

**THE INFLUENCE OF TRANSFORMATIONAL AND  
TRANSACTIONAL LEADERSHIP ON INTERPERSONAL TRUST  
THROUGH PERCEPTIONS OF FAIRNESS**

by

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**STUDY LEADERS: PROF. A.S. ENGELBRECHT AND PROF. C.C THERON**

**MARCH 2002**

**DECLARATION**

I, the undersigned, hereby declare that the work contained in this thesis is my own original work and that I have not previously in its entirety or in part, submitted it at any university for a degree.

Pascale Krafft

Date: 28. 11. 2001

## **OPSOMMING**

KRAFFT, PASCALE, MA (BEDRYFSIELKUNDE), UNIVERSITEIT VAN  
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### **DIE INVLOED VAN TRANSFORMASIONELE EN TRANSAKSIONELE LEIERSKAP OP INTERPERSOONLIKE VERTROUE DEUR MIDDEL VAN BILLIKHEIDPERSEPSIES**

STUDIELEIERS: PROF. A.S. ENGELBRECHT, M.COMM, Ph.D. (Stell.)  
PROF. C.C. THERON, MA, DPhil (Stell.)

Suider-Afrikaanse ondernemings moet in 'n toenemend kompeterende en internasionale besigheidswêreld probeer oorleef. Suider-Afrikaanse ondernemings word egter gekenmerk deur lae produktiwiteitsvlakke, 'n groot mate van wantroue tussen werknemers en werkgewers, lae vlakke van organisatoriese betrokkenheid en effektiwiteit. Oplossings moet gevind word om hierdie probleme te oorkom en in die toekoms te voorkom. Hierdie studie lewer moontlik 'n oplossing.

Die primêre doel van hierdie studie is om te bepaal of daar 'n verwantskap tussen transformasionele en transaksionele leierskap en vertroue bestaan, en of hierdie verwantskap deur persepsies van billikheid beïnvloed word. Die grondslag van dié studie was om vas te stel of prosessuele (*procedural*) billikheid 'n bemiddelende invloed op die verband tussen transformasionele leierskap en vertroue uitoefen, en of distributiewe billikheid 'n bemiddelende invloed uitoefen op die verhouding tussen transaksionele leierskap en vertroue. Verder is daar ook gekyk of daar 'n direkte verband tussen transformasionele leierskap en vertroue bestaan. Hierdie studie is gegrond op Pillai, Schriesheim en Williams (1999) se model, wat die verband tussen hierdie konstrunkte in die VSA getoets het. Hulle resultate het aanleiding tot die herhaling van hierdie studie in Suider-Afrika gegee.

'n Literatuurstudie oor transformasionele en transaksionele leierskap, organisatoriese billikheid (in terme van prosessuele, interaktiewe en distributiewe billikheid) en vertroue is uitgevoer. Die verband tussen hierdie konstrunkte is ook in die literatuurstudie ontleed.

'n Vraelys is na aanleiding van die literatuurstudie opgestel en in 'n Namibiese Bank versprei. Twaalf banktakke het aan hierdie studie deelgeneem. Die steekproef het uit 281 persone bestaan wat elkeen 'n vraelys moes voltooi. Afdeling A van die vraelys was ontwerp om 'n aanduiding van die demografiese veranderlikes van die deelnemers te verkry. Afdeling B het transformasionele en transaksionele leierskap gemeet en was op Bass en Avolio se leierskapsvraelys gebaseer. Afdeling C is opgestel na aanleiding van Moorman se studie oor billikheid in organisasies. Hierdie deel het prosessuele, interaktiewe en distributiewe billikheid gemeet. Die laaste afdeling, afdeling D, het interpersoonlike vertroue gemeet en is gebaseer op Bews se vertrouevraelys.

Die statistiese analise is in twee fases uitgevoer. In die eerste fase is die oorspronklike teoretiese model op LISREL getoets. Die bevestigende faktoranalises van die latente veranderlikes het nie goeie passingstatistieke getoon nie. Die strukturele model het ook nie gekonvergeer nie. As gevolg hiervan moes alternatiewe oplossings gevind word en 'n tweede fase van statistiese analise is toegepas. Die leierskapsoriëntasies is opgedeel in hulle onderskeie dimensies. Daaropvolgend is eers dimensieanalise met die hulp van hoofkomponentontleding en itemontleding gedoen. Verskeie items moes op grond van hierdie analises verwyder word. Op die verkorte datastel is daar weer 'n bevestigende faktoranalises met behulp van LISREL gedoen. Die passingstatistieke het hier aanvaarbare resultate opgelewer. Vervolgens is die nuwe strukturele model met behulp van LISREL getoets. Die resultate het redelike passingstatistieke gelewer, maar daar kon nie steun vir alle hipoteses gevind word nie. Nuwe insigte is deur die resultate verwerf.

Op grond van die resultate is daar tot bepaalde gevolgtrekkings gekom en daar word aanbevelings vir verdere navorsing gemaak.

**ABSTRACT**

KRAFFT, PASCALE, MA (INDUSTRIAL PSYCHOLOGY), UNIVERSITY OF STELLENBOSCH

**THE INFLUENCE OF TRANSFORMATIONAL AND TRANSACTIONAL LEADERSHIP ON INTERPERSONAL TRUST THROUGH PERCEPTIONS OF FAIRNESS**

STUDY LEADERS: PROF. A.S. ENGELBRECHT, M.COMM, Ph.D. (Stell.)

PROF. C.C. THERON, MA, DPhil (Stell.)

Southern African organisations have to survive in an increasingly competitive and globalised market. Southern African organisations are characterised through low productivity levels, low levels of trust between employers and employees, low levels of organisational commitment and effectiveness. Solutions must be found in order to overcome these problems and to prevent them in the future. This study might offer such a solution.

The primary goal of this study was to establish whether there is a relationship between transformational and transactional leadership and interpersonal trust, and whether this relationship is influenced through organisational justice (in terms of procedural, interactional and distributive justice). The basis of this study was to establish whether procedural justice had a mediating effect on the relationship between transformational leadership and trust, and whether distributive justice had a mediating effect on the relationship between transactional leadership and trust. Another goal of this study was to establish whether there was a direct relationship between transformational leadership and trust. This study was based on a model of Pillai, Schriesheim and Williams (1999) who tested these relationships in the USA. Their results gave rise to replicating this study in Southern Africa.

A literature study of transformational and transactional leadership, organisational justice (in terms of procedural, interactional, and distributive justice) and trust was conducted. The relationship between these constructs has also been analysed in the literature study.

A questionnaire consisting of four sections was compiled in accordance with the literature study. These questionnaires were distributed to a Namibian bank. Twelve branches took part in this research. The sample comprised 281 persons, each of whom had to complete the questionnaire. Section A of the questionnaire was designed to give an indication of the demographic variables of the participants. Section B measured transformational and transactional leadership. This section was based on Bass and Avolio's multifactor leadership questionnaire (MLQ). Section C was compiled in accordance with Moorman's study of organisational justice. This section measured procedural, interactional and distributive justice. The last section, Section D, measured trust and was based on Bews's questionnaire of trust.

The statistical analysis was conducted in two phases. In phase one, the confirmatory factor analysis on the original theoretical model did not produce adequate goodness-of-fit statistics. The structural model did not converge on LISREL in the first phase. Subsequently, alternative solutions had to be found and a second phase of statistical analysis was undertaken. In this phase, the various leadership dimensions were separated to test their individual effects in the model. Initially, principal component analyses using Varimax rotation and item analyses were performed on the data set using SPSS. Some items had to be removed as a result of the dimensionality and item analyses. Thereafter confirmatory factor analysis was conducted on the reduced data set, using LISREL. The results indicated satisfactory factor loadings on the measurement models. Good fit was also revealed for the measurement models. Consequently, the structural model was tested on LISREL. The results provided reasonable goodness-of-fit statistics, but some hypotheses failed to be corroborated in this study. New insights have also been gained through the results.

Conclusions were drawn from the results obtained and recommendations are made for future research.

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**Pascale Krafft**  
**Stellenbosch**  
**March 2002**

This thesis is dedicated to my beloved Mother and Father,  
whose generosity and self-sacrifice enabled me to come this far in my life.

“... Wenn der Töne Zauber walten,  
und des Wortes Weihe spricht  
muss sich Herrliches gestalten  
Nacht und Stürme werden Licht.

...Nehmt denn hin ihr schönen Seelen.  
Froh die Gaben schöner Kunst,  
Wenn sich Lieb und Kraft vermählen  
Lohnt dem Menschen Göttergunst.”

*Aus der Chorphantasie, Beethoven*

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## **CHAPTER 1**

### **BACKGROUND AND OBJECTIVES OF THE STUDY**

“An organization’s ability to survive is directly dependent on growing leaders and this is in turn dependent on meeting the cry of the human heart - of putting humanity back into organizations” (Charlton, 1992, p.ix).

This statement indicates the critical role leaders are playing in the organisation. Simultaneously, it shows the importance of humanity in the work environment. The main goal of this research is to shed more light on exactly these two issues through investigating the relationship that exists between leadership, organisational justice and trust.

#### **1.1 Introduction**

Economists, psychologists, sociologists and management scientists agree on the importance of trust in interpersonal relationships and management efficiency (Hosmer, 1995). Blau (Hosmer, 1995, p. 379) describes trust as being “essential for stable relationships”, while Golembiewski and McConkie (Hosmer, 1995, p. 379) add, “there is no single variable which so thoroughly influences interpersonal and group behaviour as does trust.”

Within the South African context, the concept of trust is of great importance in work relationships. The socio-political history created a social environment that is characterised through extreme mistrust between people in South Africa. Fuhr (Blackburn, 1992, p.4) summarises the situation as follows: “this country has been scarred by an ever widening chasm of mistrust and it is safe to say that any company that fails to address that mistrust, is destined to remain firmly rooted in the old South Africa; mistrust is probably the single most formidable obstacle in the way of meaningful change.”

Trust has been found to be a crucial element in developing organisational effectiveness (Gomez & Rosen, 2001). The importance of trust lies in its close relationship with organisational commitment, job satisfaction (Blake & Mouton, 1984; Cook & Wall, 1980; Morgan & Hunt, 1994) and organisational citizenship behaviours (Konovsky & Pugh, 1994). It is needless to say, that these three possible outcomes of trust are essential for creating and maintaining a highly effective organisation. As such, trust greatly adds value to organisational psychology and human resource management.

The effect of trust has been studied in many studies (Kramer and Tyler, 1996), but little attention has been given to the integration of leadership and organisational justice with trust, although the relationship between these constructs have been suggested by Pillai et al. (1999) and Konovsky and Pugh (1994). Some studies (Konovsky & Pugh, 1994; Lewicki & Bunker, 1996) established a firm relationship between transformational leadership and trust, but the mediating effects of procedural justice in this relationship have been largely ignored. Additionally, not only has the relationship between transactional leadership and trust been neglected, but the mediating effects of distributive justice in this context also were not adequately researched.

Pillai et al. (1999) have developed and empirically tested a model to integrate the literature to prove the relationship between leadership behaviours, organisational justice and trust. They focused on a dyadic trust relationship between an employee and a supervisor. They have found sufficient support for the proposed relationships in the model and therefore this model will be used as a theoretical basis for this study. This research will focus on the relationship between transformational leadership, procedural justice and trust, on the one hand, and on the relationship between transactional leadership, distributive justice and trust, on the other hand. Not all components of the model suggested by Pillai et al. (1999) will, however, be studied.

In the following section, some background will be provided to indicate the importance of this study.

## 1.2 Background

When he opened the ANC's national general council, President Mbeki said: "We are part of the world economy...and it is neither possible nor desirable that we cut ourselves off from the world economy so that the process of globalisation becomes a matter irrelevant to our country or people" (Smith, 2000). All interest groups, however, do not welcome this commitment to globalisation.

South Africa's commitment to globalisation demands competitiveness and growth. Like many international organisations (e.g. Apple Computer, Boeing, Kellogg Co., Daimler-Chrysler), Southern African organisations have been forced to merge and downsize (Grawitzky, 2000; Smith, 2000). Job security has come under enormous threat, thereby widening the trust gap within organisations. These large-scale job reductions cause unhealthy future employer-employee trust relationships. Robbins (2000b) indicates that an increase in job losses has a detrimental effect on employer-employee loyalty. The decrease in loyalty has a negative effect on intra-organisational trust (Engelbrecht & Cloete, 2000).

The erosion of trust seems to be linked to an environment driven by globalisation and technological change. Continuous adjustments need to be made in order to cope with the ever-changing environment. Yet, high levels of mutual trust and co-operation are necessary ingredients in an organisational environment that places greater emphasis on project teams, temporary work groups, networking and flexibility (Jones & Bowie, 1998). Consequently, there has never before been greater need for organisations to nurture trust-based relationships (Crandall & Wallace, 1998).

Nurturing trust within organisations becomes possible through incorporating organisational justice. Organisational justice comprises a perception of fairness on the side of subordinates. In everyday life, but particularly in times of change, leaders should make a concerted effort to implement principles of procedural and distributive justice. Procedural justice incorporates the idea that employees want to partake in decisions that affect them.

In a downsizing situation, employees are able to perceive fairness if a decision has been communicated openly and honestly to them. The justification of a decision and suppression of bias on the side of the leader are at the core of procedural justice. The decision must, however, be based on moral and ethical principles and may not contain ulterior motives (Lind & Tyler, 1988, Tyler & Bies, 1990). Distributive justice is linked to the outcome of a decision. It, for example, is related to pay-increases, promotions, and demotions. Employees compare their input/output ratio to those of their peers. An impression of unfairness will prevail if the employee feels he/she is under- or overpaid. Thus both procedural and distributive justice are important constructs when leaders need to nurture trust in the organisation.

Pillai et al. (1999) have indicated that transformational and transactional leadership have a differential influence on subordinates' perceptions of organisational justice. This differential influence is based on social and economic exchange relationships. Economic exchange is based on short-term transactions, while social exchanges emerge from the parties trusting that their exchange will discharge their responsibilities over the long term (Konovsky & Pugh, 1994).

Transformational leadership is linked to leader effectiveness, improvement and satisfaction. To achieve this goal transformational leaders may be able to define the leader-subordinate relationship as being outside the economic contract, i.e. it is based on social exchanges, because transformational leadership involves vision and empowerment. This is closely related to procedural justice, as a transformational leader not only allows followers to participate in decision-making, but also encourages them to think in new and innovative ways (Bass, 1985; Pillai et al., 1999). Greenberg (1996) provides evidence that people consider the nature of their treatment by others as a determinant of fairness. This affects trust in the leader and the system as a whole. For a transformational leader to gain trust and reach extraordinary goals, he/she must provide interpersonally fair treatment to subordinates. Thus the model (see Figure 2.2, pg. 38) shows that transformational leadership is positively related to procedural justice.

Transactional leaders, on the other hand, function in an environment where leader-subordinate relationships are based on economic exchanges. Bass (1985) contends that transactional leadership is based on material exchange. Followers are thus more likely to be concerned about the fairness of outcomes, as followers exchange their effort for an outcome they receive from a transactional leader. Konovsky and Pugh (1994, p. 658) hold that “distributive justice is the metric for judging the fairness of transactional contracts.” If a supervisor wants to be perceived as fair, the supervisor must strengthen the employee’s instrumentality. This is necessary for employees to have clear beliefs about what they might expect in exchange for their effort (Greenberg, 1996). Transactional leaders offer rewards that are linked to performance, and simultaneously, specify what subordinates can expect in exchange for that performance. Thus the theoretical model (see Figure 2.2, pg. 38) shows that transactional leadership is positively related to distributive justice.

Against this background, an attempt is made in this study to examine leadership, organisational justice and interpersonal trust, as well as their relationship with each other.

### **1.3 Research problem**

In terms of the scenario described above, the research focuses on the testing of a model of transformational and transactional leadership, organisational justice and trust and, in an attempt to understand the dynamics of these constructs, considers the following research questions:

- What is the influence of procedural justice on the relationship between transformational leadership and interpersonal trust?
- What is the relationship between transformational leadership and interpersonal trust?
- What is the influence of distributive justice on the relationship between transactional leadership and interpersonal trust?

In this regard it is suggested that procedural justice may mediate the relationship between transformational leadership and interpersonal trust. In addition to this mediating effect there is also an unmediated effect, namely that there is a direct relationship between transformational leadership and interpersonal trust.

It is also proposed that distributive justice has a mediating effect on the relationship between transactional leadership and trust, and that transactional leadership has no direct effect on trust.

A number of factors provide a justification for undertaking a study of this nature. These justifications will now be dealt with.

#### **1.4 Justification for this research**

Leadership, organisational justice and trust have always been important issues in society. Although the constructs have received a lot of attention, little co-ordinated effort has been made to integrate them. Most of the research has investigated the constructs in isolation, although a relationship between them has been suggested (Folger & Konovsky, 1989, Konovsky & Pugh, 1994, Pillai et al., 1999)

Secondly, a study of this nature has not been conducted in the Southern African context before. The Southern African context is characterised by tremendous change and uncertainty. Mistrust prevails in organisations, making it necessary to find solutions to improve dyadic trust relationships in organisations. Leaders play an essential role in bringing about this trust relationship. This research tries to uncover one of the many conceptual networks of leadership by incorporating organisational justice into the leadership-trust equation.

The Namibian bank that agreed to participate in the study has undergone tremendous changes in the past years. In recent years, the organisational culture has changed dramatically through policies like affirmative action and employment equity. This required skilful leadership to overcome obstacles to change and to resolve conflict in a diverse workforce. In the recent past, the bank merged with another bank, causing great confusion among subordinates. The grapevine spread rumours that employees would be retrenched as a result of the merger. After many months, the Human Resources Department managed to resolve this conflict. Mistrust widened, however. This situation indicates how important trust is, but more importantly, what role a leader has to play in situations of crisis.

This research provides an opportunity for this bank to evaluate subordinates' perception of their supervisors, organisational justice and trust. The bank has agreed to participate in this study as they recognised the importance of the constructs in question.

### **1.5 Objectives**

Bass (Pillai et al., 1999) states that there has been little research with the aim to test the many networks of linkages proposed to explain how transformational and transactional leadership works. This study aims to build on previously conducted research on transformational and transactional leadership and their relationship with trust, within the Southern African context. In this study, the attempt being made is to examine the relationship between leadership behaviours and trust. The concepts of procedural and distributive justice are integrated in explaining the relationship between leadership behaviours and trust.

In this study, it is not proposed that transformational or transactional leadership are the only factors (whether direct or indirect) that influence trust in the organisation. This study attempts to explain one of the many possible linkages leading to trust.

The specific objectives of this research are as follows:

- To advance understanding of transformational leadership and transactional leadership. By comparing transformational leadership models, greater insight into the nature of this concept is achieved. A detailed analysis of transactional leadership provides insight into this construct.
- To provide a comprehensive description of organisational justice, by incorporating levels and principles of types of justice and describing effects of procedural and distributive justice in organisations.
- To provide a more complete picture of interpersonal trust, by incorporating types of trust and to advocate the implications of trust in the organisation.
- To advance the perspective that transformational leadership is related to procedural justice and trust, while transactional leadership is related to distributive justice and trust.

- To design a study, that has both theoretical and practical relevance. The results should thus be of significance and of considerable interest to HR practitioners, academics and leaders alike.
- To make a contribution to theory building in the field of organisational psychology. The relations between the constructs are complex and are indicative of many possible leadership networks.
- To design a study in which the validity of the theory is explained by the patterns of correlations found in the empirical data. Goodness-of-fit indexes will be used to indicate the fit of the data with the theoretical model.

## **1.6 Composition of the thesis**

Chapter 1 deals with the background and need for this research, as well as the research problem and resultant objectives.

Chapter 2 deals with the concepts of transformational and transactional leadership, organisational justice and trust in greater detail. Terminology is clarified with regard to the different constructs. The primary focus falls on:

- Explaining the development of transformational leadership theories;
- Defining transactional leadership;
- Defining organisational justice, in particular explaining principles and levels of justice, and defining procedural, interactional and distributive justice;
- Defining and outlining the importance of interpersonal trust; and
- Outlining the possible relationships between the various constructs;

Chapter 3 deals with the research strategy. The hypotheses, sample, measuring instruments and statistical analysis are outlined in this chapter.

In Chapter 4, the data of the research is analysed and the findings are discussed.

Chapter 5 contains the final conclusions as well as the proposals for future research.

## **CHAPTER 2**

### **LITERATURE OVERVIEW OF THE RELATIONSHIP BETWEEN TRANSFORMATIONAL AND TRANSACTIONAL LEADERSHIP, ORGANISATIONAL JUSTICE AND INTERPERSONAL TRUST**

#### **2.1 Introduction**

This chapter aims to define the constructs of transformational and transactional leadership, organisational justice and interpersonal trust. Additionally, the relationship between these constructs will be outlined. Although the literature provides a good explanation of the constructs of transformational and transactional leadership, organisational justice and trust, the specific relationships among them have been largely neglected. This study adds value to leadership theory in that it tries to explain possible linkages with interpersonal trust through perceptions of fairness. This study will uncover one of the many conceptual networks of transformational and transactional leadership. A leader will therefore benefit by gaining insight into how to establish a more extensive trust relationship and, consequently, increasing organisational effectiveness.

#### **2.2 Defining Key Concepts**

##### **2.2.1 Transformational Leadership**

Transformational leadership has been extensively researched in the past decades (Bass 1985; Bass & Avolio, 1994; Conger, 1989; Kouzes & Posner, 1990; Tichy & Devanna 1990; Yukl, 1998). In order to have a full understanding of transformational leadership, it is essential to explain the development of transformational leadership theory.

### 2.2.2 Development of Transformational Leadership Models

Agreement can be found in the literature on the fact that transformational leadership and charismatic leadership are closely intertwined (Conger & Kanungo, 1994, Du Rand, 2001; Gibson, Ivancevich & Donnelly, 2000; Hughes, Ginnett & Curphy, 1996). Charismatic leadership theory has gradually evolved into transformational leadership theory, transformational leadership being an extended version of charismatic leadership. Although charisma is a necessary ingredient of transformational leadership, it is not sufficient to transform organisations (Lussier & Achua, 2001). Hughes et al. (1996) contend that all transformational leaders are charismatic, but not all charismatic leaders are transformational. Conger and Kanungo (1994) hold that charisma continually emerges as the most important component of transformational leadership. Transformational leaders are charismatic in that they express a compelling vision and form close bonds with followers, while charismatic leaders do so in order to get their own needs met (Hughes et al., 1996). The transformational leader appears to act as a coach or mentor, while a charismatic leader is more likely to take on the role of a celebrity, miracle worker or mystic (Bass, 1985).

Transformational leaders communicate a vision towards which the team, department or organisation should be moving. Transformational leaders view problems as opportunities and challenges. They are vigorously engaged in the development of employees. They have a passion for broadening the horizons of followers. Followers are encouraged to replace daily concerns for existence and safety with a passion for growth and personal development. The focus of transformational leadership is on needs. Employees are made aware of the organisation's needs as well as of their obligation to refine their own individual needs (Avolio, Waldman & Yammarino, 1991). An overview of these models is depicted in **Figure 2.1**.

<p><b><u>Conger:</u></b></p> <ol style="list-style-type: none"> <li>1. Detecting unexpected opportunities</li> <li>2. Communicating the vision</li> <li>3. Building trust</li> <li>4. Demonstrating the means to achieve the vision</li> </ol>	<p><b><u>Conger and Kanungo</u></b></p> <ol style="list-style-type: none"> <li>1. Environmental assessment</li> <li>2. Vision formulation</li> <li>3. Implementation</li> </ol>	<p><b><u>Shamir, House and Arthur</u></b></p> <ol style="list-style-type: none"> <li>1. Personal Identification</li> <li>2. Social Identification</li> <li>3. Internalisation</li> <li>4. Self-Efficacy</li> <li>5. Facilitating Conditions</li> </ol>
<p><b><u>Bennis and Nanus</u></b></p> <ol style="list-style-type: none"> <li>1. Attention through vision</li> <li>2. Meaning through communication</li> <li>3. Trust through positioning</li> <li>4. Development of self</li> </ol>	<p><b><u>Sashkin and Fulmer</u></b></p> <ol style="list-style-type: none"> <li>1. Focusing attention</li> <li>2. Taking risks</li> <li>3. Communicating skillfully</li> <li>4. Demonstrating consistency and trustworthiness</li> <li>5. Expressing active concern</li> </ol>	<p><b><u>Kouzes and Posner</u></b></p> <ol style="list-style-type: none"> <li>1. Challenging the process</li> <li>2. Inspiring a shared vision</li> <li>3. Enabling others to act</li> <li>4. Modelling the way</li> <li>5. Encouraging the heart</li> </ol>
<p><b><u>Tichy and Devanna</u></b></p> <ol style="list-style-type: none"> <li>1. Recognising the need for revitalisation</li> <li>2. Creating a new vision</li> <li>3. Institutionalising change</li> </ol>	<p><b><u>Bass and Avolio</u></b></p> <ol style="list-style-type: none"> <li>1. Idealised influence</li> <li>2. Inspirational motivation</li> <li>3. Individualised consideration</li> <li>4. Intellectual stimulation</li> </ol>	

**Figure 2.1. Models of Transformational Leadership (adapted from Du Rand, 2001)**

When comparing the models of transformational leadership, it becomes clear that they have many similarities. Formulating a vision, communicating a vision, influencing followers, taking risks and building trust are reflected in all the models in one way or another. In addition, charisma seems to be the most important component of transformational leadership, which indicates the close relationship between charismatic and transformational leadership. This is why some charismatic leadership theories are explained as well, as they form the underlying basis for transformational leadership. In the following section, transformational leadership models are discussed.

### 2.2.2.1 Conger and Kanungo

Conger (1989) developed a four-stage model for charismatic leadership. This four-stage model is indicative of transformational leadership behaviours and it is therefore being discussed in this context. Conger's (1989) four stages include *detecting unexpected opportunities*, *communicating the vision*, *building trust*, and *demonstrating the means to achieve the vision*.

In the first stage, *detecting unexpected opportunities*, the leader continuously assesses the environment, adapting and formulating a vision of what must be done. It is important, however, that the leader remains sensitive to the constituents during this process. In stage two, the leader *communicates the vision* to followers. In this communication process, the leader renders the status quo as unacceptable and articulates the vision as the most attractive alternative. In stage three, the leader tries to *build trust* through success, expertise, personal risk-taking, self-sacrifice, and unconventional behaviour. In the last stage, the leader aims to *achieve the vision*. In order to do that, the leader must act as a role model and motivator (Du Rand, 2001; Gibson et al., 2000). Although this is an oversimplified model that describes the interactive process between leader, follower and the external environment, it, however, offers a useful framework for transformational leadership (Conger, 1989).

Conger and Kanungo (1994) developed a model that focuses on behavioural dimensions of charismatic leadership. They proposed three distinct stages of this leadership process. Stage one includes environmental assessment. Here the charismatic leadership role of managers is distinguished from other leadership roles. Managers in the charismatic leadership role are more likely to be perceived as critics of the status quo and agents of change. Stage two comprises the formulation of a vision, where followers' perceptions distinguishes the charismatic leadership role on the basis of a shared and idealised future vision. Stage three involves implementation. Charismatic managers are perceived as engaging in exemplary behaviour that subordinates interpret as personal risk and sacrifice on the side of the leader. Conger and Kanungo (1994) contend that these actions will empower subordinates and eventually build trust. In addition, the charismatic leadership role demands innovative and unconventional strategies for achieving a formulated vision.

### **2.2.2.2 Shamir, House and Arthur**

House (1977) conceptualised a framework of how charismatic leaders behave, how they differ from others, and under what conditions they are likely to emerge. This theory had an important impact on charismatic leadership theory as it included leader traits, influence, and social conditions. Unlike in any other earlier theory, House (1977) proposed a more comprehensive overview of the charismatic leader. Shamir, House and Arthur (1993) extensively revised the charismatic leadership theory of House (1977). This new version attempts to explain why leaders are able to influence followers and to motivate them to transcend their self-interest for the sake of the collective purpose. Shamir et al. (1993) contend that a charismatic leader is more likely to arise if an organisation is undergoing a crisis situation, because such leaders are able to interpret a crisis and are able to formulate credible strategies to cope with the crisis. They included personal identification, social identification, internalisation, and self-efficacy in describing the charismatic influence of a leader.

*Personal identification* means that a follower is more likely to identify with a leader that articulates a non-traditional, but feasible, vision. Identification also seems greater when the leader makes self-sacrifices, and uses unconventional behaviour to demonstrate courage. *Social identification* involves defining oneself in terms of a group. Social identification implies that a person takes pride in being a member of a particular group, and sees his/her effort being related to this group. *Internalisation* is an influence process that charismatic leaders use for increasing existing follower values and linking them to task objectives. Charismatic leaders try to enhance group *self-efficacy*. Collective self-efficacy refers to the perception of group members to perform exceptionally when working together (Shamir et al., 1993).

### **2.2.2.3 Bennis and Nanus**

In a descriptive study, Bennis and Nanus (Yukl, 1998) identified and interviewed effective executives in order to filtrate characteristic behaviours, traits and influence processes of transformational leaders. They developed a transformational leadership theory based on the idea of how an organisation should adapt to an ever-changing external environment.

Change is brought about through four processes, namely *attention through vision*, *meaning through communication*, *trust through positioning*, and *self-development* (Du Rand, 2001). In this model, leaders challenge existing paradigms and build confidence in their followers. By the same token, subordinates are encouraged to solve problems in a new and innovative way (Du Rand, 2001).

The first process in this model, *attention through vision*, implies that a leader identifies events that will have an impact on the organisation's future. Here the transformational leader formulates an ideal vision regarding the future state of the organisation. A leader who creates *meaning through communication* establishes a climate in which subordinates actively participate in the decision-making of the organisation. *Trust through positioning* is achieved by a transformational leader who is fully committed to the vision he/she communicates to the followers, but *trust through positioning* can only be achieved when the leader acts congruently with his/her vision. *Development of the self* refers to transformational leaders who continuously improve the knowledge gained through past failures and successes (Du Rand, 2001).

Bennis and Nanus (1985) conceptualised transformational leadership as a process that changes the organisation by converting followers to be leaders and leaders to be agents of change. Followers become leaders when they are committed to a cause. Transformational leaders communicate values and norms supporting an articulated vision, establish trust by adhering to the vision, and model self-confidence through risk-taking. Bennis and Nanus (1985) add value to transformational leadership theory in that they provide considerable insight about the way leaders motivate individuals and influence change in the organisation.

#### **2.2.2.4 Sashkin and Fulmer**

Sashkin and Fulmer (1988) converted the leadership strategies identified by Bennis and Nanus (1985) into five specific behaviours: a) focusing attention, b) taking risks, c) communicating skilfully, d) demonstrating consistency and trustworthiness, and e) expressing active concern.

*Focusing attention* means concentrating communication on key points to involve others in analysis, problem solving, and action planning. The leader should *take risks* on the basis of careful calculation of the chances of success. Opportunities should also be provided for others to join in the risk-taking. *Communicating skilfully* includes communicating with understanding and empathy. The leader must ensure that that two-way communication takes place in that he/she listens actively and provides feedback skills. *Demonstrating consistency* comprises trustworthiness in a leader's behaviour, in that he/she openly expresses positions and commits to these positions. *Expressing active concern* for people demands self-regard and reinforcement of self-worth in others. Focusing attention and taking risks may be seen as task-orientated actions, while expressing active concern for others may reflect relationship-focused practices.

Additionally, Sashkin (1988) developed the Leader Behavior Questionnaire (LBQ). The LBQ is an instrument to measure the five specific behaviours above and includes a separate measure of charismatic affect toward the leader. Exploratory research found a positive relationship between the prevalence of the five leadership behaviours and the extent to which the leader was seen as charismatic. This research adds high value to leadership theory, because Sashkin and Fulmer (1988) relied on empirical evidence to help identify effective leader behaviours.

#### **2.2.2.5 Kouzes and Posner**

Kouzes and Posner (1990) refer to five practices of successful leaders, namely *challenging the process*, *inspiring a shared vision*, *enabling others to act*, *modelling the way*, and *encouraging the heart*.

*Challenging the process* involves changing the status quo. Leaders must be able to take risks, and must thus venture into the unknown. Transformational leaders are found to challenge the system. They are likely to accept new ideas and do not hesitate to challenge the status quo in order to get new processes, products and services adopted. Transformational leaders need to *inspire a shared vision* if they want followers to commit to it. Followers only commit to this vision if the leader is able to communicate a common purpose.

Successful transformational leaders *enable others to act*. Through team building, empowerment of the individual and teamwork followers develop a sense of ownership. Through this ownership, followers are able to achieve extraordinary results. *Modelling the way* is a process in which transformational leaders model the behaviour that they wish to elicit from others. In order that followers will believe in a leader, he/she must act as a role model i.e. the leaders must practice what they preach. To keep followers motivated, a leader needs to *encourage the heart* of every employee. The leader can achieve this by celebrating small milestones or recognising the good work of followers.

Kouzes and Posner (1990) stress the importance of making followers feel that their work is larger than life. In addressing the followers' most embedded values and desires, both followers and leaders will be psychologically gratified as their efforts have a synergistic significance. In addition to Bennis and Nanus (1985), Kouzes and Posner (1990) also identified useful attributes of leadership behaviour that motivate individuals and at the same time change the organisational status quo.

#### **2.2.2.6 Tichy and Devanna**

According to Tichy and Devanna (1990, p.xii) "transformational leadership is about change, innovation, and entrepreneurship ...It's a leadership process that is systematic, consisting of purposeful and organised search for changes, systematic analysis, and the capacity to move resources from areas of lesser to greater productivity."

Tichy and Devanna (1990) focus on transformation at the macro level, thus the focus is on the transformation of the organisation. Their interest in transformational leadership derives from a need for contemporary organisations to change and to be innovative. The creative, empathetic and risk-taking leader is the centre of the transformation process that fosters organisational viability.

Tichy and Devanna (1990) conducted a study with CEOs in which they tried to identify typical processes that occur when leaders transform organisations. The aim was to describe behaviours that facilitated this process of change. The process they identified included a sequence of three phases, namely *recognising the need for revitalisation*, *creating a new vision* and *institutionalising change*.

Transformational leaders need to recognise the threats an organisation is facing from the external environment. The environmental threats force organisations to change. Leaders have to perceive and respond to this change. Thus transformational leaders need to *recognise the need for revitalisation*. Tichy and Devanna (1990) suggest that leaders in this phase should challenge current assumptions by encouraging objective, critical thinking. In addition, leaders should develop better external networks in order to improve monitoring the environment. Most importantly, leaders should measure their performance against that of competitors as this helps to maintain attention on the objectives that need to be achieved.

In the second process, the leader has to *create a new vision*. This vision should be positive and accepted by subordinates. Followers need to see change as the only possibility for effective future operations. This transition is like a death and rebirth process and people have the tendency to regress to old behaviours until the new values are internalised. Tichy and Devanna (1990) suggest that participation is necessary in order to facilitate this internalisation.

The third process includes the *institutionalisation of change*. Here the new way of doing things destroys the old reality. This process demands that a new culture should be established that is in line with the revitalised organisation. Participation in strategic planning helps develop commitment to the plans. The leader will depend on his/her network with key people in the organisation in order to institutionalise this change.

Tichy and Devanna (1990) have managed to develop a model that indicates the complexity of change and the important role that a transformational leader indispensably has to play to bring about this change.

### **2.2.2.7 Bass and Avolio**

Transformational leadership emerged as a major theory under Burns (1978). He holds that transformational leaders elevate people to a higher sense of 'self'. Although Burns laid the foundation for transformational leadership theory, it was refined under Bass (1985). Bass was the first to measure the perceptions of subordinates to establish whether a leader was transformational or not. This transformational leadership theory developed into the "full range leadership model" of Bass and Avolio (1994).

This theory forms the basis of this study, because Bass and Avolio's (1994) argument of transformational and transactional leadership is based on exchange processes that are relevant in this context. In addition, the operationalised dimensions of their theory have been successfully incorporated into the multi-factor leadership questionnaire. Although Conger and Kanungo (1994) noticed that charisma (idealised influence) explained the greatest variance in transformational leadership, Bass and Avolio (1988) proposed a difference between these leadership styles in both processes and outcomes. They contended that transformational leaders instil excitement in followers, but go further in that they coach subordinates to think on their own and in innovative ways. In the short term the outcomes may be the same for the leadership styles, but in the long term, transformational leaders elicit from subordinates the willingness and motivation to question future systems and rules. In contrast, a pure charismatic leader allows personal growth, as long as individuals support the leader's message (Bass & Avolio, 1988). Bass and Avolio's theory goes beyond charisma and is thus the most comprehensive theory for understanding transformational leadership processes.

Bass and Avolio (1994) postulated four dimensions of transformational leadership, which evidently to cause followers to commit to performance outcomes that exceed their expectations. These four dimensions can be described as follows:

*Idealised influence* is the extent to which followers perceive their leaders as charismatic role models. Thus it refers to the extent to which the leader is trusted, admired and respected. This feeling of trust binds followers in an unconditional belief in and identification with the leader. The leader is thus in a position to motivate followers to make a concerted effort in order to reach a level of optimal development and performance.

*Inspirational motivation* involves articulating of a clear, appealing, and inspiring vision to followers. It means that the leader increases the follower's optimism and enthusiasm through communicating his/her vision in a truthful manner. Transformational leaders are providing meaning and challenge to their followers' work. The leader tries to get followers involved in envisioning attractive future outcomes, but also clearly communicates expectations concerning the commitment to a shared vision.

*Intellectual stimulation* involves stimulating follower creativity by questioning assumptions and challenging the status quo. This entails encouraging followers to look at old problems in a new way. The leader uses intuition and logic in order to solve problems. The same approach is solicited from followers, who are actively included in the problem-solving journey. The end result of the leader's efforts is not only to motivate followers to solve problems on their own, but to solve them in a new and creative manner.

*Individualised consideration* involves attending to and supporting the individual needs of followers. The leader diagnoses the individual needs and capacities of his/her followers in order to be able to attend to them. The leader makes a concerted effort to provide his/her followers with direction, attention, structure, advice and feedback in accordance with their needs and level of development. Through this consideration, the transformational leader increases the self-confidence of followers and encourages them to accept greater responsibility. The leader does not encourage followers to merely meet their job requirements or to maximise performance, rather, the leader accompanies the followers in their personal development for them to experience challenges in their daily work activities. Thus a leader's transformational behaviour is the key to improving leadership effectiveness.

Mutual trust, respect, internalisation of shared goals, and the willingness of followers to exert extra effort define high-quality leader-follower relationships. It was found that such relationships are aligned with transformational leadership (Gerstner & Day, 1997; Graen & Uhl-Bien, 1995).

Transformational leaders motivate others to perform beyond expectation by moving followers gradually to higher order needs (Bass & Avolio, 1994). Transformational leaders foster a climate of trust and induce followers to transcend their self-interest for the sake of the organisation. This ability of a transformational leader is derived from the leader's sensitivity to the environment, the leader's ability to articulate a strategic vision, their sensitivity to member needs, and their demonstration of personal risk (Conger & Kanungo, 1998; Yukl, 1998).

Bass and Avolio (1994) and Shamir, House and Arthur (1993) agree that transformational leaders are stimulating, which in turn generates commitment, effort, and ultimately greater performance. The transformational leader's actions have the following characteristics (Bass, 1985; Daft, 1999):

- They increase the level of awareness of followers regarding the value and importance of achieving goals, the vision and the strategy to achieve these goals;
- They get followers to dispense their self-interest for the purpose of the team, the organisation, or the greater society;
- They gradually elicit higher order needs from their followers by improving the awareness of what they want to achieve; and
- They develop followers into leaders.

Transformational leadership focuses on social exchanges in contrast to transactional leadership that is based on economic exchanges and low-quality leader-member exchanges (LMX) (Pillai et al., 1999). In the next section transactional leadership will be outlined.

### 2.2.3 Transactional Leadership

Bass (1985) characterised the transactional leader as one who operates within the existing system or culture, has a preference for risk avoidance, pays attention to time constraints and efficiency, and generally prefers process over substance as a means for maintaining control. The skillful transactional leader is likely to be effective in stable and predictable environments. This leader prototype is consistent with an equitable leader-member exchange relationship where the leader fulfils the needs of followers in exchange for performance that meets basic expectations. Bass (1985) thus contends that transformational and transactional leadership is distinct but not mutually exclusive processes. A leader may use both types of leadership at different times and situations. Burns (1978) differs from this view. He contrasts transactional leadership with transformational leadership. Transactional leaders motivate people to fulfil their self-interest rather than elevating them to a higher sense of “self” (Burns, 1978; Nahavandi, 2000; Northouse, 1997).

According to the full-range-of-leadership model (Bass, 1998) the relationship among the transactional dimensions is orientated toward leader-follower exchanges. They, however, represent relatively low forms of leader activity and involvement (when compared to transformational leadership). Bass (1985) hypothesised that three dimensions underlie transactional leadership. The three transactional dimensions, from highest to lowest activity levels, are as follows (Bass & Avolio, 1994).

*Contingent reward* is defined as providing an adequate exchange of valued resources for follower support. This dimension has to do with the contract that is concluded between the leader and the follower. This contract specifies that the follower will receive a certain reward for the outcomes that he/she will achieve. If the follower does not reach a specific outcome, he/she might be punished by the leader by means of a lower commission or stricter controls. The leader’s reaction (reward or punishment) depends on the contingency that precedes the actual event. Contingent reward is the most active form of transactional leadership. *Management by exception - active* involves monitoring performance and taking corrective action. In this manner of leadership, the leader actively monitors performance and anticipates deviations from standards.

*Management by exception - passive* means intervening only when problems become serious. Both active and passive management by exception involves enforcing rules to avoid mistakes. They maintain the process of transacting and preserve the leader's resources for those transactions that require the leader's attention.

Evidence suggests that some dimensions of transactional leadership are positively correlated with transformational leadership, e.g. contingent reward (Bass, 1997). According to Bass (1990a), transformational leadership cannot be viewed as opposing transactional leadership, but must rather be seen as a complementary style.

The transactional leader-follower relationship is based on an exchange model, in which the follower makes contributions in anticipation of, or in response to, rewards, support and various accommodations from the leader. Typical transactional leadership behaviours are the clarification of task requirements and specification of contingent reward (Bass, 1990b; Hater & Bass, 1988). Thus transactional leadership is based on economic exchanges.

#### **2.2.4 Organisational Justice**

Organisational justice is a construct that describes the role of fairness in the workplace. According to Moorman (1991, p.845), "...organisational justice is concerned with the ways in which employees determine if they have been treated fairly in their jobs and the ways in which those determinations influence other work-related variables." Organisational justice is a complex construct, the reason being that judgement about fairness or unfairness is solely based on the perception of the individual. This perception is not necessarily linked to reality, but can, however, be influenced by the perception of other people with whom one interacts. Judgements about fairness are guided by two principles and take place at different levels of analysis. These principles and levels will now be explained in more detail.

### **2.2.4.1 Principles and Levels of Justice**

According to Sheppard, Lewicki and Minton (1992), judgements about fairness are guided by two principles, namely balance and correctness. When balance is applied, a person is likely to compare a specific action with other similar actions in similar situations. Correctness refers to the quality that makes a decision seem “right”. It refers to the consistency, accuracy, clarity, and procedural thoroughness of a decision. These principles are relevant when considering the levels of justice.

The first level of justice is the outcome level. Evaluation of fairness at this level encompasses questions like “Does my outcome pass the test of balance and correctness?” “How fair was my pay relative to others?” “Is the new reorganisation fair?” “Were the right people retrenched?” “Are the recent promotions in the firm fair?” These questions are directly related to the outcome of a decision. Thus Sheppard et al. (1992) refer to it as the outcome level.

The second level of justice is invoked when people make judgements about the procedures through which those decisions are taken. Here a person will consider the process that was followed in deciding about a pay raise, promotion, performance evaluation or retrenchment. According to Sheppard et al. (1992), procedures by which outcomes are created comprise the second level of justice.

The third level of justice encompasses the system within which those evaluation procedures are generated. Systems may be considered as being fair or unfair. It includes the broader organisational context in which procedures are embedded. People make judgements about outcomes and procedures at the more general, systematic level. Although organisational contexts are often difficult to understand, employees might find that certain aspects of a performance evaluation were not considered when deciding about pay increases. This could then lead to the perception of systematic injustice (Pinder, 1998; Sheppard et al., 1992).

Sheppard et al. (1992) propose that a complete justice appraisal of an organisational event must deal with all three levels of justice. In addition, the fairness appraisal must be iterative and recursive. The former implies that judgements tend to become clearer and more stable over time and the latter implies that the model must be seen as a cycle that has two directions. A perceptual framework within which justice is determined suggests that systems produce procedures, and procedures produce outcomes. This then represents the perspective of the person who designs the organisational context or system. The procedures are put into place and they create a particular outcome for a specific employee. This, for example, is applicable when a CEO wants to include fairness in the compensation system. In the reversed scenario, the perspective of the particular employee who experiences organisational procedures and outcomes is applicable. For example, woman A experiences an outcome as unfair and, as a result, draws conclusions about the organisational procedures and systems. Both perspectives must be combined to represent one cycling model. This is necessary in order to prevent beliefs about outcomes being too broad and superficial and beliefs about systems being too narrow and less applicable. The analysis of the principles that guide justice and the levels of justice must be kept in mind when thinking about the components of organisational justice. The components of organisational justice, i.e. distributive and procedural justice, will be discussed in the next section.

#### **2.2.4.2 Organisational Justice: A Two-Component Model**

Cropanzano and Folger (1991) present a two-component model of justice, which includes distributive and procedural forms of justice. Distributive justice is defined as the individual's perception that the outcomes that they receive are fair (Greenberg, 1990; Moorman, 1991; Tremblay, Sire & Balkin, 2000). Examples of distributive outcomes are pay-increases, promotions, and challenging work assignments. Distributive justice is implicitly incorporated in Adam's equity theory and is applied in motivational theory (Greenberg & Baron, 2000). The basis of the equity theory is that the assessment of fairness in a relationship is made by comparing one's ratio of outcomes to inputs to another person's ratio (Chemers, 1997; Pinder, 1998). The importance of this theory lies in the fact that it explicitly states that people will respond to unfair relationships by displaying certain negative emotions, which they will be motivated to escape by redressing the experienced

inequity. Following the Sheppard et al. (1992) conceptualisation, distributive justice is linked to the outcome level of justice. Procedural justice is defined as an employee's perception that the procedures followed by the organisation in determining who receives benefits are fair (Greenberg, 1987; Moorman, 1991, Tremblay et al., 2000). Examples of procedural justice are the degree of voice the person has in decision-making and whether or not consistent rules are followed in making decisions. Procedural justice is linked to the procedural level of justice (Sheppard et al., 1992).

Selznick (Folger & Bies, 1989) argues that procedural justice is the fairness of methods whereby decisions are made. In line of this argument, managerial authority is derived from the employees' acceptance of the psychological contract whereby they agree to have their activities managed. Thus it is significant that managerial responsibility includes enacting decision-making procedures in order to guarantee perceptions of fairness and thereby increase procedural justice in the organisation. Decisions will often be left uncommitted by followers if an opportunity of voice in that decision has not been possible in the first place (Korsgaard, Schweiger & Sapienza, 1995) or if their viewpoint has not been considered adequately (Folger & Bies, 1989).

A second dimension has been added to procedural justice, namely interactional justice. This component was implied through the work of Bies and his colleagues (Moorman, 1991; Pinder, 1998; Tyler & Bies, 1990). Bies and Moag (Pinder, 1998, p.334) mean by interactional justice "that people are sensitive to the quality of interpersonal treatment they receive during the enactment of organisational procedures." Interactional justice involves the manner in which procedures are communicated and carried out by supervisors. It thus involves communication about what is fair to organisational members (Moorman, 1991). Bies and Moag (Pinder, 1998) also contend that procedural and interactional justice are related to perceptions of the fairness of outcomes in a causal and sequential manner. Each part of the sequence (procedure, interaction, outcome) is subject to fairness considerations (Pinder, 1998). This implies that a perception of distributive fairness (the fairness of outcomes) is preceded by a perception of procedural and interactional fairness. Moorman (1991) has demonstrated that procedural, interactional and distributive justice is correlated, but distinct aspects of organisational justice. Following this conceptualisation, organisational justice is defined as procedural, interactional and distributive justice.

In accordance with the taxonomy of justice classes (Greenberg, 1996), which is based on Thibaut and Kelley's theory of interdependence (Chemers, 1997), the distinction between structural and social determinants becomes important. In terms of structural determinants, justice is obtained by focusing on the environmental context within which interaction occurs. In contrast, the treatment of individuals is the focal point of the social determinants of justice. This means, that the act of following a prevailing rule of justice (e.g., distributing rewards equitably), is structurally fair, while the act of treating others in an open and honest way is socially fair. The taxonomy of justice classes is set out in Table 2.1. In accordance with this taxonomy of justice classes, procedural and distributive fairness will be explained in more detail (Greenberg, 1996).

**Table 2.1: Taxonomy of justice classes**

	Category of Justice Classes	
Focal Determinant	Procedural	Distributive
Structural	Systematic justice	Configural justice
Social	Informational justice	Interpersonal justice

Greenberg (1996)

### 2.2.4.3 Procedural Justice

Greenberg (1996) uses the term systematic justice to refer to the variety of procedural justice that is accomplished via structural means. The systematic justice class is represented by Leventhal's rules, to evaluate the fairness of allocation procedures. Leventhal (Lind & Tyler, 1988) contends that fair procedures should a) be consistent across people and time, b) disallow expressions of bias, c) consider employee's viewpoints, d) be based on accurate information, e) incorporate timely feedback after a decision, and f) be compatible with prevailing moral and ethical standards. This can be explained as follows.

Concerning consistent treatment across employees, it seems that being treated like “everybody else” is a crucial cornerstone of procedural justice. It implies that decisions should not be arbitrary and the leader should not subject anyone to favouritism (Folger & Bies, 1989). In addition, Greenberg (1986) found that consistent application of performance appraisal standards across people was significantly related to judgements of procedural fairness.

The suppression of bias implies that there was a fair judgement in a particular situation or decision. Managerial bias, however, will render a decision-making procedure suspect when there is an unfavourable outcome for an employee, even if the procedure was in fact fair (Folger & Bies, 1989). Thus, employees have the expectation that managers or leaders suppress their bias in decision-making as a criterion of procedural justice. Sheppard and Lewicki (Folger & Bies, 1989) show that the suppression of bias is an important aspect of procedural justice.

When employees express their viewpoints to managers, they expect such views to be examined seriously (Lind & Tyler, 1988). This consideration is at the core of procedural justice, as employees hope to have a voice in decisions that affect them. If employees have the perception that their viewpoint has not been considered, they may view the procedure as unfair. Reuter (Folger & Bies, 1989) proved that consideration of employees’ suggestions is critical when procedural fairness is an issue.

Employees expect managers to justify a decision that affects them, especially when it involves unfavourable consequences. Employees believe that they have the right to information affecting their lives (Folger & Bies, 1989). It is therefore important to base a decision on accurate information, in order to provide employees with a rationale for the decision. This justification contributes to the perception of procedural fairness. Bies and Moag (Folger & Bies, 1989) found that job candidates expected justification for any decision, as an indicator of procedural fairness.

Several studies indicate that receiving timely feedback about the decision is a criterion of procedural fairness in an organisation (Bies, in Folger & Bies, 1989; Greenhaus & Callanan, 1994; Reuter, in Folger & Bies, 1989). Job candidates seem to expect a timely feedback on decisions concerning recruitment. If such decision or feedback is delayed, the procedure is perceived as unfair regardless of whether the candidate got the job or not (Greenhaus & Callanan, 1994). Additionally, it is not only important to provide timely feedback, but also to allow employees the chance to modify or reverse the decision (Lind & Tyler, 1988). Both these issues contribute to perceptions of procedural fairness.

Lastly, Leventhal (Lind & Tyler, 1988) perceives morality and the ethics of a decision to be crucial aspects of procedural fairness. On the one hand, ethics can be perceived when a decision is communicated honestly and truthfully to employees. As a result, followers will infer that the underlying process for reaching that decision is fair. On the other hand, the courteous treatment of employees by managers increases the perception of morality in the decision-making process. This, in turn, heightens the perceptions of procedural fairness in the organisation (Folger & Bies, 1989).

These are ways to structure the context in order to obtain procedural justice. As such, they are examples of acts that promote systematic justice (Greenberg, 1996). These aspects indicate the importance of core values that are applicable in the treatment of followers. These values constitute responsibilities that should be incorporated into and not merely be attended to in an organisation.

To describe social determinants of procedural justice, Greenberg (1996) uses the term informational justice. Informational justice may be obtained by providing knowledge about procedures that demonstrate regard for people's concerns. In this instance procedures used to determine desired outcomes are explained to subordinates (Bies in Greenberg 1996). This explanation must, however, be based on sound logical reasoning; i.e. it is not allowed to contain ulterior motives. Bies (Moorman, 1991) contends that explaining decisions is instrumental in determining whether procedural justice exists. In essence, it is analogous with interactional justice as explained earlier (Moorman, 1991).

#### **2.2.4.4 Distributive Justice**

Greenberg (1996) uses the term configural justice to refer to the variety of distributive justice that is accomplished via structural means. Configural justice refers to the pattern of resource allocations perceived as fair under various circumstances. Distributions of rewards can be structured in two ways. They can either be structured by forces to conform to existing social norms (e.g., equity, equality and needs) or by the desire to reach an instrumental goal (e.g., promoting productivity) (Leventhal in Greenberg, 1996). These are ways to structure the context of reward allocation in order to obtain distributive justice.

Interpersonal justice is a term that describes social aspects of distributive justice (Greenberg, 1996). Interpersonal justice can be obtained through showing concern to individuals regarding the distributive outcomes they receive. It focuses on consequences of outcomes, while informational justice focuses on the knowledge of the procedures leading to outcomes. Mikula, Petrik and Tanzer (Greenberg, 1996) hold that ‘selfish behaviour’ on the part of the leader reflects a type of failure to meet one’s social obligations to the distribution of effort. Such behaviour represents a violation of interpersonal justice.

#### **2.2.4.5 Responses to Injustice**

In order to have a comprehensive understanding of the effects of organisational justice, it is essential to elaborate on possible responses to injustice. This understanding of injustice enhances the importance of organisational fairness in the organisation. The reactions to injustice can take place on an active/passive, positive/negative and individual/group basis (Sheppard et al., 1992).

The responses to injustice can take place on the level of the individual or of the group (departments, programmes, committees, or coalitions). Thus individuals can take actions in response to injustice as an individual, or in a group. The actions that are undertaken can range from staging protest, filing a lawsuit, or pursuing retribution. These would normally be classified as “active” actions. Passive actions can also be pursued; i.e. the activity level is reduced in comparison to the cause of injustice.

These are actions like refusing to perform, putting in less effort, decreasing involvement, or working only hard enough to meet the minimum performance standard.

Actions can be positive or negative. If actions are positive, they are directed at inducing positive change to reduce the injustice or correcting it for the future. If actions are negative they are directed at causing harm to the person who is responsible for the injustice.

Some of these responses are more desirable, depending on the situation and circumstances that lead to the injustice. In some situations, individual actions are more effective, while in others collective actions would be more effective to react to the injustice. It behoves managers to know under what conditions each form of response is likely to occur. As a result, managers have to design organisational structures and systems so as to maximise the probability of the desired responses occurring. Knowledge of the determinants of responses to injustice is necessary if managers are to develop effective organisations. A successful organisation would be one where not perceived injustices only are reduced to a minimum, but where there is a mechanism that direct these injustices into channels that will effectively manage and deal with the responses of injustice (Sheppard et al., 1992).

### **2.2.5 Interpersonal Trust**

Trust has been found to be a crucial element in developing organisational effectiveness (Gomez & Rosen, 2001). The importance of trust lies in its close relationship with organisational commitment, job satisfaction (Blake & Mouton, 1984; Cook & Wall, 1980; Morgan & Hunt, 1994) and organisational citizenship behaviours (Konovsky & Pugh, 1994).

Luhman (Nyhan and Marlow, 1997) conceptualises trust as the level of confidence that an individual has in another to act in a fair, ethical and predictable manner. This is in line with Hosmer's (1995) and Mayer, Davis and Schoorman's (1995) definition of trust (Engelbrecht & Cloete, 2000).

Mayer et al. (1995, p.712) defines trust as "...the willingness of a party to be vulnerable to actions of another party based on the expectation that the other will perform a particular action important to the trustor, irrespective of the ability to monitor or control that other party."

In accordance with this definition, trust entails four concepts - an individual's disposition to trust, situational parameters, the history of two parties' relationship and their future relationship. As an individual's disposition, trust is an expectancy or feeling that is deeply rooted in the personality and has its origins in the individual's early psychosocial development (Lewicki & Bunker, 1996).

Some situational parameters are indicated when the decision to trust is made. A situational parameter exists when a) there is an ambiguous course of action in the future, and b) the outcome occurrence depends on the behaviour of others (Lewicki & Bunker, 1996). This implies that the historical relationship is important. A party is likely to trust another party, if the other party has demonstrated reliable and ethical behaviour in the past. Past behaviours of a party is an indication of their future behaviour. Trust refers then to the beliefs that people maintain about the other party's future behaviour (Brockner & Siegel, 1996). In line with this argument it is important to distinguish the various types of trust.

Three types of trust are outlined in the literature, namely calculus-based trust, knowledge-based trust and identification-based trust (Bews, 2000; Lewicki & Bunker, 1996; Robbins, 2000b). It is suggested that these types of trust are sequentially linked in such a way that the achievement of trust at one level enables trust at the next level. Bews (2000) adds that there may be times when trust will progress from one stage to the next, but that at other times trust will be fixed at one level, depending on the nature of the relationship. Within this context, the different levels of trust will be discussed below.

*Calculus-based trust* is equal to deterrence-based trust. This type of trust is not only grounded in the fear of punishment but also in the rewards that are derived from preserving it. This is similar to the view that trust is an ongoing market-orientated, economic calculation. Its value is derived from the determination of outcomes that results from sustaining the relationship relative to the costs of maintaining it (Lewicki & Bunker, 1996).

Bews (2000) adds that this relationship may often be found in short-term employment relationships, while professional relationships will rather take place at the next level of trust.

*Knowledge-based trust* relies on information rather than deterrence. This type of trust develops over time where a historical relationship between two parties is evident. Due to the historical relationship, the behaviour of the other party is predictable and anticipatable. A party may thus classify the other party's behaviour as trustworthy (Lewicki & Bunker, 1996). According to Bews (2000) it seems that, in an employment relationship, trust mostly remains at a knowledge-based level and rarely advances to the identification-based level.

*Identification-based trust* is characterised by extremely intense relationships. It is based on the other party's desires and intentions. Trust exists at this level because of the parties' mutual understanding and appreciation of each other's wants. With this type of trust as a basis of a relationship, the one party can effectively act for the other. Here parties identify with a common goal that may be that of a particular group or the organisation as an entity. High co-operation between the parties is visible at this level of trust (Lewicki & Bunker, 1996).

If there is a negative experience, trust may degenerate to a lower level or, depending on the severity of the experience, it may collapse entirely. Once the interaction becomes more favourable, trust can develop again and it may progress to higher levels. If trust is damaged, greater efforts are necessary to repair it than were required to initially establish it. Such a situation makes it important to slow down any widening trust gap by adapting to a changing environment.

This section has established a definition of trust and provides insight into the formation of trust in the employment relationship. It comes to the fore that trust is a fundamental part in sustaining organisational effectiveness.

## **2.3 The Relationship between the Constructs**

The exchange between an employee and his or her direct supervisor is the primary determinant of employee behaviour. Trust may be reciprocated through this exchange between leader and follower when perceptions of fairness prevail. The exchange, however, is different for transformational and transactional leaders. In the following section, the direct relationships between the constructs will be explained.

### **2.3.1 Transformational Leadership and Procedural Justice**

Transformational leadership involves the empowerment of employees, individualised consideration for subordinates and supporting them for thinking for themselves (Bass & Avolio, 1994). Transformational leaders enable employees to influence the outcomes of decisions that affect them. Beyond that, transformational leaders motivate their followers to be participants in an equitable relationship. Both these factors are likely to promote procedural justice.

Additionally, transformational leaders must be perceived as providing interpersonally fair treatment to subordinates in order to build and promote trust. If subordinates perceive the leader as being procedurally fair, it will enhance the trust they have in the leader as well as in the system (Pillai et al., 1999).

An important element of transformational leadership is that it encourages followers to transcend their self-interest for the purpose of the greater collective group (group, organisation, or country) (Bass & Avolio 1994). This corresponds with procedural justice that enhances welfare and group solidarity over the long term (Lind & Tyler, 1988). Transformational leaders thus promote procedural justice.

Pillai et al. (1999) found that transformational leadership correlated strongly with procedural justice (Sample 1:  $r = 0.59$ , Sample 2:  $r = 0.56$ ,  $p < 0.01$ ). They also show the structural parameter estimate for this relationship to be 0.74 ( $p < 0.01$ ). Thus this study supports the notion that transformational leaders facilitate perceptions of procedural fairness.

### 2.3.2 Procedural Justice and Trust

The use of procedurally fair leadership practices affects employees' trust in the supervisor and the organisation because the development and use of fair procedures explicitly demonstrates the importance placed on the rights of individual employees (Pillai et al., 1999). In addition, the structural and social components of procedural justice are likely to influence perceived trust (Brockner & Siegel, 1996). Structural aspects of procedural justice tend to be stable over time. The inertial nature of institutional forces causes structures to change slowly. Therefore it is logical to contend that expectations with regard to future behaviour will be formed on the basis of the structure of the decision (Brockner & Siegel, 1996). People also base trust judgements on the interpersonal behaviour of the parties who implement the decision. Procedures that are structurally and interactionally fair, will promote trust in the system and in the implementers of the decisions (normally the leader) (Brockner & Siegel, 1996).

Procedural justice is highly correlated with trust (Konovsky & Pugh, 1994). Studies by Konovsky and Pugh (1994) and Pillai et al. (1999) indicate that procedural justice is a significant predictor of trust in supervisors. Konovsky & Pugh (1994) found a correlation between procedural justice and trust in the supervisor to be 0.77 ( $r = 0.77, p < 0.01$ ). Pillai et al. (1999) confirm this correlational pattern (Sample 1:  $r = 0.63$ , Sample 2:  $r = 0.52, p < 0.01$ ). In addition, they report the structural parameter estimate to be 0.29 ( $p < 0.01$ ).

Folger and Konovsky (1989) also found high correlations between various components of procedural justice and trust in the supervisor. This indicates that the perception of procedural fairness is crucial for the development of trust between the followers and their leaders. Korsgaard et al. (1995) showed that procedural justice played an important mediating role in the relationship between leader consideration and trust in the leader.

### 2.3.3 Transformational Leadership and Trust

Procedural justice may mediate the relationship between transformational leadership and trust. But there could also be unmediated effects. That is, transformational leadership may relate to trust directly (Engelbrecht, 1997; Pillai et al., 1999). This is so because transformational leaders have to instil trust for followers to commit to the strategic vision that they propose (Bass, in Pillai et al., 1999). Another reason is that transformational leaders try to motivate followers to take risks by stimulating them intellectually. To be able to do that, transformational leaders need to set a personal example to gain the trust of their followers (Pillai et al., 1999).

In addition, transformational leaders engage in activities that promote identification-based trust. Activities that strengthen identification-based trust include developing a collective identity, creating joint products and goals, and committing to commonly shared values (Lewicki & Bunker, 1996). It is evident that the transformational leader engages in individual consideration, in which the leader diagnoses the individual needs and capacities of his/her followers in order to be able to attend to them. The leader makes a concerted effort to provide his/her followers with direction, attention, structure, advice and feedback in accordance with their needs and developmental level. This understanding of the follower's needs is analogous to identification-based trust, in which the basis of trust is an appreciation of the follower's wants and desires that enables the leader to act effectively on the follower's behalf.

Pillai et al. (1999) found strong positive correlations between transformational leadership and trust (Sample 1:  $r = 0.75$ , Sample 2:  $r = 0.58$ ,  $p < 0.01$ ). They also found structural parameter estimates of the relationship between transformational leadership and trust to be 0.66 ( $p < 0.01$ ), indicating that transformational leadership is related to trust. They proved in their study that transformational leadership affects trust directly and indirectly. Transformational leadership is indirectly related to trust through procedural justice. A study of transformational leader behaviours and substitutes for leadership by Podsakoff, MacKenzie and Bommer (1996) supports the notion that transformational leadership is related to trust.

### 2.3.4 Transactional Leadership and Distributive Justice

Transactional leadership is based on economic exchange (Bass, in Pillai et al., 1999; Graen & Uhl-Bien, 1995). Under transactional leaders, employees are likely to be concerned about the fairness of outcomes. To that Konovsky and Pugh (1994) add, “distributive justice is the metric for judging the fairness of transactional contracts and economic exchanges.”

This relationship can be attributed to the fact that one of the norms of distributive justice is that parties reciprocate benefits with the expectation of receiving comparable benefits in the short run (Konovsky & Pugh, 1994). In connection with performance evaluations, Greenberg (1996) contends that, if they are to be perceived as fair, the instrumentality perceptions of employees should be strengthened, by ensuring that their expectations of the outcomes are related to the work they do. This is in line with transactional leadership. The leader’s function is to clarify instrumentalities for their subordinates (Bass, in Pillai et al., 1999) as well as reward good performance.

Homans (Chemers, 1997) adds that distributive justice occurs when an individual who is engaged in an economic exchange with another person receives rewards that are proportional to the investments that person makes. Investments include the knowledge, skills, effort or material resources that each person brings into the relationship. The value of this investment, as well as what constitutes a ‘just’ exchange, is a matter of personal judgement. If a person feels that he/she receives less than deserved, the emotion of anger prevails. On the other hand, if a person perceives that he/she receives more than deserved, the feeling of guilt prevails. It is evident that a transactional leader who rewards performance or effort has extensive influence over the perception of distributive justice in an organisation.

Pillai et al. (1999) found that transactional leadership was positively related to distributive justice. This relationship, however, is moderate (Sample 1:  $r = 0.41$ , Sample 2  $r = 0.50$ ,  $p < 0.01$ ). The reason for this could be that Pillai et al. (1999) operationalised transactional leadership as contingent reward behaviours only. Transactional leadership appears to have no direct relationship with trust.

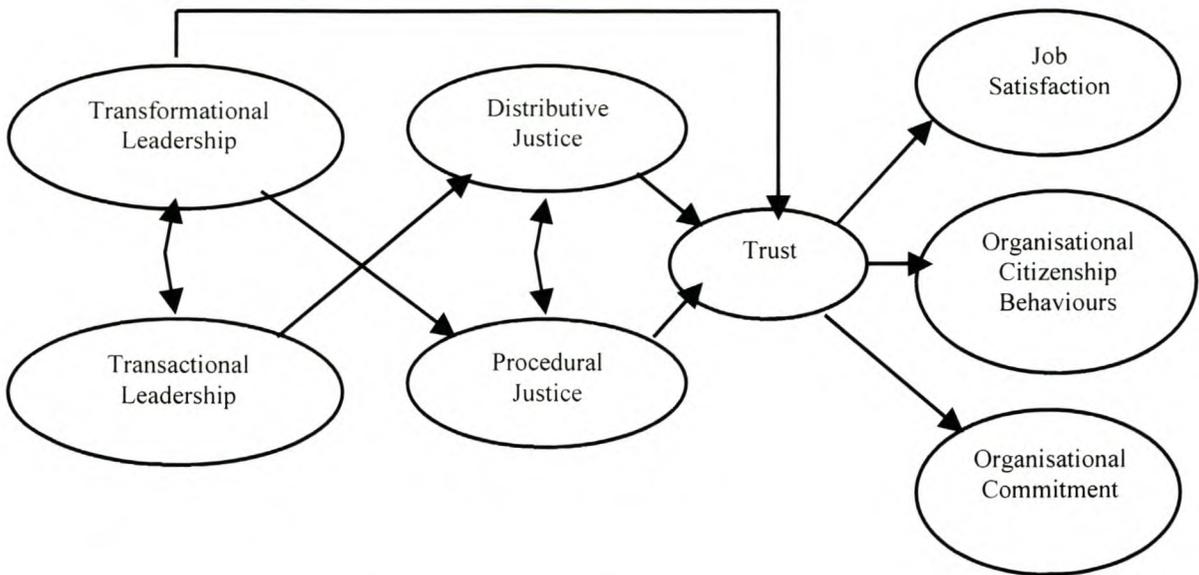
In addition, in their analysis the structural parameter estimate for the relationship between transactional leadership and trust improved from 0.49 to 0.50 ( $p < 0.01$ ) with increased fit of the model. This indicates that transactional leadership is a predictor of distributive justice (Pillai et al., 1999).

### **2.3.5 Distributive Justice and Trust**

Although Konovsky and Pugh (1994) hypothesised that distributive justice is less likely than procedural justice to produce attributions of trust, it is evident (Brockner & Bunker, 1996; Pillai et al., 1999) that distributive justice also is related with trust. For trust to be instilled, the outcome of a particular transaction must be perceived as being fair by followers. That means distributive fairness must be perceived. Equity theory (Greenberg & Baron, 2000; Robbins, 2000a) demonstrates consequences of inequitable outcomes. Inequitable outcomes present a violation of distributive fairness and trust in the leader and the organisation may be hampered as a result. Homans (Chemers, 1997) contends that the willingness to invest in an employment relationship is dependent on previous experiences and a history of such exchanges. If a person perceives that past investments have been worthwhile, i.e. that the exchange was fair, he/she is likely to repeat such an investment. This is analogous to the definition of trust, in which it was conceptualised that an individual has confidence in another party on the grounds of a past relationship, to act in a fair, ethical and predictable manner.

Pillai et al. (1999) found that distributive justice and trust correlated only moderately (Sample 1:  $r = 0.40$ , Sample 2:  $r = 0.46$ ,  $p < 0.01$ ). Folger and Konovsky (1989) found that distributive justice was highly related to pay satisfaction ( $r = 0.64$ ,  $p < 0.01$ ) and only moderately related to trust ( $r = 0.35$ ,  $p < 0.01$ ). Konovsky and Pugh (1994) report unstandardised parameter estimates (-0.421) and t-values (-0.176) in their structural path between distributive justice and trust. This indicates that they found no significant relationship between distributive justice and trust. They admit, however, that their study does not provide irrefutable evidence of causation. They suggest that more studies are needed to establish causal direction (Konovsky & Pugh, 1994).

The literature study generally supports the theoretical conceptualisation of Pillai et al. (1999). Their model is depicted conceptually in Figure 2.2.



**Figure 2.2: Theoretical model of the relationships between leadership, justice, and trust (Pillai et al., 1999)**

## 2.4 Summary

The importance of trust in the employment relationship has been recognised over the last decade. The effect of trust has been studied in many studies (Kramer & Tyler, 1996), but little attention has been given to the integration of leadership and organisational justice with trust, although such relationship has been indicated in the literature (Pillai et al., 1999; Konovsky & Pugh, 1994).

In this chapter a concerted effort is made to explain and define the concepts of transformational and transactional leadership, organisational justice and trust, as well as to outline the relationships that exist among them. This overview of the literature firstly provides a background and, secondly, supports the contents of the next chapter. In Chapter 3, a concise description of the research strategy will be provided.

## **CHAPTER 3**

### **RESEARCH METHODOLOGY**

#### **3.1 Introduction**

The insight that was gained from the literature review will form the basis of the hypotheses that will be outlined in this chapter. In addition, a description of the research design, the sample and the measuring instruments will be provided in this chapter.

#### **3.2 Hypotheses**

In accordance with the proposed relationships among the concepts and the research problems stated earlier, the following hypotheses were formulated:

##### Hypothesis 1:

A significantly positive relationship exists between transformational leadership and procedural justice.

##### Hypothesis 2:

Procedural justice has a mediating effect on the relationship between transformational leadership and interpersonal trust.

##### Hypothesis 3:

A significantly positive relationship exists between procedural justice and interpersonal trust.

##### Hypothesis 4:

A significantly positive relationship exists between transformational leadership and interpersonal trust.

Hypothesis 5:

A significantly positive relationship exists between transactional leadership and distributive justice.

Hypothesis 6:

Distributive justice has a mediating effect on the relationship between transactional leadership and interpersonal trust.

Hypothesis 7:

A significantly positive relationship exists between distributive justice and interpersonal trust.

The hypotheses were formulated in accordance with the literature. This study focuses on specific relationships that are tested. It is implicitly implied that no significant relationships exist between the remaining constructs. This non-significance is not tested in this study and thus no hypotheses are explicitly being stated.

### **3.3 Research design**

A correlative design, which is one of the *ex post facto* designs, was used in this study. According to Kerlinger (1973, p.379) “*ex post facto* research is systematic empirical inquiry in which the scientist does not have direct control of independent variables because their manifestations have already occurred or because they are inherently not manipulable. Inferences about relations among variables are made, without direct intervention, from concomitant variation of independent and dependent variables.” In *ex post facto* research, experimental manipulation and random assignment are not possible. As in experimental design, the purpose of an *ex post facto* design is to test the empirical validity of the statement “if x then y”. The difference with regard to the experimental design is the direct control that a researcher has in manipulating the independent variables.

*Ex post facto* research has three major limitations, namely the inability to manipulate the independent variables, the lack of power to randomise and the risk of improper interpretation. When compared to experimental designs, *ex post facto* research lacks control and erroneous interpretations may originate from the possibility of many explanations of complex events (Kerlinger, 1973). This is especially dangerous when there are no clearly formulated hypotheses. This, however, is not true for this study, but Kerlinger (1973) suggests that results from *ex post facto* research should be treated with caution. The value of an *ex post facto* design, however, lies in the fact that most research in the social sciences does not lend itself to experimentation. A certain degree of controlled inquiry might be possible, but experimentation is not. An *ex post facto* design is valuable in this regard (Kerlinger, 1973).

The research design sets up the framework of a study of the relations among variables, and is thus of great importance, because it controls variance. The principal mechanism of a research design is to maximise systematic variance and to control systematic non-relevant variance and error variance (Kerlinger, 1986).

### **3.4 Sample**

This research was conducted in a bank in Namibia. The questionnaires were distributed from the Human Resources Management Department via internal mail to twelve different branches across Namibia. The senior managers of the various branches distributed the questionnaires to the individual respondents. A covering letter explaining the purpose and content of the study accompanied the questionnaires. Anonymity and confidentiality were guaranteed to participants.

First, questionnaires were circulated in the Windhoek branches of the bank. Respondents were given a week to complete the questionnaires, but this was extended to two weeks. The questionnaires were returned to the Human Resources Management Department. After the completion of the questionnaires in Windhoek, the Human Resources Management Department circulated questionnaires to cities lying outside the capital. Here respondents were given two weeks to complete the questionnaires. These questionnaires were sent back to Stellenbosch via internal mail.

A total of 500 questionnaires were sent out to the various branches. A total of 281 completed questionnaires were returned. This represents a response rate of 56.2 %. A profile of the responding branches is indicated in Table 3.1. In this study non-probability sampling, more specifically quota sampling, was used. A sample is meant to reflect the characteristics of the population, but since the sampling procedure relies on accidental choice and not on random sampling (Bless & Higson-Smith, 1995), the study cannot claim to have sampled a representative sub-set of the bank population. The advantage of this procedure is that peculiar defects in the questionnaire are discovered. The procedure furthermore precludes the unqualified generalisation of the findings to other populations.

**Table 3.1: Demographic profile of the sample**

Responses	Frequency	Percentage
Windhoek branches <sup>1</sup>	9	69.8
Other branches	3	30.2
<b>Sex</b>		
Males	83	29.5
Females	198	70.5
<b>Ethnic group</b>		
African	81	28.8
Asian	1	0.4
Coloured	141	50.2
White	58	20.6
<b>Education</b>		
Less than matric	13	4.6
Matric	228	81.1
Degree / Diploma	39	13.9
Postgraduate degree	1	0.4
<b>Job Level</b>		
Non-managerial	225	80.1
Lower level management	35	12.5
Middle level management	18	6.4
Upper level management	3	1.1

<sup>1</sup> Because of reasons of confidentiality, the different branches cannot be named

**Table 3.1: Demographic profile of the sample (continued)**

<b>Variable</b>	<b>Mean (years)</b>	<b>Standard Deviation</b>
Age	30.520	7.739
Length of service in the company	8.841	6.834
Period working under this supervisor	2.616	3.596
Total work experience	10.016	7.404

Table.3.1 indicates that nearly twice as many females as males have responded to this questionnaire. It is apparent that the ethnic group consists predominantly of coloureds, which is followed by African and white people, in that order. Most employees who responded to this questionnaire have obtained a matric qualification, 13.9 % have obtained a degree, while only one person has a postgraduate qualification.

Of the respondents, 80.1 %, are working in non-managerial positions, 12.5% and 6.4% are employed in lower-level and middle-level management positions, respectively. Only three upper-level managers responded to the questionnaire. The inclusion of job levels was originally important to this study, as it was desirable to test the difference in perceptions among lower level employees and employees higher up in the hierarchy. Unfortunately, only a few middle- and upper-level managers responded in this study. The comparison of perceptions was therefore not possible. This response problem resulted from the sampling procedure.

Table 3.1 indicates that the average age of employees was 30.5 years. It was evident that many respondents obtained their total work experience in the bank. The average length of service in the bank was 8.8 years, while the average of the total work experience was equal to 10.0 years. The average time that a respondent worked under a supervisor amounted to 2.6 years.

In the next section the measuring instruments that were used will be discussed.

### 3.5 Measuring Instruments

This research utilised a combined questionnaire consisting of four sections (The questionnaire and the accompanying letter are presented in Annexure A).

Section A measured the *demographic data* of the various respondents. The demographic questionnaire consisted of three broad sections. The first acquired an indication of the general background of the participants. Questions here related to the candidates' gender, ethnic group and age. The second section consisted of questions relating to the respondents' length of service in the organisation and the time that the participant had spent under the current supervisor. The third section included questions relating to the individual's level of education and job level.

Section B measured *transformational and transactional leadership* with an adapted version of the Multi-factor Leadership Questionnaire (Form 5-45) developed by Bass and Avolio (1995). Only questions relating to transformational and transactional leadership were chosen from this questionnaire. According to Pillai et al. (1999) the MLQ is the most widely used measurement for transformational and transactional leadership behaviours.

The sub-scales relevant to transformational leadership in this research were idealised influence (eight items), inspirational motivation (four items), intellectual stimulation (four items) and individualised consideration (four items). The internal consistency reliability measured by the alpha coefficients was found to be 0.93 for idealised influence, 0.72 for inspirational motivation, 0.81 for intellectual stimulation and 0.75 for individualised consideration (Hartog & Van Muijen, 1997). Lowe, Kroeck and Sivasubramaniam (1996) reported similar  $\alpha$ -coefficients for these dimensions. They report alpha coefficients to be 0.92 for charisma, 0.86 for intellectual stimulation and 0.88 for individualised consideration. The sub-scales relevant to transactional leadership were contingent reward (four items), management-by-exception (Active) (four items) and management-by-exception (Passive) (four items). The alpha coefficients measuring internal consistency, were found to be 0.78 for contingent reward, 0.79 for management-by-exception (Active) and 0.58 for management-by-exception (Passive) (Hartog & Van Muijen, 1997).

It is evident that management-by-exception (Passive) lies below the normally accepted value of 0.70 (Nunnally, 1978, p.245). Lowe et al. (1996) reported alpha coefficients for contingent reward and management-by-exception. They were 0.82 and 0.65, respectively. Hartog and Van Muijen (1997) indicate that the alpha coefficient increased for transactional leadership when management-by-exception (Passive) was not included. However, according to Bass and Avolio (Pillai et al., 1999), this scale has consistently demonstrated good reliability across samples.

A variety of studies that utilised the MLQ have been conducted (Avolio, Yammarino & Bass, 1991, Bass & Yammarino, 1991, Du Rand, 2001, Hartog & Van Muijen, 1997, Howell & Avolio, 1993, Hater & Bass, 1988, Jung, Avolio & Bass, 1998, Lowe et al. 1996, Pillai et al., 1999, Yammarino & Dubinsky, 1994). Howell and Avolio (1993) and Yammarino and Dubinsky (1994) indicated that the factor structure of the MLQ is problematic. Du Rand (2001) found that certain items measuring idealised influence also produced significant loadings on inspirational motivation. Items that measured management-by-exception produced significant loadings on laissez-faire leadership and vice versa. Yukl (1998) contended that the high intercorrelations of transformational behaviours did not make it possible to separate their effects in survey studies.

Research findings using the MLQ have generally reported statistically significant relationships between leader effectiveness and the transformational scales. Contingent reward of the transactional leadership scale has also been associated with leader effectiveness, while management-by-exception does not seem to enhance leader effectiveness (Lowe et al., 1996). Charisma correlated with effectiveness ( $r=0.91$ ) in a study by Atwater and Yammarino (Lowe et al., 1996). Hater and Bass (1988) reported a correlation of  $r = 0.46$  after using the same measure in a Fortune 500 organisation. Bass and Yammarino (1991) found  $r = 0.21$  between individualised consideration and effectiveness (effectiveness was operationalised as supervisory ratings of contributing to the mission). Singer (Lowe et al., 1996) found a correlation of  $r = 0.71$  between contingent reward and effectiveness, whereas Waldman, Bass and Einstein (Lowe et al., 1996) found no correlation between contingent reward and effectiveness.

Management-by-exception seemed to be negatively related to leader effectiveness ( $r = -0.34$ ) (Bass, 1985). A wide range of validity coefficients was reported between the MLQ and effectiveness. The findings indicated that effective leaders emphasise transformational behaviours but also use relevant transactional behaviours, i.e. contingent reward.

Section C measured *procedural and distributive justice*. Moorman's (1991) questionnaire for organisational justice was used. Procedural justice was measured with a 13-item scale that has six-point Likert response alternatives. It identified the presence of formal procedures (i.e. relating to selection, training and development, job analysis, career planning, performance management, and disciplinary procedures) and perceived fairness of the interactions involving these procedures. Moorman (1991) found an internal consistency reliability of 0.93 for this scale. Distributive justice was measured with a five-item scale. This scale also had six-point Likert response alternatives ranging from 'strongly disagree' to 'strongly agree'. It measured the degree to which rewards received by employees were related to performance and were perceived as fair. Moorman (1991) found its internal consistency reliability to be 0.94 for distributive justice. He conducted confirmatory factor analysis to determine the validity of this measurement instrument and proved convergent and discriminant validity as all indicators loaded significantly on the hypothesised latent variables and no cross loadings existed ( $\lambda$ s varied between 0.67 and 0.93). The goodness of fit was indicated by the comparative fit index (CFI = 0.97). The chi-square for this measurement model was 320.55 ( $df = 216, N = 225, p < 0.0001$ ).

Section D measured *interpersonal trust*. Bews's (2000) trust questionnaire was used. Some of the items used to construct this instrument were based on items used in the research conducted by Mayer and Davis (Bews, 2000). The internal consistency of this instrument was found to be 0.94. Bews (2000) reported the corrected item total correlation as lying between 0.55 and 0.80 for the eleven items. This indicates a certain degree of content validity of the questionnaire. For the purpose of this study some changes had to be made to this questionnaire. The five-point Likert response alternatives were changed to six-point Likert response alternatives. The reason for that was to prevent the problem of centrality. One item was added to Bews's questionnaire, changing it to a 12-item questionnaire. The item that was added states: " I can confide in the person to whom I report".

### 3.6 Statistical Analysis

Structural equation modelling (SEM) was used as the statistical procedure to test the stated hypotheses. SEM was done using LISREL 8.3 (Jöreskog & Sörbom, 1996). SEM includes factor analysis to test hypotheses. It incorporates testing the overall quality of the factor solution and the specific parameters composing the model. SEM allows for the specification and testing of complex models, where mediational relationships and causal processes are of interest (Kelloway, 1998). SEM was used in this study, because a set of correlations is implied. Kelloway (1998, p.6) states, "...if the theory is valid, then the theory should be able to explain or reproduce the patterns of correlations found in the empirical data."

The LISREL path diagram that served as the basis for this study is depicted in Figure 3.1, and the matrices derived from the path diagram, are depicted in Table 3.2.

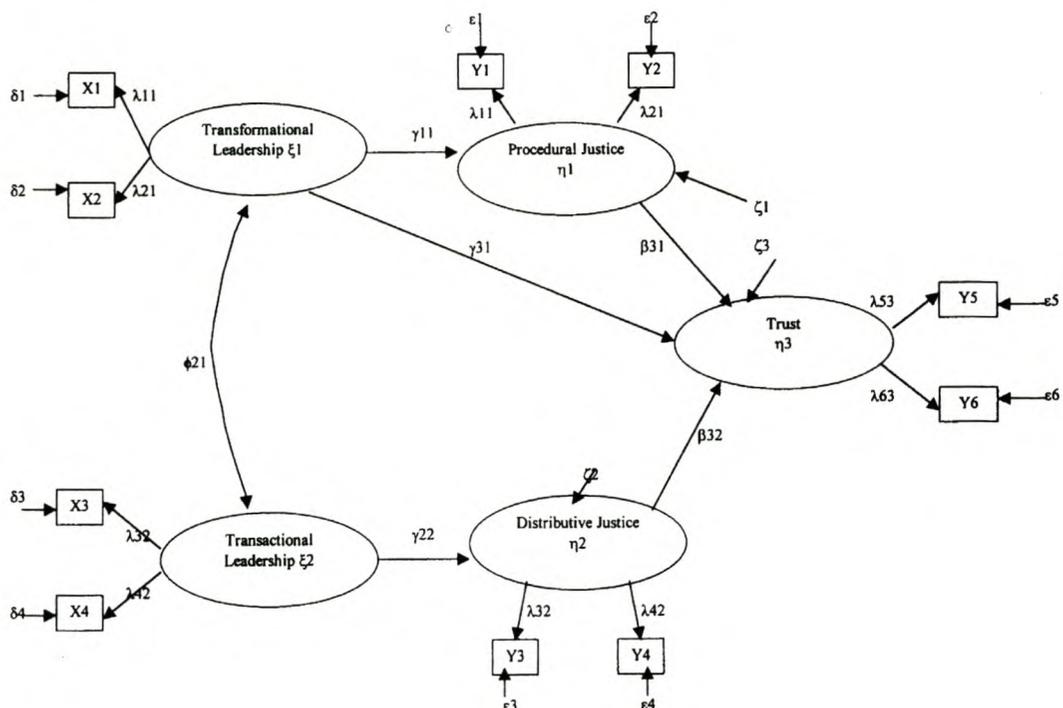


Figure 3.1: LISREL path diagram

**Table 3.2: Matrices derived from the conceptualised LISREL model****Measurement Model for X-Variables:**

$$\underline{X} = \Lambda_x \underline{\xi} + \underline{\delta}$$

$$X1 = \lambda_{11} \xi_1 + \delta_1$$

$$X2 = \lambda_{21} \xi_1 + \delta_2$$

$$X3 = \lambda_{32} \xi_2 + \delta_3$$

$$X4 = \lambda_{42} \xi_2 + \delta_4$$

$$\begin{pmatrix} X1 \\ X2 \\ X3 \\ X4 \end{pmatrix} = \begin{pmatrix} \lambda_{11} & 0 \\ \lambda_{21} & 0 \\ 0 & \lambda_{32} \\ 0 & \lambda_{42} \end{pmatrix} \begin{pmatrix} \xi_1 \\ \xi_2 \end{pmatrix} + \begin{pmatrix} \delta_1 \\ \delta_2 \\ \delta_3 \\ \delta_4 \end{pmatrix}$$

**Measurement Model for Y-Variables:**

$$\underline{Y} = \Lambda_y \underline{\eta} + \underline{\varepsilon}$$

$$Y1 = \lambda_{11} \eta_1 + \varepsilon_1$$

$$Y2 = \lambda_{21} \eta_1 + \varepsilon_2$$

$$Y3 = \lambda_{32} \eta_2 + \varepsilon_3$$

$$Y4 = \lambda_{42} \eta_2 + \varepsilon_4$$

$$Y5 = \lambda_{53} \eta_3 + \varepsilon_5$$

$$Y6 = \lambda_{63} \eta_3 + \varepsilon_6$$

$$\begin{pmatrix} Y1 \\ Y2 \\ Y3 \\ Y4 \\ Y5 \\ Y6 \end{pmatrix} = \begin{pmatrix} \lambda_{11} & 0 & 0 \\ \lambda_{21} & 0 & 0 \\ 0 & \lambda_{32} & 0 \\ 0 & \lambda_{42} & 0 \\ 0 & 0 & \lambda_{53} \\ 0 & 0 & \lambda_{63} \end{pmatrix} \begin{pmatrix} \eta_1 \\ \eta_2 \\ \eta_3 \end{pmatrix} + \begin{pmatrix} \varepsilon_1 \\ \varepsilon_2 \\ \varepsilon_3 \\ \varepsilon_4 \\ \varepsilon_5 \\ \varepsilon_6 \end{pmatrix}$$

**Table 3.2: Matrices derived from the conceptualised LISREL Model (continued)****STRUCTURAL EQUATIONS:**

$$\eta = B\eta + \Gamma \xi + \zeta$$

$$\eta_1 = \gamma_{11} \xi_1 + \zeta_1$$

$$\eta_2 = \gamma_{22} \xi_2 + \zeta_2$$

$$\eta_3 = \beta_{31} \eta_1 + \beta_{32} \eta_2 + \gamma_{31} \xi_1 + \zeta_3$$

$$\begin{pmatrix} \eta_1 \\ \eta_2 \\ \eta_3 \end{pmatrix} = \begin{pmatrix} 0 & 0 & 0 \\ 0 & 0 & 0 \\ \beta_{31} & \beta_{32} & 0 \end{pmatrix} \begin{pmatrix} \eta_1 \\ \eta_2 \\ \eta_3 \end{pmatrix} + \begin{pmatrix} \gamma_{11} & 0 \\ 0 & \gamma_{22} \\ \gamma_{31} & 0 \end{pmatrix} \begin{pmatrix} \xi_1 \\ \xi_2 \\ \xi_1 \end{pmatrix} + \begin{pmatrix} \zeta_1 \\ \zeta_2 \\ \zeta_3 \end{pmatrix}$$

Transformational and transactional leadership are the independent or exogenous latent variables in this study and are thus termed ksi-1 ( $\xi_1$ ) and ksi-2 ( $\xi_2$ ), respectively. X1 and X2 are the observed variables designed to load on transformational leadership ( $\xi_1$ ), while X3 and X4 are the observed variables designed to load on transactional leadership ( $\xi_2$ ). X1, X2, X3 and X4 were obtained through calculating unweighted averages of odd- and even- numbered items of each sub-scale. Consequently, X1 contained all the even-numbered items and X2 contained all the odd-numbered items that were designed to load on transformational leadership. The same logic was followed for the transactional leadership dimension. This was done in order to avoid overly complicated measurement models. Lambda ( $\lambda$ ) usually describes the paths between  $\xi$  and X (or later also between eta ( $\eta$ ) (endogenous variables) and Y (observed variables)).  $\lambda_{11}$  and  $\lambda_{21}$  were used to describe the path that was used from transformational leadership to the observed variables X1 and X2, while  $\lambda_{32}$  and  $\lambda_{42}$  were used to describe the path from transactional leadership to the observed variables X3 and X4. A co-variance was assumed between transformational and transactional leadership and is indicated by the symbol phi ( $\phi$ ). Delta ( $\delta$ ) was used to describe possible errors in the observed variables.

Procedural justice, distributive justice and interpersonal trust form the dependent or endogenous latent variables. The endogenous variables are indicated by the symbol eta ( $\eta$ ). In this measurement model, Y describes the observed variables and the path is described by lambda ( $\lambda$ ).

The path that describes the relationship between procedural justice and trust, as well as distributive justice and trust, was termed beta ( $\beta$ ). Epsilon ( $\epsilon$ ) was used to describe possible errors in the observed variables.

The structural model indicates a variety of paths. These paths between exogenous and endogenous variables are described with the sign gamma ( $\gamma$ ). Zeta ( $\zeta$ ) indicates errors in structural equations in the model. Zeta describes the error term on eta1, eta2 and eta3, thus it represents residual error in the latent endogenous variables. Zeta reflects all other latent variables that are not included in the model that explains variance in a specific endogenous variable.

The measurement and structural equation models depicted in Figure 3.1 can alternatively be expressed algebraically in the form of three matrix equations. These equations that form the basis of this study are presented in Table 3.2. The exogenous measurement models can be defined as follows (Jöreskog & Sörbom, 1996):

$$X = \Lambda x \xi + \delta \quad (1)$$

Where:

X is a 4 x 1 column vector of observable indicator variables,

$\Lambda x$  is a 4 x 2 matrix of factor loadings,

$\xi$  is a 2 x 1 column vector of latent leadership facets; and

$\delta$  is a 4 x 1 column of measurement errors in X. It indicates systematic non-relevant, as well as random error influences (Jöreskog & Sörbom, 1996).

The endogenous measurement model, in turn, can be expressed as:

$$Y = \Lambda y \eta + \epsilon \quad (2)$$

Where:

Y is a 6 x 1 column vector of observable indicator or outcome variables,

$\Lambda y$  is a 6 x 3 matrix of factor loadings,

$\eta$  is a 3 x 1 column vector of latent endogenous variables; and

$\epsilon$  is a 6 x 1 column of measurement errors in Y. It indicates systematic non-relevant and random error influences (Jöreskog & Sörbom, 1996).

The structural model is summarised in terms of the following expression:

$$\eta = B\eta + \Gamma\xi + \zeta \quad (3)$$

Where:

$\eta$  is a 3 x 1 column vector of latent endogenous variables,

$B$  is 3 x 3 matrix of  $\beta$  coefficients of the  $\eta$ -variables in the structural relationship ( $\beta$  has zeros in the diagonal),

$\Gamma$  is a 3 x 2 matrix of  $\gamma$  coefficients of regression of  $\eta$  on  $\xi$ ,

$\xi$  is a 2 x 1 column vector of latent leadership facets, and

$\zeta$  is 3 x 1 vector of equation errors in the structural relationship between  $\xi$  and  $\eta$  (Jöreskog & Sörbom, 1996).

The aim of this study was to measure a direct relationship between transformational leadership and trust, and to show whether procedural justice mediates this relationship. It also is tested whether there is a relationship between transactional leadership, distributive justice and trust. Thus it is tested whether distributive justice has a mediating effect on the relationship between transactional leadership and trust. In this model mediated and non-mediated relationships are assessed.

In the initial phase of the statistical analysis using LISREL, convergence of the structural model could not be achieved and the goodness-of-fit of the measurement models was poor. Consequently, alternative solutions had to be found. As a result of these problems, a second phase of analysis was entered into. All dimensions of transformational and transactional leadership were subsequently separated in order to test their separate effects on the latent endogenous variable. Factor analysis and item analysis, using SPSS (SPSS, 1990), preceded the next round of LISREL analyses. The goal of this exercise was to eliminate items that disturbed uni-dimensionality of the factor structures underlying the various scales, or that loaded poorly on the factor structure, and to eliminate items where an increase in the internal consistency of the scale could be achieved by deleting the items.

The dimensionality analysis was conducted using SPSS (SPSS, 1990). Unrestricted principal component analysis with Varimax rotation was performed on each sub-scale of the questionnaire.

The objective of these analyses was to confirm the uni-dimensionality of each sub-scale. In the case of the MLQ, two items had to be deleted, one from the idealised influence and one from the management-by-exception (passive) sub-scale, as a result of weak loadings on the factor structure.

Item analysis for all the sub-scales was conducted. Item analysis was performed through the SPSS Reliability Procedure (SPSS, 1990) to identify and eliminate possible items that are not contributing to an internally consistent description of the latent variables in question. One item of procedural justice had to be deleted. Cronbach alpha values were extremely satisfactory for the sub-scales (this will be discussed in greater detail in Chapter 4).

The data was read into PRELIS (Jöreskog & Sörbom, 1996) to compute a correlation matrix to serve as input for the LISREL analysis. Confirmatory factor analyses (CFA) using LISREL 8.30 were subsequently performed on the new measurement models (the revised model is depicted in Figure 4.1, p. 61). The aim of the CFA was to establish the factorial validity of the exogenous and endogenous measurement models. Once it was established that the exogenous and endogenous measurement models fit the data reasonably well, the structural model was tested using LISREL. In phase two the structural model converged only when using a correlation matrix.

The method of estimation that was chosen for this model was maximum likelihood (ML). Maximum likelihood estimators are known to be consistent and asymptotically efficient in large samples (Kelloway, 1998). ML is a full information technique, because one is able to estimate all parameters (i.e. path coefficients) simultaneously. LISREL provided goodness-of-fit statistics (Jöreskog & Sörbom, 1996). Absolute and comparative fit was analysed in order to estimate how well the theoretical model fitted the data. Absolute fit measures that were used were the goodness-of-fit index (GFI), the adjusted-goodness-of-fit index (AGFI), root mean squared residual (RMR), root mean squared error of approximation (RMSEA), and a ratio of chi-square and degrees of freedom ( $\chi^2/df$ ) were relevant here.

Comparative fit measures were the normed-fit index (NFI), the non-normed fit index (NNFI), the incremental fit index (IFI), the comparative fit index (CFI), and the relative fit index (RFI). The assessment of comparative fit is furthermore subdivided into parsimonious fit indices. Relevant indices here were the parsimonious normed fit index (PNFI), the parsimonious goodness-of-fit index (PGFI), the Akaike information criterion (AIC), and the consistent Akaike information criterion (CAIC). These goodness-of-fit indices are explained in detail in Chapter 4.

Lastly, completely standardised solutions (CS) were reported. Standardised solutions were estimated for latent variables. Under a completely standardised solution both the latent variables and the observed variables were scaled to have variances equal to one and means equal to zero (Jöreskog & Sörbom, 1993).

### **3.7 Summary**

In this chapter the hypotheses relevant to the study have been stated, as well as the research methodology used to test the hypotheses. An overview of the sample and measuring instruments was presented. In addition a description of the statistical analyses was provided. Furthermore a complete overview of the LISREL model was given and the assumptions underlying LISREL were described. The next chapter will present the results obtained from the statistical analyses in detail.

## **CHAPTER 4**

### **RESEARCH RESULTS**

#### **4.1 Introduction**

The purpose of this chapter is to report the results of the statistical analyses. The chapter will describe missing values and will provide detailed results of the dimensionality analyses, the item analyses and LISREL outputs. Based on the procedures discussed in the previous chapter, the testing results of the formulated hypotheses will also be discussed.

#### **4.2. Missing Values**

Missing values did not represent a problem in this analysis. A total of 306 completed questionnaires were received by the time of the analysis. Twenty-five of these had to be rejected, as they were not completed satisfactorily. Respondents failed to complete a large section of the questionnaire. All questionnaires that were subsequently used in the analysis were fully completed by all the respondents, except that some respondents did not disclose their age. This did not represent a serious problem, because the age could be deduced from the year in which they completed their school career and the amount of work experience they had indicated.

#### **4.3 Phase 1: Design and Fit of the Model**

During the first phase of the statistical analysis, the overall model as it is depicted in Figure 3.1, was designed, utilising the interactive facility of the LISREL programme. Subsequently the conventional LISREL syntax was derived from the path diagram and was submitted. The model, however, did not converge. Confirmatory factor analysis was then conducted on both the measurement models in order to establish their psychometric integrity.

The failure of the model to converge could be either due to deficiencies in one or both of the measurement models, or due to deficiencies in the structural model, or due to both. The goodness of fit for the exogenous measurement model (leadership) did not prove to be acceptable (RMSEA = 0.18,  $p < 0.05$ , GFI = 0.48 and AGFI = 0.32), neither was an acceptable goodness-of-fit found for the endogenous measurement model (RMSEA = 0.11,  $p < 0.05$ , GFI = 0.68, AGFI = 0.63) (for a discussion on acceptable fit see pages 63 to 67). As a result of these findings, a second phase of statistical analysis was conducted.

#### **4.4 Phase 2: Revising the structural model**

The original model was redesigned as a result of the problems that occurred in phase one. It was decided to separate the various leadership dimensions in order to confront the MLQ with a more equitable challenge in as far as the exogenous measurement model now agreed with the original design architecture of the MLQ. This would have the additional advantage of permitting a more penetrating analysis of the effect of each leadership dimension on the endogenous latent variables. Preceding the LISREL analysis, dimensionality analyses and item analyses were conducted on SPSS (SPSS, 1990). The goal of the dimensionality analyses was to ensure the uni-dimensionality of each sub-scale. The item analyses were conducted in order to identify and eliminate possible items that were not contributing to an internally consistent description of the sub-scales in question. Subsequently, confirmatory factor analyses were performed on the exogenous and endogenous latent variables, using LISREL to establish new goodness-of-fit on the measurement models. The last step in this phase was to test the structural model via LISREL. In phase two, the structural model converged. The next section will describe the dimensionality analysis.

#### **4.5 Dimensionality Analysis**

Dimensionality analyses were conducted with the use of SPSS (SPSS, 1990). Unrestricted principal component analyses with Varimax rotation were performed on each sub-scale of the questionnaire. The objective of this analysis was to confirm the uni-dimensionality of each sub-scale (an overview of the results is presented in Table 4.1 – Table 4.4).

In the case of the MLQ, only one factor was extracted in terms of the eigenvalues greater than one criterion for each of the seven sub-scales. In the case of the MLQ, items with inadequate factor loadings had to be removed. In the case of transformational leadership item 5 (measuring idealised influence (charisma)) was removed, because it loaded very low on that factor ( $\lambda = 0.368$ ). In the case of transactional leadership item 15 (measuring management-by-exception passive) has been deleted, because it also loaded unsatisfactorily low on that factor ( $\lambda = 0.436$ ). All remaining items had satisfactory ( $\lambda \geq 0.62$  and  $\lambda \geq 0.65$ ) factor loadings (see Table 4.1 and 4. 2).

**Table 4.1: Principal component loadings for transformational leadership dimensions**

Idealised Influence		Intellectual Stimulation		Inspirational motivation		Individualised Consideration	
Item	$\lambda$	Item	$\lambda$	Item	$\lambda$	Item	$\lambda$
Quest5	0.368	Quest 2	0.689	Quest 7	0.741	Quest 13	0.735
Quest 8	0.657	Quest 6	0.656	Quest 11	0.816	Quest 17	0.736
Quest 12	0.732	Quest 27	0.816	Quest 24	0.830	Quest 26	0.775
Quest 16	0.712	Quest 29	0.785	Quest32	0.789	Quest 28	0.830
Quest 19	0.790						
Quest 21	0.688						
Quest23	0.623						
Quest30	0.782						

**Table 4.2: Overview of the dimensionality analysis of transactional leadership**

Contingent Reward		Management-by-Exception Active		Management-by-Exception Passive	
Item	$\lambda$	Item	$\lambda$	Item	$\lambda$
Quest 1	0.723	Quest 4	0.626	Quest 3	0.650
Quest 9	0.761	Quest 20	0.758	Quest 10	0.784
Quest 14	0.743	Quest 22	0.770	Quest 15	0.436
Quest 31	0.765	Quest 25	0.714	Quest 18	0.764

Procedural justice failed the uni-dimensionality test. In this case, however, the problem could not be solved through the deletion of the offending items. The scale presented a clear, interpretable two-factor orthogonal factor structure. The sub-scale was subsequently subdivided into two orthogonal uni-dimensional scales. This subdivision was based on a common theme in the items loading strongly on each factor. The factor fission was found to result in a conceptually meaningful division of the original procedural justice dimension. Unrestricted principal component analyses using Varimax rotation was subsequently performed on each of these newly created scales. All items allocated to the subdivided sub-scales loaded satisfactorily ( $\lambda$  varied from 0.56 to 0.85) on a single factor (see Table. 4.3). The two factors that emerged from the factor fission were interpreted as procedural justice and interactional justice. The former refers to institutional procedures that are enacted in an organisational setting, while the latter refers to communicating these procedures to individuals in a transparent and equitable manner. Procedural justice concerns the procedures of an organisation in themselves, while interactional justice refers to the equitable treatment of subordinates.

**Table 4.3: Principal component loadings for organisational justice dimensions**

Procedural Justice		Interactional Justice		Distributive Justice	
Item	$\lambda$	Item	$\lambda$	Item	$\lambda$
Ques 1	0.642	Ques 8	0.814	Ques 14	0.878
Ques 2	0.818	Ques 9	0.754	Ques 15	0.885
Ques 3	0.804	Ques 10	0.802	Ques 16	0.951
Ques 4	0.768	Ques 11	0.807	Ques 17	0.922
Ques 5	0.806	Ques 12	0.885	Ques 18	0.889
Ques 6	0.827	Ques 13	0.881		
Ques 7	0.853				

The inter-item correlations of the interpersonal trust scale could be satisfactorily explained in terms of a single factor. In addition, the factor loadings produced satisfactory results (see Table 4.4)

**Table 4.4: Principal component loadings of the interpersonal trust dimension**

Interpersonal Trust			
Item	$\lambda$	Item	$\lambda$
Que 1	0.750	Que 7	0.852
Que 2	0.815	Que 8	0.849
Que 3	0.817	Que 9	0.822
Que 4	0.803	Que 10	0.818
Que 5	0.830	Que 11	0.854
Que 6	0.854	Que 12	0.817

Nunnally (1978) argues that a factor loading of  $\lambda = 0.2$  would be an acceptable standard to keep an item in the scale. In this study a more stringent viewpoint was taken in order to increase systematically explained variance. Items that showed factor loadings of  $\lambda < 0.5$  have been removed.

In the next section the item analysis will be discussed.

#### 4.6 Item Analysis

Item analyses were conducted on all the sub-scales. Item analysis was performed through the SPSS Reliability Procedure (SPSS, 1990) to identify and eliminate possible items that were not contributing to an internally consistent description of the sub-scales in question. The item analysis confirmed the deletion of item 5 of transformational leadership and item 15 of transactional leadership. The deletion of item 5 brought about an increase in the  $\alpha$  value from 0.8242 to 0.8411. Additionally, item 1 of procedural justice was suggested for removal. With deletion of this item, the  $\alpha$  value increased from 0.8992 to 0.9013 (see Table 4.8 in Annexure B). The results of the item analyses are presented in Table 4.5 (a more comprehensive summary is presented in Annexure B.)

**Table 4.5: Summarised results of the item analysis (N = 281)**

<b>Scale</b>	<b>Number of Items</b>	<b>Alpha</b>	<b>Scale Mean</b>	<b>Scale Variance</b>
Idealised Influence	7	0.8411	22.6477	37.5719
Intellectual Stimulation	4	0.7220	12.3701	12.0840
Inspirational Motivation	4	0.8023	13.1530	14.4944
Individualised Consideration	4	0.7696	12.4911	15.9651
Contingent Reward	4	0.7373	13.0071	14.0714
MBE Active	4	0.6839	13.5409	10.9492
MBE Passive	3	0.6197	6.4555	7.7132
Procedural Justice	6	0.9013	29.3559	53.2515
Interactional Justice	6	0.9094	25.5196	47.1719
Distributive Justice	5	0.9447	17.5374	57.5781
Interpersonal Trust	12	0.9566	53.1673	181.6755

Generally, the Cronbach alpha values are satisfactorily high. In the case of management-by-exception (active and passive) the Cronbach alphas lie below the generally accepted value of 0.70 (Nunnally, 1978).

#### 4.7 Structural Equation Modeling

In an effort to avoid the problems that occurred during phase 1 and build on the findings of the dimensionality and item analyses, a new structural model for the LISREL analysis was designed. The path diagram is depicted in Figure 4.1.

Structural equation modeling (SEM) using LISREL 8.30 (Jöreskog & Sörbom, 1996) was used to perform confirmatory factor analyses (CFA) on the revised exogenous and endogenous models. In the first phase of the analysis unweighted averages of odd- and even-numbered items of each scale were calculated, in an effort to circumvent overly complicated measurement models. As a result of the separation of the items into their dimensions, all items that had been retained after the dimensionality and item analyses were used to calculate indicator variables.

The schematic representation of the revised comprehensive LISREL model portrayed in Figure 4.1 implies the following matrix equations:

$$X = \Lambda_x \xi + \delta \quad (4)$$

Where:

X is a 30 x 1 column vector of observable indicator variables,

$\Lambda_x$  is a 30 x 7 matrix of factor loadings,

$\xi$  is a 7 x 1 column vector of latent leadership facets; and

$\delta$  is a 30 x 1 column of measurement errors in X. It indicates systematic non-relevant, as well as random error influences (Jöreskog & Sörbom, 1996).

$$Y = \Lambda_y \eta + \varepsilon \quad (5)$$

Where:

Y is a 29 x 1 column vector of observable indicator variables,

$\Lambda_y$  is a 29 x 4 matrix of factor loadings,

$\eta$  is a 4 x 1 column vector of latent endogenous variables; and

$\varepsilon$  is a 29 x 1 column of measurement errors in Y. It indicates systematic non-relevant and random error influences (Jöreskog & Sörbom, 1996).

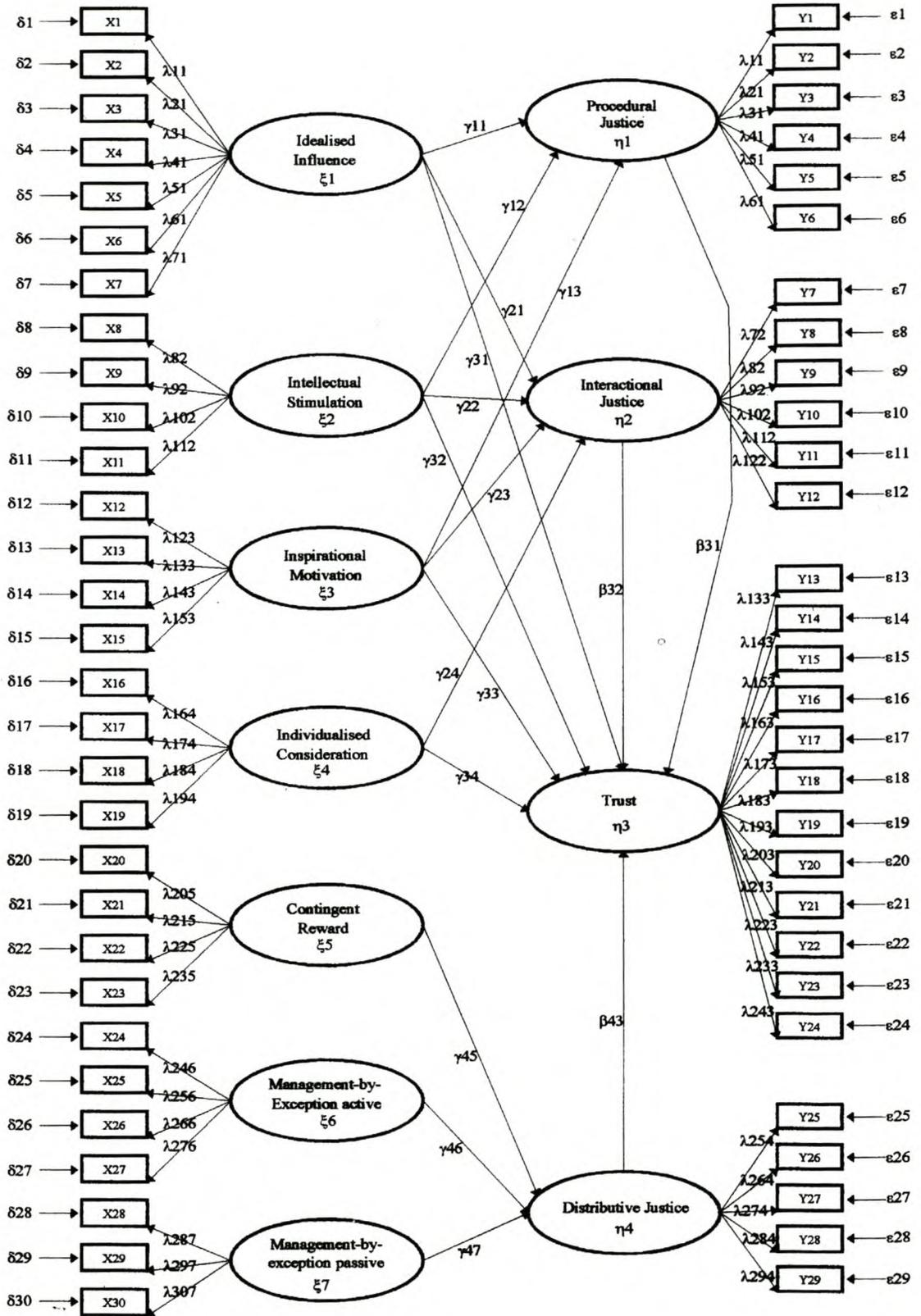


Figure 4.1: The revised path diagram

The leadership measurement model implies an additional matrix, namely the phi ( $\phi$ ) matrix, which contains the correlations between the latent leadership facets. The phi matrix is a 7 x 7 diagonal variance-covariance matrix and, in the completely standardised solution, a correlation matrix.

The goal of confirmatory factor analysis (CFA) is to explicitly test the ability of the hypothesised measurement model or factor structure to reproduce the observed correlation/covariance matrix. It tests the overall quality of the factor solution and the specific parameters (factor loadings) composing the model (Kelloway, 1998). It implies that certain items must be highly related to the latent variables they are designed to measure, and not related (or insignificantly related) to the remaining factors (Byrne, 1989). In CFA, the exogenous (X-model) and endogenous (Y-model) measurement models are of interest. The X-model is a seven-factor model measured by thirty observed variables, while the Y-model is a four-factor model measured by 29 observed variables. In both cases, the factors, the regression of the observed variables on the latent variables and errors of measurement are of primary interest and not the impact of  $\xi$  ( $\xi$ ) on  $\eta$  ( $\eta$ ). As such, confirmatory factor analysis tries to determine whether the specific hypothesised paths could have created the observed correlation/covariance matrix  $\Sigma$ . If unsatisfactory model fit would be found, the conclusion would be that the measurement models do not provide an acceptable explanation for the observed matrix and, thus, that the MLQ, organisational justice questionnaire and trust questionnaire do not measure the domains as intended.

#### **4.7.1 Information on parameters for the Measurement Models**

Confirmatory factor analyses were performed on the MLQ, organisational justice questionnaire and trust questionnaire to determine the fit of the measurement models. The data obtained on the indicator variables was read into PRELIS (Jöreskog & Sörbom, 1996) to compute a polychoric correlation matrix to serve as input for the LISREL analysis. The data was normalised on PRELIS before computing the correlation matrix. Normalisation had the advantage that the fit to the data was increased. The use of a correlation matrix simplifies interpretation of the results.

Additionally, the results are more conservative estimates of parameter significance, which is desirable in statistical analysis (Kelloway, 1998).

In this research, both covariance and correlation matrices have been used for the CFA and the structural equation analyses, but it was found that the convergence of the structural model only occurred on the correlation matrix. Therefore the results that are discussed here are based on the correlation matrix. Kelloway (1998) points out that structural equations are not always scale free and, as a result, a model may fit the correlation matrix and may not fit the covariance matrix.

For the purpose of confirmatory factor analyses, both measurement models were treated as exogenous models simply due to programming advantages. Three matrices are relevant here, namely lamda-X ( $\Lambda_x$ ) (factor loadings), PH ( $\phi$ ) (inter-factor correlations), and TD ( $\theta_\delta$ ) (unique factors). Theoretically, for the Y-model LY ( $\Lambda_y$ ), PS ( $\psi$ ) and TE ( $\theta_\epsilon$ ) matrices would be relevant. All factor loadings of each latent variable have been set free to be estimated. All remaining elements of  $\Lambda_x$  were fixed at zero loadings to reflect the assumed factorial simplicity (Tabachnik & Fidell, 1989) of the indicator variables. The elements of  $\phi$  and  $\theta_\delta$  were treated by default as free.

The following section provides an assessment of the overall fit of the measurement models.

#### **4.7.2 An Assessment of multiple fit indices of the measurement models**

An admissible final solution of parameter estimates for transformational and transactional leadership was obtained after 17 iterations, while a final solution of parameter estimates for the endogenous variables was achieved after 11 iterations. The full spectrum of measurement model fit provided by LISREL to assess absolute and comparative fit is presented in Table 4.21 and Table 4.22. Kelloway (1998) indicates that tests for absolute fit are concerned with the ability of the fitted model to reproduce the observed correlation / covariance matrix, while tests of comparative fit indicates the success with which the model explains the observed correlation / covariance matrix compared to the baseline

model. The comparative fit is further subdivided into the assessment of comparative and parsimonious fit. Parsimonious fit implies that a better fitting model can be obtained by estimating more parameters (Kelloway, 1998). The ideal, however, is to obtain acceptable fit with the minimum number of parameters. For the comparisons, the independence and saturated model (just-identified model) serve as the baseline models. They represent two ends of a continuum. In the independence model, all parameters have been set to zero and the degrees of freedom (df) are equal to the number of equations. In the just-identified model, the equations in the model are equal to the number of unknowns (Kelloway, 1998). Such a just-identified model will always provide a unique solution that will be able to reproduce the observed correlation matrix.

The chi-square ( $\chi^2$ ) statistic was used to test the null hypothesis, shown as equation 6.

$$\mathbf{H}_0: \Sigma = \Sigma(\theta) \quad (6)$$

where:

$\Sigma$  is the population covariance matrix of the observed variables;

$\Sigma(\theta)$  is the covariance matrix implied by a specific model and;

$\theta$  is a vector containing the free parameters of the model (Bollen & Long, 1993).

If the model had been specified correctly, one could use a  $\chi^2$  test statistic, following an asymptotically  $\chi^2$  distribution, to test the null hypothesis that the specified model would lead to a reproduction of the population covariance matrix of the observed variables. A significant test statistic would make the model specification doubtful. This implies that a non-significant  $\chi^2$  indicates model fit in that the model can reproduce the population covariance matrix (Bollen & Long, 1993; Kelloway, 1998). Chi-square is a measure of overall fit of the model to the data. It measures the distance between the sample covariance or correlation matrix and the fitted covariance / correlation matrix. Zero chi-square corresponds to good fit (Jöreskog, 1993). The p-values associated with the  $\chi^2$  values in Tables 4.21 and Table 4.22 indicate highly significant test statistics.

$\chi^2$ , however, is sensitive to sample size. It is therefore unlikely to obtain an insignificant  $\chi^2$  in large samples, even if the model fits the data, although the approximation of the  $\chi^2$  distribution occurs only in large samples ( $N \geq 200$ ).  $\chi^2$  must increase with an increase in sample size, which makes a non-significant  $\chi^2$  unlikely in large samples (Kelloway, 1998).

In an effort to try and avoid this problem, it was suggested that the  $\chi^2$  should be expressed in terms of its degree of freedom (Kelloway, 1998). This is, however, not normally reported by LISREL and thus not shown in Table 4.21 and 4.22. A value of 2.622 results for transformational and transactional leadership, while the  $\chi^2/df$  ratio is 2.193 for the endogenous variables. Disagreement about the interpretation of these values is found in the literature (Kelloway, 1998). Generally, good fit is indicated by values between 2 and 5. A value less than 2 indicates over-fitting (Kelloway, 1998). When evaluated against these standards, both measurement models seem to fit the data well.

The simplest fit index provided by LISREL is the root mean squared residual (RMR). This is the square root of the mean of the squared discrepancies between the implied and observed covariance matrices. The lower bound of the index is 0, and low values are taken to indicate good fit. LISREL also provides a standardised RMR, which has a lower bound of 0 and an upper bound of 1. Values less than 0.05 are interpreted as indicating a good fit to the data (Kelloway, 1998). The RMR for both measurement models indicate good fit. Table 4.21 indicates a RMR of 0.064 for leadership, while in Table 4.22 it can be seen that the RMR for the endogenous variables is 0.044. The root mean squared error of approximation (RMSEA) is also reported by LISREL. It is based on the analysis of residuals, with smaller values indicating a better fit to the data. Steiger (1990) contends that a value lower than 0.10 indicates a good fit, while a value lower than 0.05 indicates a very good fit and values below 0.01 indicate outstanding fit to the data. RMSEA has the advantage of going beyond RMSEA point estimates to the provision of 90% confidence intervals for the point estimate (Kelloway, 1998). The RMSEA indicate good fit for both measurement models (exogenous variables: RMSEA = 0.080,  $p < 0.05$ ,  $N = 281$  / endogenous variables: RMSEA = 0.067,  $p < 0.05$ ,  $N = 281$ ), although the point estimates both differ significantly ( $p < 0.05$ ) from the target value of 0.05. Judged in terms of these three fit indices, acceptable model fit is suggested for both measurement models.

The goodness-of-fit index (GFI) is “based on a ratio of the sum of the squared discrepancies to the observed variance” (Kelloway, 1998, p.27). The GFI ranges from 0 to 1, with values exceeding 0.9 indicating a good fit to the data. The adjusted goodness-of-fit index (AGFI) adjusts the GFI for degrees of freedom in the model. This measure also ranges from 0 to 1, with values above 0.9 indicating a good fit to the data (Kelloway,

1998). When evaluating goodness-of-fit in accordance with these standards, both measurement models do not achieve the 0.9 level. From Table 4.21 it can be seen that the GFI for leadership is 0.80 and the AGFI has been found to be 0.75. For organisational justice and trust, the GFI and AGFI are somewhat higher, namely 0.83 and 0.80, respectively. Kelloway (1998) warns that the GFI has no known sampling distribution, which implies that standards as to what constitutes good fit to the data is somewhat arbitrary.

Comparative fit chooses a baseline model for comparison. When using comparative fit indices to evaluate the fit, more positive results are revealed. Comparative fit is based on a comparison of the measurement models with the independence model that provides poorest fit possible to the data. Relevant in this analysis is the normed fit index (NFI), non-normed fit index (NNFI), the incremental fit index (IFI), the comparative fit index (CFI) and the relative fit index (RFI). All these indices assume values between 0 and 1, where good fit is indicated by a value above 0,90. From Table 4.21 it can be seen that the values for all the comparative fit indices for leadership do not achieve values higher than 0.90, although the NNFI, CFI and IFI come close to the 0.90 goodness-of-fit mark. The endogenous variables seem to indicate much better fit, when comparing comparative fit indices to the target value of 0.90.

Parsimonious fit indices imply that a better fitting model can be obtained by estimating more parameters (Kelloway, 1998). The question, however, is whether the increase in model fit obtained by the additional parameters set free, is worth the loss in degrees of freedom. The parsimonious normed fit index (PNFI), and the parsimonious goodness-of-fit index (PGFI) are relevant here. The PNFI adjusts the NFI for model parsimony, while the PGFI adjusts the GFI for the degrees of freedom in the model. The PNFI and the PGFI range from 0 to 1 and higher values indicate a better fit. From Table 4.21 and Table 4.22 it can be seen that the PNFI and PGFI approaches parsimonious fit from the perspective of opportunity cost. Parsimonious fit relates to the benefit that accrues in terms of improved fit in relation to degrees of freedom lost to achieve the improvement of fit (Jöreskog & Sörbom, 1993). The meaningful use of parsimonious fit indices necessitates a second formulated model that contains a number of additional paths that can be theoretically justified.

Thus the initial model is nested within a more elaborate model, but in this case no alternative exists.

The Akaike information criterion (AIC), and the consistent Akaike Information criterion (CAIC) are also measurements of parsimonious fit. The AIC and CAIC consider the fit of the model and the number of estimated parameters in the model (Kelloway, 1998). In the case of the AIC and CAIC, small values indicate a more parsimonious model, but no convention exists to indicate what value implies good fit. The AIC and CAIC values reported in Table 4.21 and Table 4.22 suggest that the fitted measurement models provide more parsimonious fit than the independence model. When comparing the fitted models to a model in which all possible parameters are set free, the AIC favours the saturated model in both cases, while the CAIC favours the fitted models. The AIC, however, has a known tendency to favour the more complex model (Kelloway, 1998). In addition, the expected cross-validation index (ECVI) estimates the difference between the reproduced covariance matrix for the specific sample and the expected reproduced matrix over all possible validation samples (Jöreskog & Sörbom, 1996). Smaller ECVI values indicate better fitting models. Evaluation of the measurement models in terms of the ECVI by comparing it to the independence models, it is clear that the fitted models are favoured. The ECVI for the saturated model is, however, superior to that of the fitted model for both the endogenous and exogenous measurement model.

Taking all fit indices into account, it seems reasonable to contend that acceptable fit has been achieved on both endogenous and exogenous measurement models.

**Table 4.21: Assessment of leadership fit**

Goodness of Fit Statistics
Degrees of Freedom = 384
Minimum Fit Function Chi-Square = 1007.03 (p = 0.0)
Normal Theory Weighted Least Squares Chi-Square = 1065.74 (p = 0.0)
Estimated Non-centrality Parameter (NCP) = 681.74
90 Percent Confidence Interval for NCP = (588.29; 782.84)
Minimum Fit Function Value = 3.60
Population Discrepancy Function Value (F0) = 2.43
90 Percent Confidence Interval for F0 = (2.10; 2.80)
Root Mean Square Error of Approximation (RMSEA) = 0.080
90 Percent Confidence Interval for RMSEA = (0.074; 0.085)
P-Value for Test of Close Fit (RMSEA < 0.05) = 0.00
Expected Cross-Validation Index (ECVI) = 4.38
90 Percent Confidence Interval for ECVI = (4.05; 4.75)
ECVI for Saturated Model = 3.32
ECVI for Independence Model = 16.33
Chi-Square for Independence Model with 435 Degrees of Freedom = 4511.54
Independence AIC = 4571.54
Model AIC = 1227.74
Saturated AIC = 930.00
Independence CAIC = 4710.69
Model CAIC = 1603.45
Saturated CAIC = 3086.83
Root Mean Square Residual (RMR) = 0.064
Standardized RMR = 0.064
Goodness of Fit Index (GFI) = 0.80
Adjusted Goodness of Fit Index (AGFI) = 0.75
Parsimony Goodness of Fit Index (PGFI) = 0.66
Normed Fit Index (NFI) = 0.78
Non-Normed Fit Index (NNFI) = 0.83
Parsimony Normed Fit Index (PNFI) = 0.69
Comparative Fit Index (CFI) = 0.85
Incremental Fit Index (IFI) = 0.85
Relative Fit Index (RFI) = 0.75
Critical N (CN) = 126.51

**Table 4.22: Assessment of organisational justice and trust fit**

Goodness of Fit Statistics
Degrees of Freedom = 371
Minimum Fit Function Chi-Square = 813.85 (p = 0.0)
Normal Theory Weighted Least Squares Chi-Square = 834.98 (p = 0.0)
Estimated Non-centrality Parameter (NCP) = 463.98
90 Percent Confidence Interval for NCP = (383.97; 551.72)
Minimum Fit Function Value = 2.91
Population Discrepancy Function Value (F0) = 1.66
90 Percent Confidence Interval for F0 = (1.37; 1.97)
Root Mean Square Error of Approximation (RMSEA) = 0.067
90 Percent Confidence Interval for RMSEA = (0.061; 0.073)
P-Value for Test of Close Fit (RMSEA < 0.05) = 0.00
Expected Cross-Validation Index (ECVI) = 3.44
90 Percent Confidence Interval for ECVI = (3.15; 3.75)
ECVI for Saturated Model = 3.11
ECVI for Independence Model = 26.53
Chi-Square for Independence Model with 406 Degrees of Freedom = 7370.08
Independence AIC = 7428.08
Model AIC = 962.98
Saturated AIC = 870.00
Independence CAIC = 7562.59
Model CAIC = 1259.84
Saturated CAIC = 2887.68
Root Mean Square Residual (RMR) = 0.044
Standardized RMR = 0.044
Goodness of Fit Index (GFI) = 0.83
Adjusted Goodness of Fit Index (AGFI) = 0.80
Parsimony Goodness of Fit Index (PGFI) = 0.71
Normed Fit Index (NFI) = 0.89
Non-Normed Fit Index (NNFI) = 0.93
Parsimony Normed Fit Index (PNFI) = 0.81
Comparative Fit Index (CFI) = 0.94
Incremental Fit Index (IFI) = 0.94
Relative Fit Index (RFI) = 0.88
Critical N (CN) = 151.45

### 4.7.3 Examining the obtained solution

All estimated factor loadings  $\lambda$  in  $\Lambda_x$  (see Tables 4.10 and 4.15 in Annexure C) differ significantly from zero. The fit of the models would therefore deteriorate if any of the existing paths in Figure 4.1 would be eliminated, thus fixing the corresponding parameters in  $\Lambda_x$  to zero. None of the existing paths should be removed, as all items appear to reflect the leadership, organisational justice and trust dimensions they were designed to measure.

Overall results suggest that the factor loadings have been satisfactory for both the X and Y model. The factor loadings, inter-factor correlations and unique factor variances are depicted in Annexure C (Table 4.10 – Table 4.17). The  $\Lambda_x$ -matrices contain three values for each item related to the construct in question. The first value indicates the factor loading of each estimated parameter / factor loading. The second value indicates the standard error, while the third value indicates the t-values. The t-values indicate the significance of an item. The t-values in  $\Lambda_x$ -matrices are all high, indicating that all items correlate significantly with their specified latent variable. The  $\Lambda_x$ -matrices indicate that the items do measure what they were designed to measure. In this study  $\theta_\delta$  is a diagonal matrix. The diagonal elements of the  $\theta_\delta$  matrices represent the variances of the error terms (Jöreskog & Sörbom, 1993).  $\theta_\delta$  indicates the residual (unique factors) for each observed variable. The lower these values are, the lower the random or systematic non-relevant influences on the observed variables.

The squared multiple correlations shown in Tables 4.18 and 4.20 should be interpreted as estimates of the item reliability  $\rho_{ii}$ . The reliability of item  $i$  is defined by equation 7.

$$\begin{aligned} \rho_{ii} &= \lambda_i^2 / [\lambda_i^2 + \theta_{\delta i}] \\ &= 1 - (\theta_{\delta i} / [\lambda_i^2 + \theta_{\delta i}]) \\ &= 1 - \theta_{\delta i} \\ &= \lambda_i^2 \end{aligned} \quad (7)$$

Where:

$\theta_{\delta i}$  represents the error variance elements of the completely standardised diagonal matrix  $\Theta_\delta$  (shown in Table 4.13 and 4.17 in Annexure C) and  $\lambda_i$  are the factor loadings in the completely standardised  $\Lambda_x$  matrices.

The error term  $\delta_i$  reflects both random and systematic error and thus  $\rho_{ii}$  can also be interpreted as an item validity coefficient. It thus expresses how well  $\xi$  and  $\eta$  manifest themselves in the indicator variables  $X$  and  $Y$ . From the respective tables, it can be seen that the squared multiple correlations are moderate for transformational leadership and rather low for transactional leadership. This indicates that only a moderate proportion of the variance in the leadership indicator variables can be explained in terms of its designated latent variable. It thus suggests that the indicator variables are not factorially pure, as assumed in the measurement model and/or that the random error components in the observed measures are reasonably high. The squared multiple correlations are high for organisational justice and trust, which means that the indicator variables successfully reflect differences on the designated latent variables.

The phi matrix of correlations between the latent leadership dimensions (see Table 4.12) is not positive definite with off-diagonal entries exceeding unity. This raises some concern about the quality of the obtained solution for the leadership measurement model. The amount by which the offending correlations exceed unity, however, is small and could possibly be attributed to rounding errors. The high correlations between contingent reward and the dimensions of transformational leadership furthermore suggest that the distinction between transformational and transactional leadership may be somewhat problematic, one could even say unfortunate.

#### **4.7.4 Evaluation of the full LISREL model**

The structural model that served as a basis for this study is depicted in Figure 4.1. This structural model presents a more detailed account of the nature of the relationship between leadership, organisational justice and interpersonal trust than the structural model initially proposed (see Figure 3.1). Although the research hypotheses reported earlier (see section 3.2) are not affected, as such, the expansion of the structural model does necessitate a reformulation of the statistical hypotheses implied by the research hypotheses. The statistical hypotheses for the original model were not stated explicitly due to the problems encountered with the initial exogenous and endogenous measurement models.

Not explicitly translating the research hypotheses into statistical hypotheses on the relevant path coefficients in the revised structural model could result in a logical dilemma when deciding on the validity of the stated hypotheses.

The specific statistical hypotheses on the relevant elements of the B and  $\Gamma$  population matrices, are consequently derived from the previously stated research hypotheses and are shown in Table 4.34.

**Table 4.34: Statistical hypotheses on the B and  $\Gamma$  population matrices**

<u>Hypothesis 1:</u> Ho: $\gamma_{11} = 0$ Ha: $\gamma_{11} > 0$	<u>Hypothesis 6:</u> Ho: $\gamma_{23} = 0$ Ha: $\gamma_{23} > 0$
<u>Hypothesis 2:</u> Ho: $\gamma_{12} = 0$ Ha: $\gamma_{12} > 0$	<u>Hypothesis 7:</u> Ho: $\gamma_{24} = 0$ Ha: $\gamma_{24} > 0$
<u>Hypothesis 3:</u> Ho: $\gamma_{13} = 0$ Ha: $\gamma_{13} > 0$	<u>Hypothesis 8:</u> Ho: $\gamma_{31} = 0$ Ha: $\gamma_{31} > 0$
<u>Hypothesis 4:</u> Ho: $\gamma_{21} = 0$ Ha: $\gamma_{21} > 0$	<u>Hypothesis 9:</u> Ho: $\gamma_{32} = 0$ Ha: $\gamma_{32} > 0$
<u>Hypothesis 5:</u> Ho: $\gamma_{22} = 0$ Ha: $\gamma_{22} > 0$	<u>Hypothesis 10:</u> Ho: $\gamma_{33} = 0$ Ha: $\gamma_{33} > 0$

**Table 4.34: Statistical hypotheses on the B and  $\Gamma$  population matrices (continued)**

<u>Hypothesis 11:</u> Ho: $\gamma_{34} = 0$ Ha: $\gamma_{34} > 0$	<u>Hypothesis 15:</u> Ho: $\beta_{31} = 0$ Ha: $\beta_{31} > 0$
<u>Hypothesis 12:</u> Ho: $\gamma_{45} = 0$ Ha: $\gamma_{45} > 0$	<u>Hypothesis 16:</u> Ho: $\beta_{32} = 0$ Ha: $\beta_{32} > 0$
<u>Hypothesis 13:</u> Ho: $\gamma_{46} = 0$ Ha: $\gamma_{46} > 0$	<u>Hypothesis 17:</u> Ho: $\beta_{43} = 0$ Ha: $\beta_{43} > 0$
<u>Hypothesis 14:</u> Ho: $\gamma_{47} = 0$ Ha: $\gamma_{47} > 0$	

The statistical hypotheses show that individualised consideration has not been related to procedural justice, but to interactional justice only. Initially, it was hypothesised that transformational leadership is related to procedural justice, but with the separation of the leadership dimensions, it was argued that individualised consideration is related only to interactional justice and not to procedural justice. Individualised consideration involves the personal development of followers so that they are able to increase their self-confidence and to take on greater responsibility. The focus of individualised consideration lies on the interaction between the leader and the followers. Seen from this perspective, followers are concerned about fair personal treatment on the side of the leader. Consequently, individualised consideration is rather related to interactional justice and not to the perception that procedures are fair.

Reporting the results of the evaluations of the structural model fit is based on the guidelines of Raykov, Tomer and Nesselroade (1991).

The design and structure of this conceptual model implies a specific structural equation. The revised structural model relevant to this study is shown in matrix form in equation 8.

$$\eta = B\eta + \Gamma \xi + \zeta \quad (8)$$

Where:

$\eta$  is a 4 x 1 column vector of latent endogenous variables,

$B$  is 4 x 4 matrix of path/regression ( $\beta$ ) coefficients of the  $\eta$  - variables in the structural relationship ( $\beta$  has zeros in the diagonal),

$\Gamma$  is a 4 x 7 matrix of path/regression ( $\gamma$ ) coefficients of regression of  $\eta$  on  $\xi$ ,

$\xi$  is a 7 x 1 column vector of latent leadership facets, and

$\zeta$  is 4 x 1 vector of equation errors in the structural relationship between  $\xi$  and  $\eta$  (Jöreskog & Sörbom, 1996).

The data was read into PRELIS to compute a polychoric correlation matrix to serve as input for the LISREL analysis. The model fit was evaluated through an analysis of a polychoric correlation matrix. The use of a correlation matrix simplifies interpretation of the results. Additionally, the results are more conservative estimates of parameter significance, which is desirable in statistical analysis (Kelloway, 1998).

The method of parameter estimation that was used in this study was Maximum Likelihood (ML). Maximum likelihood estimators are known to be consistent and asymptotically efficient in large samples (Kelloway, 1998). ML is a full information technique, because one is able to estimate all parameters (i.e. path values) simultaneously. Raykov et al. (1991) point out that  $\chi^2$  and the standard errors need to be interpreted with caution when ML is used as a method of parameter estimation.

#### 4.7.4.1 Assessing Goodness-of-fit of the Structural Model

The logic underlying assessment of fit of the structural model is the same as that of the measurement models. Consequently, the same structure will be followed in analysing fit. The goodness-of-fit statistics are exhibited in Table 4.35.

The p-value of the chi-square statistic is significant as seen in Table 4.35. Following the earlier logic, a non-significant  $\chi^2$  indicates model fit in that the model can reproduce the observed covariance matrix (Bollen & Long, 1993; Kelloway, 1998). In this case the model is not able to reproduce the observed covariance matrix to a degree of accuracy that could be explained in terms of sampling error only.

The evaluation of fit on the basis of the  $\chi^2/df$  for the structural model indicated good fit when evaluated against the standard that good fit assumes values between 2 and 5. The value here is 3.2933.

The RMSEA value of 0.079 supports the notion of good fit, where good fit is indicated by a value of less than 0.10. The RMR also indicates good fit (0.071). When analysing the GFI and AGFI a less satisfactory result is revealed. Good fit in this case would be indicated by a value higher than 0.90. The GFI reveals a value of 0.65 and the AGFI a value of 0.62. Comparative fit is also not satisfactory. The NFI, NNFI, CFI, IFI and RFI all show values lower than 0.90. In the case of parsimonious fit, the PGFI and PNFI also indicate marginal fit. The AIC and EVCI indicate that the saturated model is favoured, while the CAIC favours the fitted model.

**Table 4.35: Goodness-of-fit of the structural model**

Goodness of Fit Statistics
Degrees of Freedom = 1614
Minimum Fit Function Chi-Square = 5315.42 (P = 0.0)
Normal Theory Weighted Least Squares Chi-Square = 4401.29 (P = 0.0)
Estimated Non-centrality Parameter (NCP) = 2787.29
90 Percent Confidence Interval for NCP = (2593.77; 2988.35)
Minimum Fit Function Value = 18.98
Population Discrepancy Function Value (F0) = 9.95
90 Percent Confidence Interval for F0 = (9.26; 10.67)
Root Mean Square Error of Approximation (RMSEA) = 0.079
90 Percent Confidence Interval for RMSEA = (0.076; 0.081)
P-Value for Test of Close Fit (RMSEA < 0.05) = 1.00
Expected Cross-Validation Index (ECVI) = 16.83
90 Percent Confidence Interval for ECVI = (16.14; 17.55)
ECVI for Saturated Model = 12.64
ECVI for Independence Model = 62.75
Chi-Square for Independence Model with 1711 Degrees of Freedom = 17452.44
Independence AIC = 17570.44
Model AIC = 4713.29
Saturated AIC = 3540.00
Independence CAIC = 17844.11
Model CAIC = 5436.87
Saturated CAIC = 11749.89
Normed Fit Index (NFI) = 0.70
Non-Normed Fit Index (NNFI) = 0.75
Parsimony Normed Fit Index (PNFI) = 0.66
Comparative Fit Index (CFI) = 0.76
Incremental Fit Index (IFI) = 0.77
Relative Fit Index (RFI) = 0.68
Critical N (CN) = 93.14
Root Mean Square Residual (RMR) = 0.071
Standardized RMR = 0.071
Goodness of Fit Index (GFI) = 0.65
Adjusted Goodness of Fit Index (AGFI) = 0.62
Parsimony Goodness of Fit Index (PGFI) = 0.59

#### 4.7.4.2 Assessing Parameter Estimates of the Structural Model

The parameter estimates for the measurement models were evaluated. The results are seen in Table 4.23 to Table 4.30 in Annexure D. Here the completely standardised solutions are presented. The results obtained in the full LISREL analysis agree with the results reported earlier for both the exogenous and endogenous measurement models.

#### 4.7.4.3 An analysis of the structural relationships

The analysis of the structural relationship reveals whether the theoretical model, and thus the hypotheses, can be confirmed. The relevant matrices for the direct effects between the constructs are the beta (B) and gamma ( $\Gamma$ ) matrices. The matrices are depicted in Tables 4.36 and 4.37, respectively.

**Table 4.36: Gamma ( $\Gamma$ ) matrix**

	Idealised Influence	Intellectual Stimulation	Inspirational Motivation	Individual Consideration	Contingent Reward	MBE Active	MBE Passive
<b>Procedural Justice</b>	6.81 (3.63) 1.87	-4.62 (2.88) -1.60	-1.89 (1.11) -1.69	-	-	-	-
<b>Interactional Justice</b>	2.53 (1.06) 2.37*	-1.92 (0.80) -2.38*	-0.87 (0.45) -1.92	0.75 (0.17) 4.33*	-	-	-
<b>Distributive Justice</b>	-	-	-	-	0.52 (0.09) 5.68*	-0.12 (0.08) -1.36	0.07 (0.06) 1.13
<b>Trust</b>	6.92 (21.15) 0.33	-4.46 (14.75) -0.30	-1.98 (5.68) -0.35	-0.01 (0.14) -0.08	-	-	-

\* t-values greater than |1.96| indicate significant path coefficients

From t-values in the gamma ( $\Gamma$ ) matrix, it can be derived that the relationships between the transformational leadership facets and procedural justice are insignificant ( $p > 0.05$ ). For statistical hypotheses 1 to 3,  $H_0$  cannot be rejected in favour of  $H_a$ .

The research hypothesis 1 is thus not corroborated, as no significant relationship exists between transformational leadership and procedural justice. There are, however, significant ( $p < 0.05$ ) positive relationships between idealised influence, intellectual stimulation and individualised consideration and interactional justice. For statistical hypotheses 4, 5, and 7,  $H_0$  can be rejected in favour of  $H_a$ . For statistical hypothesis 6,  $H_0$  cannot be rejected, because inspirational motivation is not significantly ( $p > 0.05$ ) related to interactional justice. This implies that transformational leaders do not directly influence the perception concerning the procedures itself. The focus lies rather on how these procedures are communicated to followers in order to enhance the quality of interpersonal treatment during the enactment of these procedures. The explanations of decisions are apparently more instrumental in affecting perception of fairness than the procedures themselves. In this study no significant ( $p > 0.05$ ) relationship can be found between transformational leadership and trust. In terms of the statistical hypotheses,  $H_0$  cannot be rejected for hypotheses 8 to 11. Research hypothesis 4 therefore is not corroborated. At the same time, procedural justice has no significant mediating effect on the relationship between transformational leadership and interpersonal trust. Consequently, research hypothesis 2 is not corroborated. Such a mediating role must, given the aforementioned findings, rather be ascribed to interactional justice.

A positive and significant ( $p < 0.05$ ) relationship was found between contingent reward and distributive justice, but an insignificant ( $p > 0.05$ ) relationship is evident between both facets of management-by-exception and distributive justice.  $H_0$  can thus be rejected for statistical hypothesis 12, but must be accepted for statistical hypotheses 13 and 14. A possible explanation for this finding can be that the exchange of follower resources for valued rewards instils a perception of distributive fairness. The valence the person attaches to a specific reward is linked to a specific level of performance, indicating a perception of fairness at the outcome level. Management-by-exception involves the monitoring of performance and intervening when problems become serious and thus are not directly linked to the perception of distributive fairness. As a result, hypothesis 5 can only be partly accepted, as transactional leadership as a whole is not related to distributive justice.

Additionally, the mediating effect of distributive justice in the relationship between transactional leadership and trust can be referred back to contingent reward. Thus hypothesis 6 is only partly accepted.

The acceptance or rejection of the remaining hypotheses can be inferred from the beta matrix (Table 4.37).

**Table. 4.37: Beta (B) matrix**

	<b>Procedural Justice</b>	<b>Interactional Justice</b>	<b>Distributive Justice</b>
<b>Trust</b>	-0.75 (2.65)	0.38 (0.14)	0.13 (0.04)
	-0.28	2.80*	3.36*

\* t-values greater than  $|1.96|$  indicate significant path coefficients

From the beta matrix it can be inferred that the relationship between procedural justice and trust is insignificant ( $p \geq 0.05$ ).  $H_0$  for the statistical hypothesis 15 is therefore not rejected. Consequently, research hypothesis 3 is not confirmed. There is, however, a significant, positive relationship between interactional justice and trust.  $H_0$  can be rejected for statistical hypothesis 16. Following the argument explicated earlier, it can be deduced that trust is only instilled when leaders communicate decisions concerning procedures in a sensitive manner. Trust thus only results when procedures are communicated in an open and honest way without containing ulterior motives. The focal point once again is not the procedure itself, but the way it is communicated to followers. Additionally, a significant relationship ( $p < 0.05$ ) is found between distributive justice and trust.  $H_0$  can be rejected for statistical hypothesis 17. Thus trust is promoted when fairness of outcomes prevail. Inequitable outcomes present a violation of distributive fairness, resulting in trust in the leader and organisation being reduced. As a result of this finding, research hypothesis 7 is supported.

Consequently, the findings of Pillai et al. (1999) and Konovsky and Pugh (1994) can only be supported partly. This research fails to find support for the notion that transformational leadership is related to procedural justice or trust. It is evident that interactional justice plays a much larger role in the perception of fairness than does procedural justice. It can thus be concluded that the procedures themselves are not subject to fairness perceptions, but rather the sensitive communication of them. Followers react on the social exchange of a transformational leader, in that the communication of procedures is seen as a provision of interpersonally fair treatment. This interaction then instils trust in the leader and the system as a whole.

Contingent reward is the only sub-dimension of transactional leadership that is related to distributive justice. Evidently subordinates perceive fairness in the economic exchange process. They receive valued rewards for their efforts. The fairness of that outcome influences trust in the leader or organisation. A violation of distributive fairness will thus inevitably lead to a feeling of mistrust.

#### **4.7.5 Summary**

The purpose of this chapter was to report the results obtained in this study. Even though all hypotheses were not supported by the results, the objectives of the study have nonetheless been met to a satisfactory extent.

The next chapter will discuss the general conclusions drawn from the research, and will offer recommendations for future research on this topic.

## **CHAPTER 5**

### **GENERAL CONCLUSIONS AND IMPLICATIONS FOR FUTURE RESEARCH**

#### **5.1 Introduction**

This chapter will firstly discuss the general conclusions derived from the results obtained in this study, after which certain recommendations for future research will receive some attention.

#### **5.2 General Conclusions**

A comprehensive series of statistical analyses underlie this study. Various insights have been gained as a result of the second phase of the statistical analyses. Resultant from the principal component analyses, uni-dimensionality has been assured on all sub-scales of the questionnaire. In this process the items of the original organisational justice sub-scale evidently loaded on two orthogonal factors, necessitating the inclusion of interactional justice as a separate dimension in the LISREL model. The item analyses produced satisfactory results, except in the cases of the management-by-exception active and passive sub-scales. The subsequent confirmatory factor analyses that have been performed on LISREL indicated that factors loaded satisfactorily on the dimensions they were set out to measure. The confirmatory factor analyses also revealed acceptable fit for the measurement models. Subsequently, the structural model was tested on LISREL. The structural model indicated reasonable fit for the new model. Unfortunately not all hypotheses could be corroborated in this study.

### **5.2.1 The path: transformational leadership, procedural justice and trust**

Transformational leaders empower people to exert extra effort for the collective group and gradually elicit higher order needs from subordinates. They formulate and communicate extraordinary visions. For them to get people to become committed to their visions, they have to instil trust in their subordinates (Bass & Avolio, 1994). The hypothesis thus stated that there is a significant relationship between transformational leadership and trust, but this hypothesis did not find support in this research. It was hypothesised that transformational leaders make use of procedural justice to elicit trust in subordinates. This hypothesis could also not be supported in this study. A new insight has, however, been gained. Interactional justice, as sub-component of procedural justice, seems to play a greater role in the relationship between transformational leadership and trust. Interactional justice refers to the communication of procedures in a sensitive and honest manner. Interactional justice seems to elicit perceptions of fairness in subordinates and not the procedure itself. This corresponds to the argument of social exchange on which transformational leadership is based. For transformational leaders to instil trust, they have to treat employees in a sensitive and considerate manner. The interaction is the focal point of achieving trust and not the procedure per se. This is an important insight into the conceptual network of how transformational leadership may function. Perceived fairness in the interaction -communication of procedures - may result in interpersonal trust.

This study does not confirm the findings of Pillai et al. (1999) that transformational leadership is related to procedural justice. The notion that transformational leaders rather facilitate perceptions of interactional justice is supported. In this study no confirmation is found for the relationship between procedural justice and interpersonal trust. The findings of Folger and Konovsky (1989), Konovsky and Pugh (1994) and Pillai et al. (1999) are not supported by this study. It, however, is confirmed that interactional justice is related to interpersonal trust. In addition, the finding of Pillai et al. (1999) and Podsakoff et al. (1996) that transformational leadership is directly related to interpersonal trust cannot be supported.

### **5.2.2 The path: transactional leadership, distributive justice and trust**

Contingent reward indicates an economic exchange process. Valued rewards are exchanged for performance. Rewards are thus linked to performance. Rewards are the outcome of the exchange and thus distributive justice is an issue. Fairness is perceived when the outcomes are equitable. This research supports the notion that contingent reward is positively associated with distributive justice. In this regard it is found that transactional leadership is related to distributive justice. Both facets of management-by-exception are not significantly related to distributive justice. Management-by-exception is concerned with monitoring performance and correcting mistakes that deviate from standards. Management-by-exception could not be related to distributive justice, although the outcome of the performance could have had an impact on the perception of fairness.

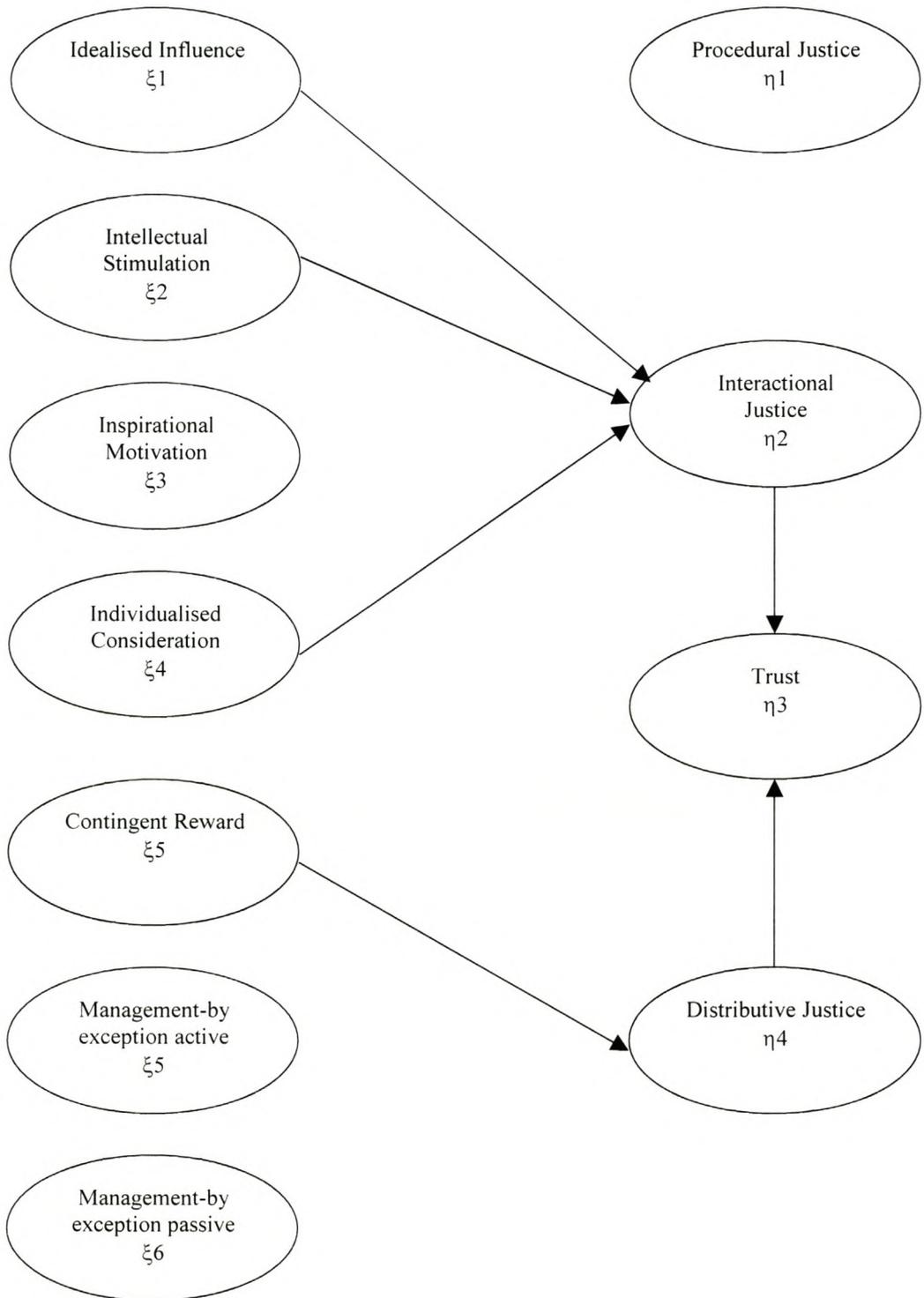
Perceptions of fairness concerning the outcome level are positively related to interpersonal trust. This notion has been supported in this study. The consequences of outcomes are of crucial importance to instil interpersonal trust in subordinates. Subordinates are willing to invest in an exchange process when they perceive the outcome of this process as fair. This investment is an act of trust. Distributive justice plays an important role in the relationship between transactional leadership and interpersonal trust.

This study supports Pillai et al. (1999) finding that contingent reward is related to distributive justice. The correlation between contingent reward and distributive justice ( $r = 0.52, p < 0.05$ ) is similar to Pillai et al. (1999) correlation ( $r = 0.50, p < 0.01$ ) for this relationship. This study also confirms the findings of Pillai et al. (1999) and Folger and Konovsky (1989) that distributive justice is related to interpersonal trust. The findings of Konovsky and Pugh (1994) that distributive justice is not related to trust could not be supported by this study.

### **5.2.3 The Distinction between Transformational and Transactional Leadership**

This research revealed that transformational and contingent reward are very closely related concepts. The general conclusion that can be inferred is that this distinction might be problematic. Transformational leaders increase followers' higher order needs, and they empower followers to become leaders. Transformational leaders are proactive in that they articulate and communicate a vision. This proactive behaviour also demands an economic exchange. Surely, the efforts of a leader are directed at increasing the organisation's performance, thus implicitly the performance of the individual in the organisation. Contingent reward is thus part of transformational leadership. Many studies confirm this correlation (Bass, 1997; Lowe et al., 1996). If management-by-exception is analysed, a distinct reactive pattern to problems in the organisations is revealed, particularly when management-by-exception (passive) is considered. The leader reacts to problems. If leading implies anticipating change and enticing the organisation into a more profitable future, then the distinction between transformational and transactional leadership becomes problematic. The distinction can then only be between leaders and non-leaders. This means there is a distinction between persons that are proactive to change and persons that are reactive to change. The person who reacts cannot be called a leader. Management-by-exception implies reactive behaviour and, as such, is contradictory with regard to the term 'leading'. The opinion that is expressed here is that contingent reward should be placed into the transformational leadership category and this new dimension should be re-named leadership behaviours. Management-by-exception should be placed into the laissez-faire category and this new dimension should be re-named non-leadership behaviours. The idea is that one can now measure to what degree a leader also possesses non-leadership behaviours and not to what degree a leader is transformational or transactional. The unfortunate combination of transactional leadership items necessitates a critical re-assessment of this dimension.

The conceptual path diagram (Figure 5.1) summarises the findings of this research. The paths in the model indicate the significant relationships.



**Figure 5.1: Summarised conceptual model of significant and insignificant relationships**

### **5.3 Shortcomings of this study**

In this study, the relationship between leader behaviours and trust, as well as organisational justice and trust were investigated. It is possible that other factors in the organisational setting can influence trust (Engelbrecht & Cloete, 2000). In addition, trust is not unique to the work environment, and is being studied in other situations. This study focuses only on trust in the work situation and can therefore not be generalised to other contexts. In addition, the trust relationship in this study refers to the trust that employees have in their direct supervisors and not vice versa. This model does not make provision for any other trust relationship that might exist in the organisation.

Using a non-probability sampling procedure in this study has resulted in an inability to compare the perceptions that prevail at the various job levels. A non-probability sampling procedure, as well as an *ex post facto* research design, might reduce the ability to generalise the results of this study.

### **5.4 Recommendations for Future Research**

This study has provided some insights into relationships between leadership, justice and trust. To provide a more comprehensive view of understanding this field, the following recommendations can be made.

It is recommended that an in-depth study be undertaken to investigate the relationship between leadership, trust and job satisfaction, as well as organisational commitment and organisational citizenship behaviours. In addition, it would be of value to study the relationship between leadership, trust and job involvement. Trust seems to be an important mediator in interpersonal relationships and managerial careers (Butler, in Pillai et al., 1999). Consequences of trust could be commitment, job satisfaction, organisational citizenship behaviours and a higher degree of job involvement. Morrow (Pillai et al., 1999) suggests that commitment entails exerting extra effort and maintaining membership in the organisation. Trust in the leader is a prerequisite for attaining this commitment.

According to Podsakoff et al. (1996), trust generates a sense of obligation that manifests itself in organisational citizenship behaviours. If a supervisor elicits trust, subordinates are more likely to engage in extra-role behaviour. Leader-follower relationships influence job satisfaction (Pillai et al., 1999). Job satisfaction is not directly related to increased productivity, but is important with regard to turnover and absenteeism (Robbins, 2000a).

It is also recommended that a study be undertaken to investigate the utility of leader-member-exchange (LMX) theory (i.e. in-group / out-group theory) and trust through the perceptions of fairness. Here it is recommended that future studies investigate the role that interactional justice plays in this relationship. LMX theory proposes that leaders establish different social exchange relationships with different followers. Howell and Hall-Merenda (1999) contend that low-quality LMX relationships are characterised by economic exchange behaviours and formal role-defined relationships. Leaders rely more on the formal employment contract in this exchange. High-quality LMX relationships are based on mutual trust and obligation (Graen & Uhl-Bien, 1995). Leaders encourage this follower to undertake more responsible activities. High-quality LMX relationships are based on social exchanges rather than economic exchanges (Howell & Hall-Merenda, 1999). Consequently, it is likely that a follower in the in-group has a different perception of fairness and trust than the person in the out-group. In this regard, it would also be interesting to investigate whether a person in the in-group displays increased job satisfaction, job involvement and organisational citizenship behaviours.

Furthermore it is recommended that a study be undertaken to investigate leadership in connection with the life-cycle theory and how trust is affected in this regard. It is suggested that transactional leadership takes precedence over transformational leadership and vice versa in some life cycle stages of the organisation (e.g. in the entrepreneurial stage transformational leadership is likely to take precedence over transactional leadership, while in the formalisation-and-control stage transactional leadership is likely to take precedence over transformational leadership) (Robbins, 1990). This effect is suggested to influence interpersonal trust in the organisation.

It is also recommended that a trust questionnaire be developed to assess the various types of trust. The questionnaire that was used in this study establishes whether there is trust in a

supervisor or not. It would, however, also be useful to know what type of trust the subordinate is experiencing. It would be useful to know whether a leader elicits identification-based trust or calculus-based trust.

It is suggested that a study be undertaken to investigate the separation of transactional and transformational leadership as different constructs. The suggestion is made that the distinction should rather be between leaders and non-leaders. The study proposes that the leadership dimensions be reformulated into leadership and non-leadership behaviours and that these behaviours be re-tested in connection with perceptions of fairness and trust.

## **5.5 Summary**

This study tested the relationship between transformational and transactional leadership and interpersonal trust through perceptions of fairness, and was based on a model proposed by Pillai et al. (1999). The objective of this study was to investigate the different implied theoretical relationships between the constructs contained in the model in the Southern African context. Although this study did not confirm all the hypothesised relationships between transformational leadership, procedural justice and trust, an important insight was gained into the positive role interactional justice plays in this context. The positive relationship between transactional leadership, distributive justice and trust, implies the importance of perceived fairness in the outcome of a reward.

It is believed that a valuable contribution has been made by this study to the field of organisational psychology, not only for academics, but also for persons who need to lead organisations. This study can change the general well-being of organisations if leaders recognise the importance of affecting perceptions of fairness in order to instil trust in followers. Leaders must come to terms with the fact that trust is an important mediator affecting organisational effectiveness and, as such plays, a crucial role.

The researcher concludes with Albert Einstein's saying: "...Setting an example is not the main means of influencing another, it is the only means."

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## **ANNEXURE A: Covering letter and questionnaire**

### **INSTRUCTIONS**

This questionnaire forms part of a Master's study conducted by Pascale Krafft at the University of Stellenbosch. The aim of the study is to determine the influence of transformational and transactional leadership on interpersonal trust through perceptions of fairness. The management of this company has kindly agreed that all employees may partake in this research. Participation, however, remains voluntary.

The questionnaires are completed **anonymously**. The information will be kept **confidential** as the questionnaires will be handled and used by the researcher only.

For the research to yield valid results, it is important that you answer **all** the questions as **honestly** and **truthfully** as possible. The answers must reflect your own opinion and perception. **Confidentiality** is assured as some questions or statements are of a sensitive nature. The questionnaire consists of four sections (Section A-Section D). Please **answer all questions and statements**.

**Thank you for your participation and contribution to this study it is greatly appreciated.**



**Please mark the following questions with a cross**

**Highest level of education**

Less than Matric	<input type="text" value="1"/>	Diploma/Degree	<input type="text" value="3"/>
Matric	<input type="text" value="2"/>	Post-graduate Degree	<input type="text" value="4"/>

**Job Level:**

Non-managerial  
Lower level management  
Middle level management  
Upper level management

1
2
3
4

..... **End of section A** .....

**Please turn to Section B**



8. Instills pride in me for being associated with him/her	1 Not at all	2 Once in a while	3 Sometimes	4 Fairly often	5 Frequently if not always
9. Discusses in specific terms who is responsible for achieving performance targets	1 Not at all	2 Once in a while	3 Sometimes	4 Fairly often	5 Frequently if not always
10. Waits for things to go wrong before taking action	1 Not at all	2 Once in a while	3 Sometimes	4 Fairly often	5 Frequently if not always
11. Talks enthusiastically about what needs to be accomplished	1 Not at all	2 Once in a while	3 Sometimes	4 Fairly often	5 Frequently if not always
12. Specifies the importance of having a strong sense of purpose	1 Not at all	2 Once in a while	3 Sometimes	4 Fairly often	5 Frequently if not always
13. Spends time supporting and coaching	1 Not at all	2 Once in a while	3 Sometimes	4 Fairly often	5 Frequently if not always
14. Makes clear what one can expect to receive when performance goals are achieved	1 Not at all	2 Once in a while	3 Sometimes	4 Fairly often	5 Frequently if not always
15. Shows he/she is a firm believer in "if it isn't broken, don't fix it."	1 Not at all	2 Once in a while	3 Sometimes	4 Fairly often	5 Frequently if not always
16. Goes beyond his/her self-interest for the good of the group.	1 Not at all	2 Once in a while	3 Sometimes	4 Fairly often	5 Frequently if not always
17. Treats you as an individual rather than just a member of the group	1 Not at all	2 Once in a while	3 Sometimes	4 Fairly often	5 Frequently if not always
18. Demonstrates that problems must become chronic before he/she will take action.	1 Not at all	2 Once in a while	3 Sometimes	4 Fairly often	5 Frequently if not always
19. Acts in ways that builds my respect	1 Not at all	2 Once in a while	3 Sometimes	4 Fairly often	5 Frequently if not always
20. Concentrates on correcting anticipating mistakes, complaints and failures	1 Not at all	2 Once in a while	3 Sometimes	4 Fairly often	5 Frequently if not always
21. Considers the moral and ethical consequences of his/her decisions	1 Not at all	2 Once in a while	3 Sometimes	4 Fairly often	5 Frequently if not always
22. Keeps track of all mistakes	1 Not at all	2 Once in a while	3 Sometimes	4 Fairly often	5 Frequently if not always
23. Displays a sense of power and confidence	1 Not at all	2 Once in a while	3 Sometimes	4 Fairly often	5 Frequently if not always
24. Articulates a compelling vision of the future	1 Not at all	2 Once in a while	3 Sometimes	4 Fairly often	5 Frequently if not always
25. Directs his/her attention toward failures to meet standards	1 Not at all	2 Once in a while	3 Sometimes	4 Fairly often	5 Frequently if not always

26. Considers me as having different needs, abilities and aspirations from others.	1 Not at all	2 Once in a while	3 Sometimes	4 Fairly often	5 Frequently if not always
27. Gets me to look at problems from many different angles	1 Not at all	2 Once in a while	3 Sometimes	4 Fairly often	5 Frequently if not always
28.Helps me to develop my strengths	1 Not at all	2 Once in a while	3 Sometimes	4 Fairly often	5 Frequently if not always
29. Suggests new ways of looking at how to complete assignments	1 Not at all	2 Once in a while	3 Sometimes	4 Fairly often	5 Frequently if not always
30. Emphasises the importance of having a collective sense of mission	1 Not at all	2 Once in a while	3 Sometimes	4 Fairly often	5 Frequently if not always
31. Expresses satisfaction when I meet expectations	1 Not at all	2 Once in a while	3 Sometimes	4 Fairly often	5 Frequently if not always
32. Expresses confidence that goals will be achieved	1 Not at all	2 Once in a while	3 Sometimes	4 Fairly often	5 Frequently if not always

..... **End of Section B** .....

**Please turn over to Section C**

**SECTION C: ORGANISATIONAL JUSTICE**

Every company has formal procedures (e.g. selection, training and development, job analysis, career planning, performance management, disciplinary procedures) according to which decisions are made and employees are treated. Items 1-7 are statements regarding such procedures, while items 8-13 refer to the manner in which your direct supervisor enacts company procedures. Items 14-18 refer to perceptions of fairness regarding outcomes (e.g. remuneration, pay increases, promotions) employees receive in relation to their input.

**Please react to each statement as honestly and truthfully as possible. Each statement must reflect your perception.**

Use the following responses

1	2	3	4	5	6
Disagree Strongly	Disagree Moderately	Disagree Slightly	Agree Slightly	Agree Moderately	Agree Strongly

**For example: If you agree slightly with a question cross the box with the number 4**

1	2	3	4	5	6
Disagree Strongly	Disagree Moderately	Disagree Slightly	Agree Slightly	Agree Moderately	Agree Strongly

**Read each question carefully and choose only ONE answer!**

<b>Questions</b> <i>In this company, procedures are designed to...</i>	Disagree strongly	Disagree Moderately	Disagree Slightly	Agree Slightly	Agree Moderately	Agree Strongly
1. collect accurate information necessary for making decisions	1 Disagree Strongly	2 Disagree Moderately	3 Disagree Slightly	4 Agree Slightly	5 Agree Moderately	6 Agree Strongly
2. provide opportunities to appeal or challenge the decision	1 Disagree Strongly	2 Disagree Moderately	3 Disagree Slightly	4 Agree Slightly	5 Agree Moderately	6 Agree Strongly
3. have all sides affected by the decision represented	1 Disagree Strongly	2 Disagree Moderately	3 Disagree Slightly	4 Agree Slightly	5 Agree Moderately	6 Agree Strongly
4. generate standards so that decisions could be made with consistency	1 Disagree Strongly	2 Disagree Moderately	3 Disagree Slightly	4 Agree Slightly	5 Agree Moderately	6 Agree Strongly
5. hear the concerns of all those affected by the decisions	1 Disagree Strongly	2 Disagree Moderately	3 Disagree Slightly	4 Agree Slightly	5 Agree Moderately	6 Agree Strongly
6. provide useful feedback regarding the decision and its implementation	1 Disagree Strongly	2 Disagree Moderately	3 Disagree Slightly	4 Agree Slightly	5 Agree Moderately	6 Agree Strongly

7. allow for requests for clarification or additional information about the decision.	1 Disagree Strongly	2 Disagree Moderately	3 Disagree Slightly	4 Agree Slightly	5 Agree Moderately	6 Agree Strongly
<b><i>During decision-making concerning formal procedures...</i></b>	1 Disagree Strongly	2 Disagree Moderately	3 Disagree Slightly	4 Agree Slightly	5 Agree Moderately	6 Agree Strongly
8. my supervisor considers my viewpoint	1 Disagree Strongly	2 Disagree Moderately	3 Disagree Slightly	4 Agree Slightly	5 Agree Moderately	6 Agree Strongly
9. my supervisor is able to suppress personal biases	1 Disagree Strongly	2 Disagree Moderately	3 Disagree Slightly	4 Agree Slightly	5 Agree Moderately	6 Agree Strongly
10. my supervisor provides me with timely feedback about a decision and its implications	1 Disagree Strongly	2 Disagree Moderately	3 Disagree Slightly	4 Agree Slightly	5 Agree Moderately	6 Agree Strongly
11. my supervisor treats me with kindness and consideration	1 Disagree Strongly	2 Disagree Moderately	3 Disagree Slightly	4 Agree Slightly	5 Agree Moderately	6 Agree Strongly
12. my supervisor shows concern for my rights as an employee	1 Disagree Strongly	2 Disagree Moderately	3 Disagree Slightly	4 Agree Slightly	5 Agree Moderately	6 Agree Strongly
13. my supervisor takes steps to deal with me in a truthful manner	1 Disagree Strongly	2 Disagree Moderately	3 Disagree Slightly	4 Agree Slightly	5 Agree Moderately	6 Agree Strongly
<b><i>In my current job...</i></b>	1 Disagree Strongly	2 Disagree Moderately	3 Disagree Slightly	4 Agree Slightly	5 Agree Moderately	6 Agree Strongly
14. I am fairly rewarded considering the responsibilities I have	1 Disagree Strongly	2 Disagree Moderately	3 Disagree Slightly	4 Agree Slightly	5 Agree Moderately	6 Agree Strongly
15. I am fairly rewarded in view of the amount of experience I have	1 Disagree Strongly	2 Disagree Moderately	3 Disagree Slightly	4 Agree Slightly	5 Agree Moderately	6 Agree Strongly
16. I am fairly rewarded for the amount of effort I put forth	1 Disagree Strongly	2 Disagree Moderately	3 Disagree Slightly	4 Agree Slightly	5 Agree Moderately	6 Agree Strongly
17. I am fairly rewarded for the work I have done well	1 Disagree Strongly	2 Disagree Moderately	3 Disagree Slightly	4 Agree Slightly	5 Agree Moderately	6 Agree Strongly
18. I am fairly rewarded for the stresses and strains of my job	1 Disagree Strongly	2 Disagree Moderately	3 Disagree Slightly	4 Agree Slightly	5 Agree Moderately	6 Agree Strongly

..... End of Section C .....

**Please turn to Section D**

**SECTION D: TRUST**

**Instructions**

This section consists of 12 questions relating to interpersonal trust. Decide if you agree with or differ from each statement and mark your answer on the scales as shown below.

1	2	3	4	5	6
Disagree strongly	Disagree Moderately	Disagree Slightly	Agree Slightly	Agree Moderately	Agree Strongly

**For example: If you agree slightly with a question cross the box with the number 4.**

1	2	3	4	5	6
Disagree strongly	Disagree Moderately	Disagree Slightly	Agree Slightly	Agree Moderately	Agree Strongly

**Read each question carefully and choose only ONE answer!**

Questions	1 Disagree strongly	2 Disagree Moderately	3 Disagree Slightly	4 Agree Slightly	5 Agree Moderately	6 Agree Strongly
1. I am comfortable allowing the person to whom I report control of issues that are important to our team.	1 Disagree strongly	2 Disagree Moderately	3 Disagree Slightly	4 Agree Slightly	5 Agree Moderately	6 Agree Strongly
2. I can depend on the person to whom I report	1 Disagree strongly	2 Disagree Moderately	3 Disagree Slightly	4 Agree Slightly	5 Agree Moderately	6 Agree Strongly
3. I believe the person to whom I report does not need to be carefully watched	1 Disagree strongly	2 Disagree Moderately	3 Disagree Slightly	4 Agree Slightly	5 Agree Moderately	6 Agree Strongly
4. The person to whom I report is trustworthy	1 Disagree strongly	2 Disagree Moderately	3 Disagree Slightly	4 Agree Slightly	5 Agree Moderately	6 Agree Strongly
5. In a situation of risk one can rely on the person to whom I report to act in the interest of others	1 Disagree strongly	2 Disagree Moderately	3 Disagree Slightly	4 Agree Slightly	5 Agree Moderately	6 Agree Strongly
6. The person to whom we report supports our team, even in our absence	1 Disagree strongly	2 Disagree Moderately	3 Disagree Slightly	4 Agree Slightly	5 Agree Moderately	6 Agree Strongly
7. If one requests assistance with a problem, even if one cannot monitor him or her, the person to whom I report will act in one's interest	1 Disagree strongly	2 Disagree Moderately	3 Disagree Slightly	4 Agree Slightly	5 Agree Moderately	6 Agree Strongly

8. In a situation of risk one can rely on the person to whom I report not to take advantage of one's vulnerability	1 Disagree strongly	2 Disagree Moderately	3 Disagree Slightly	4 Agree Slightly	5 Agree Moderately	6 Agree Strongly
9. If one requests the person to whom I report to do something for one, I know that it will generally be done	1 Disagree strongly	2 Disagree Moderately	3 Disagree Slightly	4 Agree Slightly	5 Agree Moderately	6 Agree Strongly
10. I can believe what the person to whom I report says	1 Disagree strongly	2 Disagree Moderately	3 Disagree Slightly	4 Agree Slightly	5 Agree Moderately	6 Agree Strongly
11. Even in my absence, the person to whom I report will support me	1 Disagree strongly	2 Disagree Moderately	3 Disagree Slightly	4 Agree Slightly	5 Agree Moderately	6 Agree Strongly
12. I can confide in the person to whom I report	1 Disagree strongly	2 Disagree Moderately	3 Disagree Slightly	4 Agree Slightly	5 Agree Moderately	6 Agree Strongly

**END OF QUESTIONNAIRE**

**THANK YOU FOR YOUR CO-OPERATION**

**ANNEXURE B: Item analysis****Table 4.6: Results of the item analysis for transformational leadership (N = 281)**

Variable	Scale Mean if item deleted	Scale Variance if item deleted	Corrected Item total correlation	Alpha ( $\alpha$ )
<b>Idealised Influence</b>				<b>0.8411</b>
Quest 8	19.6370	28.4678	0.5330	0.8295
Quest 12	19.3665	28.1473	0.6011	0.8183
Quest 16	19.4875	27.9865	0.5895	0.8202
Quest 19	19.3701	26.7125	0.6994	0.8022
Quest 21	19.4698	29.2000	0.5664	0.8236
Quest 23	18.9186	30.0638	0.5022	0.8326
Quest 30	19.5765	27.7664	0.6757	0.8071
<b>Intellectual Stimulation</b>				<b>0.7220</b>
Quest 2	9.1993	7.9601	0.4607	0.6887
Quest 6	9.1423	8.0582	0.4263	0.7076
Quest 27	9.2669	6.8892	0.6056	0.6016
Quest 29	9.5018	6.8009	0.5558	0.325
<b>Inspirational Motivation</b>				<b>0.8023</b>
Quest 7	9.9786	8.6495	0.5526	0.7865
Quest 11	9.7153	8.7329	0.6463	0.7386
Quest 24	9.9680	8.6383	0.6677	0.7285
Quest 32	9.7972	8.7408	0.6064	0.7572
<b>Individualised Consideration</b>				<b>0.7696</b>
Quest 13	9.3203	10.1685	0.5308	0.7349
Quest 17	9.2242	9.6388	0.5328	0.7357
Quest 26	9.5409	9.7849	0.5752	0.7123
Quest 28	9.3879	9.0883	0.6472	0.6724

**Table 4.7: Results of the item analysis for transactional leadership (N = 281)**

Variable	Scale Mean if item deleted	Scale Variance if item deleted	Corrected Item total correlation	Alpha ( $\alpha$ )
<b>Contingent Reward</b>				<b>0.7373</b>
Quest 1	9.4626	9.1923	0.5013	0.6936
Quest 9	9.8754	8.3880	0.5441	0.6689
Quest 14	9.8363	8.5160	0.5232	0.6812
Quest 31	9.8470	8.3372	0.5487	0.6662
<b>MBE Active</b>				<b>0.6839</b>
Quest 4	10.1530	6.9658	0.3834	0.6751
Quest 20	10.0676	9.7990	0.5081	0.5928
Quest 22	10.1495	9.3776	0.5270	0.5773
Quest 25	10.2527	7.0895	0.4564	0.6252
<b>MBE Passive</b>				<b>0.6197</b>
Quest 3	4.0569	4.0825	0.3693	0.6106
Quest 10	4.5053	4.0009	0.4978	0.4251
Quest 18	4.3488	4.1565	0.4256	0.5244

**Table 4.8: Results of the item analysis for organisational justice (N = 281)**

Variable	Scale Mean if item deleted	Scale Variance if item deleted	Corrected Item total correlation	Alpha ( $\alpha$ )
<b>Procedural Justice</b>				<b>0.8992</b>
Ques 1 ×	24.6228	43.6358	0.5394	0.9013
Ques 2	25.2420	38.9555	0.7383	0.8803
Ques 3	25.2705	40.0694	0.7212	0.8826
Ques 4	25.0498	40.7618	0.6784	0.8873
Ques 5	25.4911	37.7722	0.7215	0.8831
Ques 6	25.1459	38.6822	0.7512	0.8788
Ques 7	25.3132	3805873	0.7843	0.8750

**Table 4.8: Results of the item analysis for organisational justice (N = 281) (continued)**

<b>Variable</b>	<b>Scale Mean if item deleted</b>	<b>Scale Variance if item deleted</b>	<b>Corrected Item total correlation</b>	<b>Alpha (<math>\alpha</math>)</b>
<b>Interactional Justice</b>				<b>0.9094</b>
<b>Ques 8</b>	21.3665	33.2902	0.7295	0.8960
<b>Ques 9</b>	21.5231	35.7075	0.6594	0.9053
<b>Ques 10</b>	21.3274	33.3067	0.7053	0.8998
<b>Ques 11</b>	21.0356	33.5130	0.7385	0.8946
<b>Ques 12</b>	21.1993	32.1459	0.8386	0.8799
<b>Ques 13</b>	21.1459	32.1465	0.8221	0.8822
<b>Distributive Justice</b>				<b>0.9447</b>
<b>Ques14</b>	13.8932	38.2386	0.8100	0.9387
<b>Ques15</b>	13.9537	38.0657	0.8204	0.9369
<b>Ques16</b>	14.0036	35.8678	0.9178	0.9192
<b>Ques17</b>	14.0107	37.0535	0.8730	0.276
<b>Ques18</b>	14.2883	37.5702	0.8259	0.9360

**Table 4.9: Results of the item analysis for interpersonal trust (N = 281)**

<b>Variable</b>	<b>Scale Mean if item deleted</b>	<b>Scale Variance if item deleted</b>	<b>Corrected Item total correlation</b>	<b>Alpha (<math>\alpha</math>)</b>
<b>Que1</b>	48.7473	157.2038	0.7064	0.9551
<b>Que2</b>	48.7651	152.2304	0.7789	0.9531
<b>Que3</b>	48.6335	152.5616	0.7794	0.9531
<b>Que4</b>	48.4733	154.8073	0.7651	0.9535
<b>Que5</b>	48.7046	153.6232	0.7913	0.9527
<b>Que6</b>	48.6655	153.1020	0.8210	0.9519
<b>Que7</b>	48.7544	152.1931	0.8179	0.9519
<b>Que8</b>	48.8612	153.4485	0.8157	0.9520
<b>Que9</b>	48.7580	153.2555	0.7822	0.9530
<b>Que10</b>	48.6619	155.4889	0.7792	0.9531
<b>Que11</b>	48.9181	150.5611	0.8218	0.9518
<b>Que12</b>	48.8968	150.6429	0.7792	0.9532
				<b>0.9566</b>

**ANNEXURE C: Results of the CFA****Table 4.10: Lamda-X ( $\Lambda_x$ ) for transformational leadership**

<b>Idealised Influence</b>	<b>Intellectual Stimulation</b>	<b>Inspirational Motivation</b>	<b>Individualised Consideration</b>
Quest 8 0.57 (0.06) 10.35*	Quest 2 0.48 (0.06) 8.35*	Quest 7 0.61 (0.06) 11.00*	Quest 13 0.68 (0.05) 12.63*
Quest 12 0.68 (0.05) 12.72*	Quest 6 0.48 (0.06) 8.29*	Quest 11 0.72 (0.05) 13.60*	Quest 17 0.56 (0.06) 10.01*
Quest 16 0.66 (0.05) 12.30*	Quest 27 0.74 (0.05) 14.12*	Quest 24 0.74 (0.05) 14.14*	Quest 26 0.65 (0.05) 12.05*
Quest 19 0.72 (0.05) 13.81*	Quest 29 0.78 (0.05) 15.01*	Quest 32 0.78 (0.05) 15.14*	Quest 28 0.81 (0.05) 16.02*
Quest 21 0.59 (0.05) 10.76*			
Quest 23 0.61 (0.05) 11.18*			

\* t-values greater than |1.96| indicate significant path coefficients

**Table 4.10: Lamda-X ( $\Lambda_x$ ) for transformational leadership (continued)**

<b>Idealised Influence</b>	<b>Intellectual Stimulation</b>	<b>Inspirational Motivation</b>	<b>Individualised Consideration</b>
Quest 30 0.78 (0.05) 15.54*			

\* t-values greater than |1.96| indicate significant path coefficients

**Table 4.11: Lambda-X ( $\Lambda_x$ ) for transactional leadership**

<b>Contingent Reward</b>	<b>Management-by-exception active</b>	<b>Management-by-exception passive</b>
Quest 1 0.57 (0.06) 10.01*	Quest 4 0.40 (0.06) 6.19*	Quest 3 0.44 (0.07) 6.65*
Quest 9 0.62 (0.06) 11.01*	Quest 20 0.77 (0.06) 13.02*	Quest 10 0.85 (0.07) 11.57*
Quest 14 0.62 (0.06) 11.15*	Quest 22 0.56 (0.06) 9.01*	Quest 18 0.53 (0.07) 7.90*
Quest 31 0.75 (0.05) 14.06*	Quest 25 0.61 (0.06) 9.91*	

\* t-values greater than |1.96| indicate significant path coefficients

**Table 4.12: Phi ( $\phi$ ) for exogenous latent variables**

	ideal_i	intell_s	insp_m	ind_c	cont_r	mbea	mbep
ideal_i	1.00						
intell_s	0.99	1.00					
insp_m	1.00	0.95	1.00				
ind_c	1.01	1.04	0.90	1.00			
cont_r	0.97	0.93	0.95	0.98	1.00		
mbea	0.73	0.65	0.63	0.64	0.67	1.00	
mbep	-0.51	-0.45	-0.47	-0.51	-0.53	-0.32	1.00

**Table 4.13: Theta –delta ( $\theta_\delta$ ) of transformational leadership**

<b>Idealised Influence</b>	<b>Intellectual Stimulation</b>	<b>Inspirational Motivation</b>	<b>Individualised Consideration</b>
Quest 8 0.67	Quest 2 0.77	Quest 7 0.63	Quest 13 0.54
Quest 12 0.54	Quest 6 0.77	Quest 11 0.48	Quest 17 0.69
Quest 16 0.57	Quest 27 0.45	Quest 24 0.45	Quest 26 0.58
Quest 19 0.48	Quest 29 0.39	Quest 32 0.39	Quest 28 0.35
Quest 21 0.65			
Quest 23 0.63			
Quest 30 0.39			

**Table 4.14: Theta – delta ( $\theta_\delta$ ) for transactional leadership**

<b>Contingent Reward</b>	<b>Management-by-exception active</b>	<b>Management-by-exception passive</b>
Quest 1 0.67	Quest 4 0.84	Quest 3 0.80
Quest 9 0.62	Quest 20 0.40	Quest 10 0.27
Quest 14 0.61	Quest 22 0.68	Quest 18 0.72
Quest 31 0.44	Quest 25 0.63	

**Table 4.15: Lamda-X for organisational justice and trust**

<b>Procedural Justice</b>	<b>Interactional Justice</b>	<b>Distributive Justice</b>	<b>Trust</b>
ques2 0.75 (0.05) 14.42*	ques8 0.73 (0.05) 13.87*	ques14 0.83 (0.05) 17.00*	que1 0.73 (0.05) 14.08*
ques3 0.74 (0.05) 13.97*	ques9 0.65 (0.05) 11.87*	ques15 0.85 (0.05) 17.54*	que2 0.80 (0.05) 16.01*
ques4 0.70 (0.05) 12.97*	ques10 0.73 (0.05) 13.81*	ques16 0.95 (0.04) 21.17*	que3 0.81 (0.05) 16.33*
ques5 0.81 (0.05) 16.06*	ques11 0.82 (0.05) 16.61*	ques17 0.92 (0.05) 19.91*	que4 0.80 (0.05) 15.93*
ques6 0.82 (0.05) 16.32*	ques12 0.90 (0.05) 19.35*	ques18 0.85 (0.05) 17.67*	que5 0.83 (0.05) 16.86*
ques7 0.84 (0.05) 17.02*	ques13 0.89 (0.05) 18.70*		que6 0.84 (0.05) 17.44*

\* t-values greater than |1.96| indicate significant path coefficients

**Table 4.15: Lamda-X for organisational justice and trust (continued)**

<b>Procedural Justice</b>	<b>Interactional Justice</b>	<b>Distributive Justice</b>	<b>Trust</b>
			que 7 0.84 (0.05) 17.19*
			que8 0.83 (0.05) 17.05*
			que9 0.82 (0.05) 16.52*
			que10 0.82 (0.05) 16.70*
			que11 0.86 (0.05) 17.87*
			que12 0.82 (0.05) 16.68*

\* t-values greater than |1.96| indicate significant path coefficients

**Table 4.16: Phi ( $\phi$ ) for organisational justice and trust**

	procjust	intjust	trust	distjust
procjust	1.00			
intjust	0.61	1.00		
trust	0.52	0.77	1.00	
distjust	0.41	0.53	0.52	1.00

**Table 4.17: Theta-delta ( $\theta_\delta$ ) of organisational justice and trust**

<b>Procedural Justice</b>	<b>Interactional Justice</b>	<b>Distributive Justice</b>	<b>Trust</b>
Ques2 0.43	Ques8 0.47	Ques14 0.31	Que1 0.47
Ques3 0.46	Ques9 0.58	Ques15 0.28	Que2 0.36
Ques4 0.51	Ques10 0.47	Ques16 0.10	Que3 0.35
Ques5 0.34	Ques11 0.32	Ques17 0.16	Que4 0.37
Ques6 0.33	Ques12 0.18	Ques18 0.27	Que5 0.32
Ques7 0.29	Ques13 0.21		Que6 0.29
			Que7 0.30
			Que8 0.31
			Que9 0.33

**Table 4.17: Theta-Delta ( $\theta\delta$ ) of organisational justice and trust (continued)**

<b>Procedural Justice</b>	<b>Interactional Justice</b>	<b>Distributive Justice</b>	<b>Trust</b>
			Que10 0.33
			Que11 0.26
			Que12 0.33

**Table 4.18: Squared multiple correlations for transformational leadership**

<b>Idealised Influence</b>	<b>Intellectual Stimulation</b>	<b>Inspirational Motivation</b>	<b>Individualised Consideration</b>
Quest 8 0.33	Quest 2 0.23	Quest 7 0.37	Quest 13 0.46
Quest 12 0.46	Quest 6 0.23	Quest 11 0.52	Quest 17 0.31
Quest 16 0.43	Quest 27 0.55	Quest 24 0.55	Quest 26 0.42
Quest 19 0.52	Quest 29 0.61	Quest 32 0.61	Quest 28 0.65
Quest 21 0.35			
Quest 23 0.37			
Quest 30 0.61			

**Table 4.19: Squared multiple correlations for transactional leadership**

<b>Contingent Reward</b>	<b>Management-by-exception active</b>	<b>Management-by-exception passive</b>
Quest 1 0.33	Quest 4 0.16	Quest 3 0.20
Quest 9 0.38	Quest 20 0.60	Quest 10 0.73
Quest 14 0.39	Quest 22 0.32	Quest 18 0.28
Quest 31 0.56	Quest 25 0.37	

**Table 4.20: Squared multiple correlations for organisational justice and trust**

<b>Procedural Justice</b>	<b>Interactional Justice</b>	<b>Distributive Justice</b>	<b>Trust</b>
Ques2 0.57	Ques8 0.53	Ques14 0.69	Que1 0.53
Ques3 0.54	Ques9 0.42	Ques15 0.72	Que2 0.64
Ques4 0.49	Ques10 0.53	Ques16 0.90	Que3 0.65
Ques5 0.66	Ques11 0.68	Ques17 0.84	Que4 0.63
Ques6 0.67	Ques12 0.82	Ques18 0.73	Que5 0.68
Ques7 0.71	Ques13 0.79		Que6 0.71
			Que7 0.70
			Que8 0.69
			Que9 0.67
			Que10 0.67
			Que11 0.74
			Que12 0.67

**ANNEXURE D: STRUCTURAL EQUATION MODEL****Table 4.23: Completely standardised  $\Lambda_x$  – matrix for transformational leadership**

<b>Idealised Influence</b>	<b>Intellectual Stimulation</b>	<b>Inspirational Motivation</b>	<b>Individualised Consideration</b>
Quest 8 0.62	Quest 2 0.52	Quest 7 0.65	Quest 13 0.71
Quest 12 0.71	Quest 6 0.50	Quest 11 0.76	Quest 17 0.60
Quest 16 0.70	Quest 27 0.76	Quest 24 0.79	Quest 26 0.70
Quest 19 0.77	Quest 29 0.82	Quest 32 0.81	Quest 28 0.86
Quest 21 0.63			
Quest 23 0.64			
Quest 30 0.82			

**Table 4.24: Completely standardised  $\Lambda_x$  – matrix for transactional leadership**

<b>Contingent Reward</b>	<b>Management-by-exception active</b>	<b>Management-by-exception passive</b>
Quest 1 0.59	Quest 4 0.44	Quest 3 0.47
Quest 9 0.64	Quest 20 0.79	Quest 10 0.96

**Table 4.24: Completely standardised  $\Lambda_x$  – matrix for transactional leadership  
(continued)**

<b>Contingent Reward</b>	<b>Management-by-exception active</b>	<b>Management-by-exception passive</b>
Quest 14 0.65	Quest 22 0.61	Quest 18 0.56
Quest 31 0.78	Quest 25 0.64	

**Table 4.25: Completely standardised  $\Lambda_y$  – matrix for organisational justice and trust**

<b>Procedural Justice</b>	<b>Interactional Justice</b>	<b>Distributive Justice</b>	<b>Trust</b>
Ques2 0.78	Ques8 0.76	Ques14 0.86	Que1 0.76
Ques3 0.76	Ques9 0.67	Ques15 0.88	Que2 0.82
Ques4 0.73	Ques10 0.76	Ques16 0.97	Que3 0.83
Ques5 0.84	Ques11 0.85	Ques17 0.94	Que4 0.83
Ques6 0.85	Ques12 0.94	Ques18 0.89	Que5 0.85
Ques7 0.87	Ques13 0.92		Que6 0.87
			Que7 0.85

**Table 4.25: Completely standardised  $\Lambda_y$  – matrix for organisational justice and trust (continued)**

Procedural Justice	Interactional Justice	Distributive Justice	Trust
			Que8 0.86
			Que9 0.84
			Que10 0.85
			Que11 0.88
			Que12 0.85

**Table 4.26: Phi matrix of leadership**

	INTEL_S	IDEAL_I	INSP_M	INDIV_C	CONT_R	MBE_PAS	MBE_ACT
INTEL_S	1.00						
IDEAL_I	0.99	1.00					
INSP_M	0.97	0.98	1.00				
INDIV_C	1.02	1.00	0.89	1.00			
CONT_R	0.95	0.97	0.95	0.98	1.00		
MBE_PAS	-0.49	-0.50	-0.46	-0.53	-0.54	1.00	
MBE_ACT	0.71	0.71	0.65	0.61	0.69	-0.33	1.00

**Table 4.27: Psi matrix for organisational justice and trust<sup>2</sup>**

This matrix is diagonal.			
Procedural Justice	Interactional Justice	Distributive Justice	Trust
0.12	0.38	0.77	0.25
(0.30)	(0.08)	(0.09)	(0.37)
0.39	4.68	8.79	0.66

**Table 4.28: Theta-delta for transformational leadership**

<b>Idealised Influence</b>	<b>Intellectual Stimulation</b>	<b>Inspirational Motivation</b>	<b>Individualised Consideration</b>
Quest 8 0.61	Quest 2 0.73	Quest 7 0.58	Quest 13 0.49
Quest 12 0.49	Quest 6 0.75	Quest 11 0.42	Quest 17 0.64
Quest 16 0.51	Quest 27 0.43	Quest 24 0.38	Quest 26 0.51
Quest 19 0.40	Quest 29 0.33	Quest 32 0.34	Quest 28 0.27
Quest 21 0.60			
Quest 23 0.59			
Quest 30 0.33			

<sup>2</sup> Variance of the residual errors of prediction for the endogenous variables

**Table 4.29: Theta-delta for transactional leadership**

<b>Contingent Reward</b>	<b>Management-by-exception active</b>	<b>Management-by-exception passive</b>
Quest 1 0.65	Quest 4 0.80	Quest 3 0.78
Quest 9 0.59	Quest 20 0.37	Quest 10 0.08
Quest 14 0.58	Quest 22 0.63	Quest 18 0.68
Quest 31 0.39	Quest 25 0.59	

**Table 4.30: Theta-epsilon for organisational justice and trust**

<b>Procedural Justice</b>	<b>Interactional Justice</b>	<b>Distributive Justice</b>	<b>Trust</b>
Ques2 0.39	Ques8 0.42	Ques14 0.26	Que1 0.43
Ques3 0.42	Ques9 0.55	Ques15 0.23	Que2 0.32
Ques4 0.46	Ques10 0.43	Ques16 0.05	Que3 0.30
Ques5 0.30	Ques11 0.27	Ques17 0.12	Que4 0.32
Ques6 0.28	Ques12 0.12	Ques8 0.21	Que5 0.27
Ques7 0.24	Ques13 0.16		Que6 0.24

**Table 4.30: Theta-epsilon of organisational justice and trust (continued)**

<b>Procedural Justice</b>	<b>Interactional Justice</b>	<b>Distributive Justice</b>	<b>Trust</b>
			Que7 0.27
			Que8 0.26
			Que9 0.29
			Que10 0.29
			Que11 0.23
			Que12 0.28

**Table 4.31: Squared multiple correlations for transformational leadership**

<b>Idealised Influence</b>	<b>Intellectual Stimulation</b>	<b>Inspirational Motivation</b>	<b>Individualised Consideration</b>
Quest 8 0.39	Quest 2 0.27	Quest 7 0.42	Quest 13 0.51
Quest 12 0.51	Quest 6 0.25	Quest 11 0.58	Quest 17 0.36
Quest 16 0.49	Quest 27 0.57	Quest 24 0.62	Quest 26 0.49
Quest 19 0.60	Quest 29 0.67	Quest 32 0.66	Quest 28 0.73

**Table 4.31: Squared multiple correlations for transformational leadership (continued)**

<b>Idealised Influence</b>	<b>Intellectual Stimulation</b>	<b>Inspirational Motivation</b>	<b>Individualised Consideration</b>
Quest 21 0.40			
Quest 23 0.41			
Quest 30 0.67			

**Table 4.32: Squared multiple correlations for transactional leadership**

<b>Contingent Reward</b>	<b>Management-by-exception active</b>	<b>Management-by-exception passive</b>
Quest 1 0.35	Quest 4 0.20	Quest 3 0.22
Quest 9 0.41	Quest 20 0.63	Quest 10 0.92
Quest 14 0.42	Quest 22 0.37	Quest 18 0.32
Quest 31 0.61	Quest 25 0.41	

**Table 4.33: Squared multiple correlations for organisational justice and trust**

<b>Procedural Justice</b>	<b>Interactional Justice</b>	<b>Distributive Justice</b>	<b>Trust</b>
Ques2 0.61	Ques8 0.58	Ques14 0.74	Que1 0.57
Ques3 0.58	Ques9 0.45	Ques15 0.77	Que2 0.68
Ques4 0.54	Ques10 0.57	Ques16 0.95	Que3 0.70
Ques5 0.70	Ques11 0.73	Ques17 0.88	Que4 0.68
Ques6 0.72	Ques12 0.88	Ques18 0.79	Que5 0.73
Ques7 0.76	Ques13 0.84		Que6 0.76
			Que7 0.73
			Que8 0.74
			Que9 0.71
			Que10 0.71
			Que11 0.77
			Que12 0.72