serious problems arise	☐	☐	☐	☐	☐	☐	☐
11. My happiness depends very much on those around me	☐	☐	☐	☐	☐	☐	☐
12. My personal identity is very important to me	☐	☐	☐	☐	☐	☐	☐
13. I usually sacrifice my own interests for the benefit of my group	☐	☐	☐	☐	☐	☐	☐
14. I'd rather depend on myself than others	☐	☐	☐	☐	☐	☐	☐
15. I feel good when I co-operate with others	☐	☐	☐	☐	☐	☐	☐
16. It is important that I do my job better than others	☐	☐	☐	☐	☐	☐	☐
17. It is important to me that I respect the decisions made by my team	☐	☐	☐	☐	☐	☐	☐
18. I rely on myself most of the time	☐	☐	☐	☐	☐	☐	☐

	Strongly agree	Agree	Slightly agree	Neither agree nor disagree	Slightly disagree	Disagree	Strongly disagree
19. The well-being of my co-workers is important to me	☐	☐	☐	☐	☐	☐	☐
20. When a co-worker is rewarded, I feel proud	☐	☐	☐	☐	☐	☐	☐
21. This organisation has a great deal of personal meaning for me	☐	☐	☐	☐	☐	☐	☐
22. I find my values and the organisation's are very similar	☐	☐	☐	☐	☐	☐	☐
23. It would take very little change in my present circumstances to cause me to leave this organisation	☐	☐	☐	☐	☐	☐	☐
24. I am proud to tell others that I am part of this organisation	☐	☐	☐	☐	☐	☐	☐
25. I feel very little loyalty to this organisation	☐	☐	☐	☐	☐	☐	☐
26. I am extremely glad that I chose this organisation to work for over others I was considering at the time I joined	☐	☐	☐	☐	☐	☐	☐

	Strongly agree	Agree	Slightly agree	Neither agree nor disagree	Slightly disagree	Disagree	Strongly disagree
27. I could just as well be working for a different organisation as long as the type of work was similar	☐	☐	☐	☐	☐	☐	☐
28. This organisation really inspires me to perform at my very best	☐	☐	☐	☐	☐	☐	☐
29. There's not too much to be gained by staying with this organisation indefinitely	☐	☐	☐	☐	☐	☐	☐
30. For me this is the best of all possible organisations for which to work	☐	☐	☐	☐	☐	☐	☐
31. The people I work with are intelligent	☐	☐	☐	☐	☐	☐	☐
32. I will not leave this organisation within the next year	☐	☐	☐	☐	☐	☐	☐
33. I enjoy my work on most days	☐	☐	☐	☐	☐	☐	☐
34. My job makes me want to work harder	☐	☐	☐	☐	☐	☐	☐
35. One of the things I especially enjoy about my job is working with my supervisor	☐	☐	☐	☐	☐	☐	☐

	Strongly agree	Agree	Slightly agree	Neither agree nor disagree	Slightly disagree	Disagree	Strongly disagree
36. I would accept almost any type of job assignment in order to keep working for this organisation	☐	☐	☐	☐	☐	☐	☐
37. I often find it difficult to agree with this organisation's policies on important matters relating to its employees	☐	☐	☐	☐	☐	☐	☐
38. I really care about the fate of this organisation	☐	☐	☐	☐	☐	☐	☐
39. Deciding to work for this organisation was a definite mistake on my part	☐	☐	☐	☐	☐	☐	☐
40. I find my work challenging and interesting	☐	☐	☐	☐	☐	☐	☐

APPENDIX B

Question number and the factors underlying them

1) Transformational leadership – inspirational motivation
2) Transactional leadership – contingent reward
3) Transformational leadership – inspirational motivation
4) Transactional leadership – active management-by-exception
5) Transformational leadership – individualized consideration
6) Transactional leadership – contingent reward
7) Transformational leadership – intellectual stimulation

8) Transactional leadership – contingent reward
9) Transformational leadership – charisma/idealised influence
10) Laissez-faire
11) Allocentrism
12) Idiocentrism
13) Allocentrism
14) Idiocentrism
15) Allocentrism
16) Idiocentrism
17) Allocentrism
18) Idiocentrism
19) Allocentrism
20) Allocentrism
21) Organisational commitment – value commitment
22) Organisational commitment – value commitment
23) Organisational commitment – commitment to stay
24) Organisational commitment – value commitment
25) Organisational commitment – commitment to stay
26) Organisational commitment – value commitment
27) Organisational commitment – commitment to stay
28) Organisational commitment – value commitment
29) Organisational commitment – commitment to stay
30) Organisational commitment – value commitment
31) Job satisfaction
32) Job satisfaction – withdrawal intentions
33) Job satisfaction
34) Job satisfaction
35) Job satisfaction
36) Job satisfaction
37) Job satisfaction/Organisational commitment
38) Job satisfaction
39) Job satisfaction/Organisational commitment
40) Job satisfaction